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**ABSTRACT**

This document consists of nine papers which discuss the planning and design, implementation and maintenance, and evaluation of magnet schools. They are based on practical experience with magnet schools, which first appeared in the early 1970s. By 1982, the movement had grown to include more than 1,200 schools in 140 urban school districts, and the rate of new programs implemented since then has rapidly increased. The papers (and their authors) are: (1) "Components of Magnet Schools" (Faye B. Bryant); (2) "A Practitioner's View of Essential Instructional Development Factors in Planning Magnet Schools" (Grace Fairlie); (3) "Effective Information Dissemination and Recruitment Strategies for Magnet Schools" (Phale D. Hale and Larry O. Maynard); (4) "Planning Resource Allocations for Magnet Schools" (William A. Pearson); (5) "Assessing Outcomes of Magnet Schools" (Lee Laws); (6) "Research Needed to Assess the Performance of Magnet Schools" (Jerry D. Bailey); (7) "Issues in Designing Magnet Schools" (Mary Haywood Metz); (8) "Comparative Analysis of Local Planning and Development of Magnet Schools" (Rolf K. Blank); (9) "Reflections on Understanding, Studying, and Managing Magnet Schools" (Mary Anne Raywid). A preface which provides an overview of the papers is included. (KH)

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PLANNING AND DEVELOPING

MAGNET SCHOOLS:

Experiences and Observations

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## COMPENDIUM OF PAPERS

Components of Magnet Schools - - - - - Faye B. Bryant

A Practitioner's View Of Essential  
Instructional Development Factors  
In Planning Magnet Schools - - - - - Grace Fairlie

Effective Information Dissemination  
And Recruitment Strategies For  
Magnet Schools - - - - - Phale D. Hale &  
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Planning Resource Allocations For  
Magnets Schools- - - - - William A. Pearson

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Research Needed To Assess The  
Performance Of Magnet Schools- - - - - Jerry D. Bailey

Issues In Designing Magnet Schools - - - - Mary Haywood Metz

Comparative Analysis Of Local  
Planning And Development Of  
Magnet Schools - - - - - Rolf K. Blank

Reflections On Understanding,  
Studying, and Managing  
Magnet Schools - - - - - Mary Anne Raywid

DRAFT

Preface

Local school districts have gained extensive experience and knowledge with effective models and strategies for developing magnet school programs. This compilation of papers on magnet school planning and development attempts to record and disseminate some of the accumulated experience and knowledge. The volume is intended to address the concerns and questions of local program administrators, school board members, educators, and parents about how educationally-effective, equitable magnet school programs can be incorporated into school systems. It also identifies issues and concerns for which ready answers are not yet available through experiment or research.

Magnet school programs were initiated in a few cities in the early 1970's. By 1982, the movement had grown to include over 1200 schools in more than 140 urban school districts and the rate of new programs implemented in the past five years has rapidly increased. The magnet school became well known as a strategy for school desegregation primarily because it offered an alternative to mandatory assignment, or busing. There are, however, four innovative elements that characterize magnet schools: a) a special curricular theme or method, b) choice of school by the student and parent, c) open access to students beyond a regular school attendance zone, and d) a role in voluntary desegregation within a district.

The initial models for magnet school curricula were the specialty



schools in public education, such as Bronx High School of Science (est. 1938), Boston Public Latin School (est. 1935), and Chicago's Albert G. Lane Technical School (est. 1900), which served selected students for many years. Most specialty schools admit students by examination or other measures of performance or ability, and they typically serve highly gifted students. The basic idea of a magnet school is to attract and enroll students based on their interest, either in a particular subject, such as science, art, or in learning through a different instructional approach, such as a Montessori or ungraded school. By attracting students with common educational interests, but diverse socio-economic backgrounds, the goals of a magnet school are to attain a racially heterogeneous student enrollment and provide unique educational experience.

Magnet schools have largely been developed through the initiative and ideas of local school districts. Since the development of the initial programs in cities such as Philadelphia, Boston and Cincinnati, many school districts have adapted the magnet school concept and strategy to the specific needs and interests of their communities. Due to the high degree of local initiative, magnet schools across the country have a wide variety of "themes" as well as different methods of organization, such as a whole school, school-within-a-school, or part-day program.

The development and expansion of magnet schools received a major boost with federal grants to support program planning and

implementation, which began in 1976 under an amendment to the Emergency School Aid Act. This grants program authorized funding for districts in the process of desegregating schools; the design of the magnet schools however, was largely left to local districts. By 1981, 65 districts had federal grants for their magnet school programs.

A new federal magnet schools program was authorized by Congress in 1984. The Department of Education currently administers magnet schools grants for approximately 45 districts. One of the responsibilities of the Department is to plan and organize an annual conference of magnet school program directors for the purpose of sharing the knowledge, experience, and strategies that have been developed at the local level. For the March 1987 conference, several district magnet program directors were asked to write and present papers on specific aspects of magnet program planning and development, and several researchers on magnet schools were asked to respond to the papers and provide an overview of research knowledge on magnet planning and development.

Four of the papers by district program directors describe important elements of program planning and development. Bryant outlines components of magnet school planning and implementation that are found in effective programs. Fairlie's paper gives a step-by-step description of the role of district administrators in developing a magnet program. Hale and Maynard provide an analysis of effective strategies for information dissemination and recruitment for magnet schools. Pearson describes in detail a process for planning resource allocations for magnet schools. It should be noted that these papers present the

present the experience, knowledge, and perspectives of district-level administrators; other important sources of local experience and knowledge, such as teachers, principals, community leaders, and parents, are not included in this volume.

Two papers outline the elements of effective approaches to evaluation and research on magnet schools. Laws' paper contains a description of measures and data that should be used by school districts in analyzing the performance of magnet schools. Bailey describes the needs for improving research on magnet schools.

This is followed by three papers that examine prospects and issues concerning magnet schools. Metz analyzes three problems involved in designing magnet programs that seek to offer educational equity and excellence. Blank examines findings from a comparative analysis of local magnet planning and development, and outlines steps taken in developing successful magnet programs. Finally, Raywid relates a number of current magnet school issues to national patterns of organizational change in education.

## **COMPONENTS OF SUCCESSFUL MAGNET SCHOOLS**

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**Houston Independent School District**

**Houston, Texas**

## COMPONENTS OF SUCCESSFUL MAGNET SCHOOLS

### INTRODUCTION

Magnet schools were initiated to maintain quality integrated education and to bring about desegregation in urban school districts. Today, however, they are found in medium, small, and large school districts in urban and suburban areas including all geographical sections of the United States. The use of magnet schools as a desegregation tool has increased greatly during the past decade. These unique and innovative educational programs are also helping to transform public education. Equity and excellence in education, two major problems facing the nation's public school systems, have accelerated the expansion of the magnet school concept. School districts are asking, "How do we achieve equality as well as excellence?" The quest for a solution to school desegregation and educational excellence continues to cause more and more of the nation's school districts to consider magnet schools as an option. A 1983 national study of magnet schools, prepared by James H. Lowry and Associates (Blank, et al, 1983) indicates that between 1976-77 and 1981-82, districts implementing magnet school programs grew from 14 to 138. Since 1982 not only have the number of school districts implementing magnet school programs continued to increase but the number of magnet schools within school districts has also increased.

The attention being given the nation's public schools, as evidenced in studies regarding the state of education in America including the Secretary of Education's National Commission on Excellence in Education (1983), The Task Force on Education for Economic Growth, and recent recommendations of the nation's governors regarding public education, has certainly added impetus to the acceleration of the number of school districts implementing the concept.

Development of magnet schools has not occurred in isolation but has taken

place within a general societal context and development has been affected by changes in the society as a whole. Consideration of the magnet school concept must include a careful analysis of conditions in local communities for educational change. The following salient points should be considered:

- (1) Placing magnet programs in locations that will attract all ethnic groups.
- (2) Devising instructional programs that address changing educational needs.
- (3) Larger societal factors affecting schools, e.g.,
  - Family need and composition
  - Parental perceptions
  - Changes in student populations
  - Teacher shortages
  - Technological advances
  - Community resources
  - Legal mandates and judicial opinion, and
- (4) Local districts issues affecting school planning:
  - Raising student achievement
  - Transfer policies
  - Building capacity/attendance zones
  - Voluntary interdistrict education plans

#### STUDY OBJECTIVES

This paper will identify and discuss components of successful magnet programs. A search of the literature indicates that even though researchers have described the various components of magnet school programs the effectiveness of the various components in determining the success of the program has not been a primary focus of their investigations. Most of the data in the literature is descriptive in nature. Although Blank, et al, 1983 includes some comparison, no indepth systematic, comparative analyses of magnet school components as related to success in implementing a program was found. Thus, data found in the review of the literature as well as a review of information gathered directly from school districts form the basis for this paper. Some attention

has also been given to the degree of attainment and unintended consequences of objectives of magnet schools.

For purposes of this paper, magnet schools are those meeting the criteria included in the following definition by the United States Department of Education:

"School or education center that offers a special curriculum capable of attracting substantial numbers of students of different racial backgrounds."

### Components of Magnet Schools

There are multiple components and/or variables which must be considered in implementing magnet schools. The program components vary based on locale, needs, resources, and emphasis of particular school districts. Success, however, is directly related to the effectiveness in designing, mixing, and implementing these multiple components. The components can be divided into two categories:

1. Core components--Basic elements which must be included in a magnet school for success.
2. Ancillary Components--Elements which add to effectiveness of the magnet school but depending on local circumstances may or may not be included.

#### CORE COMPONENTS

Several factors have been identified as necessary ingredients in successful magnet schools. These components are found consistently across districts in magnet school programs. They are the very heart of the concept. They are: (1) leadership, (2) organizational structure, (3) program design, (4) staffing, (5) student selection, (6) resources, (7) student recruitment, (8) transportation, (9) funding, (10) evaluation.

#### Leadership

Leadership is a necessary ingredient in the magnet school concept, and it undergirds successful implementation of a district plan as well as individual school programs. The study done by Lowry and Associates concluded that magnet

schools will not succeed unless there is strong district leadership for a magnet school policy and a plan for implementation as well as school leadership that is innovative and resourceful. Thus, the degree of success appears to be directly related to leadership, including that exhibited by school boards, superintendents, district administrators, and school leadership.

School Board. The school board establishes policies related to the objectives and finances of the schools. The school board is also responsible for advocating, locating and reviewing planning options for magnets. Because of the uniqueness of the program, flexibility in policies must be granted by school boards as well as financial resources allocated. For example, the Policies and Administrative Procedures of the Houston School District include specific policies related to admissions, transfers and withdrawals, and transportation. Staffing guidelines allow for flexible staffing based on unique program needs. The board also has provided as a part of the budgeting process, the necessary funds to accommodate the special program needs.

Superintendent. The superintendent, the CEO of the district, is responsible for overall implementation and must lend visible support to the concept and be committed to making the plan work.

District Central Office Staff. The district central office staff provide support and coordinate district-wide activities related to the magnet school program. They are involved in the development of curriculum, supervision for specialty teachers, purchasing, facility planning, personnel selection, and transportation. They must understand the uniqueness of each program and provide the support services to make the program work.

Several districts have created departments to furnish the leadership essential in the general administration of the magnet school program. This department headed by a top administrator coordinates all of the efforts related to



implementation of the program. The Assistant Superintendent for Enrichment Programs in the Houston School District is responsible for the implementation of the magnet school program. A bureau of magnet school programs in the Enrichment Department is headed by a director who has the following duties:

1. Coordinates efforts with other departments and the community to provide support services.
2. Identifies needs and recommends curriculum projects.
3. Assesses needs, plans and recommends curriculum projects.
4. Works with magnet school principals to develop objectives and visits the schools periodically to appraise the programs.
5. Communicates and interprets Court guidelines as related to magnet school programs and desegregation in the District.
6. Works with magnet school principals to provide adequate staffing to meet the needs of the individual programs.
7. Prepares instructional budgets.

School Leadership. The campus leadership creates an environment which is attractive to students and parents. Various leadership configurations are utilized, but in all, the principal has the ultimate responsibility of implementing the program based on objectives and established policies. The principal has the option to delegate this responsibility to an assistant principal, dean of instruction, program administrator or magnet school coordinator. The position used in the Houston School District is a Magnet School Instructional Coordinator.

Illustrative duties of the magnet school coordinator include:

1. Actively recruit students for the magnet school program.
2. Establish and maintain open communication with the community.
3. Exemplify positive interpersonal relations and aid in developing good human relations among teachers/students and between personnel and other personnel in the building.
4. Serve as primary liaison with Transportation Department in matters relating to magnet students.

5. Aid in developing program objectives and organizing a record keeping system to monitor these objectives; participate in on-going evaluation and modification of program as needed.
6. Assist with preparation of budget, financial reports, requisitions for supplies/equipment and inventory of magnet school purchases.
7. Provide assistance in design of inservice for teachers and paraprofessionals and work with individual teachers to improve classroom instruction.
8. Provide assistance in curriculum development and selection of appropriate enrichment materials and activities.

Because of the nature of the duties performed by the magnet school coordinators, districts have been able to identify and train instructional leaders who have moved into administrative roles in magnet and non-magnet schools, thus increasing the effectiveness of instruction across the District.

Management Team and Advisory Committee. Some districts use a management team concept. In the Fort Worth School District a management team serves as an advisory body for policy making. The team reviews and determines the nature, scope, and effectiveness of magnet programs and advises the Director accordingly. The team functions similarly to a site-based management team, offering advice and making policy which give direction to the following:

- .. Budget planning and implementation
- . Facilities and equipment
- . Personnel (This is a very sensitive area and the Management Team's role will be limited to the suggestion for personnel needs.)
- . Program development
- . Program evaluation
- . Communication and public relations
- . Scholarship opportunities
- . Student follow up
- . Other (as needs dictate)

#### Organizational Structures of Magnet Schools

Magnet schools are structured to meet the needs of a school district as well as the needs of a particular campus and/or community. The organizational structure is related directly to the overall instructional and desegregation

goals of a particular magnet school. Since the main thrust of the magnet school approach is to achieve integration through quality education programs, ethnic composition of the school environment is important. The organizational structure enhances the success factor by achieving the most integration possible in a program as well as impacting the total campus at a level necessary to consider integrated. It also influences the ability of a magnet school to attract students. Some organizational structures allow for short term involvement in an integrated environment.

A survey of of the forty-four school districts that received Magnet school grants during 1986-87 school year indicates that the following structures are operational:

(1) School-Within-A-School Program

A School-Within-A-School Program is designed to attract a student body reflecting established racial goals. A specific group of students meets apart from the rest of the student body, although they may join the others for non-academic and academic studies not related to the magnet school's area of specialization. This separation is necessary due to the kinds of programs which are offered such as music or programs for gifted students. The number of students to be served is pre-determined based on space available, racial and ethnic goals. Transfer students leave their home schools to transfer to this magnet school or they participate in their home school's School-Within-A-School.

Careful consideration must be given to the relationship of the School-Within-A-School's students, staff and resources to those on the same campus in the regular school program. Where possible, the program must impact the regular school population in terms of desegregation and improvement in the total instructional program.

The School-Within-A-School structure is widely used in school districts. It allows for the effective utilization of low enrollment schools since a program is usually located in a building with vacant space. It can also have a very positive effect on the total student population as magnet school expectations - academic excellence, school pride, parental involvement, etc. - permeate the entire school.

(2) Add-On-Programs

In some magnet schools, specialty programs are added to the regular school curriculum. In these instances, the student body affected includes the total enrollment of the school. Each school may have a

slightly different format for attaining their educational objectives, but in all instances each school has a magnet program as well as the regular district curriculum. Transfer students are accepted based on identified ethnic goals to impact the integration level on the total campus.

This structure has been particularly effective in some school districts at the elementary level. It allows for maximum utilization of space but its greatest impact comes from the instructional enrichment provided for a total school population.

It is suggested, however, that "add-ons" have two serious disadvantages:

- (a) Because the school remains basically racially identifiable, it is difficult to recruit the non-resident race to a school.
- (b) Because there is a segregated enclave, intergroup hostility is always a problem. (Rossell, 1985: 7-22)

### (3) Separate and Unique Schools

Separate and Unique Schools provide a unique curriculum and single educational focus for all students attending the school. All students transfer into a separate facility, usually a redirected school site or newly constructed building. Students transfer into the program based on the total number to be served and predetermined ethnic goals. This model represents the ideal structure for a magnet school.

Separate and unique schools are called "selective schools." Even though some of these schools are now called magnet schools, the concept of selective schools that rely on voluntary enrollment has been a part of American education since 1635 with the founding of the Boston Latin School. The best known of these schools compose an honor roll of U.S. education: Bronx High School of Science in the Bronx, Lane Tech in Chicago, New York High School of the Performing Arts in Manhattan, and the High School for Health Professions in Houston.

### (4) Cluster Centers

Cluster Centers are designed to give students from racially isolated schools the opportunity to spend several days during a school year in an integrated environment. These programs specialize in a given area of educational experiences. Various education media for teaching are used.

The Houston program includes the Outdoor Education Centers, Wildlife Cluster Center, International Trade Center, Career World, and the Children's Literature Center.

Variations in these organizational structures are being implemented in a few school districts. These include:

(1) Neutral Sites

Programs are placed in a separate facility in a central location. The facility may include one Separate and Unique Program or several Schools-Within-A-School. All students transfer into the program or onto this campus. The Downtown Magnet School in Boston is an example of this structure.

(2) Part-Time Programs

Students in these programs attend their home school for the regular curriculum and attend magnet schools only for the specialty classes. Sky Line Magnet School in Dallas is an example of this structure.

It appears that all of the organizational structures have merit as related to program and desegregation goals of school districts. Some analysis of these structures were included in Blanks, et al, 1983. However, further study should be undertaken to answer the following questions:

- (1) Which structure is most successful and under what circumstances?
- (2) Which structure has the greatest impact on student achievement?
- (3) Which structure is the most cost effective?

Program Design

Magnet schools are significantly different from one another as well as from the comprehensive program available in a given school district. The program has a distinctiveness that is best for certain students, just as other options, including the conventional school program, are best for others. The magnet program is based on a distinctive curricula that provide relative equal opportunities for all youth. (Barr, 1982: 37-40)

Unique Themes. The uniqueness of a magnet school is related to the theme which determines the curriculum and/or delivery strategies and/or teaching methods, and grade levels. Themes being implemented vary within school districts but there appears to be district patterns. It is clear that while many of the themes selected relate to interest of the student, others are selected based on career options available for students in a community. The career

options are particularly important at the secondary level.

Unique themes have been determined in many different ways by school districts:

- a. Student and/or parent surveys to ascertain interest in a particular theme.
- b. Needs Assessments - Questionnaires used to secure responses on areas of immediate concern and to provide an opportunity for open-ended expression concerning needs and/or types of programs.
- c. Parent-Teacher-Community Task Force
- d. Visits to other school districts
- e. School Core Committee - made up of principal, the Chairman of the Parent Advisory Committee, a faculty-elected representative, and in the case of a high school, a student leader. Core Committee members meet with groups they represent and also serve on the Area Advisory Committee. Data are used to supplement the recommendations relative to programs and placement.

The magnet themes implemented in school districts may be grouped into categories related to curriculum, delivery strategies and/or philosophy and student needs and/or characteristics. At the elementary level the majority of the themes relate to enrichment of the curriculum with some school districts giving attention to delivery strategies and students needs and/or characteristics. At the secondary level, themes are related to career options and specific student needs, such as banking, finance, aerodynamics, medical careers etc.

A survey of school districts implementing magnet school programs indicate the following categories:

#### Elementary Magnet School Themes

##### (1) Themes related to the curriculum:

Communication, Visual and Performing Arts - Music, Art, Dance, Theatre, Photography

Math, Science and Computers - Marine Science, Ecology, and Outdoor Education, Environmental Education, Horticulture, Wildlife Discovery



Academic - Structure of the Intellect, Foreign Languages, Problem Solving

Humanities - Writing, Literature

Multicultural

Business Education

Physical Development

Technology

(2) Themes related to delivery strategies and/or philosophy:

Open Education Concept

Montessori

Continuous Progress

Individualized Instruction

Back to Basics

(3) Themes related to student needs and/or characteristics:

Early childhood

Gifted and Talented

Extended Day

Secondary Magnet School Themes

(1) Themes related to the curriculum and/or career options:

- Math, Science, and Computers and Technology - Biological and Environmental Science, Pre-Engineering, Computer theory, applications and programming, Health and Medical Professions
- Business and Commerce, Finance
- Military (e.g. JROTC)
- Communications, Visual, Creative and Performing Arts - Telecommunications, Graphic Arts
- Academics (in conjunction with a University)
- Foreign Languages
- Liberal Arts - Writing, Global Education, Classical Studies, Teaching Professions, Literature

- . Government/Law - Law Enforcement, Criminal Justice
- . International Studies

(2) Themes including vocational programs:

- Machine Trades
- Aerodynamics
- Petro Chemical Careers
- Banking and Finance
- Hospitality Careers

There is some evidence that the selectivity, or perceived selectivity, of magnet schools is more important to many parents than the specific magnet theme. This may be more true, however, when the magnet theme is a teaching style, as in most elementary schools, than when it is more clearly curricular, as in secondary schools. Rossell suggests that magnet schools located in racially isolated minority schools should be nontraditional at the elementary school level and highly academically oriented at the secondary level. The more racially isolated the school, the greater selectivity or perception of selectivity there should be. (Rossell, 1985:7-22)

Blank, et al, 1983, found that the way a magnet program is marketed impacts the student self-selection. Students and parents are drawn to a magnet school or program in response to the way it is presented to them. The theme of the program is the basis of the marketing.

Curriculum and/or Delivery Strategies. Students are offered a challenging and rewarding curriculum that is broad in scope yet unique in the area(s) emphasized. The curriculum brings the theme of the program into focus and includes planned experiences to assist students in attaining desired outcomes. Even though it is significantly different from the regular school curriculum, coordination of the two must occur to assure that magnet school programs reach



the "excellence" that is being sought.

A quality magnet school curriculum should include:

- enriched content in the specialty area beyond the regular prescribed curriculum
- resources beyond those designated for use in the regular classroom
- attention to both the affective and cognitive domains
- appropriate interdisciplinary studies
- attention to higher level thinking skills
- opportunities for special activities such as field trips, internships, informed classroom activities, tutorial sessions, etc.

Curriculum Development. Development of curriculum involves professional educators as well as specified community, corporate, and college and university resources. The theme and program goals serve as the bases for determining the content, learning experiences, method of instruction, and evaluation of the curriculum. As in other instructional programs, the curriculum is usually published as a curriculum guide.

Curriculum developed for magnet schools can lead to the improvement of curriculum in general. This curriculum should be shared with non-magnet schools, thus allowing the regular school students to benefit from same.

A problem of magnet schools is that so many of them created because of court-ordered desegregations, have been developed rapidly with little or no time to train staff, inform parents, and develop appropriate curricula. As a result of this urgency, many "special theme" magnets have simply failed to live up to their promise of unique curricular programs. (Barr, 1982:37-40).

#### Staffing

A critical component in a successful magnet school program design is a qualified and committed staff.

Staff Selection. Teachers and other staff in magnet school programs are selected according to criteria consistent with the theme and objectives of the program. Flexibility in staffing allows for the utilization of experts in speciality areas which adds to the indepth content exposure provided students.

The following characteristics of staff add to the strength of magnet programs: (1) Interest, (2) Experience and/or training, (3) Commitment, (4) Capacity and willingness to spend extra time with students.

Magnet Schools take advantage of multiple resources to enhance instruction. Part-time and/or hourly specialists, university professors, corporate (employee-all) actually teach in magnet schools. Volunteers further enhance the instructional program.

It is recommended that schools located in racially isolated minority neighborhoods likely to have difficulty attracting Whites should have popular white principals and teachers (but no more of the latter than is necessary to have a racially balanced staff) and schools located in a racially isolated white neighborhoods likely to have difficulty attracting minority students would have popular minority principals and teachers (but again no more of the latter than is necessary to have a racially-balanced staff) (Rosell; 1985:7-22)

Whether recruited through regular district processes or specially devised methods for magnet schools, teachers are sought who have educational or experience background in the specialty area an interest in teaching in a magnet school, an understanding of th cultures of that children, high expectations and a willingness to go that extra mile.

Staffing Ratios. Pupil-teacher ratios, class size and/or pupil professional staff ratios are adjusted downward to serve as incentives to teachers as well as strategy for attracting students. Special ratios are also required in laboratory settings.

The Houston School District found that a lower pupil-teacher ratio was cited as the most or second most attractive feature of magnet parents (Stanley, 198:9, 12). Similarly, parents of children attending a magnet school, formerly with a predominantly black student enrollment, in St. Paul, Minnesota, also indicated the most important factor to be the low pupil-teacher ratio (Levine and Eubanks, 1980:57). Magnet schools should be projected, and widely publicized, to have low pupil-teacher ratios. (Rossell, 1985:7-22).

Pupil professional staff ratios tend to be lower in magnet schools. Professional staff includes principals, teachers, counselors, nurses, resource room teachers, librarians, etc. The professional staff ratio in the Houston Independent School District ranged from 10.1 to 20.8 (1984-1985).

In staffing magnet schools, ethnic diversity must be considered. In some district's ethnic ratios are established by court order. In others, the ratios are set by the Board of Education as a part of the regular district staffing plan.

Staff Development. Staff development is a key component in successful programs. Activities include: (1) training in specialty areas, (2) multicultural activities; (3) teaching strategies, (4) educational philosophy. In Houston staff development and inservice requirements exceeded 68 hours of appropriate training during the initial implementation period.

Teacher training in the Fort Worth magnet school program included:

- (1) Courses in Gifted and Talented Education
- (2) Outcome Based Instruction Workshop
- (3) Mastery Learning Workshops
- (4) Effective School Workshops
- (5) Individual Learning Style Strategies
- (6) International Baccalaureate Training

Staff development and inservice training may be handled internally or externally. School district departments, colleges and universities, community agencies/ institutions have all been used in providing teachers with developmental opportunities.

Magnet schools offer a setting in which teacher-generated reforms can take place. Curriculum development has been a contribution that affects the educational reforms in states and the nation. (Doyle and Levine, 1984:265-70)

### Student Selection

Magnet schools programs are created to give students a voluntary choice based on interest and particular needs. Thus, student selection processes must provide access for students on the basis of voluntary preference. Magnet programs should be designed to serve average as well as high-ability students.

Various methods based on the type of program are being used to select students:

- (1) Open enrollment based on first-come, first-served
- (2) Multiple criteria
- (3) Testing (Aptitude and Achievement)
- (4) Auditions
- (5) Interviews
- (6) Lotteries

Elementary programs tend to select students on a first-come first-served admission policy. These programs are designed to enrich the elementary curriculum and to give students an opportunity to explore interest areas. The exceptions to this policy are admission to gifted and talented programs and in some instances math and science programs. For example:

- (1) Fort Worth Texas's Morningside Preparatory School of Science and Mathematics requires a student to score at or above the 80th percentile on the math and reading subtests on the Iowa Test of Basic Skills (ITBS).

- (2) Houston's Vanguard Program develops a student profile including: performance on a standardized achievement test, academic achievement, and teacher, parent, and student inventories which determine the level of development in characteristics unique to gifted students.

Many secondary programs are more selective. Students begin to concentrate on specific career goals based on identified strengths. For example:

- (1) Scores above the 60th percentile on the Differential Aptitude Test (DCAT) were required for admission to secondary programs in the Fort Worth, Texas programs.
- (2) Houston's High School for Performing and Visual Arts includes audition and interview as a part of the selection process.

Ethnic balance and/or desegregation goals are required in magnet school programs. This balance and/or goals are established either in a Court Order or by Board Policy. The percentage of each ethnic group included in magnet programs varies from district to district.

Magnet schools must reflect a policy of inclusion rather than exclusion (Doyle and Levine, 1984:265-70). Careful attention must be given to positive racial integration. One of the greatest concerns is that these schools do not reach out to assist the minority and poor youth of America who are the targets of the desegregation movement, but focus instead on attracting and holding middle-class youth. Charles McMillan suggested that: "If magnets are to prove their worth as a desegregation remedy, they must demonstrate first and foremost their ability to educate a minority child and the poor child whose rights have been denied." (Barr, 1982:37-40)

The location of the school and percent of minority students affects the success of the program. Rossell found that schools in black neighborhoods have difficulty in attracting whites, regardless of whether assignment is mandatory or voluntary. Attracting whites depends on past and projected racial composition. She suggests that "schools in black neighborhoods should be projected and widely publicized, to be predominantly white and the more

racially isolated the school, the higher this projected white percentage should be."

The 1983 study of magnet schools (Blank, et al) revealed four types of selectivity practiced among the magnet schools in the study: (1) student self-selection, which is inherent in the magnet concept; (2) market focus, which is expressed in the ways in which magnets are marketed to the community and consumers; (3) applicant screening, which may include both behavioral and academic standards for admission; and (4) post-entry mechanisms for transferring students who do not perform or behave in accordance with the magnet's standards.

Some critics of magnet school programs claim that magnet schools "skim" the best students. Most agree that magnets do, in fact, "skim" to some degree the best students, but there are many positive advantages that impact the quality of education in a community.

#### Specialized Resources

The success of magnet school programs is enhanced when adequate resources are provided to add the uniqueness desired. Facilities, supplies and materials, equipment, and human resources are the ingredients necessary to create a unique learning experience in an orderly humane environment.

Facilities. Rearrangement and/or construction of facilities relate directly to the program theme and curriculum. For example, a science program, elementary or secondary must include space for actual laboratory experiments. Likewise, a fine arts program must include space for performing, rehearsing, such as soundproof rooms, dance floors, etc. The facility affects the creativity allowed in a unique program.

Equipment, Supplies, and Materials. Since magnet school programs include the basic curriculum plus a unique specialty, consideration must be given to providing opportunities for students to move beyond the basic curriculum.



Equipment, supplies, and materials must provide an opportunity for students to explore, create and utilize higher-level thinking skills. It is in this area that the unique curriculum comes alive.

Human Resources School and community resources with expertise in a particular area allow the necessary enrichment and indepth study in the magnet specialty. Business and industry, colleges and universities and other community resources create a pool of individuals who can teach and challenge students.

### Student Recruitment

Student recruitment efforts must be based on effective communications with the total community. If the goal is to make available on a voluntary basis programs to children according to interest and choice, the message must be clearly communicated to students, staff, parents, and the total community.

Basic tools for transmitting the message include: (1) direct community contact by speaking to civic groups, churches, professional groups and employees of institutions; (2) printed materials such as brochures, fliers which may be mailed to individuals; (3) news media to reach specific publics; (4) district activities for parents and students; (5) exhibits and performances; (6) speakers; (7) publications of specific groups, agencies and/or corporations.

A problem in the recruitment of students is that of adequately informing parents and students about the variety of magnet schools and helping them make sound choices among the programs offered. Decisions sometimes appear to be based on superficial information which bears little relationship to actual practices in the magnet schools. (Barr; 1982:37-40)

### Transportation

Magnet schools rely on efficient planning and effective delivery systems. Thus transportation is a key component in successful magnet school programs. In providing transportation for all students who live outside the attendance

zone of the school at no cost to the student, consideration must be given to the most efficient and effective method of movement of students. A system must be created to coordinate regular transportation, special education, transportation required under Court ordered desegregation plans, and magnet schools. Magnets should be strategically placed to minimize long distances. (Rossell, 1985:7-22)

Where district transportation service is not available, alternatives should be considered. These include:

- (1) Individual contract with the parent on a per diem basis
- (2) Private bus companies
- (3) Metropolitan bus services
- (4) Parent drop off and pick up
- (5) Students and parents riding together to central sites  
utilizing employee van pools.
- (6) Limited attendance zones

Attention must also be given to transportation for students who wish to participate in after school activities. In St. Louis, for example, transportation is provided to students who wish to participate in after-school activities.

#### Funding Magnet School Programs

A major task in developing Magnet School programs is to identify the financial resources necessary to meet the program and desegregation goals. The following funding sources should be considered:

- (1) Reallocation of existing state and local funds
- (2) Vocational funds
- (3) Special state funding
- (4) Federal funds
- (5) Foundation, Business/Industry funding sources. Corporations may fund programs that are specifically related to their area



of business or service. For example:

Banks are involved in banking, and therefore would be interested in funding for programs related to banks.

Engineering firms would primarily be interested in funding programs relating to engineering.

The available sources are numerous and varied. A study of area corporate directories, however, is a good place to start in looking for possible funding sources. Foundation directories list information concerning funding: (a) Donor(s), (b) Purpose and Activities, (c) Financial data, (d) Officers and Trustees.

### Evaluation

The importance of an evaluation component in a magnet school program cannot be underestimated. How do we evaluate? To determine the effectiveness of programs, both process and product evaluations should be undertaken.

Process Evaluation. This type of evaluation is designed to assess the achievement of management timelines and performance of personnel in implementing the program, and detecting, during the ongoing implementation process, the strengths and weaknesses of the overall implementation effort. The process evaluation provides feedback and quality control data for the implementation method and improves the management system. The process evaluation will answer the question: Do the activities, resources used, etc., flow from the stated objectives of the specific program?

Product Evaluation. Product indicators include standardized criterion performance, affective behavior of teachers, student attendance, student and parent input, faculty stability, community input and participation, administrative and teacher input, and racial composition of students.

The evaluation design should be multi-directional and multi-source in nature.

- a. Internal Evaluation Report - Each school provides a report.
- b. External audit of magnet school programs - External personnel work in consultative and monitoring roles with programs throughout the year. In general, an audit is designed to allow external application of the same objective criteria used in internal evaluations by program personnel. The audit reports the product findings related to the accomplishment of individual magnet school program objectives.
- c. Summary review of project - The review includes data related to success in achieving action steps related to desegregation and program objectives.

Evaluations may be completed by internal district sources (Department of Research and Evaluation) and/or outside contracted services, such as colleges and universities, etc.

#### ANCILLARY COMPONENTS

Other components add to the success of a magnet school. Depending on local circumstances, these may or may not be included: (1) Parental Involvement, (2) Corporate/Community Support, (3) Inter-District Participation, (4) Evaluation.

##### Parental Involvement

Organized parent involvement in the education of children has been going on for the past 88 years. While parents and teachers have traditionally formed the cornerstone of the partnership, an expanded role for parents has been undertaken. Every effort is made to keep parents informed and actively involved as volunteers. Activities include: (1) Parents Night, (2) Volunteers with instructional and clerical duties, (3) Supervision during field trips, (4) Participants in recruitment of students, (5) Parents calling parents, (6) Financial and In-kind Contributions.

##### Corporate/Community Support

Community involvement in schools provides a range and depth of experiences for students which can greatly enhance their learning. Magnet schools utilize

resources of major corporations, colleges and universities, and social agencies to provide a richer, more relevant education. Community and corporate involvement extend to program planning and design, instruction, and support.

Business/School Partnership or Adopt A School. The Business/School Partnership pairs magnet schools with one or more businesses. The thrust of the program is the active involvement of businesses in the schools on an ongoing basis. This involvement takes many different forms. The business, for example, gives released time to their employees to tutor students or present mini-courses. It may arrange field trips, provide summer jobs, or donate materials to the schools.

To establish a Business/School partnership, the principal must survey the needs of the school, select a coordinator, encourage school personnel to support the program and participate in selling prospective companies on the business/school partnership. The teacher and the business volunteer work together as a team.

Activities of volunteers from business include (1) tutoring, (2) sponsoring field trips, (3) speaking, (4) teaching computer classes, (5) assisting teachers, (6) planning curriculum, (7) designing special labs.

Mentorships, Internships. Mentorships and internships offer a unique opportunity for students to have meaningful non-school based experiences.

In Rochester, attorneys and support staff at the law firm of Harris, Beach, Wilcox, Rubin, and Levy have formed a partnership with the School of Law and Government. As partners with the school, the law firm staff makes classroom presentations, assists with curriculum review, consults with faculty on law-related topics, and provides role models, internships and coaching for the students.

Rochester's Medical Magnet School has formed a partnership between the

science magnet and the University of Rochester School of Medicine. Seventh, eighth, and ninth graders participate in labs at the School of Medicine on Saturdays and have 20 hours of mentorships with hospital staff.

University/College support. The High School Scholars Program in Houston provides talented science/math students with the opportunity to interact with nationally renowned scientists from Baylor College of Medicine and Rice University. Participation in the program furthers the students' knowledge of the sciences and provides exposure to the scientific research process.

Community Institutions. Fourth graders in HISD's Gifted and Talented Program are involved in an environmental education project at Armand Bayou Nature Center. This project provides an interdisciplinary approach to studying the relationship between humans and the environment.

- The New York High School of the Performing and Visual Arts, for example, is located close to the theater district. Its campus is situated across from Juilliard, the New York Library of Music, and just behind Lincoln Center.
- Houston's School of Engineering Professions reflects the city's stake in high technology.

#### Inter-District Participation

The Voluntary Interdistrict Plan (VIEP) in the Houston Metropolitan area is a creative approach to encourage inter-district cooperation for sharing educational programs. Through voluntary cooperation between the Texas Education Agency, the Houston Independent School District and the surrounding suburban districts, students are able to choose educational options across district boundaries. Approximately 1200 of the participants in magnet programs are students from surrounding districts.

The St. Louis Voluntary Inter-district Plan encourages black students to transfer from St. Louis to predominantly white St. Louis County Schools and recruits comparable numbers of St. Louis County white students for city schools.

## CONCLUSION

Magnet schools appear to have proven their value. At a time when many people believe that little is working well in public education, a concept with even a modest record of success is exciting news. (Barr, 1982:37-40)

A growing body of information attests to the effectiveness of magnet schools:

- . Reduction in violence and vandalism
- . Better attendance rates
- . Improved achievement
- . Improved student concept and better attitudes toward school

According to a 1983 United States Department of Education study conducted by James H. Lowry Associates and Abt Associates (Blank, et al):

- . Magnet schools can and do provide high quality education in urban school systems.
- . They help renew the interest and motivation of teachers, because efforts are organized around common academic goals and interdisciplinary curriculum planning.
- . Potentially, they can help improve a school system's image in the community as a result of voluntary enrollment policies.

There have also been unintended consequences of magnet schools: (1) they provide parents a choice within the public school system--the ability to choose the kind and quality of education they want for their children, (2) magnet schools encourage practice of a wide variety of educational philosophies and methods, (3) magnet schools have provided us a means for research and development--for trying our new ideas and approaches that add to our knowledge of effective school programs. (Clinchy, 1985:43)

Several potential research questions have been identified. A search of the literature and information available indicate that there is a need for systematic, comparative analyses of magnet school components related to success. Components have been clearly identified, but questions remain about program components leading to successful magnet schools.

How well do students do after they leave magnet school programs? Very few of the school districts can answer this question based on accumulated longitudinal objective data. Others have not had enough graduates to determine same. Follow-up studies are needed to determine if students are indeed successful and if this success can be related directly to magnet school programs. Further attention should also be given to which components of magnet schools contribute to this success. Further research will give us objective data to assist school districts in moving forward in creating effective schools and achieving the excellence we all want for our schools.

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**A PRACTITIONER'S VIEW OF ESSENTIAL  
INSTRUCTIONAL DEVELOPMENT FACTORS  
IN PLANNING MAGNET SCHOOLS**

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# A PRACTITIONER'S VIEW OF ESSENTIAL INSTRUCTIONAL DEVELOPMENT

## FACTORS IN PLANNING MAGNET SCHOOLS

### Introduction

Magnet schools are characterized by offering attractive specializations in K-12 education with accompanying unique and/or intensified curricula. They provide alternative educational opportunities for students and parents and in most cases, have been the fundamental vehicle for school integration efforts throughout the country.

This paper primarily addresses the instructional development factors that are important in planning magnet schools. In considering the design process for magnet schools, certain considerations for the delivery system or implementation process must also be examined.

The sources of information for the paper are the author's twenty years of experience as a curriculum planner within an urban district that has gained national recognition for sound educational change; the experiences of valued colleagues at home and throughout the country; and observations gleaned from visits to many successful program sites. In addition, the paper includes examples and information from visitors to the Buffalo School District, from as close as Rochester, New York to as far as Alaska, Thailand and Singapore. The purpose of the paper is to provide a basic source document for school districts that are considering the development of magnet schools.

### Selection of a Direction

This first phase in planning a magnet school is extremely critical. If carefully crafted, it sets a firm mold upon which subsequent planning can efficiently build.

In selecting a theme, approach and/or program that will become the basis of a viable addition to your education community, it is imperative that, as the Music Man says, "You must know your territory." A magnet school espousing a physical education or sports thrust may meet with greater success in a southern area than it would in Western New York. A school aligned with a major corporation in a town or city has a built-in interest factor. Magnet schools depend on voluntary enrollment, therefore, it is critical to assure that there is a potential clientele for the proposed offering.

The law of supply and demand needs to be observed. Most districts begin by assessing the needs of the community either with an open-ended survey or a checklist survey identifying five or six magnet themes for possible consideration. The demographics of the community are important to consider. For example, our area has a large number of young college and university professors who expressed an immediate interest in a school based on the Montessori approach to learning. Consider the educational philosophies that the community is exposed to through the media or through local social or cultural institutions. The so-called "back to the basics" movement gave rise to a support group for our Traditional Magnet School that included a strict dress code and educational contracts signed by parents, students and school staff. A sure fire magnet school for a first attempt in any district is one for the Gifted and Talented. There is not a district in this country that does not have a core group of parents demanding specialized programs for their bright children.

It is also important to listen to the "squeaky wheels" in the community, to listen to staff within the district, and to listen to the unassuming professor from a local college who comes to you with a beautifully designed program in finance for secondary students. But, in the process of listening, it is also important to thoroughly examine,

and filter through all that you are hearing with the experienced ear of an educational architect. Precise educational foundations must form the core of the selected direction; and, bottom-line questions need to be answered in the affirmative.

1. Does the proposed direction adhere to the educational goals of your district?
2. Is the direction congruent with your local and State Education Department's mandates?
3. And most importantly, will the proposed magnet school provide enhanced educational opportunities designed to maximize student learning?

The tension between community need and sound educational expertise creates the healthy balance that, when nurtured carefully, leads to success. Nurturing this balance is an ongoing process that may have its beginnings here, but must be continued throughout all stages of development and implementation.

A cadre of proponents arises during this beginning phase. These are the people who visit other sites to identify or verify directions. They are the ones who labor in putting together the initial comprehensive proposal for Board of Education approval. They are the visionaries who are convinced that their selection of a direction will truly evolve into a needed educationally-sound magnet program for students.

The composition of this group is peculiar to each endeavor. Generally, it is composed of Board of Education representatives, staff, professional union representatives, parents, university and college staff, members of the broader community, and in some cases, students.

The lead persons in roles vary more often than not. During the development of our Futures Academy, a parent previously antagonistic to the whole magnet approach suddenly became the most outspoken advocate. When this parent became a member of the Futures Magnet Planning Committee and saw the advantages of the life-skills curriculum, she reversed her prior objections to sending her children across town to an inner-city building for their education. She is now an active member of the magnet school team to promote parent participation.

This example illustrates the need at this phase for broad-based collaboration. Plans developed in isolation, albeit by well-meaning central office staff or principals, are too often doomed to failure. The cadre of key supporters becomes not only the prime movers in the planning, but serve as the "cheerleaders" who spread the word and become the catalyst for an ever-expanding group dedicated to participating in all phases of the project.

### Instructional Planning

At this point, a direction has been established. Generally, the basic organization decision has been made and you know if you are dealing with: a school within a school; a total school design; an approach that will close a school in June and reopen it in September with a new name, program, and organizational structure; a school based on a curricular emphasis or one based on a specific educational philosophy and/or teaching/learning style; or it might be a unique structure, such as the new school we are building which will be connected physically and programmatically to our local Museum of Science. At this time, you know the breadth of your task and you have your "cheerleaders" as the nucleus of a planning committee. Your planning will be, as Edward Krug (1957) suggests, comprehensive, concrete, cooperative and continuing. Yet when Krug proposed his 4 C's to curriculum planning in the late 50's, I doubt that he had in mind the extent to which each of the above would be stretched to apply to magnet school planning.

The program mission will dictate the key people who need to be added to the planning committee. As Buffalo Public School personnel, it never would have occurred to us that we would be working directly with architects, but our current project makes them critical members of our planning committee. The architects are not there to assist in program planning but to obtain a complete understanding of all program

elements in order to assure that the new building is designed to provide appropriate settings for the multitude of student, staff and community experiences being proposed.

Some projects require direct input into planning from any number of sources that can provide expertise above and beyond local staff planners. For example, our local bar association, elected officials and judges have assisted us in the development of our Law and Government Magnet. Again, most important in all planning committees aside from teachers, administrators, board members, sometimes students, and the experts, are the parents and community members. The general planning committee is usually large, but throughout the planning, small sub-committees branch off and include additional short term members to address specific tasks which, when completed, are brought back to the general committee for discussion and approval. State and federal consultants often provide valuable assistance to the sub-committees. It is important to choose as general committee chairperson, a staff member who is an expeditor, organizer, and mediator; someone who conducts meetings efficiently, maintains a timeline and understands closure. This person additionally will need to be in constant touch with the instructional head in the district - the "master builder/planner". Pick the person, not the job title for this important assignment.

Unlike General Motors, magnet school planners never have the luxury of planning five to ten years in advance for a change in design. Time is always short and intense work is demanded. Local development of curriculum, including activity packets or instructional manuals, is extremely time-consuming. It will probably mean a continuing and costly commitment that will continue even after the opening of the magnet school.

Typically, local-level curriculum development cannot be avoided. A good example is the Air Traffic Control Magnet in Buffalo. There was no curriculum anywhere that we could use or adapt locally. Therefore, work on this project is constant, to assure that all material is sound, sequential, tested and refined as the student group progresses through the initial implementation phase. Local experts have been called upon to assist

curriculum committee members. Curriculum specialists are assigned to committees to expedite the editing and compilation of the materials in a form that facilitates useful implementation by teachers.

In planning many of our magnet schools, we did not have to "reinvent the wheel." Our research and visits to other sites provided us with a very effective method of program planning which we have come to call "creative stealing". Through the National Diffusion Network of Exemplary Programs, and our State Education Department's Transferring Success Program, we have replicated, adopted and/or adapted programs that have proven their worth in other districts throughout the country. Many of these projects have been validated through a stringent review process by the U.S. Department of Education or the State Education Department. The project documents provide objectives, activities, materials and evaluation strategies that have proven effective in increasing learning outcomes for students, and experts can be identified who will come to the district and conduct extensive staff training.

After the initial training, a cadre of local staff members is identified to participate in additional training designed to certify them as turnkey trainers in the program(s). This process assures that the district will develop a local capacity for all future training and technical assistance. We are careful to choose programs that have been successful with students having needs similar to our students, and are congruent with our curricular mandates and local and state testing instruments. Four of our five schools that have won National Recognition Awards for Excellence have replicated national or state validated programs - Early Childhood Center #54, Houghton Academy, West Hertel Academy and our Junior High School Science Magnet. This approach to development also gives rise to staff participation in local, regional and national networks



that provide invaluable contacts and information regarding programs and practices that work.

The replication approach is also extremely cost-effective. The first year of magnet school funding is the most costly and replication of programs rather than local development of all program components, cuts funding needs considerably.

Whether your program development is locally based and/or linked to a replication, special attention must be given to the adaptations necessary to assure effective participation of special education students that are assigned to the magnet. If "mainstreaming" is the goal, curriculum components must be consistent. A task analysis for special education students is helpful in designing appropriate activities geared to meeting program objectives.

Additional attention needs to be given to the activities that the librarian, and the art, music, foreign language, physical education and vocational education teachers will provide for students. Many times a unified approach to learning is designed in which activities dovetail with the major program thrust. For example, in our bilingual magnets, activities provided by the above staff center around the contributions of the Hispanic culture and are linked to the sequence of learnings provided by the classroom teachers.

An instructional planning committee may become involved with other issues. First, if the magnet is intended to serve a specific student population, such as in Buffalo's City Honors, Visual and Performing Arts and Frederick Law Olmstead Magnets, student eligibility requirements must be clearly defined and recommended. The planning committee often needs to recommend and itemize all the materials, texts, and equipment needed for program implementation. All evaluation strategies designed to monitor program effectiveness need to be included. All aspects for staff training must be planned. The committee also needs to detail any plant changes that might be necessary within the building designated to house the magnet. And finally, an



estimated budget must be formulated and attached to the total planning package for approval by the local Board of Education.

### Staffing Considerations

Many magnet schools depart from the traditional school staffing pattern of one teacher per class, assistant principals, and a principal. Each magnet dictates a unique staffing configuration from the teaming of teachers to the addition of paraprofessionals, professionals and/or volunteers. Part of the success of magnet schools is credited to the collaboration and teaming of teachers and aides working together with students in the classrooms.

One of our most successful staffing recommendations was the addition of a "program coordinator" to each elementary magnet school. This person is a teacher whose total responsibility is to assist classroom teachers with implementing all aspects of the new program design. The assistance includes: a) conducting staff development sessions; b) providing classroom demonstrations; c) testing students who enter the magnet school; d) disseminating materials; and e) conducting grade level planning meetings. The program coordinator is in the school full-time, but has no teacher evaluation responsibility. This position has become critical to the maintenance of program fidelity.

In the secondary magnet program, department chairpersons or "secondary program coordinators" assume similar tasks. Many districts with multiple magnets have district-wide teams of counselors and teacher specialists who provide assistance to the schools in reading, mathematics, computer instruction, human relations skills training, and many other services designed to strengthen the total district commitment to magnet school(s) success.

Approaches to staff selection also vary considerably. It is extremely helpful when the principal is designated early in the planning process. His/her participation in

all aspects of program design assures commitment to the project and the development of a leadership role that carries forward into implementation. The principal can play an important role in the selection of the teaching staff. Many magnet schools are staffed through an interview process conducted by the principal and key planning committee members.

To help build staff consensus, some magnet schools require that teaching staff, who are already assigned to a building designated to become a magnet, sign a form stating a commitment to the philosophy, training and implementation components of the new design. Those choosing not to sign are offered voluntary transfers to other schools in the district. In cooperation with other planning committee members, some magnet programs are developed by the teachers who will implement the program.

Because magnet programs demand a departure from what staff and administration are accustomed to providing, a voluntary "buy in" of some kind helps to eliminate the nay-sayers who may impede program implementation. This is also a consideration when assigning professional staff, school clerks, cafeteria and maintenance personnel. The "cheerleaders" expand from the planning committee members to school site implementers.

There is, however, a danger in the development of magnet schools in some districts. Non-magnet school personnel may resent what they believe are unequal distribution of resources, especially during the first year of implementation. Some believe staff and students are being siphoned off, leaving their neighborhood schools with a weakened school climate. Time and information must be given to all schools to assure an understanding of the district-wide commitment to the education of all students and the role that magnet schools provide in inservicing the needs of the total community. When the responsibility for instruction is placed in the office of one leader and not fragmented through a separate chain of command for magnet schools, the divisiveness can be most effectively eliminated. The establishment of separate "turfs" at the top can only add to confusion and conflict. A delicate balance needs to be

maintained and can be best served through one voice articulating and assuring that balance.

### Providing Information and Developing Awareness

Advertising strategies and student recruitment procedures will not be extensively reviewed in this paper. However, some basic considerations need to be included here because of their implications for the planning process.

The general planning committee members have the task of providing information regarding the proposed magnet program to not only the board members but also to parents, teachers, the broader community, and sometimes a federal court. As soon as the magnet plan is approved by the local board of education, it is necessary to share it with teachers, administrators and parents. Formal information sessions need to be conducted for each group. These sessions provide staff members with an opportunity to decide upon their eventual participation in the implementation. The sessions will give parents a preliminary understanding of the learning experiences students will receive at the new magnet, as well as information on their eligibility and the educational benefits of participation.

One over-riding concern of parents, at this point, is the safety of their children. Many students, for the first time, will be riding buses to and from a school site that is some distance from home and often to a neighborhood that parents may perceive as undesirable. All safety factors built into the transportation of students need to be clearly defined and emphasized at the information meetings. These factors include: bus routes and time schedules; the assignment of paraprofessional staff to each bus to assist students during the bus ride; procedures at the school site for receiving and boarding students; emergency procedures in case a bus is late or encounters mechanical difficulties; and school policies for the notification of parents if a student should become ill during the school day. Once parents are convinced that the planned

precautions meet their standards for child safety, they are more likely to begin to look objectively at the unique educational opportunities being offered. The "cheerleaders" play an important role as presenters at these preliminary meetings. They are knowledgeable, committed and able to spread their enthusiasm with credibility and trust.

### **Staff Training and Retraining Requirements**

Each new magnet program has built-in demands for staff training. Training programs should primarily focus on the new curricula, materials, methods and organizational implications. Where possible, this training needs to be linked with district-wide professional development goals. Take time to carefully plan every aspect of training. There is a definite correlation between the quality of training and the quality of implementation. Staff need to be freed from all other responsibilities to assure that focus and concentration are directed to the training components. The best time for initial training is during the summer months preceding the opening of a magnet school. Some important considerations in planning training are:

- a. **Involvement of expert presenters** who have proven track records and who have carefully crafted their presentations to meet the needs of their audiences. It is essential that the presenters model effective teaching techniques. Nothing is more deadly than the obsolete lecture, note-taking, and testing approach.
- b. **Selection and notification of training participants.** All teachers and administrators will participate in all training related to the program. Paraprofessionals, school clerks, cafeteria staff, engineering staff, bus drivers and bus aides need to attend specialized training geared to providing program information, developing expectations of their contributions to the school and creating a sense of teamwork.
- c. **Use of a pleasurable setting.** The inclusion of snacks and beverages help convey the attitude that the comfort of the participants is important.
- d. **Introductions and greetings from the superintendent and board members.** A sense of importance and commitment helps build cohesiveness and collegiality among the participants.

- e. Dissemination of relevant and meaningful training materials to each participant. Training manuals can provide a continuing reference.
- f. Scheduling the first days' activities that are interest-peakng and provide opportunities for successful completion.
- g. Provision for opportunities for participants to process new learnings through active participation, hands-on activities and time for discussion and practice.
- h. Teaching only a few major topics each day, the modeling of the needed skills and an explanation of their research base. Overload is counterproductive.
- i. Matching the length and depth of training to the complexity of program components. It needs to be understood that training will be continuing throughout the implementation phase.
- j. Include strategies for follow-up in on-site activities. Recent research conducted by Bruce Joyce and Beverly Showers (1982) has prompted recognition of the essential need for practice. The on-site program coordinator or department chairperson play a critical role in assuring that information learned in the workshops is transferred into desired practices at the work place. This includes the development of a "peer coaching model" at the building level.
- k. Use of appropriate evaluation methods to monitor participant reactions to training, assist in adjusting training to meet emerging needs and help plan for future training.

Staff development has become a primary initiative in most districts. Teacher Centers provide invaluable assistance in this effort. Current research on the "Essential Elements of Effective Instruction" from the work of Madeline Hunter has prompted our district to launch a long-term, comprehensive professional development thrust to improve the skills of all personnel within the district. Magnet schools have taught us that short term curriculum-based inservice is not enough. A commitment to continuing professional renewal is vital.

## Summary

Magnet school planning is no easy task. It involves a multitude of steps and processes that vary with each project. Yet, certain common factors seem to be essential to success in all projects. They include:

- Educational integrity of program purpose -- top-quality programs designed to maximize the learning potentials of students.
- Top-level instructional master builder/planner -- maintains the district-wide blueprint for commitment to educational opportunities for all students within the district.
- Action leaders -- creative planners and expeditors dedicated to project planning and implementation.
- Commitment to cooperative, collaborative planning and implementation -- a continuing expansion and nurturing of the "cheerleading teams".
- Constant communication and flow of accurate information to all constituencies -- direct, purposeful and continuous public relations activities.
- Built-in strategies -- for continuing evaluation, refinement, staff development and renewal.
- School-based support personnel and strategies -- to assure that information and skills learned in the workshops are transferred to the workplace.

The benefits to school districts that have incorporated magnet schools as an expansion of their educational opportunities for students are difficult to quantify. Granted, studies have been conducted that verify increases in test scores of students and decreases in absentee and drop-out rates of students attending magnet schools. Yet, very little and in most cases, no data have been generated to verify the ancillary benefits to school districts and communities where magnet schools have proven successful.



A major benefit of magnet schools in Buffalo has been a marked rise in the levels of professional competence of staff members and their continuing demands for increased growth opportunities. Some additional benefits observed in Buffalo are listed below as suggestions for further investigation:

- Increased positive support for the school system from parents, community and media.
- Increased number of national, state and community awards for excellence in education to the district, individual schools and staff members.
- Increased number of visitors to the district who seek advice in planning educational change in their communities.
- Increased requests for staff to act as consultants to other districts in program planning.
- Increased number of parent and community members who participate in magnet planning activities and subsequently continue their education to receive high school diplomas and/or post secondary degrees.
- Increased number of outreach contacts and support networks, including professional, private sector, political, social, and cultural, that contribute to planning and implementation.
- Increased number of volunteers who contribute time, expertise and resources directly to students.
- Increased requests from universities, colleges, private and public organizations for collaboration on projects designed to increase the educational opportunities of district students.
- Increased applications from out-of-district students for admission to magnet schools.
- Increased number of requests for staff to sit on governing boards, advisory boards and committees providing services at a local, state and/or national level.
- Increased property values in neighborhoods that give resident children preference for attendance at specific schools.
- Increased commitment from local, state and national legislators for funding support for magnet schools and education in general.



Participation in a district's magnet school planning and a comprehensive integration planning process can unite the efforts of the total community to focus on educational opportunities for all students, and in so doing, can ensure a self-perpetuating and ever-expanding learning pursuit for all involved.

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**EFFECTIVE INFORMATION DISSEMINATION  
AND RECRUITMENT STRATEGIES FOR  
MAGNET SCHOOLS**

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# EFFECTIVE INFORMATION DISSEMINATION AND RECRUITMENT STRATEGIES FOR MAGNET SCHOOLS

## INTRODUCTION

Although magnet schools have have been used extensively in the United States as a mechanism for desegregating public education, little has been published on pupil recruitment strategies and admission policies for magnet programs (Blank, 1986) and their impact on equal access.

This paper will attempt to examine these issues by reviewing information dissemination strategies currently being used to inform potential choosers of their choice options, identifying and discussing those strategies which appear to be effective, and examining magnet school admission policies. Many school districts with magnet schools are conducting recruitment strategies with considerable success. Many more, however, are isolated and not aware of the successful strategies that have been developed by others. During the initial stages of magnet program development, the level of accessibility of special magnets to all students is sometimes impaired by the attempt to design magnets which are attractive to special groups.

This paper is intended to serve as a stimulus for further discussion and study of the critical magnet school issues outlined above. The research is based in part on a survey, conducted by the authors, of 56 magnet school administrators whose programs are funded by the Magnet Schools Assistance Program (MSAP). The school districts represented ranged in size from 9,300 students to 680,000. Each city had an average of 3 magnet schools with 22 being the highest number and 1 being the lowest. (See Appendix for further description of methodology.)

## MAGNET SCHOOL INFORMATION DISSEMINATION STRATEGIES

### Who Should be Responsible for Information Dissemination?

Before identifying the most commonly used information dissemination strategies and methods of reaching parents and students, it is important to discuss who is generally responsible for designing and implementing the information dissemination plan. The most common approach has been to rely heavily upon the magnet school central administrative staff to conduct the design and implementation stages of information dissemination. Evidence suggests, however, that this is not necessarily the most effective approach. While the MSAP practitioners generally agree that a central magnet school information department should be responsible for the actual marketing plan of the overall magnet program, several other components are critical. Involvement and support from a district's public relations or parent and community involvement office is often essential to the plan because the effort frequently requires major changes in the way school systems provide information to the public and the level of information provided by non-magnet schools. The overall organization of the system as well as the existing information dissemination strategies used in the system, should be considered when preparing a magnet schools recruitment plan. Magnet school practitioners agree that while the central magnet school information department should have overall responsibility for marketing, each magnet site should manage its own marketing plan with support from the central office.

Educational personnel are not necessarily in time with the pulse of the community and may not be adept in the use of successful marketing techniques. The MSAP survey results show that educators' perceptions of what parents look for in selecting a school are not necessarily in agreement with marketing experts' findings. One interpretation of the data is that the use of private sector marketing agencies may be the most effective approach for districts that

are just beginning to implement a magnet plan. It may be advisable for districts that are in the initial phases of magnet school development and recruitment to contract with a professional marketing agency to assist with the plan. The initial cost may seem high, yet a trial and error process of information dissemination by local educators may only end up being more costly in the long run, and more importantly, actually impede the attainment of magnet school recruitment goals.

#### What Types of Information Dissemination Strategies are Commonly Used?

An analysis of survey questionnaires filled out by administrators from 56 school districts currently implementing MSAP programs has revealed the most commonly used information dissemination strategies to attract students to magnet schools used by their districts to be the local media, formal and informal meetings with organized parent groups and neighborhood parents, mailings of printed materials to students and parents, recruitment visits to schools, peer recruitment activities, school open houses, "word-of-mouth," and recruitment booths at shopping malls.

Other types of information dissemination strategies which are used by districts to a somewhat lesser degree have included:

1. Dissemination of printed materials describing magnet school options to:
  - Local real estate agencies
  - Private nurseries, daycare centers, and preschools
  - Public libraries
  - Public housing authority offices
  - Youth Centers (e.g., YMCA/YWCA, youth groups)
  - Civic groups
2. A telephone informational hot line (e.g., "dial-a-tape")

3. Telephone recruitment
4. Video tapes/discs disseminated to target groups
5. Distribution of bumper stickers and T-shirts advertising magnets
6. Advertisements on city buses and billboards
7. Calendars publicizing application dates
8. Speakers Bureaus of magnet school supporters including: parents, students, teachers, special staff, community leaders.

#### How Effective are these Strategies in Informing Potential Choosers?

Essentially, all magnet school information dissemination strategies can be construed as "publicity campaigns" for marketing of the magnet program. It should be obvious that no matter how popular, or seemingly effective a particular strategy is, the product itself, the magnet school, is the key factor in the "sale." On the other hand, a highly effective school may not draw the target population it is striving to attract if potential students and their parents are not aware of the program.

Analysis of the magnet schools survey results and a review of available literature leads to the conclusion that there is no single strategy that is effective for every school district, and while some strategies are effective for one district, those same strategies may be totally ineffective for another. Every district must use a unique combination of information dissemination techniques. The most effective information dissemination strategy is the one that reaches and informs the maximum number of potential choosers. Therefore, each school district must know specifically who those potential choosers are before it can select the best strategy for its recruitment effort.

#### Targeting the Information Dissemination Effort

The first general category of choosers to reach are parents, since it is the parents who are the primary decision-makers in the selection of their child's school until the child reaches high school. As potential magnet school



students get older, peers have a great deal more influence on their choice of magnets. Teenagers have a tendency to choose the schools their friends choose. Most district recruitment materials reviewed by the authors have tended to be oriented toward parents, even at the high school level. School districts, however, should be cautious in orienting recruitment materials to students. It has been our experience that materials and ads specifically designed to attract students may tend to upset adults. Themes using rock music or other popular interests of teenagers are sometimes not well-received by parents. It is quite a bit less controversial and safer to use recruitment themes that target parents as recipients of information.

Knowing the importance of focusing information dissemination efforts on parents, it must be determined specifically who the potential parent "choosers" are, where they are located, and where you need their children to improve racial balance. The size of the school district and the demographics of the pool of potential choosers are key factors to consider when selecting a strategy. For example, our MSAP Survey results show that 75% of the districts with enrollments over 40,000 students believe that dissemination of printed materials mailed to the homes of students was the single most effective part of their strategy, whereas districts with enrollments under 40,000 students cited newspaper advertisements as their single most effective tool. All parents, regardless of race or class, want a "good" school for their children, yet different communities and different groups within the community may use differing criteria for selecting a school. For example, MSAP Survey data indicate that program selection criteria differ slightly depending on the size of district: staff in small districts believe parents consider curricular emphasis before they consider location, whereas in the larger districts, staff perceive location to be a more important choice factor than curricular

emphasis. No matter what the district size, however, respondents agreed that social reputation (i.e. extracurricular and/or social activities) is the least significant factor influencing program choice.

Determining what criteria parents use in selecting a school should guide the design of recruitment materials. Information should be organized to emphasize the school features which parents consider particularly important. Printed material that is mailed to students' and parents' homes should be expressly tailored to the needs and desires of the target audiences. Letters and brochures should be written in clear, concise language which all parents can easily understand. Educational jargon which may be confusing should be avoided and the materials should be written in the parents' native language whenever possible. Strong emphasis should be placed on considering the characteristics of the target audiences. Are the intended information recipients Hispanic, black, Asian, white, private/parochial school parents, or suburban? Once the potential groups of choosers have been identified, the information should be specifically tailored for and disseminated to those groups.

After assessing the number and type of choosers to be reached and determining where they are located, district staff should determine what financial and human resources will be available to develop and implement a viable recruitment plan. Cost factors will significantly influence the kinds of strategies to be used.

Marketing research has found that, generally, it takes at least three contacts with a potential chooser in an appropriate target group to make up his or her mind regarding the selection of a particular program. Statistics for continuing education programs show that there are peak periods in the time schedule for program registrations. Currently, there is no similar data available for magnet schools which could be used to develop a practical information

dissemination plan that provides the three or more contacts. An April target date, however, for school selection seems to be the most common one used by districts, as it allows adequate time for informing parents, staff planning, and, if it involves recruiting students from outside the district (i.e., private school students), it takes into account other options in-selection deadlines that parents and students may have.

Results of the MSAP survey done for this research show that districts with enrollments under 40,000 students generally have found the strategies listed in the first column below to be most effective (in order of most effective to least effective); the survey results of districts over 40,000 are listed in the second column.

<u>Districts UNDER 40,000</u>	<u>Districts OVER 40,000</u>
1. Newspapers	1. Printed materials mailed to students/parents at their home address
2. Meeting with organizations and parent groups	2. Printed materials mailed to students in non-magnet schools
3. Printed materials mailed to students/parents at their home address	3. Newspapers
4. School "open houses"	4. Meetings with organizations and parent groups
5. Distribution of printed materials in non-magnet schools	5. School "open houses"
6. Visits by recruiters to non-magnet schools	6. Visits by recruiters to non-magnet schools
7. Peer recruitment	7. Peer recruitment
8. Television	8. Television
9. Radio	9. Radio
10. Neighborhood "Kaffee klatches" or other informational personal contact	10. Neighborhood "Kaffee klatches" or other informational personal contact
11. Recruitment booths at shopping malls	

These information dissemination methods are only effective when implemented as part of a well-orchestrated design with carefully chosen timelines as well as target audiences. In examining the techniques used most frequently in districts under 40,000, newspapers are noted as the single most effective tool, yet further clarification is necessary because newspapers can include a wide variety of readers and even in smaller cities, there is often more than one newspaper.

A district should examine the degree of appropriateness the various local newspapers have to the targeted chooser (e.g. ethnic press, labor press, shopper's guides, suburban press, special community-based press). Magnet schools information specialists questioned by the researchers expressed the opinion that positive news and feature stories about magnet school programs and events provided a more effective way of using newspapers to reach choosers than relying on paid advertisements. Therefore, experience suggests that recruiters should develop contacts with representatives of local print media to create greater awareness of, and interest in, magnet options.

The evidence on information dissemination and recruitment for magnet schools clearly stresses how essential the support and commitment of the school board and district leadership is to the success of their magnet programs (Blank, 1986). This is hardly a surprising finding, yet there have been instances where lack of support from these key groups can seriously erode the effectiveness of even the most well-developed information dissemination plan. For example, one district's magnet schools director interviewed by the the researcher was deluged with phone calls from parents who were upset about a front-page newspaper quote from a school board member who had said that the district was financially unable to support any new magnets. According to the respondent, financial support was not really an issue for continuing existing

magnets or adding new ones. The magnet schools director further stated that, as a result of the board member quote, several parents withdrew applications and that he was concerned about the impact the article would have on future applicants.

#### LIMITATIONS OF NEEDS ASSESSMENTS

Specialists in magnet program development put great emphasis on conducting needs assessments. These assessments typically involve the use of questionnaires which most frequently illicit the kinds of information educational personnel want to hear rather than determining what the school community really wants. The fact that 95% of parents surveyed might say that they would be interested in sending their children to a technology magnet does not mean that 95% of them would actually enroll their children in that school. Further, a response by a small but dedicated minority who would actually enroll their children in the program could be easily overlooked or discounted. Finally, surveys are often designed as if a district has no history and they sometimes fail to account for all the important variables that affect choice. Marketing research shows that some of the pitfalls in the use of non-professionally-developed needs assessments are:

- Surveys are often written in a way that produces results which are biased.
- Certain kinds of people fill out questionnaires, others do not (i.e., active vs. passive choosers).
- Often, people tell those who administer surveys what they want to hear.
- Persons who are dissatisfied are more apt to answer questionnaires than those who are satisfied.

A good example of this emerged in the analysis of the survey of magnet school administrators used for this research. Respondents to this instrument

agreed that parents choose a school primarily based upon the academic reputation of the school, whereas surveys of parents show that, generally, parents use non-instructional criteria in choosing programs. Further, administrators from cities over and under 40,000 cited school location as the second and third most important factor respectively affecting selection, but school location was cited as the primary criterion for most families (Bridge and Blackman, 1978).

Survey responses from magnet school directors and available literature suggest that several components make up an effective information dissemination system. Prior to designing an information dissemination plan, parents should be surveyed to determine the kinds of magnet schools they want for their children. Magnet programs that are developed should reflect the interests of parents.

#### A SAMPLE CASE STUDY OF A DISSEMINATION AND RECRUITMENT PLAN

In the following pages, a sample information dissemination/recruitment plan is presented and discussed in order to illustrate a combination of strategies that are likely to produce the most successful results.

##### Background

School district "A" is located in a northeast urban setting with an enrollment of 39,000 students. Its minority population is 66%; of these students, 50% are black, 12% Hispanic, 3% Asian, 34% white, and 1% "other." District "A" has two existing magnet schools; these magnets are successful in attracting students and are racially balanced, yet district planners have identified three key concerns they want to address in their recruitment plan for the ten new magnets they have recently planned. These are:

1. To increase the number of Hispanic students enrolling in magnets.
2. To increase the number of white students enrolling/re-enrolling in district schools.
3. To increase the number of low-achieving black students who apply to magnets.

The existing magnets are well-established and have enjoyed a good reputation within the community for over five years. Because of their popularity it has not been necessary to implement any special recruitment strategies to attract students other than by word-of-mouth.

The newly-developed magnets embody a rigorous academic approach and each was carefully designed to provide the community with programs which parents had identified as being needed or wanted. Following is the information dissemination plan employed by District "A" to recruit students to the new magnets.

#### Pool of Potential Choosers

District "A" wanted to draw enrollment from all school-age children in the city as well as attract some white suburban students. Board of Education policy allowed 10% of each magnet school's population to be opened to suburban students on the condition that all city students had first choice and suburban students would only fill vacancies that existed after all city students were placed. Therefore, the district's pool of potential choosers was the entire parent and school-age population of the metropolitan area: 860,000. Since planners had several "subgroups" they specifically wanted to reach, they knew they would have to design a plan that was effective for both the general population as well as specific targeted groups. With the assistance of consultants from a local marketing firm, the district determined the special needs of the three targeted subgroups that they specifically wanted to reach and suggestions were made for reaching them.



## Recruitment Objectives

### Objective 1: To Increase Hispanic Enrollment.

Hispanic parents were generally unaware of the choice options available for their children. Although many had read the Spanish-language brochures mailed to their homes, the brochures were written in vague terms and Hispanic parents were reticent about calling the district central office or school to find out more about getting their children enrolled. Hispanic community leaders informed the consultants that many Hispanic parents felt uncomfortable in actively seeking information from the district.

### Recommendations:

The marketing consultants recommended improving the quality of translations in the written material to Hispanic parents. Moreover, they recommended an approach stressing direct personal contact using parent and student volunteers to initiate phone contacts and make home visits. Posters in Spanish were distributed to grocery stores in the Hispanic community, youth centers, and meeting sites for Hispanic community organizations.

### Objective 2: To Increase White Enrollment.

Parents who sent their children to private or parochial schools said they did so because they believed that private schools offered better discipline, smaller classes, extended child care, religious instruction, and more concern for individual students.

### Recommendations:

The marketing consultants and ex-private school parents recommended sending a special cover letter along with the general magnet brochures to parents of private school children emphasizing the features of the magnet program which drew the parents to private school: better discipline, small class size, individualized attention, caring teachers, and extended child care.

Objective 3: To Increase the Number of Lower Achieving Black Students  
Enrolling in Magnets

Lower achieving black students felt that magnet schools were for "smart" kids only.

Recommendations:

The marketing consultants recommended peer recruitment along with extra assistance from youth advocacy groups to reach low-achieving black students. Visits by the magnet recruiter to compensatory program classrooms in targeted non-magnet schools, home visits and personal contact with parents at community centers were also recommended.

The marketing firm also supplied the school district with a media list that was specifically prepared to reach the three unique target groups that the district was especially interested in contacting. The marketing agency also had a good mail-broker department which was able to identify a target mailing down to one city block within a zip code area. With all this information, the district designed and implemented its information dissemination strategies as described below.

Information Dissemination/Recruitment Timeline

Although information dissemination is conducted on a year-round basis, major dissemination activities occurred during a specific 6-8 week period -- early March-April 30. The target date for submission of enrollment applications was May 1st.

A. Phase I - Preliminary Publicity (Early March)

1. Two general press releases to print media. The first describes choice options of magnets in attractive, general terms; the second gives more specific details.
2. All printed materials ready to distribute (posters, flyers, brochures, applications); Speakers Bureau volunteers ready and all special mailings prepared.

B. Phase Two of Information Dissemination (Mid-March)

1. Television - Magnet Project Director appears on local talk shows.
2. Radio - Magnet Project Director discusses magnet programs on local talk shows.

C. Phase Three - Countdown Period (April, 4 weeks to target date)

1. Four press releases - one per week (emphasis on special target group audiences in special interest press) [April 1-30]
2. Public service announcements [April 1-15]
3. Radio and television appearances of magnet site staff and students (target programs that have been identified for special target audiences) [April 1-20]
4. Activate mailings, distribute posters, brochures [April 2]
5. Activate Speakers Bureau - speakers at community meetings, clubs, parent groups, etc. [April 10-30]
6. Hold "open houses" at magnet sites [April 15-22]
7. Magnet school recruiters visit schools, make home visits [April 15-22]
8. Activate parent-to-parent telephone recruitment [April 15-30]
9. Implement final television, radio, newspaper ads, submit application deadline dates in calendar of events publications [April 25-30]

THE ROLE OF BUILDING-BASED STAFF IN THE RECRUITMENT PROCESS

When reviewing the model for effective information dissemination strategies presented on the preceding pages, it might appear that an important component of the recruitment strategy identified has been underemphasized: the role of teachers, counselors, and paraprofessionals. The research literature and magnet school practitioners agree that the involvement of these staff members is important to the success of the recruitment plan and, in fact, most magnet school recruitment plans identify teachers and counselors as key players in influencing students' awareness of their options.

Why were these key people, then, not relied upon more heavily as part of the effective information dissemination strategy since all agree that their influence is critical? The reason is that not all school-based staff are enthusiastic supporters of magnet school programs, as found by most practitioners with experience in implementing magnet programs. . -

A great deal of controversy has emerged over the issue of school choice and education vouchers as tools of choice, and most of the arguments for or against vouchers use magnet schools as the current example of a choice program in the public schools. For example, the president of the National Education Association (NEA), Mary Hatwood Futrell, explains that NEA is wary of the current focus on choice because of its implications for equal educational opportunity for all students. Futrell cites the following criticism of magnets: "Two classes of school may be created: one on a fast track to improvement, the other to neglect and decline (Futrell, 1986)." The common concern most magnet staff hear is that they (the magnets) are "creaming" the best students from the comprehensive schools and leaving those schools with the highest concentration of disadvantaged, unmotivated students. While there is not yet conclusive evidence to indicate that this is actually happening, the fact that comprehensive school staff perceive that it is happening or will happen is a significant problem for magnet school recruiters.

It is specifically because of this problem that many magnet program recruiters cannot always rely on the staff of comprehensive schools to encourage students to become aware of their choices outside the comprehensive school. In fact, in conversations with the researchers, some practitioners have cited instances where counselors fail to mention magnets as a choice to some students and actually discourage others.

This particular problem appears to diminish as the magnet schools become well-established and no longer need to rely on information dissemination strategies to make choosers aware, yet it can still remain an obstacle, particularly for the passive chooser. In an ideal situation, teachers and counselors can be extremely effective vehicles for providing students with awareness of their choices, but a district must be sensitive to potential problems in this approach during its earliest stages of magnet program implementation.

One of the ways magnet school planners and implementers can begin to minimize the perception that they are "skimming" the best students is to design their recruitment and informational materials so that the message is clear to choosers that a variety of programs are offered to all learners. Examination of recruitment and promotional materials from forty MSAP-funded districts suggests that the message of choice is often misinterpreted as choice of the best school in general, rather than choice of a specific program which is best suited to the individual learner. In other words, magnets should avoid using the competitive approach which pits schools against one another and instead focus on the diversity of choice available to all learners.

#### CRITERIA FOR ADMISSION TO MAGNET SCHOOLS

A critical factor in dissemination and recruitment is the criteria for to magnet programs and the implications of these requirements for of equal access.

Admission criteria at magnets range anywhere from "interest" to strict adherence to test scores and past academic records. Although supportive data are not conclusive in this area, all of the respondents to the researchers' survey of magnet administrators employed a variety of criteria within their

individual systems of magnet programs which ranged from interest to ability criteria (as in Blank, et al, 1983 national study).

MSAP survey results indicated that the most commonly used selection criteria are:

1. Racial balance
2. Academic ability (test scores, grades)
3. Ability in curricular area of magnet
4. Location of residence
5. Interest

Other less commonly used criteria include:

1. Teacher recommendation
2. Student behavior (attendance, suspension)
3. Motivation
4. First-come basis
5. Lottery

A two-year national study (Blank, 1983) found that of 45 magnet schools examined, 17 emphasized general academics, 10 had an arts theme, 3 used a science theme, 3 had career/vocational themes, and 2 specialized in social studies. Of these 45 schools, only 13% had highly selective admission criteria. In the MSAP Survey, while 90% used some selective admission requirement other than "interest" in at least one of their magnet programs, the survey did not define selectivity as precisely as in the Blank study.

Critics of selective admissions policies argue that the less able student may be denied access to the very opportunity he or she needs to become more successful in school. Supporters of admission criteria argue that some programs are not designed for all students; in fact, that is what makes them unique. They believe it is unfair to a student to be enrolled in a program in

which he/she is not equipped to succeed, such as students who enter a math/science magnet with significantly deficient basic math skills. Even those magnets where student interest is used as a criterion have been known to reject a student because the required interest essay indicated a lack of genuine interest in the theme of the magnet.

Given one of the basic objectives of magnet programs in general, which is to reduce racial isolation and eliminate minority group discrimination, it is imperative that the magnet school admission policy be designed not to exclude, reject, or deny those students who are actively seeking admittance. Proponents of "interest only" admissions requirements believe that selection criteria based on ability or other highly selective variables will lead to further resegregation by race. If racial balance, however, is the overriding factor in the selection (which it is in MSAP-funded programs) then, theoretically, racial resegregation trends can be monitored and avoided; yet, segregation by ability is almost inevitable, particularly when the selection criteria is rigid. The evidence is clear, however, that ability grouping practices do tend to segregate students by race and socio-economic status. Therefore, even if the overall racial balance of a magnet school population can be controlled, ability grouping can lead to segregation of classrooms within a magnet school. Studies show that this kind of assignment practice does not improve achievement for low-ability or high-ability groups, and further that it actually can negatively impact the self-esteem and achievement of the low-ability student (Oakes, 1962, 1987).

The task of providing equitable choices through magnet programs for a diverse group of students without further resegregating students by race, class, or ability, must be addressed not simply through the magnet admission criteria policy, but must also be addressed during the initial stages of



developing magnet schools programs. Since part of the legislative intent behind magnet schools has been to offer opportunities to those students who have historically been part of a group that has not had equal access to educational and career opportunities, it does seem ironic that the most common types of magnets implemented are those for the academically talented. -This is not to suggest that these magnets should be eliminated. These programs appear to be successful in attracting white students to predominantly black schools. When designing an overall magnet schools plan, however, districts need to ensure that great care is taken to offer diverse magnet programs that are accessible and beneficial to all students. Creating new options for poor children, low-achievers, and minorities is the current challenge of magnet school program planners, and there are a number of creative ways to accomplish this goal. While it is not the intent of this research to recommend how to design these kinds of magnets, there are some implications which relate directly to admission criteria, because if magnets are to offer students "a better chance" but refuse entrance to some of them, then where is the choice?

Many educators believe that some form of selection criteria is necessary, particularly when an individual magnet has many more applicants than spaces available. To address this problem, some districts have implemented the "first-come, first-admitted" approach. The weakness in this model for providing equity is that better educated parents have more accurate information regarding choice options and will be the first to enroll their children. In Pittsburgh, where this approach has been used to an extreme, parents have had to "camp out" in lines for up to two days in order to enroll their children. Children of single and working parents are definitely at a disadvantage in this situation because parents cannot afford to stand in line for a day or two.

Thus, it is difficult for magnet schools to offer equal opportunity with this approach to admission.

When available space is not an issue in the earlier stages of magnet development, magnets need not rely exclusively upon setting up rules in advance, but rather they should have a flexible admissions policy which can be adjusted to the needs of the population as the magnet program develops (Glenn, 1984). In this situation, a placement coordinator would be responsible for overseeing and monitoring the selection process to ensure that student selection and placement is fair and equitable. An outside parent/community-based group could provide a similar function.

A review of the admission criteria and policies of magnet programs across the nation indicates that any criteria used in admitting students to magnets can present problems regarding the issue of equal access. The lottery approach does appear to have the fewest obstacles in terms of equal access. Its proponents agree that if implemented carefully students can still be placed in a magnet of their choice, albeit not necessarily their first choice. Some districts have used computers to accomplish this by collecting family choices and matching these with data on race and capacity of schools. While there still may be some students who are denied admission to the magnet of their first or second choices, this approach eliminates discrimination against any single group and all students have an equal opportunity for admission regardless of ability, race, or class.

## CONCLUSION

After examining recruitment materials and other data from school districts across the United States it becomes clear that each district is a unique system in terms of its desegregation goals and it is therefore essential that each district carefully plan its magnet school program with specific recruitment goals in mind.

Too often a school district will decide to implement a magnet school which will draw a certain population and then will encounter equity problems in its admission policy later in the process. For example, after an initial decision has been made to establish a magnet school for academically gifted students, it is very difficult to address the issue of equal access. During the planning stages of magnet school development, enrollment goals should be established with an understanding of the long-term impact of program emphasis on recruitment. A broader understanding concerning the ways in which magnet schools can eliminate the exclusionary barriers to equal opportunities for students would be helpful to magnet school planners and would reduce subsequent problems of equal access in magnet school programs.

The data presented in this paper reveal what current MSAP implementers believe are effective information dissemination and recruitment strategies, yet the data also suggests that the area warrants further scrutiny. As magnet schools proliferate we need to examine: the influence of peers on choice; the influence of parents on choices for older students; the ability of school districts to target recruitment strategies to students; equity issues for magnets vs. comprehensive schools; the issue of elitism in magnets; and, the role of information dissemination/recruitment for active vs. passive choosers.

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## APPENDIX

### Methodology

A questionnaire was completed by magnet school representatives from 56 school districts. The questionnaire focused on the magnet school recruitment process and information dissemination strategies. Responses yielded information on school district size, the racial composition of the student population of each district, as well as data about recruitment and information dissemination strategies. The following list shows the school districts that identified themselves when completing the survey, although some school districts did not complete the optional item of school identification. Of the 56 surveys completed, 37 identified the district being represented.

It should be noted that when asked to identify the most effective information dissemination strategies used in their district, respondents were providing answers based on experience and perceptions rather than on objective measures.

The completed questionnaires were coded and analyzed in November, 1986. There were a number of non-responses for some items which subjects felt inadequately informed about but these frequencies were factored out in the final analysis.

Questionnaire data were supplemented with copies of recruitment materials from 23 MSAP applicants. These printed materials were examined by the investigators as part of the research design for this paper.

SCHOOL DISTRICTS IN SURVEY SAMPLE

Lawson, Okla.	Buffalo, N.Y.
Peoria, Ill.	Long Beach, Calif.
Fort Worth, Tex.	Dallas, Tex. -
Phoenix, Ariz.	Tulsa, Okla.
San Bernadino, Calif.	Nashville, OH
Flint, Mich.	Indianapolis, Ind.
Rochester, N.Y.	New Orleans, La.
Overland, Kans.	Baton Rouge, La.
Jackson, Miss.	Weehawken, N.J.
Richmond, Va.	Trenton, N.J.
Kansas City, Mo.	Montclair, N.J.
Miami, Fla.	Jersey City, N.J.
Cincinatti, OH	Newburgh, N.Y.
Los Angeles, Calif.	Little Rock, Ark.
Milwaukee, Wis.	Bayonne, N.J.
Memphis, Tenn.	Silver Springs, Md.
Atlanta, Ga.	Philadelphia, Pa.
Denver, Colo.	Montgomery, Ala.
Detroit, Mich.	Chicago, Ill.

**PLANNING RESOURCE ALLOCATIONS FOR  
MAGNET SCHOOLS**

**William A. Pearson  
Associate Superintendent  
Saint Louis Public Schools**



## MAGNET SCHOOLS: RESOURCE ALLOCATIONS

### INTRODUCTION

#### Study Purpose

Resourcing magnet schools, how to pay for their many components and the myriad of activities associated with their success, is always a formidable challenge to school districts which, in the main, are enmeshed in the perennial problem of how to finance education. This challenge is even more formidable when there is not careful and comprehensive planning designed to reduce the anxiety experienced by school districts in this effort by minimizing unanticipated costs. In addition to a detailed and comprehensive plan which identifies the interrelationships<sup>s</sup> of components, activities and functions which must be resourced if magnet schools are to be successful, there must also be a resource plan which focuses on their support.

This paper provides an examination of the full range of resources required to plan, develop and implement magnet schools. Such an examination implies more than the operation and maintenance of such schools. It also includes the provisions for the following: program planning and curriculum development; identification, selection and training of staff; assessment, identification and selection of students; determination and ordering of specialized instructional materials, furnishings, equipment; movement and supervision of students from home areas to various points of

instruction, including field experiences which are perceived to be crucial to the magnet school programs; public relations tasks necessary to keep the community informed; activities in marketing of magnet schools and their programs; specialized programs for parents and community agencies and leaders who have a stake in such schools and their operations; building construction and/or modifications required to support such programs; travel, consultations and visitations for strengthening program conceptualization and operations; relocation of students, staff, furnishings, and equipment; supervisory oversight; budget planning and management necessary for responsible fiscal control; and evaluation and assessment activities to provide for program efficiency and to keep it on track. In short, the paper is concerned with the full array of functions and activities which have resource implications for the comprehensive planning and successful operation of magnet schools.

Additionally, the paper describes a prototypical model for planning resource allocations for magnet schools. Models for resource planning are valuable for developing a comprehensive plan. Several models are suggested for districts to consider in magnet school resourcing.

Third, important issues are outlined which affect the resource needs of magnet schools. A key issue is educational equity, especially as it relates to comparability of support for each child in a given school district; i.e., comparability of building conditions, quality of teaching and support staff, quality of student culture, and supervisory oversight. Such issues as these may well give rise to related policy infer-

ences which must be made in the establishment of magnet schools.

Finally, the paper formulates conclusions about magnet school resource requirements and frames additional questions or issues which would be fruitful for future, in-depth examination both for better understanding of magnet schools and their resource needs specifically and of the funding of education generally.

### Methodology

One key aspect of understanding magnet school resourcing is derived from comparing relative costs of magnet and regular schools in a large, urban school district over a six-year period. This comparative study will attempt to shed light on the relative costs among magnet schools, as well as average costs of magnet and regular schools of this district. This comparison shall be undertaken by a look both at traditional per student cost measures in examining and evaluating resource requirements of schools, and an examination of relative costs in terms of a cost benefit theory.

Finally, the methodology will include an examination of relevant literature on the resourcing of magnet schools, scant though it is, and on the observations and impressions of respected colleagues both in this district and in other large, urban districts which have experience in the funding of magnet school programs.

The findings will reflect an in-depth examination of a single, large urban school district and its experience in resourcing magnet schools. Certain representations in this study result from a closely reasoned approach to the issue<sup>s</sup> of costs, cost shifts and cost trends. Important though reasoning is in building a theoretical context

for issues and findings, the study would be immeasurably enhanced by an in-depth understanding of the actual experience of school districts in dealing with costs associated with magnet schools in a larger-scaled study.

### **TRADITIONAL MEASURES IN EXAMINING AND EVALUATING RESOURCE REQUIREMENTS OF MAGNET SCHOOLS: A QUESTION OF COMPARABILITY AND IMPACT**

A recent study (Sherman, 1985) of resource allocations and staffing patterns in the public schools of the nation reveals trends in resource allocations over the last 25 years. That study reflects that real spending per pupil has nearly doubled. However, among many trends observed, perhaps the most significant is the shift in resources from salaries for classroom teachers to other types of school spending, most notably in the areas of: 1) fixed charges - spending comprised largely of fringe benefits for school employees, 2) school administration and 3) maintenance and operation of school facilities. Such trends are also prominently in evidence in the analysis of magnet school spending.

#### **Per Student Cost Measure**

Perhaps one of the more widely used measures to explain the dollar support necessary for education is that of per student cost. This measure is not only widely used, but it also has a long history of use. Accordingly, educators have come to accept the per student cost measure as a reasonable and rational method for examining resources required to support various school operations. One of the problems associated

with the use of per student cost measures is that of definition. Sometimes the per student cost measure will represent only direct instructional costs; sometimes this measure will represent both direct instruction and support costs experienced in a given school, without considering central office administrative costs associated with oversight and logistical support in that school's operations. In other instances, the per student cost measure may or may not be reflective of long-term equipment purchases and/or specialty modernization or building erection costs which are amortized over a number of years; and, obviously, there can be other variations in measurement of per student cost. Despite the many variations that are employed, the per student cost measure has wide acceptability in the educational community.

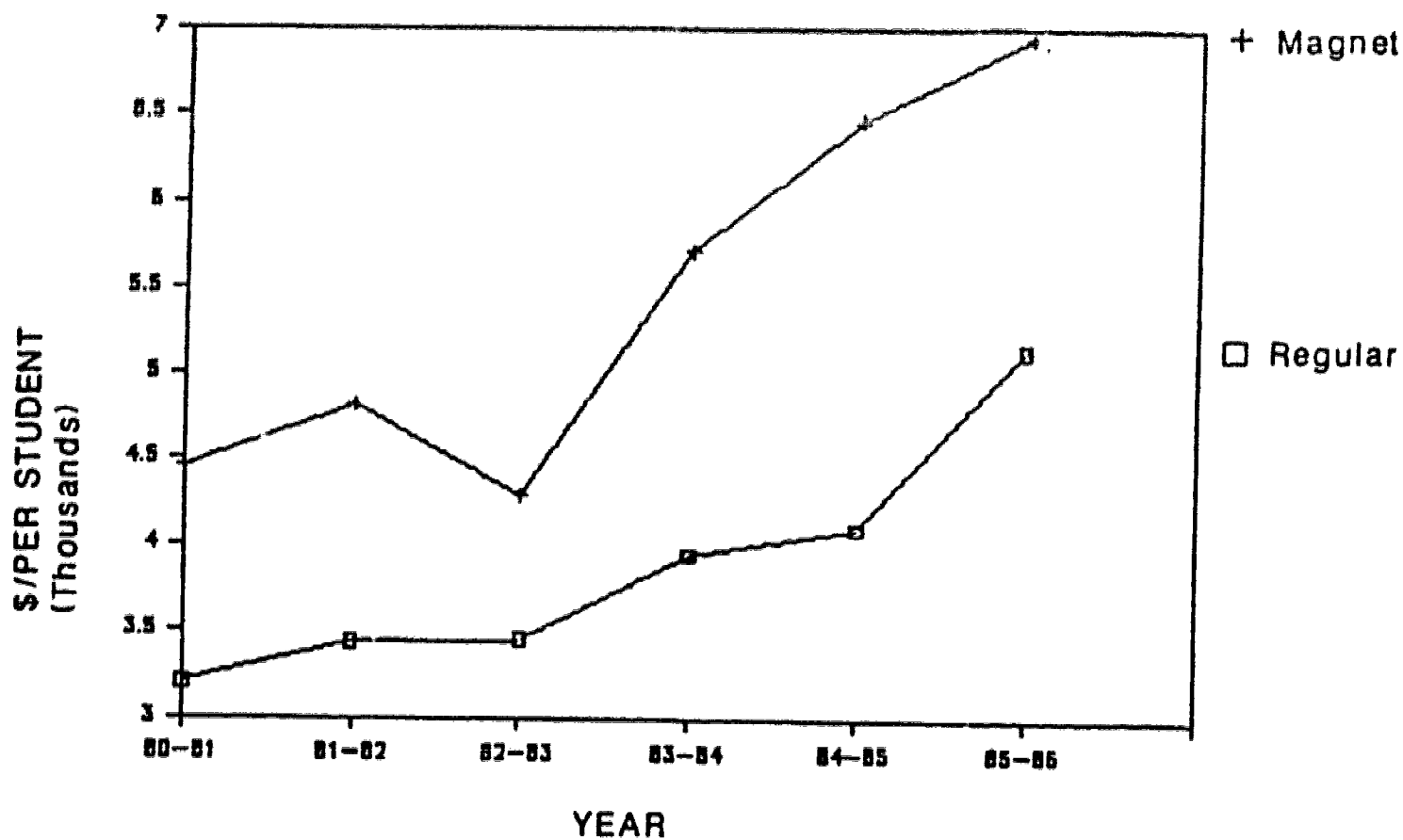
Regardless of how the per student cost is measured, experience has shown that the establishment of magnet schools usually requires an outlay of capital beyond that which is considered for other schools of a district. Experience has also shown that the establishment of magnet schools requires a host of activities initially, and to some extent continuing, which are to a lesser degree the concern of school personnel in the support of regular schools. Start-up costs such as building modifications and the acquiring of stationary and/or specialized equipment are associated with magnet schools, and these can be prohibitive. Additionally, staff development activities which can be crucial to the success of such schools are extensive in the early months and years of the school's operation. Yet, there are continuing costs, perhaps to a higher degree than would be expected, in the areas of continuing staff development

activities in support of the school's specialty program and in the transportation of its students, to name but two areas of cost variability.

Logic suggests that once the initial costs have been addressed, there would be a declination in the resource requirements relating to the support of magnet schools. And, hence, there would be the expectation that, although there would be a surge in the per student cost in magnet schools initially, there would be a corresponding drop both in actual dollars and in the percentage of variation between magnet and regular schools of a district over the years of its operations. The experience of the district under investigation on this point, however, has been telling.

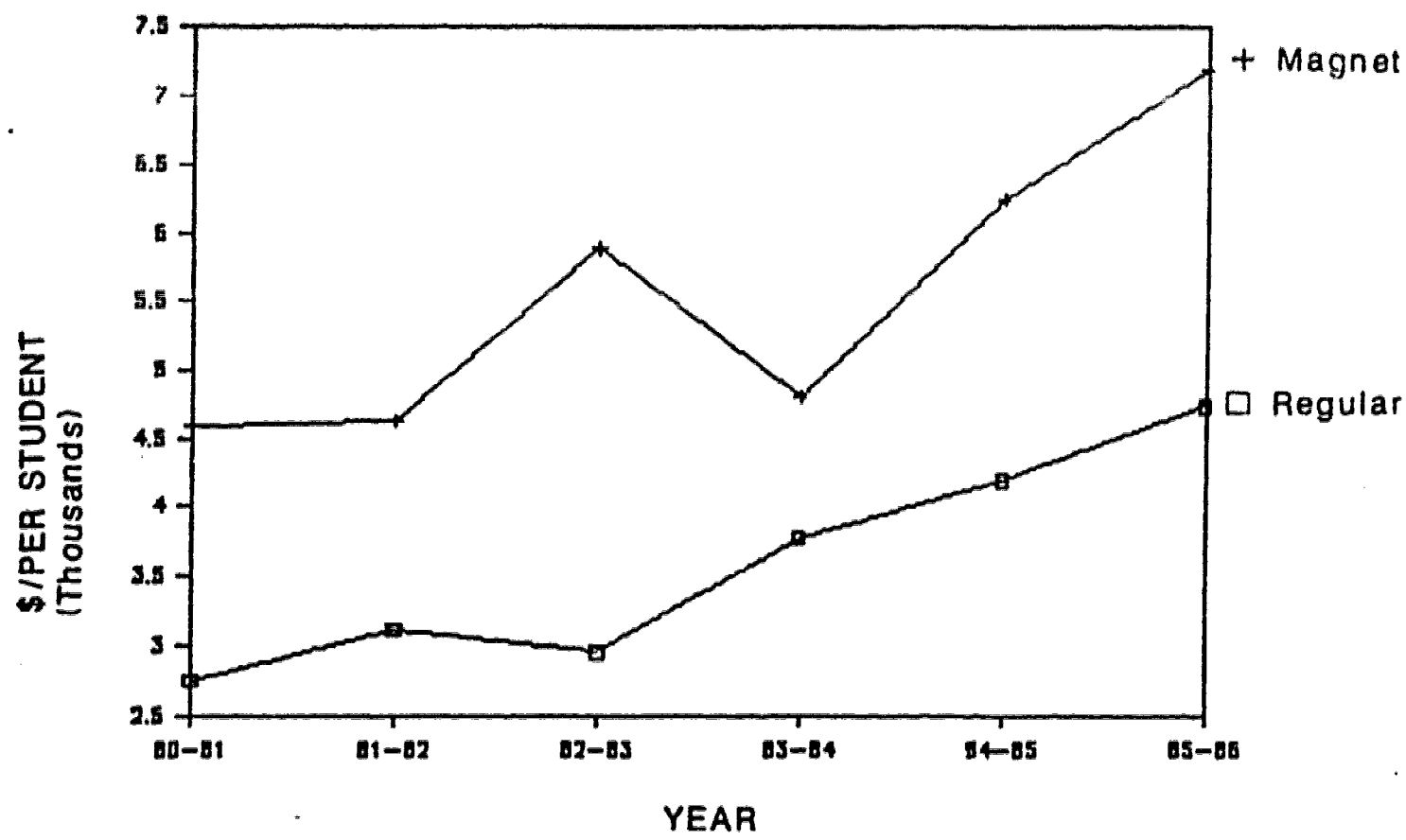
An examination of the district's Annual Financial Reports over the last six years on costs per student based on school disbursements, both direct and indirect, has revealed less than a consistent pattern. The large, relative decline in the resource requirements of magnet schools based on cost per student, which was anticipated, did not occur. In fact, in two rather significant instances, the variation between magnet school per student costs and regular school per student costs actually, increased. The following charts and graphs are illustrative:

# **HIGH SCHOOL PER STUDENT COST COMPARISONS 1980-86**

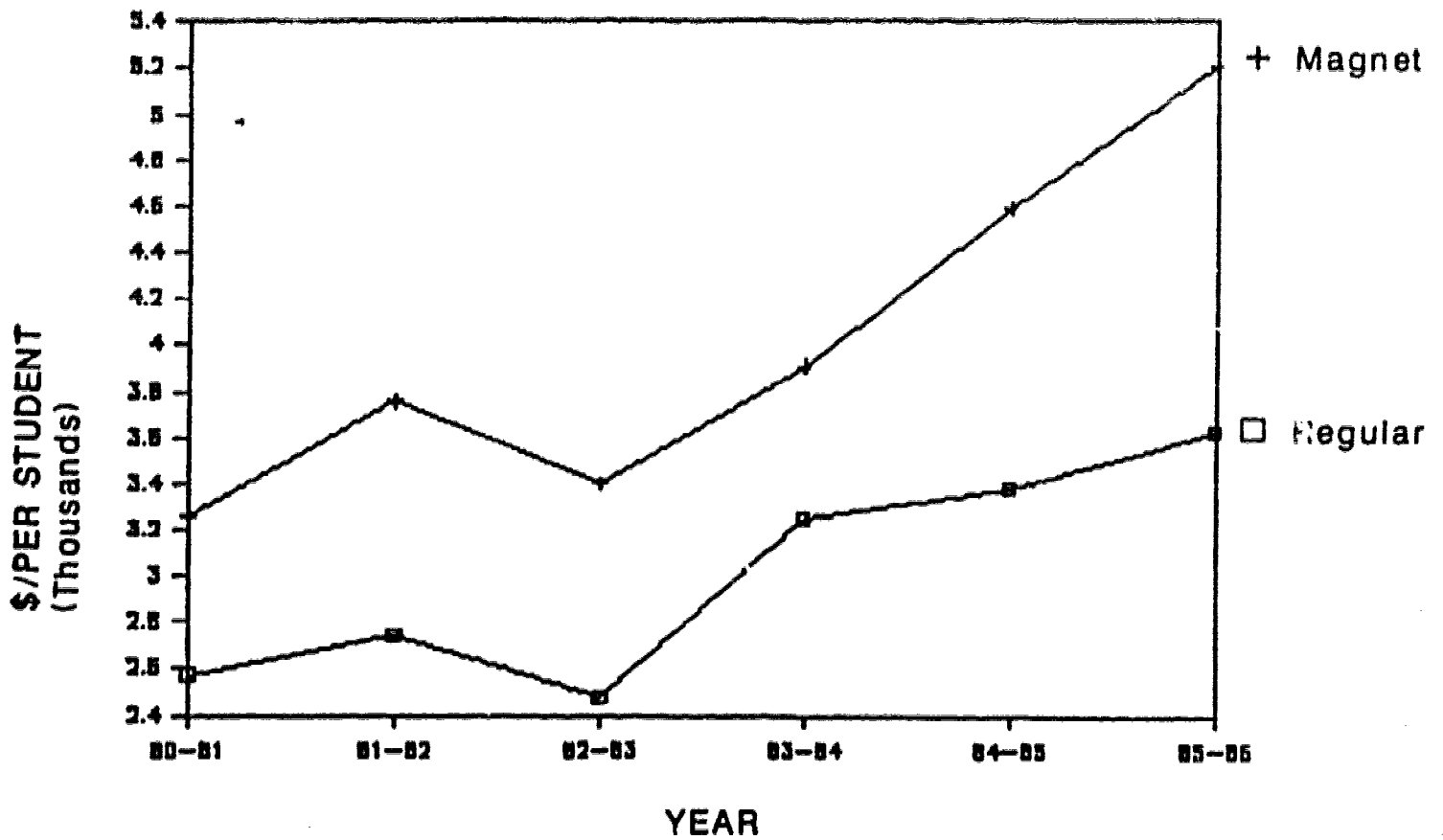




**MIDDLE SCHOOL  
PER STUDENT COST COMPARISONS 1980-86**



# **ELEMENTARY SCHOOLS** **PER STUDENT COST COMPARISONS 1980-86**



## HIGH SCHOOL PER STUDENT COST COMPARISONS

(Based Upon Average Daily Attendance)

Class of School	80-81	81-82	82-83	83-84	84-85	85-86
Regular High Schools	\$3,297	\$3,439	\$3,451	\$3,947	\$4,687	\$5,134
Magnet High Schools	4,463	4,809	4,285	5,707	6,519	6,946
Percentage Differential	+39%	+40%	+24%	+45%	+39%	+35%

## MIDDLE SCHOOL PER STUDENT COST COMPARISONS

Regular Middle Schools	\$2,741	\$3,116	\$2,951	\$3,781	\$4,447	\$4,739
Magnet Middle Schools	4,583	4,626	5,885	4,802	6,516	7,201
Percentage Differential	+67%	+48%	+99%	+27%	+46%	+52%

## ELEMENTARY SCHOOL PER STUDENT COST COMPARISONS

Regular Elementary Schools	\$2,575	\$2,748	\$2,477	\$3,247	\$3,520	\$3,620
Magnet Elementary Schools	3,262	3,755	3,398	3,905	4,764	5,210
Percentage Differential	+27%	+37%	+37%	+20%	+35%	+44%

The presentations included in these graphical portrayals of resource requirements for magnet schools raise the important question of whether or not per student cost measures alone are the best gauges for ascertaining the effectiveness and efficiency of school operations.

#### Analyzing the Question of Shifting Student Costs

An increase in financial support to magnet schools and a corresponding diminution of financial support to regular school programs would clearly imply a shifting of resources from regular to magnet schools. This matter is complicated, however, by the fact that, except for a single year in which the district resources met a multi-million dollar short-fall, the resources behind all schools significantly increased. The answer is not an easy one. In the absence of a resource pool which is constant, the question can only be inferentially answered by suggesting that if the resources supporting magnet schools remained on an even keel, the question of shifting costs is somewhat mooted because the resources were constantly expanding.

The actual experience of the district (excepting the anomaly year) is that in high schools and in the elementary schools -- the difference between regular and magnet schools in total dollars and in percentage of increase grew. Since there was significant growth in the per student costs of magnet schools when compared to regular schools of the district, one can be reasonably certain that there were student cost shifts even though the pool of dollars also expanded.

Additionally, it can be seen that not only did the shifts actually occur, they were of sizeable magnitude.

The questions of whether or not the shifting of student costs was accomplished in an equitable way and the resultant impact on non-magnet schools are both questions whose answers remain less than conclusive. Equity can be approached in terms of that which is appropriate as opposed to that which is the same. It appears that the shifting did occur in a way that appears equitable, in that the program requirements were reasonably met in both magnet and non-magnet schools. When an explanation of critical budget considerations (personnel, class size, supply and equipment purchases) was made, the budget levels and instructional support levels were maintained. The question of whether or not there would have been significant improvements in such areas had additional resources been available is not clear based upon expenditure patterns which are available. Said another way, this investigation did not reveal that there were program requirements of non-magnet schools which were diminished as the result of enhancing magnet schools. Hence, any (negative) impact on non-magnet schools was negligible.

Variances can be anticipated if magnet school programs are expanding and/or if new magnet programs are brought on line. Additionally, variances can be anticipated among magnet schools and between magnet and non-magnet schools when one considers whether such schools are of the high cost, average cost or low cost variety, depending

on their special requirements. More is said on this subject in the section on "Magnet School Organizational Patterns."

Error of Measurement: Start-Up Costs/  
On-Going Program Comparisons

In some instances, conclusions have been drawn where on-going programs have been compared with start-up programs. The conclusions may have had increased validity if, for example, they had been based on average costs associated with a new regular school and a new magnet school or where, by using some operational definition\*, an on-going regular school were compared with an on-going magnet school. Certainly, experience will reflect that in opening new schools, whether regular or magnet, a number of start-up costs will decline over time. But by comparing that which is on-going with that which is coming on line, the cost disparity is exaggerated.

Can Magnet Schools Be Administered Ultimately  
At Per Student Cost Compared To Non-Magnet Schools?

One of the more interesting questions to be raised by financial experts in the area of education is the degree to which costs of magnet schools will approximate costs of non-magnet schools over time and whether, in fact, magnet schools can ultimately be operated at a cost comparable to that of non-magnet schools. There

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\*Operational definition, a designation of an arbitrary period in operations for which comparisons are made. (e.g., in the 5th year of operations or after 10 years of operation.)

are several variables which one must consider in responding to this question. The definition of magnet schools themselves may well be a point of departure, inasmuch as magnet schools possess an attractability which is usually based upon an "extra" which is not present in regular schools. As such, this "extra" suggests that costs associated with magnets would always exceed that of regular schools. Whether that "extra" is in a specialty component or in different class ratios, or in a heightened level of instructional support, the associated cost is generally an "add-on" as opposed to a "substitute-for." Parenthetically, we note that the present push for quality in educational programming could conceivably result in regular schools having components and characteristics very similar to those of magnets as they gain in educational quality and attractability.

But if magnet schools still hold an attractability edge, such schools will possess additional differentiating qualities and characteristics and, consequently, will continue to require a higher level of resourcing.

An additional factor which skews the per student cost is that of fixed costs. Magnet schools generally operate at a lower actual capacity than the theoretical capacity because of the need in magnet schools for additional classrooms for specialized services and equipment and because the ratio of students to teachers, in some of these schools, is made lower as a feature of attractiveness (magnetism). As a consequence, the fixed cost is spread over a smaller number of students; hence, the appearance of a higher cost per student index.



In returning to the long-considered relationship between start-up costs and maintenance costs of magnet school operations, it is conceivable that were it not for the labor intensive nature of school operations in general, there would certainly be, over time, a lessening of the variance in costs. Yet, even in this consideration, it is the judgment of this investigator that the cost relationship would be somewhat analogous to the normal curve relationship to the base line which is described by some statisticians as being "asymptotic," that is that it would approach, but never reach, the cost of non-magnet schools. As educational planners come to better understand the elements which make for significant efficiency in the learning environment, there may be a point in the distant future where this question can be answered in the affirmative; but it is clearly not on the horizon at this point in time, based on the experience of the district under study.

Although we have indicated the recent experience in a large, urban district in the resourcing of its magnet schools, it should be pointed out that other research in the area of magnet school financing is at variance with the trends within the city district schools under study. Other researchers (Blank et al., 1983) indicate that the total cost per student in magnet schools in 1980-81 and '81-'82 was slightly higher — on the order of \$200 per year. Although this is a modest differential, there were large cost differences among some of the districts in the study. That study found that extra costs were related to improved student outcomes.

Planning how to better use existing resources is one approach to resourcing magnet schools. While some magnet schools will require extensive additional costs for new buildings or major building renovation, equipment and supplies, these needs will not all be extensive in every case. This study further observes that magnets can be quite modest (in cost) while still achieving high education quality.

Whether the wide discrepancy observed in the district under study and in the observations of the two other studies mentioned is due to the time period in which the survey work was done is not clear. What is known is that magnet school costs can run from modest levels to very high levels. It is important, therefore, that school districts achieve a balance among the kinds of magnets based as much upon cost considerations as upon programmatic ones.

#### **COST/BENEFIT THEORY IN EVALUATING RESOURCE REQUIREMENTS OF MAGNET SCHOOLS**

Over the last several years, communities and educators themselves have raised large concerns about accountability in the educational enterprise. On some occasions, these concerns have been expressed simply in terms of the quality and quantity of educational services. More often than not, such expressions have been descriptive. However, questions are now being asked about the efficiency and effectiveness of school operations. A part of this new thrust can be accounted for by the "effective schools" movement; a part can be attributed to a business orientation in the management of schools. As efforts are made to continually examine the quality of school

programs and to make comparisons among them as to which tend to produce at higher levels, the way in which schools and their operations are analyzed must be expanded.

This writer suggests that although there are insights to be gleaned from the more traditional measures, there is also a need to examine and evaluate the efficiency and effectiveness of school programs and the resources required to support them based upon a cost/benefit theory applicable to education. It is possible to make a strong case for the efficiency and effectiveness of magnet schools in light of what they produce. Clearly, magnet schools are positively correlated with educational quality, both perceived and actual.

Whether one uses the various corollates of the effective schools program or other elements which are associated with school efficiency and effectiveness, magnet schools as a generalized group tend to approach the standards that are regarded as important in the justification of the resource outlay which is required for them. The claims seem to be well documented; certainly they were found to be true in the magnet schools of the district under study.

Student achievement is always critical in the assessment of the effectiveness of an instructional program. In this regard, students who attend the magnet schools of the district achieved significantly higher levels on major achievement measures: reading, mathematics and language.

Attendance is another factor which is frequently associated with school success. Here again, in the secondary schools of the district, magnet school attendance was

approximately 5 percentage points above that of students in regular schools over the last several years; in middle schools 2 percentage points above, and in elementary schools 1.5 percentage points above. Attendance is not only important from the point of view of instructional efficiency, in that the instructional staff is focusing upon almost all of its students each day, but the state reimbursement to the district is appreciably enhanced because of such attendance.

It is fairly well documented that students in magnet schools are better motivated and tend to have far fewer problems of discipline and self-control. As a consequence, magnet schools are often described as having environments that are safer and more supportive than those of regular schools.

In the speculative realm, as one looks to postsecondary education and to the earning power which is generally associated with the quantity and quality of postsecondary education and to contributions this element tends to make to the community, all such factors auger well in making a strong case from the point of view of cost/benefit. The resourcing of magnet schools, even in the higher cost programs, is well spent, and, when given the longer view, tends to be far less expensive than regular programs. The celebrated economic study (Schultz, 1972) aligns this phenomenon to that of allocative benefits.

Magnet schools have been shown to be powerful vehicles for building/rebuilding the public confidence in schools. What this may mean ultimately is incalculable.

## **MAGNET SCHOOL ORGANIZATIONAL PATTERNS: IMPLICATIONS FOR RESOURCING**

Magnet schools are variously organized from a programmatic and an organizational stance. What is often not well understood, however, are the total financial implications of the programmatic and operational dimensions of such schools. It is important at the outset to understand that just as regular schools run the full gamut from low cost programs in a comparative sense to high cost programs, so do magnet schools. Formerly, vocational and special schools (programs) were thought to be non-regular schools. But now, because of the heightened understanding of the diverse student needs and because of the many legislative mandates which give guidance to providing educational services, such schools can no longer be thought of as non-regular. Depending on programmatic themes which imply curriculum of a special character and kind and which are either constrained or enhanced by equipment, supplies and specialized personnel, a school district must be prepared to adequately resource the school if the school is to achieve its *raison d'être*.

### **Regular School Plus Specialized Components**

A review of the educational literature on magnet school program patterns reveals that some magnets represent an "add-on" to the regular school. Said another way, such arrangements represent a regular school plus a specialized component. The specialized components must be clearly seen as an additional financial responsibility.

### Specialty Schools

Some magnet schools are organized around a special curriculum theme. Many such schools will use the specialty theme as the vehicle for teaching that which is normally taught in a regular school and more. In this arrangement, however, speciality is not an "add-on"; it is, in fact, the major element in a recurring series of curricular motifs. Sometimes the resourcing of this school is no greater than that of a comparable regular school; sometimes because of the theme chosen and the manner in which the program is articulated, such schools can cost a great deal more.

### Part-Time Schools and Programs

A number of magnet schools and programs are successfully organized on a part-time basis. Frequently, the services provided are of such high quality that school personnel want to share that service with as many students as possible. While this arrangement embellishes the regular offerings of students, the cost implications are generally far less when amortized over the expanded number of students who benefit from this arrangement. Schools and programs organized in this fashion must be chosen selectively and should generally be ones which encourage, if not indeed, require independent work on the part of the student during the intervening period of his attendance.

Finally, it should be noted that the magnet school organizational patterns will influence resource needs and should be considered in light of the detailed requirements for magnet schools which are discussed in the following sections.

## **PLANNING AND RESOURCING OF MAGNET SCHOOLS: A PROTOTYPICAL MODEL**

The successful planning and resourcing of magnet schools is largely dependent upon a carefully detailed plan embracing the many elements which must be considered and which have a cost attached. It is not possible to plan for the resourcing of a magnet school until it is clear as to what elements are going to be resourced. In an effort to provide guidance on this point, this section is devised to specify many of the key elements for which resources must be provided.

### **Human Resource Issues**

Human resource issues will constitute, perhaps, the largest dollar consideration in magnet resources. This should not be surprising, in that schools are generally labor intensive environments; magnet schools tend to be even more labor intensive.

Magnet schools which enjoy considerable success from the point of view of planning and resourcing are often guided by a general planning team. This team will require the necessary personnel who have been given adequate time and resources to carry out the overarching planning that must be done. The general planning team should be comprised of persons who are knowledgeable in specific areas which must be given attention within a school district. A frequently occurring problem is that planning teams are made up of key staff personnel who are already overextended. As a consequence, they frequently lack the time and energy necessary to provide the high level of guidance to the many developmental activities that will ensure the school's success.



The curriculum and programs unit within a district is crucial to the total planning effort. This unit must provide specific curriculum planning as it relates to the magnet school that is contemplated. The planning and development activities must be thoroughly done and should include not only a full description of the program but also a design for its operational elements. The curriculum and programs unit must ensure that the special service dimensions (field experiences, special examinations, admissions, licenses, uniforms, etc.) are identified and costed out. Similarly, specialized equipment and supplies must be accounted for.

Flowing from the work of the curriculum and programs unit should be a plan for identification of staff. Staff selection must be achieved for the regular and speciality program components of the magnet school. Generally, such staff will be drawn from the ranks of other schools of the district. Where this is not a viable option either because such personnel are in limited supply or are not otherwise available from the district's personnel pool, they must be recruited very often from colleges and universities, sometimes from other districts and, obviously, from the labor force of the wider community.

Equally important, is the development and inservicing of staff once they have been recruited. Such development is usually very intense in the early period in the school's history. And, while staff development activities are extensive in the school's inception, they are continuing. Such activities must be planned for in the resourcing of the school.

The impact of drawing staff from other schools can be negligible if the non-magnet schools from which they come have strong faculties and if the district has a personnel pool of applicants sufficient to generate necessary replacements. If, on the other hand, key staff are pulled from existing schools and the possibility of quickly identifying well-qualified replacements does not exist, then the impact on non-magnet schools of the district can be damaging, indeed. Each magnet school, however, must be looked at individually in terms of the availability of both regular and speciality staff.

Student recruitment is another large activity that must be resourced. As with all other components, student recruitment activity must be carefully planned and should, as a minimum, have marketing and student selection components. Additionally, if the new magnet school is to be located in an existing facility which is operational, provision must be made for the relocation of those students and services which are not a part of the new magnet school.

The involvement of parents both in the planning of the new magnet school and in their inservicing must be given careful resource consideration. Parents may have need for special learning materials or simply the need to meet on occasion to raise questions and express concerns, or to secure clarification regarding the new school. As simple an item as this may seem, some magnet schools had problems where this component was not carefully planned and resourced.

Public relations activities cannot be overemphasized. Whether this function is underwritten, in an already existing public relations unit of the district, or whether

a new component must be created, this function must be well thought through and planned for in the budget. A public relations unit would not only require the services of staff, but additionally will require special supplies, equipment and even special services capability as in the case of provision for radio, newspaper and sometimes television time.

Beyond the personnel already mentioned, a strong magnet school resource plan will consider volunteers, as well as community agencies and institutions which will share in the support of the magnet school. These, too, are frequently an after-thought in the development of the resource plan.

Another function which has important implications for a successful magnet school program is that of evaluation and assessment. Too often the evaluation component of magnet school proposals is overlooked in program resource planning and budgeting. It may be inappropriately assumed that program evaluation should not occur until the program is established and in operation for a year or two. There are, however, several benefits to including the evaluation component as an integral part of the project from the beginning. At the outset the evaluator can conduct systematic research as part of the planning process. This synthesis of the research provides a useful perspective in the initial planning and review of the project proposal. As part of the project design, evaluation can ensure that adequate controls are built in, whenever possible, so that project outcomes may be more meaningfully interpreted employing valid bases for drawing conclusions about the effectiveness of the project.

Frequently, outcomes cannot be attributed to the project because of failure to build in controls during the planning stages. Another important consideration in the inclusion of resources at an early stage for evaluation and assessment is to assure formative feedback. That is, as the project progresses, evaluation performs a monitoring function to determine if implementation is proceeding as planned. Such monitoring is useful for modifying the project, if necessary, as well as for interpreting program outcomes. For all of these reasons, incorporating an evaluation component into magnet school resource proposals serves to strengthen program planning, implementation and operations.

Provisions for budget planning and management should be a part of the resource plan. If the magnet program of a district is small, this activity can sometimes be folded into the work of the existing budget office. However, when the magnet programs of a district are extensive and require millions of dollars, often from multiple sources, extra personnel may be needed in the budget office. Without this resource provision, cost and resource identification is frequently less than adequately provided for and cost containment failure can find school districts in not only difficult but embarrassing straits.

Not every human resource need has been included; however, it is believed that this discussion may be suggestive for resource planning in this area.

### **Physical Resource Requirements**

Another large activity within the resource plan must be the adequate provision of the numerous physical needs in developing the magnet school program. The need for facilities is so obvious that on occasion their planning for has been overlooked. In planning for the magnet school facility, careful attention must be given to design use of space vs. actual use of space. The theoretical vs. actual capacity issue is one that plays havoc with cost distribution, particularly since in most magnet schools space that would be used for additional classrooms is converted to support space for the magnet specialty. As a consequence, overhead costs in magnet schools can skew the cost index, since in regular schools the overhead is distributed, generally, over a larger number of students.

In planning to resource the facility needs, consideration must be given to stationary equipment and furnishings. Both of these will need to be planned for in terms of their base cost, if they must be secured, or for their relocation if they are already on hand but are to be used in a different facility. Associated installation costs must not be overlooked. Utility costs (telephones, water, electricity, gas) are on-going and should also be included in the resource plan.

Readying a facility for a magnet program can be a costly item, in that such readying will require building, renovation, repair or at the very least, cleaning. There can be no easy formula for such planning and resourcing, since there will be variances with types and sizes of magnet schools.

In addition to the stationary items that must be accounted for there must also be the programmatic items of equipment, furnishings and space, for both students and staff. A carefully detailed resource plan will include provision for these as well.

Transportation of students can be a prohibitive cost, but inasmuch as it is almost always required, its provision must be given thoughtful consideration as a major budget item. The student transportation plan is so complex as to require experts in this area to develop the details. A sound transportation plan is one which is responsive to: board policy in terms of the distance or special conditions which will necessitate transportation; the kind and character of transportation vehicles that should be engaged for the number of students; insurance; the routing possibilities; vehicle purchase and maintenance; student concentrations; loading factors; length of routes; management; and, obviously, a range of personnel for the many associated activities, including drivers, supervisors, dispatchers and maintenance personnel. There are many approaches to the movement of students. However, whether chartered, owned, or a combination of these, resource provisions must be considered.

Staff travel, whether it includes movement from one site to another site for duty or to other points within the local community or elsewhere for necessary consultation, is an important item and must be included in the budgeting process.

The need for comprehensive resource planning is considerable if magnet schools are to be the effective models for attracting students and for promoting quality

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education. Such a plan would have at least two basic components: one which details the costs of the many elements which make up a magnet school and a second which identifies the sources of the needed resources.

### Resource Leveraging

In planning for resource leveraging, consideration must be given to every possible source of funds. To begin, it is important for school districts to examine how existing school resources can be reconfigured in order to assist with the resource needs of the new magnet schools. The importance of the involvement of the business and corporate communities has been well established in virtually every community which has a strong educational program. Such involvement is important to regular schools; it becomes critical to magnet ones.

The support that can be provided through cultural agencies, other educational and governmental institutions and an array of specialized organizations within the community can be critical to the success of magnet programs.

Foundations, both local and ~~N~~<sup>n</sup>ational, must be included in the resource plan, for they have played increasingly large roles in the support of educational programs. In some instances, a few foundations have been sufficiently generous as to provide seed money necessary to planning for and building toward more comprehensive programs.

Governmental agencies and their extensions at the federal, state and local levels comprise a large source of assistance and financial support. Without the assistance of governmental agencies, many large, successful magnet programs would fail.

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Finally, in terms of resource leveraging, the community in all of its dimensions, should be explored for support. Such support comes in various shapes, sizes and forms. Volunteers, for example, come not only from corporations but also from grass-root programs and from other ranks within the wider community. Resource leveraging needs to be built into any resource plan, for in the absence of such leveraging, districts would be faced with the hard options of eliminating meaningful services and vital support which are critical to a program, or with providing the additional funding directly.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

This study illuminates the fact that resourcing magnet schools is a formidable task. However, magnet school resourcing is enhanced where there is a carefully-designed, overarching plan which identifies major components and where there is a detailed component plan which identifies the myriad of functions and activities to be resourced. It also points up the need for a carefully designed plan for developing resources. Few schools or school districts in the public domain will have sufficient resources to fund magnet schools at the required levels, without assistance. Consequently, there should be an accompanying resource plan which identifies every possible source of both funds and services which will enrich the magnet school offerings.

Finally, this investigator concludes that because the research literature which speaks to resourcing magnet schools is sparse, additional studies in this area are needed.

### Recommendations

A number of large concerns and issues surrounding the resourcing of magnet schools remain inconclusive and/or still speculative in nature. As a consequence, this investigator believes that the following issues/questions would benefit from additional research and/or activities:

1. Data should be collected from several districts which operate magnet schools in order to better establish the relative costs of magnet and non-magnet schools and to better analyze differences by type of cost over time .
2. A study should be conducted to reconcile differences between the assumption of diminishing costs in the operation of magnet schools and the actual expenditure experience of such schools.
3. In order to reduce the error of measurement in comparing costs of magnet schools and regular schools, a study of new regular schools should be compared with new magnet schools, inasmuch as both require relatively large start-up costs.
4. It will be important to school districts to understand the relative cost differences which can be anticipated based upon organizational arrangements. Additional studies in this area will not go unnoticed.

There are implications for which research can shed light on other aspects of costs associated with the operation of magnet schools and which are elsewhere imbedded in this Paper. However, recommendations have focused on those large questions which would seem to have the greatest impact on future magnet school resourcing.

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**ASSESSING OUTCOMES OF MAGNET SCHOOLS**

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AUSTIN, TEXAS**

## ASSESSING OUTCOMES OF MAGNET SCHOOLS

### INTRODUCTION

At a time when educational reform is sweeping the states, the role of magnet schools is particularly unique (Lines and McGuire, 1984). Many states, including Texas, have implemented strict state mandated curricular elements, increased academic graduation requirements, eliminated social promotions and generally reduced local district options. At the same time, educational reform has generally emphasized strong early childhood programs for the disadvantaged, mandated remedial/tutorial assistance to underachievers and established goals directed towards reducing drop-out rates. Instead of diminishing general interest in magnet schools, it is the observation of this author, that there is an increasing interest by students and parents in the concept of magnet schools. Apparently, this is one of the few areas in which there is still some degree of choice: which school to attend; which curricular emphasis is of personal interest or aptitude; or what additional curricular enhancements should be considered by a school district.

To illustrate the role of evaluation research in assessing the impact of the magnet school experience on students and parents, the case study approach will be used, focusing on Austin, Texas. The methods, measures, and data used in assessing the outcomes of a new magnet school program in Austin will illustrate how school districts can plan and implement evaluation programs. Studies of magnet schools in other districts will also be referenced.

Each of the eight magnet schools in the Austin Independent School District (six elementary, one junior high and one senior high) were, in the main, initiated by parent and business leadership and nurtured in a supportive climate established by the school district administration and Board of Trustees. Since 1982, when the first four magnet schools were established at the elementary school level, parents and business leaders, through the Austin Adopt-A-School program have assisted in the planning and implementation of each magnet curricular theme and activities. While it may be a bit of a cliché, it is still true that people support what they help create! The Austin magnet school story confirms this premise.

In the 1985-86 evaluation report, prepared by the Office of Research and Evaluation, six major summary findings were listed as follows (Gaines, 1986):

1. Magnet programs have helped to stabilize enrollment at the elementary campuses over the last three years. At all six magnet schools, enrollment increased during either the first or second year of the program.
2. After steady declines since desegregation began, enrollment at Lyndon Baines Johnson High School (L.B.J.) increased 14% in 1985-86, the first year of the Science Academy.
3. Elementary programs have been successful in attracting transfer students from overcrowded South Austin schools.
4. Ninth grade Science Academy students had achievement gains greater than expected in reading and science. Tenth grade students exceeded their expected gain in mathematics.
5. The number of students enrolled in honors courses at L.B.J. High School increased 55% as a result of transfers to the Science Academy. Enrollment in honors classes at other campuses was not significantly affected by the loss of transfer students.
6. Eighty-six percent of the Science Academy students reported that they would encourage other interested students to apply.

The types of magnet school outcome measures used in Austin have been used in studies by Blank in "The Effects of Magnet Schools on the Quality of Education in Urban



School Districts" (1984) and Rossell in "What Is Attractive About Magnet Schools?" (1985).

## AUSTIN HISTORICAL PERSPECTIVE

### Elementary Schools

The first four elementary magnet school programs were established in the 1982-83 school year. Two more elementary schools were added in 1983-84. The primary purpose was to provide a means of assisting these schools, which were under-enrolled, achieve the ethnic balance as outlined in the court approved student assignment desegregation plan. Parents and school staff in the six schools were concerned that their elementary campuses might be closed because of low enrollment. They proposed establishing magnet schools around a curricular theme to attract students and gain parental support from the overcrowded South Austin schools and at the same time achieve the court approved ethnic goals in their own schools without disturbing the ethnic balance goals in other schools.

This general plan was presented to and approved by both the administration and the Board of Trustees for the Austin Independent School District. Parents in each of the six elementary schools have been instrumental in planning, implementing and obtaining approval for the program. They have also assisted in attracting parents of other elementary school students in transferring to a magnet school. Businesses which have adopted the elementary magnet schools have provided both financial resources and technical expertise to each program.

#### Junior High School

The first junior high school magnet program in Austin was tried on a very limited basis, and unsuccessful due to a number of factors, in this author's opinion.

- o The court approved student assignment plan moved so many students out of that particular building that few committed parents and students were left to build a core of strong support for either the school or a magnet program.
- o The student assignment plan approved in the court consent decree allowed few junior high students the flexibility of transferring to this particular campus. Over 100 students submitted transfer requests but only 9 transfers were approved.

- o The curricular theme established for this magnet school was not of general enough interest to attract students nor their parents. Extensive interest surveys had not been conducted and used for planning purposes as were done for other magnet school sites. It appears that the attraction of the magnet was insufficient to offset strong junior high peer group affiliation needs.

A subsequent magnet school has been established (1986-87 school year) at a new replacement school site as outlined in the court-approved desegregation plan.

Positive steps have been taken. Parents and community leaders have been involved heavily in the planning stage. Interests of students and parents have been obtained through surveys, and the curricular theme for the new junior high magnet is based on the results of those surveys. The ethnic goals of the court-approved student assignment plan do not serve as a block to student transfers into the program.

While it is too soon to evaluate student and parent outcomes at the time of this writing, preliminary data indicate strong interest and support for this magnet school. When the school doors first opened in September, 1986, there was already a waiting list of students and

their parents who had applied but could not be accepted because the enrollment goal had been met. Magnet school satellite programs were established on the home school campuses to accommodate students on the waiting list. The Office of Research and Evaluation will evaluate the effectiveness of the program in terms of student and parent outcomes.

### High School

One of the high schools in Austin was built over a decade ago in a fringe area of the city that was projected to be a fast-growing, naturally integrated section of Austin. The beautiful school plant was designed around the school-within-a-school concept wherein students and faculty were clustered into school "family" units to prevent the depersonalization that frequently occurs in comprehensive high schools. In spite of a decade of extremely fast growth in the city and in the school district, this particular section of Austin did not develop fully, leaving a beautiful but greatly underutilized school with a predominately minority student population. Many of the high school parents became very unhappy with what was

happening to their school and children. The community unrest spilled over into the school causing perceived racial tensions, increased student disruptions and lowered student achievement. Parent groups approached the administration and Board of Trustees strongly requesting that something be done to improve the school and learning environment.

At approximately the same time (1984), a number of business leaders from the high-technology industries in Austin approached the administration and Board of Trustees with an idea of establishing a "first-class high school" with a science, math, and technology theme, with support and expertise offered by the high-tech industries in the area.

With approval from the school district, one staff member from a high tech corporation and one person from the school administrative staff were assigned full-time for about half a year to the task of developing a plan, establishing a joint advisory committee and surveying student and parent curricular interests. Questions had to be addressed from parents and staff in the other high schools. If advanced programs were set up, would it skim

the talented teachers and students from other Austin schools? Many meetings were held with students, parents, and school personnel to give assurance that top-quality programs in all schools would not be gutted to set up a high school magnet program.

The focus of the magnet school was determined to be math/science technology, as a result of an extensive interest survey of parents and students. Math and Science were used as a starting point. The validity of the theme was checked with parent and student surveys. It was found that the parents and students shared the "high-tech fever" that was sweeping Austin leadership. The following rankings helped determine the theme and content of the magnet program later to be called "The Science Academy of Austin":

**COMPARISON OF RANKING OF MAGNET  
SCHOOL OPTIONS BY POPULARITY  
FOR HIGH SCHOOL STUDENTS  
AND PARENTS**

<b>RANK</b>	<b>STUDENTS</b>	<b>PARENTS</b>
1	No Transfer*	No Transfer*
2	Business/Management	Math/Science <sup>1</sup>
3	Math/Science <sup>2</sup>	University High <sup>1</sup>
4	Computer Science <sup>2</sup>	Computer Science
5	Trade/Industry	Business/Management
6	Fine Arts	Trade/Industry
7	Communication	Fine Arts <sup>3</sup>
8	Agriculture	Communications <sup>3</sup>
9	---	Agriculture

1 Tied in ranking.

2 Tied in ranking.

3 Tied in ranking.

\* Students and parents who indicated they would not be willing to transfer to magnet schools for any reason.

The placement of The Science Academy in the under-utilized high school was an obvious choice. Also, an open transfer policy was established to attract voluntary transfers to increase enrollment. Beginning in the 1985-86 school year, the magnet school students became part of the comprehensive high school for all classes and activities with the exception of the advanced math and science classes provided by the Science Academy in one section of the school-within-a-school.

One key factor of success to date was the hiring of the Science Academy Administrator and Science Coordinator a year in advance of opening the magnet school. Besides planning and recruiting, they involved the Advisory Board and the University of Texas in the development of curriculum and gaining public support.

#### Student and Parent Outcomes

The Austin Independent School District has long believed in thorough and objective evaluation of the major programs implemented by the school district. To achieve that goal, a separate Office of Research and Evaluation was established, staffed by highly qualified evaluators who



report to the Director of Management Information. Program personnel have no direct supervisory role over the evaluation office. Thus, neutrality and objectivity can be maintained in conducting research and evaluation activities.

The student and parent outcomes resulting from magnet school experiences in Austin reported herein are drawn from an evaluation document prepared by the Office of Research and Evaluation for the Board of Trustees (Gaines, 1986). Several evaluation questions were addressed by the study.

#### Who Was Served In The Elementary Magnet School Programs?

The percentage of students by ethnicity and gender served by the elementary magnet program in the Austin Independent School District for the school year 1985-86 is presented in Figure 1.

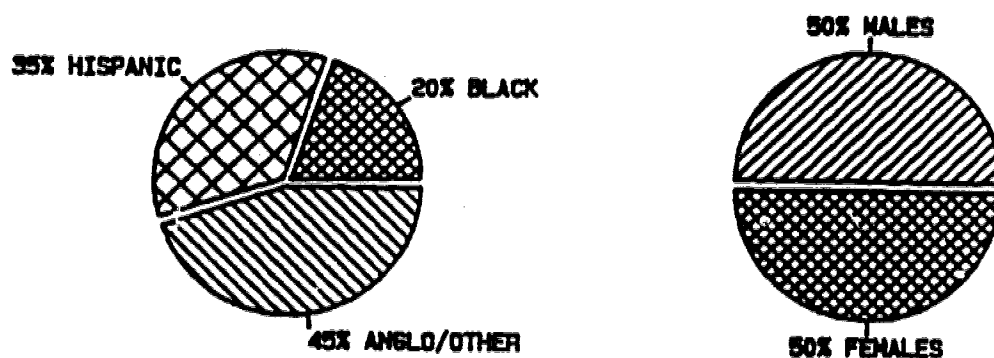


Figure 1. ELEMENTARY MAGNET STUDENTS:  
ETHNICITY AND SEX CHARACTERISTICS.

Figure 2 presents the student characteristics by school, including the percentage of students who were eligible for the free or reduced-price lunch program. The enrollment figures were obtained from the Average Daily Membership Report for the first six weeks, and the percent low-income was taken the last day of school, June 3, 1986. At Gullett and Sims Elementary Schools, where not all students attending the school were participants, the figures were based only on students in the magnet program.

SCHOOL	ETHNICITY			SEX		PERCENT LOW INCOME	STUDENTS SERVED
	BLK	HSP	A/O	MALE	FEMALE		
BROOKE	4%	69%	27%	54%	46%	55%	325
BRYKER WOODS	33%	15%	52%	49%	51%	32%	224
GULLETT	8%	5%	87%	57%	43%	6%	165
HIGHLAND PARK	2%	35%	63%	52%	48%	28%	382
ORTEGA	22%	46%	32%	46%	54%	55%	307
SIMS	62%	13%	25%	45%	55%	58%	212

Figure 2. ETHNICITY, SEX, LOW-INCOME STATUS, AND ENROLLMENT OF STUDENTS SERVED IN ELEMENTARY MAGNET PROGRAMS.

#### Who Transferred To The Elementary Magnet Programs?

Participation in the elementary magnet programs via voluntary transfer to a magnet campus was open to all students districtwide who were eligible to transfer under the stipulations of the district's transfer policy. Essentially, a student was not eligible if he/she was reassigned for desegregation or if the student was in the

minority ethnic group at the home school. The program at Gullett required students to submit an application and to be tested and screened before being admitted to the program. Once admitted, a student's transfer request was approved.

One indication of a magnet school's attracting power is the number of transfers granted to students for the magnet program relative to the number of transfers granted for all other reasons.

Figure 3 indicates the total number of transfers, and the proportion of the total represented by magnet transfers for each campus during 1985-86 as an indication of each program's attracting power.

#### 1985-86 TRANSFERS TO ELEMENTARY MAGNET SCHOOLS

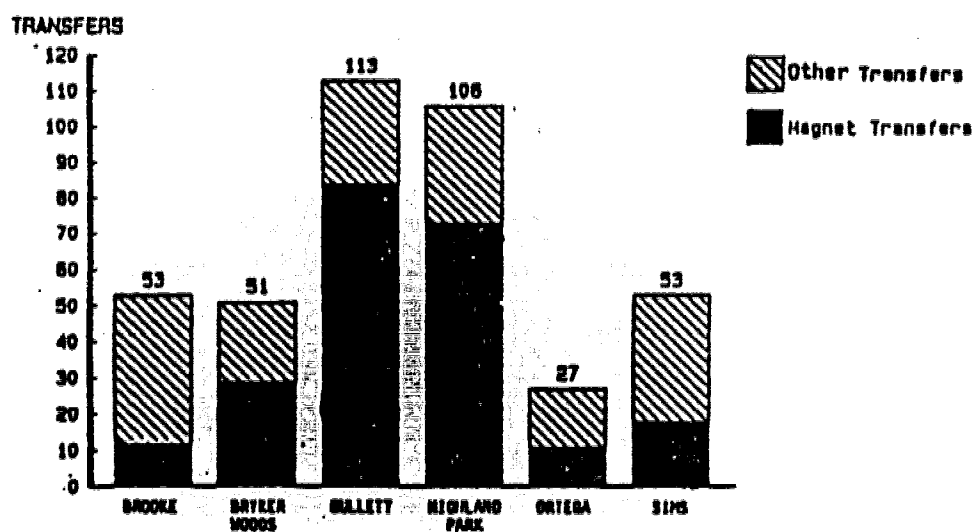


Figure 3. ELEMENTARY MAGNET TRANSFERS AS PORTION OF TOTAL TRANSFERS.

In order to examine the drawing power of the magnet programs on students of the three major ethnic groups, the percentage of total transfers was calculated for each group by the Office of Research and Evaluation. The number of magnet transfers within each ethnic group and the percentage of the total transfers represented by the magnet transfers were also found. The schools were grouped according to their pre-desegregation status, either minority-dominant or Anglo-dominant.

	TOTAL TRANSFERS (Percent of Total)			MAGNET TRANSFERS (Percent of Ethnic Group)		
	BLK	HSP	A/O	BLK	HSP	A/O
<b>Formerly Minority-Dominant:</b>						
Brooke	5 ( 9%)	34 (64%)	14 (26%)	2 (17%)	2 (17%)	8 (66%)
Ortega	4 (15%)	9 (33%)	14 (52%)	0 ( 0%)	1 ( 9%)	10 (91%)
Sims	33 (62%)	2 ( 4%)	18 (34%)	7 (39%)	0 ( 0%)	11 (61%)
<b>Formerly Anglo-Dominant:</b>						
Bryker Woods	3 ( 6%)	2 ( 4%)	46 (90%)	1 ( 3%)	2 ( 7%)	26 (90%)
Gullett	23 (20%)	7 ( 6%)	83 (73%)	14 (17%)	5 ( 6%)	65 (77%)
Highland Park	7 ( 7%)	25 (23%)	74 (70%)	6 ( 8%)	8 (11%)	59 (81%)

Figure 4. ETHNIC COMPOSITION OF TRANSFER STUDENTS AT MAGNET CAMPUSES.

The number of transfer students to formerly minority-dominant schools has been small compared to the number of magnet transfers to the formerly Anglo-dominant schools. . While statistical significance cannot be determined, the educational significance should be

considered within the context of the demographic characteristics of the schools since desegregation. Brooke, Ortega, and Sims were experiencing white flight; the number of Anglo students dropped three to four percentage points each year after the first year of desegregation. Increases in Anglo students at the minority schools coincided with the implementation of the magnet programs. That the downward trend in the percentage of Anglo students was halted and reversed was educationally significant at those schools and for the District. To improve the overall enrollment as well as the ethnic balance at the magnet program campuses is a specific objective of the magnet programs in the Austin Independent School District.

Compared to the changes at the minority schools, the formerly Anglo-dominant schools have not made as much progress toward meeting the objective of having ethnically balanced schools as a result of the magnet schools. The percentage of minority students at Bryker Woods and Gullett has remained relatively stable since the magnet programs were implemented, but the percentage of minority students at Highland Park has declined. Transfer students to the

three schools have been primarily Anglo students from the overcrowded south Austin schools rather than minorities from schools in east Austin. However, to relieve overcrowded south Austin schools is also an objective which showed progress through the number of voluntary transfers over the years the programs have been operating.

#### Who Was Served In The Science Academy Magnet School?

In 1985-86, the first year of implementation, 115 ninth and 41 tenth grade students and a few eleventh graders were enrolled. The program is designed to expand to include approximately 200 students in each of four grade levels. Students admitted to the Science Academy enrolled in an extra course offered during a "zero hour" period (before the official start of the school day). These courses were usually math or science taught by a Science Academy teacher. Students also had additional mathematics, science, or computer classes with the Science Academy faculty during the day. Students were integrated into the entire L.B.J. High School student body for their remaining academic and elective courses.

Admission to the Science Academy was determined by a student's satisfactory performance on a battery of admission criteria, including standardized test scores, teacher recommendations, expression of interest, and an interview with a Science Academy staff member. Because any student could obtain a transfer to L.B.J. High School in an effort to increase enrollment, once a student was selected, a transfer request was approved regardless of eligibility under the stipulations of the District's transfer policy.

A total of 282 students applied to the Science Academy, of which 216 (78%) were accepted, and 193 (68%) enrolled. Figure 5 shows the proportion of applicants who enrolled, cancelled their application before or after the selection decision was made, and those who were rejected. Figure 6 shows the proportion of enrolled students who dropped out for various reasons.

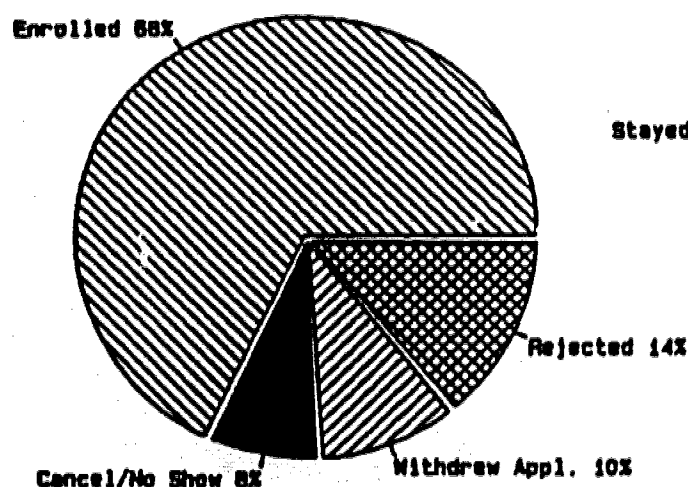


Figure 5. SCIENCE ACADEMY APPLICANTS, 1985-86.

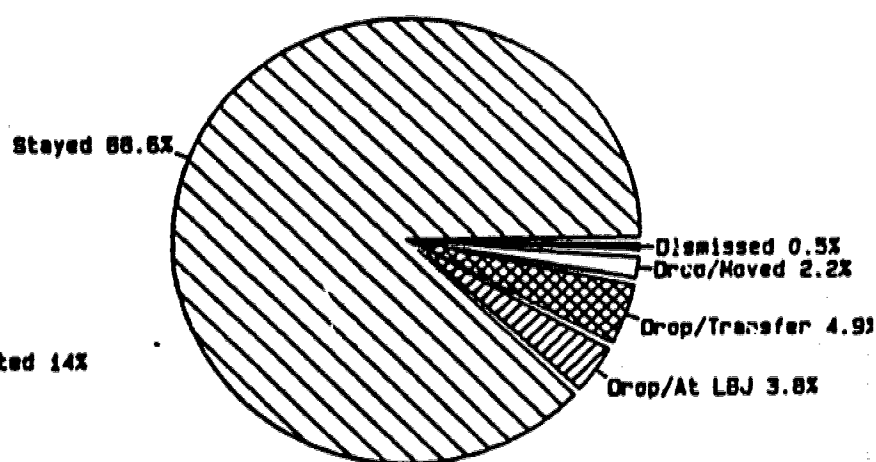


Figure 6. ENROLLMENT STATUS BY END OF YEAR.



Figure 7 below summarizes the ethnic, sex, and low-income status of the students who were still enrolled when the last count was taken for the school year 1985-86.

BLACK	ETHNICITY		SEX		PERCENT LOW-INCOME
	HISPANIC	OTHER	MALE	FEMALE	
33 20%	12 7%	123 73%	122 73%	46 27%	11 7%

Figure 7. CHARACTERISTICS OF SCIENCE ACADEMY STUDENTS.

How Did Entering Science Academy Students Compare To Other Students Districtwide In Terms Of Achievement?

The criteria used to select applicants for the Science Academy required that their standardized test percentile scores in math and reading should sum to at least 140, and no subtest total percentile score should be below the 50th percentile. In general, the Science Academy applicants scored well above students districtwide on all subtests of the ITBS or TAP. The figures on the next page (Figures 8 and 9) show the median percentile scores for eighth and ninth grade applicants who were accepted compared to students districtwide by ethnicity.

	SCIENCE ACADEMY ENROLLEES		DISTRICTWIDE	
	GRADE EQUIV.	PERCENTILE	GRADE EQUIV.	PERCENTILE
READING				
Black	10.25	78	7.67	33
Hispanic	10.35	80	7.77	36
Anglo	11.40	93	9.84	71
TOTAL	11.20	91	8.89	54
MATHEMATICS:				
Black	9.95	77	7.78	32
Hispanic	10.15	81	8.12	39
Anglo	10.80	92	9.52	69
TOTAL	10.60	88	8.82	54

Science Academy: Black=16, Hispanic=10, Anglo=111

Figure 8. 1985 ITBS MEDIAN GRADE EQUIVALENT AND PERCENTILE SCORES FOR STUDENTS DISTRICTWIDE AND SCIENCE ACADEMY ENROLLEES IN THE NINTH-GRADE IN 1985-86. There is no science subtest on the ITBS for which to report previous levels of achievement.

	SCIENCE ACADEMY ENROLLEES		DISTRICTWIDE	
	GRADE EQUIV.	PERCENTILE	GRADE EQUIV.	PERCENTILE
READING:				
Black	13.20	76	8.07	29
Hispanic	*	*	8.62	36
Anglo	16.20	91	12.26	70
TOTAL	15.90	90	10.23	54
MATHEMATICS:				
Black	14.40	83	7.95	25
Hispanic	*	*	8.59	32
Anglo	16.20	92	12.52	72
TOTAL	14.90	86	10.55	55
SCIENCE:				
Black	13.20	77	7.64	26
Hispanic	*	*	8.28	33
Anglo	16.10	95	11.98	69
TOTAL	15.30	90	10.14	53

Science Academy: Black=15, Hispanic= 5, Anglo=30

Figure 9. 1985 TAP MEDIAN GRADE EQUIVALENT AND PERCENTILE SCORES FOR STUDENTS DISTRICTWIDE AND SCIENCE ACADEMY ENROLLEES IN THE TENTH-GRADE IN 1985-86. There were too few Hispanic tenth-grade Science Academy students to report reliable results.

At the time applications were submitted, eighth grade students accepted into the Science Academy:

- o Scored an average of 37 percentile points above the district median percentiles for all students in reading on the ITBS (91st percentile versus 54th).
- o Scored an average of 35 percentile points above the district ITBS median percentile in mathematics (89th versus the 54th).

Ninth grade applicants:

- o Scored an average of 36 percentile points higher than the district TAP median percentile score in reading (90th versus the 54th).
- o Scored an average of 31 percentile points higher than the district TAP median percentile score in mathematics (86th versus the 55th).

#### What Was Student Achievement By End Of Year?

At the end of the year, regression analyses were done on the ninth and tenth grade TAP reading, mathematics, and science grade equivalent scores. A variety of characteristics were taken into consideration such as previous achievement level, sex, ethnicity, low-income status, and desegregation status to predict achievement levels for each student.

For ninth graders, TAP scores were predicted from 1985 ITBS scores. Because the ITBS does not have a science subtest, total battery grade equivalent scores were used in calculating a predicted TAP science score. All tenth grade TAP scores were predicted from the students' 1985 TAP scores.

The following graphs show that the Science Academy students made large gains during the year. In addition, they made slightly larger gains than their high-achieving counterparts districtwide. It should be noted that the tenth-grade science gains for the Science Academy students are not significantly larger than the gains for the similar, high-achieving students. The Science Academy administration proposed that the tenth-grade Science Academy students did not have sufficient opportunity to demonstrate mastery in the science content areas they studied during the year (primarily chemistry and physics). Because of a change in the science course sequence at the ninth and tenth grades that took effect in 1985-86, some Science Academy students had biology in 1984-85 and some had not had biology at all. (This effect is unlikely to recur.) Only 32% (1st sem.) and 20% (2nd sem.) of the

Grade Equivalent

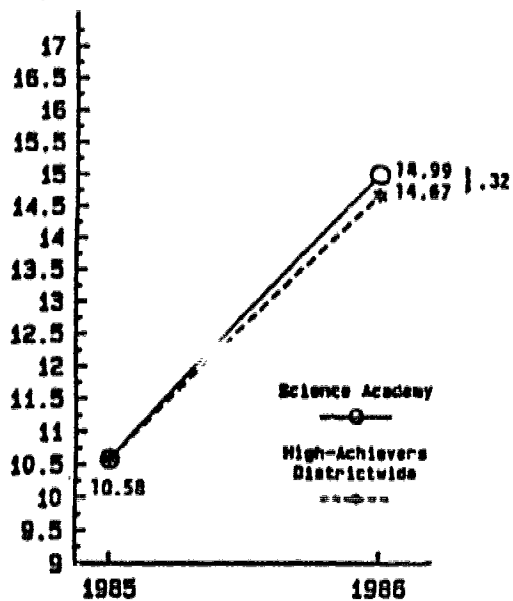


Figure 10a

Ninth-Grade Mathematics Achievement

Grade Equivalent

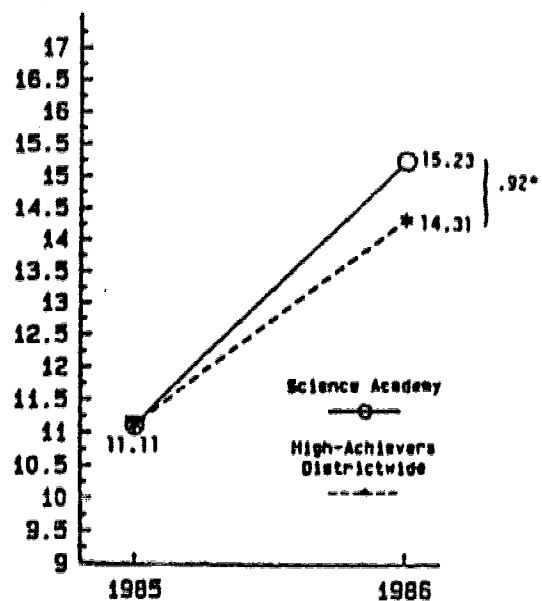


Figure 10b

Ninth-Grade Science Achievement  
\*Statistically Significant difference

Grade Equivalent

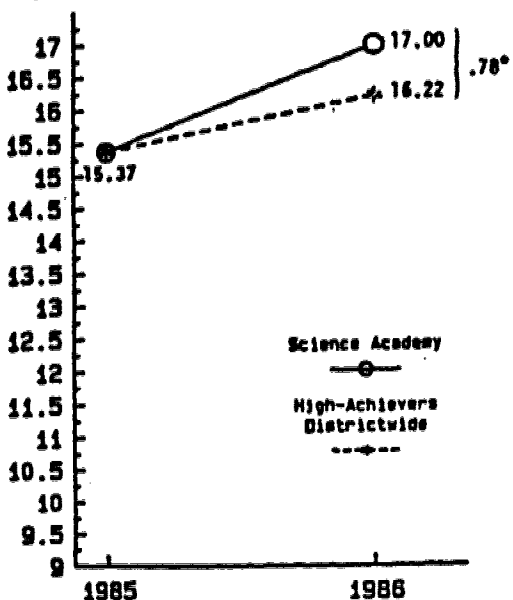


Figure 10c

Tenth-Grade Mathematics Achievement  
\*Statistically significant difference

Grade Equivalent

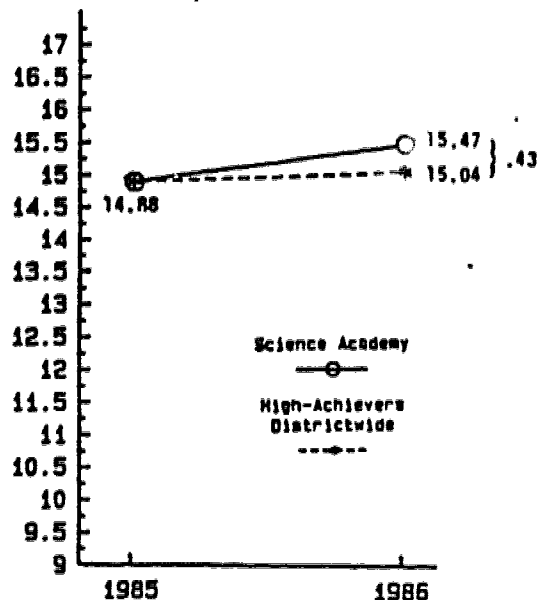


Figure 10d

Tenth-Grade Science Achievement

tenth-grade Science Academy science enrollments were in biology during 1985-86. By comparison, 58% of tenth grade science enrollments districtwide were in biology during 1985-86, and very few had chemistry or physics. However, the TAP science subtest is heavily loaded on biology items (37% of all items) and has very few on chemistry (3%) or physics (3%) items. The Science Academy director suggested that administering a higher level of the science TAP may help remedy this curriculum-test mismatch, as the higher levels have more chemistry and physics items than the lower levels.

#### Attitudes Toward The Science Academy

A 28-item survey was distributed to Science Academy students in April 1986, and 143 (86%) were completed and returned. No make-ups were offered. The results of the student survey indicated:

- o More than half of the students felt motivated either by being with students with similar interests or just being in the Science Academy.
- o Most of the students (80%) plan to go to college and are considering a career in a science, math, or technology field.

- o Students who thought that the courses were difficult also tended to think that the teachers expected too much from the students. Students with a high grade point average tended to think the courses were easy.
- o Eighty-six percent reported that they would encourage other interested students to apply.
- o Students felt less prepared in study skills than in subject areas. Only 25% felt better than adequately prepared, and 30% felt poorly or not at all prepared in study skills, compared to fewer than 20% who felt poorly or not at all prepared in all other academic areas.

Students were also asked to respond to open-ended questions about what they liked and disliked about the Science Academy. While academic topics, such as math and science, represented over half of the positive comments, academics also received the largest portion (36%) of unfavorable comments. Students also focused on attitudes towards teachers and social aspects (student-student interactions in social settings) of the program in their comments about what they disliked (24% and 23% of the comments, respectively).



## IMPACT OF MAGNET PROGRAMS ON THE DISTRICT

### Enrollment And Ethnicity

The enrollment by ethnicity was examined at each campus over a seven year period. Since the Austin Independent School District implemented its desegregation plan in 1980-81, enrollment at seven of the eight campuses has been declining. Trends generally began to reverse with the introduction of magnet programs. The enrollment data indicated the following:

- o All six elementary campuses increased in enrollment during either the first or second year of the magnet programs. Previously, these six schools had lost enrollment, in part, due to flight from court-ordered desegregation.
- o In general, the enrollment at the six elementary schools has stabilized over the last three years (83-84 through 85-86). The magnet schools may have contributed to this, but there may have been other factors involved as well.
- o L.B.J. High School showed its first increase in enrollment (+14%) since desegregation with the implementation of the Science Academy.
- o After desegregation impacted the school district, ethnic distributions remained relatively stable.

While conclusive statements about the impact of magnet schools on enrollment cannot be made because other District programs and policies affect a school, it appears that the magnet programs are impacting the schools in a positive way.

### Impact On Transfers

- o As the magnet schools have gained in popularity, the number of magnet transfers has increased. The largest increases occurred between the first and second years of the programs.
- o A total of 765 elementary magnet transfers have been granted since the programs were first implemented.
- o On a per school basis, transfers from overcrowded south Austin schools have been granted at a higher rate than from other schools, which is consistent with the purpose of the magnet schools. The sixteen south Austin elementary schools (south of the Colorado River) have contributed 44% of the total magnet transfers, or an average of 21 per school compared to an average of nine for all remaining elementary campuses.
- o Elementary magnet transfer students comprised from 4% to 22% of a school's total enrollment, with the average at 11.5%.
- o Science Academy students represented nearly 15% of the total enrollment at L.B.J High School; the magnet transfer students also accounted for 10%. Almost 73% of all Science Academy students transferred from other schools.

### Impact On Enrollment In High School Honors Courses

Enrollments in honors courses at the other high schools was examined to determine whether the Science Academy affected these schools by attracting transfer students to L.B.J. High School. The number of students taking one or more honors courses and the total enrollment for all honors courses were obtained for each campus. Then, assuming that the Science Academy students were at their home school, enrollment estimates were calculated. A course was considered impacted if more sections would have been offered or the course would have been offered with the presence of the transfer students.

In general, the findings indicated no significant negative impact on the other high schools, with the exception of Johnston High School. Rather, the Science Academy had a positive impact on L.B.J. High School by increasing enrollment in honors courses. The following results were found:

- o The number of students taking one or more honors courses at L.B.J. High School increased by 55% due to magnet transfers, while the average loss at the other schools was only 3.2%. At Johnston, the number decreased by 5.8%.

- o Total enrollment in all honors courses at L.B.J. High School increased just over 70%, while the other schools experienced an average decrease of 4.7%. Enrollment at Johnston decreased 9.3%.
- o All Science Academy students were enrolled in honors courses. Academy students accounted for 54% of all L.B.J. High School students in honors courses.

In addition to quantifiable results there are other indicators of parent and student support for the magnet schools in Austin Independent School District:

- o Since the establishment of the Science Academy, the numbers of individual parents and parent groups appearing before the School Board to express strong concerns about the high school have vastly diminished.
- o The principals of the elementary magnet schools report an increasing number of parents who volunteer to assist with learning activities related to magnet curriculum. On several occasions during the school year, 1986-87, parents from elementary magnet schools, have appeared before the School Board to invite Board members to special magnet events that occur on their campuses.
- o Many comments heard by the author in schools and the community indicate a general change in perception of L.B.J. High School from a disruptive, troubled campus to an orderly, quality campus, in part, due to the Science Academy.

- o With the implementation of the Science Academy at L.B.J. High School in 1985-86, overall disciplinary measures dropped from 14% of the students to 9% of the student population. While it is too soon to tell if this trend will continue, the drop in students requiring disciplinary actions was higher than all other high schools for the same period of time.

### SUMMARY

The evaluation of magnet school programs in the Austin Independent School District was based on a decision making approach. In addition to monitoring progress in meeting the stated program objectives, the evaluation was designed to provide information in response to a number of questions that were likely to be asked by administrators or used to make decisions about the programs. Furthermore, evaluation utilization is encouraged if information is reported in a ready-to-use form.

The 1985-86 evaluation of the magnet programs asked decision questions stated in the form, "Should the magnet program be continued as it is, modified, expanded, or

discontinued?" The evaluation questions, which directed the data collection and analysis, asked about the characteristics of the students served and the implementation of various components of the programs in order to monitor progress and compliance in meeting program objectives. The second year of evaluation continued to monitor progress but also focused on gathering information for making admission to the high school magnet program. Information gathering also focused on achievement and student surveys, which were used by program administrators for modifying the curriculum.

Evaluation of magnet schools can go beyond the simple documentation of student characteristics or description of achievement outcomes at the schools where programs are located. Innovative approaches in identifying outcome measures and assessing program effectiveness are possible and necessary. The Austin Independent School District has evaluated the impact of magnet schools on achievement through the use of linear model regression techniques to compare the achievement gains of magnet students to gains made by similar, nonmagnet students. The impact of voluntary transfers to the magnet programs on the sending

campuses was assessed via simulation exercises by hypothetically replacing the transfer students at their assigned schools and measuring the differences. Additional information about the model and techniques used for evaluating magnet schools and other programs may be obtained by contacting the Office of Research and Evaluation in the Austin Independent School District.



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**RESEARCH NEEDED TO ASSESS  
THE PERFORMANCE OF MAGNET SCHOOLS**

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# RESEARCH NEEDED TO ASSESS THE PERFORMANCE OF MAGNET SCHOOLS

## INTRODUCTION

In Doyle and Levine's article (1984) advocating the promise of magnet schools, they state that such schools can be "powerful tools for educational change" and that they are effective, in part, as a result of the opportunities of choice for students. Indeed magnet schools are designed to increase the possibility that students can obtain the type of education they desire. However, little is known about the actual relationship between this type of schooling--the magnet experience--and its benefit to the student once he or she leaves that environment. This paper is an initial attempt at reviewing what has been written on the topic. Its second purpose is to suggest additional research questions that need attention.

## RESEARCH ON STUDENT OUTCOMES

A considerable amount has been written about the effects that magnet schools have on the quality of education (for example, Blank, 1984). Most of these studies indicate that the rate of achievement among students who attend magnet schools is higher than that of students enrolled in traditional schools.

Achievement questions are still fertile ones for investigation, however. In a recent (1985) report of the Office of Educational Evaluation of the New York City Board of Education, five magnet high schools were evaluated. One set of program objectives at the schools were related to increases in achievement and attendance. Another set was developed in an effort to, when implemented, decrease the number of human relations violations in those schools. According to the findings of the study, the human relations violations did decrease in three of the five schools. However, objectives for attendance and achievement

were not met, although attendance was generally high in the magnet programs. In Rossell's study of magnet schools (1985) she could not find a single experiment, and only one quasi-experimental design, controlling for self-selection of students. "As a result, although numerous studies document that magnet school students generally have higher achievement and that they have fewer absences and suspensions, there is little evidence that magnet schools caused this because only one of the studies controlled for initial differences. Magnet schools may simply attract students with these characteristics" (page 18). Laws' paper in this volume describes a model for research on student outcomes in a local district.

#### NEED FOR FOLLOW-UP STUDIES

One fact remains particularly clear as a result of the search that led to the writing of this paper. If follow-up studies on students are objectives of magnet schools, they certainly are not first-order priorities. Most of the follow-up information that has been identified seems to come as a result of accreditation requirements. And, the accrediting bodies are interested in where students go when they leave the school under review. They are not as interested in how well they do once they get there (see, for example, survey instruments prepared for schools by the North Central Association, 1983). The Sumner Academy of Arts and Sciences in Kansas City, Kansas is a magnet school for academically talented students that opened in the fall of 1978. The school was created as a solution to a court desegregation mandate. It has an exemplary record of student achievement and offers high quality instruction to its students. The number of advanced placement college credits that students accrue is impressive. The list of institutions that receive its graduates includes many of our finest universities. However, little follow-up on individuals is

done. And, Sumner probably does a better job than most magnet schools in maintaining contact with its former students. The school is currently undergoing its periodic North Central Association evaluation. As a part of this evaluation, a questionnaire was sent to all of the graduates of the Academy using their last known address. A total of 358 questionnaires were returned. "Based solely upon the surveys that were completely returned, 80% of the graduates will obtain some type of college degree in a period of 5 years... Several of the students indicated that they had received or were working towards a master's degree.... At this time 90-95% of the 1986 graduates indicate their desire to continue their education" (Sumner, 1987, page 7). Certainly these figures are higher than the rates for the district at large. However, it would be helpful to know how successful the magnet experience was in fulfilling the educational and career aspirations of the student, the relationship of magnet program to the postmagnet experience, the success of its students in achieving career objectives, or whether the magnet experience was causal to the students' ability to gain entrance into the college of his or her choice.

This lack of information seems to be prevalent in many school districts that have magnet school programs. The 1983 evaluation of the magnet school programs of the Los Angeles Unified School District suggests almost parenthetically in one brief paragraph (on the 64th of 65 total pages) that "while limited information was available on postsecondary opportunities due to recent establishment of most senior high school programs and a limited number of twelfth grade students, the majority of seniors sampled reported that they expected to receive a high school diploma. Further about 70% expected to pursue some type of postsecondary education. However, due to missing data, it was not possible to assess their preparation or eligibility for these pursuits" (Los Angeles, 1983).

As part of the preparation for this paper the abstracts of the funded proposals under the current cycle of the Magnet School Assistance Program were reviewed. This program funds projects in 44 districts from 21 states. The projects impact magnet school programs in 350 schools that enroll well over 200,000 students. In none of the proposal abstracts were follow-up studies indicated as activities. Six follow-up phone calls were made to project directors. All indicated that there was a need to investigate postmagnet outcomes. Five directors indicated that "not much" was currently being done to assess the impact of the magnet school experience on students after they had left the experience. One district, Montclair, New Jersey has awarded a contract to the Educational Testing Services for an evaluation study of the magnet programs. In one part of the study, qualitative data gained primarily through interviews will attempt to gauge the impact of the magnet experience. The strategy being employed is that the researchers will interview individuals in the Chamber of Commerce and the business community to gain their perspective on the effectiveness of the schools. Please note that the ETS proposal does not suggest that it will interview former students. No emphasis is placed on attempting to gauge the degree to which the students' expectations were met by the preparation that they received in the magnet schools.

The seemingly significant factor in the review of all of the proposal abstracts is this lack of emphasis by districts on following up students that have left their experiences. It may be that follow-up studies, outside of those done as a part of accreditation process, just are not being done in any of the schools in the districts as the emphasis is placed on evaluating students while they are in school. And, much of this lack in the magnet schools may be attributed to the fact that many of these programs are currently being implemented and few students exist on which to follow-up. However, it is important

that researchers, program evaluators and/or others look at the impact of this exceedingly important innovation in education practice.

The scope of the literature review for this paper was limited. It is possible that some school districts have conducted effective follow-up studies on their magnet school graduates. Frankly, the researcher doubts that they have. However, a much broader based quantitative and qualitative study needs to be done to ascertain the extent of such district-level efforts. Such a study would include, in survey format, questions that could determine if districts attempt to measure whether students, once they have left, believe that their educational and career aspirations have been met. If such perceptual data are gathered, do students from magnets differ from their nonmagnet colleagues? What data exist that show that educational and workplace performance of magnet graduates exceeds that of other graduates? Once it is determined where such school district information exists, then researchers can begin to ask the necessary second- and third-level sets of questions--what research questions were in fact asked? how was the information gathered and analyzed? for what purposes were the studies generated? are they at all comparable? Only at the point that such questions can be answered is it possible to ask if magnets generally are causal to an enhanced educational and career quality of life for graduates.

The only major study most people reference in discussing magnet schools is the Blank, et al. Survey of Magnet Schools: Analyzing a Model for Quality Integrated Education (1983). The study shows that magnet schools can have a significant positive impact on district-wide desegregation efforts, that they can help reduce community conflict, and that they can promote racial integration. As a strategy for desegregation magnets are promising. However, studies which demonstrate that magnet environments impact students in such a way that



they are more understanding, more tolerant, and more vocal in promoting equal opportunity after they leave the magnet probably do not exist. If schools are to serve society in such a fashion, we should ask such research questions.

#### OTHER AREAS FOR CONSIDERATION

Magnet schools, as has been suggested, offer considerable promise as options to help students become all that they can be. Certainly, the existing evidence, though scanty, is encouraging. However, major questions will remain unanswered. Many of these questions can not be answered unless districts make conscious efforts to develop the kind of institutional research infrastructure that creates and maintains adequate data bases. These efforts take talent, time and money, resources that are scarce in most environments. This section reviews briefly some of the general areas that deserve attention. The reader will note that several of these topics and mentioned in other papers in this volume.

In most districts, central office personnel have responsibilities in the recruitment and selection of students for their magnet schools. All too often, districts do not pay enough attention to those students once they are enrolled. It would be very helpful if systems developed the capacity to track students after their enrollment. Basic studies comparing the performance, academic as well as otherwise, of students from different "feeder" schools, race, sex, ability and interest could prove helpful not only to the research community but also to other educators, patrons, and judges. Districts should be able to document the progress of students over the period of time that students are enrolled in the magnets--do students do better the second year (or the third) they are in the magnet than the first? Comparisons of student outcome data on achievement, attendance, and discipline across magnet schools, as well as non-magnets, is essential if truly wide-spread implementation of magnet is to be considered.



Little about magnet schools is known about a variety of basic organizational questions. Which magnet themes offer the greatest promise in what kinds of districts? How are community needs best assessed in determining these themes? What recruitment and selection strategies work best for which themes in what kinds of communities? Do some strategies work better than others to facilitate desegregation? What effective staffing strategies have been implemented to assure that the magnet has a chance to succeed while, at the same time, protecting the quality of the programs in the non-magnet buildings? Curtis (1986) suggests that most secondary-level performing arts magnets are smaller than comprehensive urban high schools--is size, or commitment of faculty, or pupil-teacher ratio, the reason why a magnet is successful? Perhaps. The investigation of these questions, and the use of the resulting information, can not help but assist school districts become more successful in the educating of their students.

#### CONCLUSION

Issues of quality, choice, and equal opportunity are inextricably intermingled. They will not go away. We have the opportunity to make major policy recommendations about the promise of magnet environments in resolving the conflict that frequently surrounds these issues. However, we should make these recommendations based on the results of reputable studies. These studies should help answer the unresolved questions relating to the impact of the magnet experience.

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ISSUES IN DESIGNING MAGNET SCHOOLS

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## ISSUES IN DESIGNING MAGNET SCHOOLS

### INTRODUCTION

The author prepared this paper as a reactor to the major papers of this volume for the Conference for Project Directors of the Magnet School Assistance Program. The paper was intended to supplement the six major papers. It picks up three themes important for magnet school planners to consider which are treated only relatively briefly in the other papers. The themes are close to the actual operation of the schools; these reactions were intended to provide central office project directors a view of the issues from the school level upward. The three themes deal with the interdependence of program design and recruitment issues, with school level practices which help to turn racial desegregation into racial integration, and with the strains experienced by teachers and principals when programs are imposed from above.

### DESIGNING MAGNET SCHOOLS TO DRAW AN OPTIMAL POPULATION

At least four of the authors speak to the need to design magnet schools in such a way that they will be attractive to volunteering parents. Several recognize the complexity of the task as a consequence of the fact that magnet schools should not draw their clientele through overall superiority, thus consigning traditional schools to second class status, but rather through appeal to a constituency interested in a specialized kind of education. Thus they must be designed to attract a rather narrow constituency out of the city's population, but

at the same time one which is diverse at least in race. If they are to meet the spirit of the impulse to desegregation, as Hale and Maynard point out, they should also appeal to a constituency which is diverse in class. Perhaps better said, they should not appeal just to the middle class, which is most likely to be easily drawn to volunteer, but should serve the poorest minority children who have historically received the least educational attention. A major thrust of legal actions for desegregation has been a desire to pull these children into the educational mainstream.

The challenge of diversity must be met at both the individual school and the system level. Each magnet school must offer a single distinctive departure from educational practice which will nonetheless appeal to socially diverse kinds of parents. In the array of magnet schools in a school system as a whole, planners must be sure to include programs which will serve the needs of children from prosperous, well-educated, politically articulate and powerful families, whom the central cities need to hold within their boundaries, and whose support can give magnet schools public acceptability. In the same array, and where possible in the same schools, some programs must be appropriate for and appealing to the poorest, least educated, and marginalized minority families whose children most need the assistance of the schools to gain access to mainstream economic and political life. At the same time, the magnet schools must also serve the needs of the majority of ordinary black, Hispanic, Oriental, Native American, and white children whose parents are the solid citizens of the community and the mainstay of both its white-collar and blue-collar labor force. There is real challenge in the task of designing an array of magnet schools which will appeal to these constituencies as volunteers. The task is made twice as difficult by the need not to make other

schools appear to be second class, or to leave their staffs feeling that their most alert and ambitious students are being pulled away from them to magnet schools.

The imperatives of these various goals may conflict. For example, Faye Bryant suggests that where schools are in minority neighborhoods perceived by whites as depressed, it is important to have programs that are perceived as academically selective in order to make them attractive to white parents. There is reason for this suggestion; some cities have located their schools designed to be attractive to the city's academically elite students in just such neighborhoods and have found they drew far more volunteers than could be accommodated. But while this policy is effective in attracting whites (and middle class minorities) into depressed minority neighborhoods, it tends to do so at the cost of a burden on the children of that neighborhood, most of whom will not qualify for the new magnet school. There is an irony in a successful magnet school's launching at the cost of displacing from a desegregated building minority children who most need educational assistance. Planners must make a series of difficult decisions which balance a concern for the welfare of all students with political realities concerning actions needed in order to draw both majority and minority students to magnet schools.

Some of these problems can be alleviated by thinking about the magnet schools as an array of schools, rather than as single schools. If it is possible to have other magnet schools which will in fact serve the children displaced in the previous example, and serve them well, then the choices become less painful. Thinking of the magnet schools as a total array also makes it easier to design magnet schools collectively to draw from all segments of the community, even though each alone may not do so. Thus, for example, elementary programs such as

a gifted and talented school, a school with an ecological emphasis, or an arts school are likely to appeal to middle class or ambitious working class parents, whatever their ethnicity, and they are likely to be best suited to children who learn the basics easily and have time for enrichment. That they do so becomes much less problematic both politically and morally if there are other schools such as a fundamental school, a continuous progress school, and a school following Individually Guided Education which are more likely to be appealing to working class families and to children for whom the basic work of elementary school is a significant challenge. Still, it is important that each school appeal to all races and that each be at least somewhat diverse in class composition, rather than reproducing the class isolation typical of neighborhood schools in large communities.

This task may be easiest to accomplish at the elementary level. Parents' ideas about good elementary education are more diverse and less tightly tied to their own class status than are their ideas about high school education. At the high school level the hand of tradition lies more heavily, and the academic pressures of college entrance constrain the teaching of students with college ambitions, even when they are not top achievers. An elementary school with almost any specialty which gains a reputation as a warm and caring place where children can learn without corrosive competitive pressures may draw from all walks of life as well as all races. Even at the middle school level parents from all walks of life may still seek out or be persuaded to investigate an innovative or a supportive and noncompetitive middle school to build the child's confidence and skills before the rigors of high school. This will be particularly true for parents whose children do not flourish in traditional school because they do not do well

with competition or are less than stellar performers, but it may also apply where children are capable but nontraditional thinkers.

At the elementary and middle school levels, especially, there are, then, opportunities to establish magnet schools which break with traditional lockstep, competitive instructional patterns. Furthermore, such schools can deal more easily than traditional schools with the academic diversity among students which is likely to accompany their social diversity. Such schools can meet the needs of many children who are not well matched to the social and academic patterns of traditional settings. They also provide contexts where practitioners and researchers can learn about the potentialities and limitations of alternative teaching styles or curriculum for various kinds of children. They can introduce ideas which can be more widely disseminated into traditional schools, if they are shown to be broadly helpful.

Because the educational discourse of our time emphasizes excellence and constant competitive ranking of students, magnet schools are all too often designed for ambitious, highly achieving students looking for excellence and competition. It is more difficult to develop an appealing rhetoric for schools which are designed to help solid but unspectacular achievers and below average achievers, but these students may need special innovative schools as much or more than do high achievers. Together such students constitute the numerical majority of both the white and black student population not only in cities, where magnet schools are most common, but also in more elite communities. Such students need schools which will help them learn up to their capacities and flourish as persons while they do so. Below average achievers, especially, need schools designed to help them with the substantial academic learning of which they are capable when not driven



by discouragement to withdraw their efforts. The emphasis needs to be on what each student can and does learn, rather than on ranking students' accomplishments. Magnet school planners and school level practitioners who thoughtfully design programs to help these children, while enveloping the programs in socially acceptable rhetoric, are likely to find grateful parents and students who will gladly enroll.

Metz's (1986) study of the life of three magnet middle schools, two of which had non-traditional educational approaches and drew student bodies which included a preponderance of average or below average achievers, explores both the political and recruitment issues which shaped these and all magnet schools in their urban district and the ways in which teachers and students in the three individual schools created distinctive patterns of daily school life. The book emphasizes the intertwining of political and recruitment processes with the development of a distinctive program and distinctive atmosphere inside each school. Central office planners concerned to design a successful magnet program must become knowledgeable about the many interdependent influences which shape both the ability of magnet schools to become and remain attractive and their ability actually to be constructive environments for students and their teachers.

#### ESTABLISHING RACIAL INTEGRATION AS A PURPOSE OF MAGNET PROGRAMS

It is important to remember that magnet schools are desegregated schools, a purpose the papers stress as they discuss recruitment of different races, but pay less attention to in considering program content.

Teachers must pay attention to students' social diversity. Students' academic success or lack of success in the crucial early grades, especially, is often affected

by teachers' ability to set them tasks and ask them questions in ways which provide some continuity with their home experience. Teachers can improve students' cognitive learning as well as their social relationships by developing knowledge about, and sensitivity to, diverse cognitive styles which students bring with them from home. Shirley Heath analyzes (1982, 1983) differences in cognitive styles among students in desegregated schools in one southern community. These styles, based on patterns of belief and family interaction that differed with class and race, created miscommunications between teachers and some students and led those students to be uncomfortable with tasks expected of them in school. Heath describes ways in which teachers can develop strategies of instruction which use varied cognitive styles during the school day. Discussion of such differences—for example in the style and meaning of questions or of storytelling—teaches all children to operate in several different cultural styles and to become reflective about linguistic modes of expression and interaction. Such discussion and the use of diverse modes of expression and thought becomes an enriching experience for all children in the class.

In her excellent study of interracial relations in a magnet middle school, Janet Schofield (1982) tells us that the topic of race became taboo in the school. Despite the visible reality of racial diversity, which most of the eleven to thirteen year old students were experiencing for the first time in their lives, adults set a pattern of ignoring race to the point where it was not mentionable. Students feared disapproval if they mentioned race even for such innocent purposes as describing to a teacher a student who had left one of his or her belongings in a classroom. In this atmosphere, it was impossible for students of both races to pursue their natural curiosity about one another in open ways or to discuss patterns

of behavior associated with race which sometimes puzzled, annoyed, or intimidated students of a different race. The taboo at this school reflects a general uneasiness in our society about openly discussing issues of race.

These issues do not go away because we do not acknowledge them. Children now being born will live in a society which is one third "minority" and two thirds "majority". Both majority and minority students need to learn to interact comfortably and without misunderstanding with members of the other groups in society. As Schofield's book shows, when teachers leave the development of such understandings to an unplanned "natural progression" after simply putting children together in the same space, most students make little progress toward such understanding.

Schofield draws upon lessons from social psychology and her ethnographic study of this magnet middle school to develop some principles which can guide teachers' and administrators' efforts to facilitate interracial relations. Following principles set out by Gordon Allport (1954), Schofield stresses, first, that steps need to be taken to encourage the development of equal social status for children of all races. Such equal status is often supported by the development of diverse activities in both the classroom and the school. With many different kinds of activities, many different individuals from all races have a chance to demonstrate skill and talent in some activity in front of their peers. The peer group is then less likely to develop a rigid prestige hierarchy based around a narrow range of skills.

Second, students of different races should be put in situations where they must cooperate for common goals. Situations which pit students of different races against one another in competition should be avoided. Cooperative projects in the

classroom are helpful. Intramural sports leagues even in elementary school, arts activities such as skits and musical groups, and student government can all be opportunities for cooperative interracial experiences. The adults in the school must see to it that such groups are consistently multiracial in membership.

Third, Schofield stresses that adults must take leadership in modeling and encouraging patterns of routine and constant interracial association. The importance of such association must be agreed upon and made a visible part of the school's agenda. Such an attitude can not be taken for granted merely because a setting is desegregated, even voluntarily desegregated, as Schofield's study shows. Both in selecting staff and in training for each school's program, central office planners must make the development of ways to encourage the move from desegregation to integrated social relationships among both adults and students part of the agenda for the school staffs.

Several other ethnographic studies, mostly by authors unaware of the social psychological theory upon which Schofield draws, have named processes similar to the ones she identifies as important in attempting to explain the development of friendly or tense interracial relations in schools. (See Metz, 1986 for a discussion of this work.) A good deal of experimental work in social psychology has also confirmed these patterns (Cohen, 1980, Slavin, 1980).

Policies that encourage good interracial relations need not take much time away from academic agendas. They include such simple matters as assigning seats in classrooms, so that students of different races sit next to one another and so have opportunities for observation of one another at close range and for casual, unplanned conversation. Many of the supplementary activities such as sports, arts activities, and student government which provide chances for equal status contact

and for interracial cooperation can constitute enrichment of the kind frequently offered by magnet schools in order to make schools appealing to volunteers. It is important, however, that adults monitor and guide events to be sure that students of different races have a chance to shine and to be sure that cooperating groups are constituted of interracial collections of students. Students, especially younger ones, will quickly pick up adults' expectations for uniracial or multiracial groupings in these contexts.

In order for these patterns to persist, the staff of each school must deal openly with the existence of racial diversity. Staff members of different races must themselves develop comfortable patterns of relationship, as well as the ability to break the societal expectation of silence around racial issues. These patterns will not develop without some assistance during the training period for the magnet school staff. Continuing inservice should also address them. The principal or some other staff person in the building should have both formal responsibility for, and good skills in, facilitating easy interracial communication on a continuing basis. Secondary school students who have not grown up in desegregated schools may need special help from facilitators in openly addressing tensions or simple questions about the other group.

#### SELECTING STAFF AND DEVELOPING COMMITMENT TO MAGNET PROGRAMS

This topic expands on Grace Fairlie's very useful discussion of ways to develop wide involvement in the school planning process, to create cadres of cheerleaders committed to the school, and to train staff to understand and to be faithful to the magnet plan. She takes the perspective of central office planners, that of the intended audience for these papers. I think there is value for this audience in

adding some observations on how these matters look from the bottom up, as school staffs struggle with the daily implementation of magnet school plans.

It is important for central office personnel to remember that the imposition of a magnet plan from above radically alters traditional relationships between building administrators and teachers. Despite the existence of traditional curriculum guides and of supervision by principals, in practice teachers usually have considerable freedom to choose their own curricular emphases and pedagogical approaches. Magnet schools sometimes dramatically alter that freedom as a particular pedagogical approach becomes the substance of a magnet program. The same pressures can occur when a substantive emphasis is expected to pervade the whole life of a school, so that math teachers must think about the artistic applications of arithmetic, or music teachers must ponder the ecological significance of sound. It is clearly best for the school if teachers volunteer for magnet programs and if they and the principal can be identified early enough so that all are involved in planning, and so in owning the school's design.

Where that is not possible, for example where union rules require staffing magnet schools with all teachers in a building who wish to stay, teachers will inevitably have a part in forming the actual practice of the magnet program whether their alterations are formally sanctioned or not. It is thus wise to acknowledge the teachers' part in forming the program and to find some organizational vehicle to allow them to discuss and alter the program legitimately rather than illegitimately. It is also helpful to find channels of transfer which will not penalize teachers who find themselves unsympathetic to the magnet program; if possible transfers which are actively congenial should be facilitated. Too often fear of transfer to a totally unknown school or loss of seniority rights through



transfer keep teachers who are unsympathetic with a magnet program in a school to become centers of discontent and of resistance to the realization of a distinctive educational approach.

Furthermore, where the magnet program is quickly designed and imposed on a school, then interpreted and required by the principal, the principal's unusually strong curricular and pedagogical demands are bound to be resented by teachers. Conflict is likely to ensue. While this conflict may not be easily visible to outsiders, it will affect the shape of the education offered and the daily experiences of students. Both principal and teachers deserve support in such a situation. Principals may need some one who is not in authority over them as a sympathetic counselor. They also need to be given latitude to recognize teachers' reasonable requests for resources and their suggestions for alteration of the program in accord with their experiences with the realities of the situation within the schools' walls.

### CONCLUSION

It is important for central office planners to remember that the most careful of blueprints for magnet school plans and for individual magnet schools can be only that. Parents and students come to the process of choice of magnet schools as whole persons, not simply as consumers of rationally designed educational plans. They will choose schools because of a complex of factors: for example, the social acceptability of the school's name, their social ties to other choosing families, the reputation of the neighborhood, transportation processes, their emotional reaction to staff who represent the school, and—once the school is established—the experiences of relatives' and neighbors' children with all aspects of the school. Wise planners

will take these processes into account in planning; they will try to construct schools which will provide students with good interracial and interclass social experiences as well as good cognitive education. They will also try to plan magnet schools which will, individually and collectively, serve the needs of the diverse children of the community, including those whose families have less power and whose own academic accomplishments are modest.

It is likewise important for planners to remember that current public school children need to be prepared for a society which will be multiracial in almost all its aspects, as both current "majority" and "minority" students will live their adult lives among peers nearly evenly divided among white and non-white citizens. Desegregated schools must move toward social integration so that intergroup relations are based on mutual understanding and respect. Interpersonal friendships across racial lines must become commonplace both for the good of individuals and as a cement for intergroup relations. The social ambience of desegregated schools thus provides a crucial portion of the education they provide, especially in communities where housing and other aspects of adult and family social life are racially segregated.

Finally, central office planners need to develop sensitivity to the implications of magnet school planning for the working lives of the school building staffs who must carry out the plans. Where magnet school plans are developed by, or with substantial participation by, school level staffs, those persons will feel ownership in the plans and find most of the alterations of traditional or accustomed patterns empowering. But where magnet schools staffs have innovative approaches imposed upon them, they are likely to experience even imaginative plans as disenfranchisement and a revocation of informal professional autonomy. Planners



need to provide support for both administrators and teachers in these situations and to allow them some opportunities to shape the program as local experience indicates best. Those who would like to shape the plan to revert to traditional patterns need opportunities to move to congenial traditional schools without loss of face or reputation; so that others more sympathetic to the special program can replace them.

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**COMPARATIVE ANALYSIS OF LOCAL PLANNING  
AND DEVELOPMENT OF MAGNET SCHOOLS**

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COMPARATIVE ANALYSIS OF LOCAL PLANNING  
AND DEVELOPMENT OF MAGNET SCHOOLS

**INTRODUCTION**

Many urban school districts have developed magnet school programs over the past fifteen years. The knowledge and experience that local educators have gained about magnet schools has often been a resource for planning new programs in other districts. Currently, there is a continuing need for quality descriptions, models, and analyses of local magnet school programs, and the papers in this volume contribute to meeting this need.

Local planners and administrators of magnet schools may also benefit from a comparative analysis of magnet school programs across a number of districts. With a comparative analysis approach, the effects of specific factors and decisions in program development and implementation can be assessed under varying school and district conditions.

The published research on magnet schools consists largely of studies in single districts or a few districts (e.g., Marshall, 1978; Dantler & Scott, 1981; D. Levine, et al., 1980; McMillan, 1977; Metz, 1986). Existing multi-district comparative studies have mainly examined the role of magnet schools in school desegregation (Levine & Eubanks, 1980; Willie & Greenblatt, 1981; Hawley, 1981; Rossell, 1985, 1987). Recently, there have been studies on specific aspects of planning magnet schools, such as the role of teachers (McNeil, 1986; M. Levine, 1987), and student recruiting (Blank, 1986), as well as analysis of magnet schools as "schools of choice" (Raywid 1986; Murnane, 1984; Snider, 1987).

## COMPARATIVE STUDY OF MAGNET SCHOOLS

A useful source of information for planning magnet schools that is based on multi-district, comparative research is the recent national study of magnet schools for the U.S. Department of Education (Blank, et al., 1993). The purposes of the study were to determine the effectiveness of magnet schools in increasing education quality and voluntary desegregation, as well as to identify the factors in planning and implementation that lead to effective magnet schools. The study was conducted through a comparative analysis of 45 magnet schools in 15 urban districts across the country. Detailed interviews were conducted with administrators, school board members, principals, teachers, parents, and students; data on student and teacher characteristics, student outcomes, and costs were analyzed; and instruction was observed and assessed in schools.

The study analyses revealed several "important findings:

- o About one-third of the magnet schools in the study provided "high quality" education as measured by ratings of instruction, curriculum, student-teacher interaction, student learning opportunities, and use of resources. A majority of the magnet schools exhibited some elements of these quality education processes, and eighty percent of the schools had higher average achievement test scores than their district averages for the same grade level.

- o Three factors are strongly associated with high quality education in a magnet school: a) an innovative principal who provides leadership in developing curriculum, recruiting and motivating staff, and seeking school

resources; b) a high degree of coherence of the magnet school theme, curriculum, and teaching expertise, which combine to form a unique and definite program identity; and c) policy commitment by district leaders and allowance of flexibility with rules, conventions, and procedures.

The results of our analysis showed there is a wide degree of variation in the design, development, and effectiveness of magnet schools. However, the study also showed that there is a pattern of similar decisions and actions taken by districts with successful programs. The comparative analysis results were used to outline 10 steps in effective planning and development of magnet schools (See Figure 1). This model may be useful to local districts that are initially planning magnet school programs as well as those that would like to improve their programs.

#### STEPS IN EFFECTIVE PLANNING AND DEVELOPMENT

In the remainder of the paper, the ten steps will be briefly described. With each step, issues that arose in one or more of the study districts are cited and strategies are outlined that can be used to resolve the issues.

##### 1. Identify Needs for Magnet Schools

The first key step in a district's planning effort is to identify the local needs or problems that could be addressed by a magnet school program. Identifying "the problem" means that: a) district leaders reach a consensus that specific conditions in the school have reached a point where district action is required; and b) the magnet school concept is

FIGURE 1

STEPS IN EFFECTIVE PLANNING AND DEVELOPMENT OF MAGNET SCHOOLS

1	2	3	4	5
<b>Identify Needs for Magnet Schools</b>	<b>Establish Desegregation and Education Objectives</b>	<b>Develop District Program Strategy</b>	<b>Select Leaders for the Program and Schools</b>	<b>Identify and Allocate Resources</b>
<ul style="list-style-type: none"> <li>-Interests in magnets, types of themes</li> <li>-Status of desegregation</li> <li>-Quality concerns</li> <li>-Building capacity utilization</li> </ul>	<ul style="list-style-type: none"> <li>-District plans vs. area or school focus</li> <li>-Increase options, improve academic curriculum, career preparation</li> <li>-Leadership consensus</li> </ul>	<ul style="list-style-type: none"> <li>-Broad versus limited</li> <li>-Location, type, themes</li> <li>-Participation by staff and community</li> <li>-Themes that are definite, distinctive, appealing</li> </ul>	<ul style="list-style-type: none"> <li>-District central leadership</li> <li>-School leaders</li> <li>-Direction, coordination, and flexibility</li> </ul>	<ul style="list-style-type: none"> <li>-Start-up funds</li> <li>-Planning staff</li> <li>-Community involvement</li> <li>-Facilities and equipment</li> </ul>
6	7	8	9	10
<b>Design and Staff Individual Magnet Schools</b>	<b>Develop Curriculum around Magnet Themes</b>	<b>Publicize the Program and Recruit Students</b>	<b>Organize Students and Staff</b>	<b>Maintain Support</b>
<ul style="list-style-type: none"> <li>-Design appropriate to theme</li> <li>-Principal and teacher selection</li> <li>-Staff development and commitment</li> </ul>	<ul style="list-style-type: none"> <li>-Integration of theme</li> <li>-Relation to district-wide curriculum</li> <li>-Innovation in methods</li> <li>-Experiential education</li> </ul>	<ul style="list-style-type: none"> <li>-District and school-level efforts</li> <li>-Equal access</li> <li>-Broad public support</li> <li>-Selection method</li> </ul>	<ul style="list-style-type: none"> <li>-Part-school, whole-school</li> <li>-Building magnet identity</li> <li>-Expectations and attitudes</li> </ul>	<ul style="list-style-type: none"> <li>-Funding and resource support</li> <li>-Community roles</li> <li>-Publicity with outcomes and innovations</li> <li>-Spin-offs and expansion</li> </ul>



selected as an organizational strategy that has strong potential for resolving the problem.

The results of the national study indicated that the most common needs that lead to magnet schools are:

- o To increase the racial balance of district schools, or develop alternative methods of desegregation;
- o Perception by staff, parents, and/or community leaders that the quality of education in the district has declined or not kept pace with student needs;
- o Interest in greater choice, options, or diversity in public education; and
- o Declining or shifting enrollment in public schools.

Board members, administrators, and community leaders should join in considering the needs for magnet schools and determining how they would address the problem. The development of a consensus among district leaders that an identified problem can be met with a magnet school approach is an important first step in planning.

Districts that have broadly surveyed community perceptions of needs and interests in magnet programs have found that this information was very useful in planning. In addition, a needs assessment process can be useful in building support for the magnet concept, and in locating the neighborhoods and schools which would be appropriate and desirable for magnet programs.

The districts in our study that did not seek broad community identification of needs for magnets generally developed programs that responded to narrow community interests, and, thus, the program had less chance of solving basic district programs. In these cases, the magnet

program was more likely to become a "special program," and not one that reaches a high priority status in the school district.

## 2. Establish District Desegregation and Education Objectives

A second important step for district leaders is to firmly establish the district's objectives for the program, and, then, to develop a leadership policy consensus around these objectives.

First, it is important that the objectives match the need(s) or problem(s) that the district has identified. For example, if an identified need was lack of opportunity for specific career-development programs, and the school district developed magnet schools designed to offer advanced curricula in core academic subjects, the program would have difficulty gaining strong support and it may lead to conflict over continued district support. Or, if a district had 20 schools that did not comply with federal and state desegregation requirements, the development of one or two magnet schools would not address the problem and might exacerbate it.

Our study showed that district objectives for magnet schools could be grouped in the following categories:

- o Reduce declining enrollment by holding students in the district,
- o Offer educational alternatives, or options, such as career education,
- o Improve academic quality through college preparatory or advanced study programs,
- o Provide a voluntary desegregation plan for the district,
- o Desegregate specific schools or areas, or "focused desegregation",

- o Provide voluntary options to the existing mandatory desegregation plan.

A magnet school program will not produce either instructional quality or racial/ethnic integration in some mechanical way. The program objectives must be built into the decision, planning, and implementation process, and when the endeavor is earnest and adapted to local practicalities, the results are generally positive and predictable. The decision to create and maintain magnet schools must also be reached in tandem with decisions about their planned relation to regular, or "non-magnet," schooling in the district. Otherwise, magnet development can impede the growth of improved teaching and learning opportunities.

Policy consensus among the district's central leaders is critical to magnet program planning, initiation, and subsequent decisions. Lack of consensus can lead to continued questioning and debate about district objectives and program strategy, which can delay funding, staff selection, and curriculum development, as well as cause the magnet program to be viewed with less certainty by the public. High policy consensus means board members, superintendent, and top administrators share a consensus view of where the program is going and how it should be accomplished.

The districts in the national study that had low leadership policy consensus had less development of a central program strategy, and the magnet schools were typically viewed as individual school efforts. Policy consensus also appeared to be related to the educational quality of the magnet schools that were produced. Five of the six districts with the highest ratings of magnet educational quality had high consensus among their leadership on objectives and strategy, as well as consistent, continuing support for the programs.

### 3. Develop District Program Strategy

A third step in the development process is determination of the district-level strategy for the program, including selecting the number of schools, their magnet "themes," and locations. In some districts, the selection of magnet schools is the result of interests expressed at the school level and in others, magnet schools are selected as part of a district desegregation plan. However, it is useful to view the strategic decisions that set the scope and direction of the program as an overall district strategy.

A basic strategy decision is the breadth of the program relative to the number of schools in the district. A "limited strategy" focuses on certain schools or areas of the city where racial/ethnic balance or educational quality improvements are needed. A "broad strategy" is generally required with a districtwide voluntary desegregation plan, where magnet schools are distributed across a large portion of the district and locations of magnets are balanced among minority, white, and heterogeneous neighborhoods. The development of a program strategy can be improved with the following steps:

- o Conduct a careful and thorough survey to assess the interests in magnet schools and develop a strategy that meets the broad interests of the community;
- o Evaluate the potential impact of magnets on the existing desegregation plan and publicize the real intentions of the program for desegregation;
- o Plan magnet schools based on student interests, not what will attract students with high ability, i.e., avoid magnets as a form of "tracking";

- o Include plans for publicizing voluntary choice and a method of recruiting students that emphasizes open access, although specific recruiting efforts will be needed for some schools and groups.

A magnet school's attractiveness to students and parents is due to a complex variety of factors, including: previous school identity, neighborhood, school improvements, current theme and identity, and recruitment methods. A magnet school often obtains differential rates of interest from minority and white students, and the degree of interest must be balanced with the available magnet enrollment opportunities. The magnet theme and location should be designed to help attract a racially-heterogeneous student body. Several kinds of actions have assisted the selection of locations:

- o Balance magnet school locations in white and black, poor and middle class, neighborhoods to avoid predominance of movement of students in any one direction;
- o Avoid placing certain magnet themes in only white or minority neighborhoods, such as "academic" and "college-prep" themes in minority neighborhoods (presumably to attract whites), or "career magnets" in white neighborhoods (to attract minorities), because the charge of racial stereotyping and favoritism can be made.

Many districts have faced the problem of magnet neighborhood parents wanting access to the local magnet when the enrollment is open to the whole district. This problem arises when the interest in magnets is underestimated or the magnets are viewed as an advantage that is being withheld. Several types of solutions have been used by districts in our study, such as:

- o Expanding the size of the magnet school so that it can offer neighborhood residents first choice, and still have room to attract students from other areas of the city;

- o Establishing a districtwide open transfer policy allowing transfers to improve the racial balance of sending and receiving schools, which will extend voluntary choice opportunities to other schools;
- o Locating magnets in underenrolled schools where more students are needed or there is the threat of the school closing; or placing magnets in a neutral location where schools have not existed previously and there is no claim by a particular neighborhood.

Closely associated with strategy decisions regarding magnet locations are decisions concerning curriculum themes. A theme which will provide an upgraded academic curriculum or a career focus can help to change the image or identity of the school, often away from labels such as "rough school," "academically poor," or "jock school."

Deciding on a part-school vs. a whole-school magnet is often dictated by the size of the facility and the strength of support for the present school. A part-school magnet can be a means of curriculum innovation and improving the school identity within an existing school. A major advantage of whole-school magnets is that the school can be closed, the facilities remodeled and upgraded, and even the name changed as ways of improving the identity. This pattern generally is used with under-enrolled, or segregated, middle and elementary schools.

Some degree of selectivity is an inherent feature of all magnets. If nothing else, magnet students are self-selected by voluntarily enrolling. Beyond this universal minimum, however, the extent to which students are selectively screened for admission to magnets can vary greatly.

In some cases, a highly selective magnet school is appropriate for the local context, and in some instances, a nonselective magnet will be most suitable. In other situations, some intermediate degree of selectivity will be the best choice. Several districts in our study developed a

program strategy that included magnet schools with varying degrees of selectivity depending on local conditions, resources, and community interests. For instance, high selectivity may be necessary for accelerated placement magnets, while a specific theme magnet, e.g., arts or environment, can serve students at all levels of preparation. The degree of selectivity should be closely tied to the planned curriculum and teaching methods.

Local planners should be aware, however, that student selectivity is a policy choice. It should be faced openly and publicly in the earliest planning stages, and the policy debate should be inclusive of all groups. A district that fails to do this may subsequently discover that its magnets are perceived by many sectors of the community as elitist and inequitable. In our study, many parents and educators regard magnet schools as characteristically more selective and exclusionary than our findings showed them to be.

Participation by the community is an important element in program strategy development. Careful explanation of the objectives of the program and effective requests from district leaders for community help in theme selection and program planning can go a long way toward heading off opposition to change and the apprehension of the neighborhood that it is "losing its school to outsiders."

#### 4. Select Leaders for the Program and Schools

The central direction and coordination of the early stages of magnet planning require an inventive, resourceful leader. For the district to

move from a broad set of objectives and district program strategy to development of programs in each school, an important coordinating and managing function must be performed by a central office director. This person must master and communicate the details of how the program will work, be able to coordinate programs in individual schools, and have authority to make critical decisions. The central staff also must have the flexibility to delegate authority to the principals and school staff so that they can exercise organizational and program creativity.

Magnet programs can flourish as whole schools or as programs within regular schools, but in either case they need strong initial directions exercised at both the district and the school level. A superintendent who appoints persons as magnet directors and principals without thoroughly examining their dedication, previous experience and training will subsequently have less effective educational and integrative outcomes from the program design than it has the potential to produce.

School-level leadership is critical for effective programs; the principal or magnet coordinator must translate the program concept and design into an integrated magnet curriculum delivered through a staff that is committed to the program objectives and methods. The principal or coordinator is typically the person who generates interest and support for the magnet school in the community and stimulates teachers to participate in developing an innovative approach to their work. Often good leadership has been "entrepreneurial" in obtaining program resources, staff and students, and in ensuring the magnet's survival over time.



Magnet principals should be chosen for their leadership skills and entrepreneurial abilities. Then they should be given sufficient authority, freedom, and support to enable them to put the magnet school together and develop community support. The same criteria should be applied in selecting school program coordinators, who are often outstanding teachers that the principal designates for a leadership role in part-school as well as whole-school programs.

A critical ingredient for district and school leadership is a district policy that allows creativity and experimentation with the magnet program. Such a policy will contribute to attracting dynamic, ambitious, and imaginative administrators and teachers, which a magnet school program requires.

Successful magnet programs in the national study typically had strong district and school leaders who were involved in the process of developing district strategy and designing individual school programs. Some districts asked principals and teachers to develop ideas and designs for magnet schools. The goal in participatory measures is to prevent the magnet program from being viewed by those expected to operate it as something that is imposed by "the people downtown." However, key district administrators and curriculum staff should also be involved to give the program the benefit of their expertise and to prevent bypassing of the regular chain of command in decision-making. For long-term success, the magnet schools need to be viewed by district and school-level staff as part of the "regular system" of instruction.

##### 5. Identify and Allocate Resources

In addition to providing a new means of allocating students to schools, the magnet school is a method by which a district can reorganize and maximize the resources of the staff, facilities, and community. Most of the districts in our study obtained additional funds for staff, equipment, and supplies necessary for magnet program start-up, and our analysis shows there is a continuing cost differential with non-magnet schools. However, we also found that an element in effective implementation of magnet schools is improved utilization of existing resources in a district and community.

School planners should recognize that magnet schools can be quite modest in extra costs and still achieve high educational quality. Most districts do not have the resources to implement "super magnets," that can cost millions of dollars. Our study results showed that the critical factors related to educational quality were program authenticity, leadership, and coherence, not the fact that it offers "state-of-the-art" equipment or facilities.

During the initial planning and implementation phases, a small start-up funding grant or allocation is needed. Additionally, special assignment of administrators or teachers is needed to staff the planning, publicity, recruitment, and development activities, and to identify needed resources. A district strategy for recruiting and selecting staff must be planned, and a program for gaining effective involvement of businesses, community organizations, parent groups, and universities should be developed. Finally, an assessment should be made of the adequacy of designated facilities to decide on the necessary building or remodeling.

A major challenge for magnet school planners and administrators is to use magnets to increase the diversity of educational programs and opportunities without decreasing resources and opportunities in other schools. If this challenge is not resolved, magnet schools can be accused of causing a reallocation of existing resources in the district to benefit a few students at the expense of the rest. A number of steps have been taken to offset this potential problem:

- o Additional funds for magnet schools development and implementation, above regular prepaid allocations, should be obtained through new or additional revenues, e.g., federal or state grants, foundations, private corporate support, fund-raising, or new tax revenues;
- o The role of magnet schools should be emphasized as part of a range of program alternatives and educational choices for students at all levels of ability and achievement, and in all parts of the district;
- o All neighborhoods, parent groups, and schools can be offered the opportunity to develop magnet schools or other special-theme or alternative programs if they are interested;
- o Magnet schools, curricula, activities, and resources can be linked with those of other schools to increase interest in magnets, as well as provide benefits to students in other schools;
- o Magnet schools should not be placed in existing schools that are already perceived as having advantages in terms of location, staff, program quality, or student mix.

#### 6. Design and Staff Individual Magnet Schools

The theme, or curriculum concentration, of each magnet school is typically decided as part of the overall district strategy. However, many of the essential steps in individual program design are completed at the school level, such as:

- o ~~S~~electing types and level of courses,
- o ~~D~~eveloping and revising curriculum and organizing appropriate teaching methods,
- o ~~A~~ssigning teachers,
- o ~~R~~ecruiting and selecting students, and
- o ~~I~~dentifying special resources, such as those from the community.

Many of these tasks should involve the entire school magnet staff, and thus, the ~~m~~staffing process is integral to designing each school program.

Our study findings showed the importance of principal leadership in the design of the magnet school and selection of staff. The principal and teachers should have a common commitment to the magnet school concept, have strong interest in innovations toward quality education, and be willing to invest extra time and effort toward a unique educational experience. A period of staff development is often important to mold cohesion around the magnet theme and the approach to teaching. Effective magnet staffs have often sought assistance and resources from the community both in designing the program and in providing educational linkages as part of a unique curriculum. The special curriculum theme often provides an attractive opportunity for local institutions and businesses to share their expertise and facilities with the school, e.g., cultural and arts institutions, universities, hospitals, and scientific and technical firms.

A particular challenge in staffing magnet schools is to identify new principals and teachers with leadership qualities, teaching skills related to the magnet theme, and a commitment to the concept, yet avoid having the program be viewed as "taking all the best teachers" in the district.

Several steps can be taken toward developing a smooth staffing process:

- o Hiring for magnet school positions should specify qualifications related to the magnet concept and theme as well as seniority and teaching ratings;
- o Assignment of principals and staff to magnet schools should be voluntary whenever possible, recruiting of teachers should be avoided, and only a few teachers should transfer from any one existing school;
- o For a magnet program developed in an existing school, all staff members should be given an opportunity to apply with the understanding that the program requires staff who are genuinely interested in the magnet concept and will make a commitment to the extra time, effort, and work that is often necessary;
- o Emphasize to the prospective staff and to the public that magnet staff members are not paid premium salaries and that funds are not reallocated from another school to pay for magnets;
- o Whenever possible, recruit part-time or volunteer instructors from local business, institutions of higher education, and professional or community organizations, to provide specialized teaching assistance;
- o Look for staff members who are likely to benefit and do well as a result of assignment to the magnet, not just those who are already highly popular and effective teachers.

#### 7. Develop Curriculum Around Magnet Theme

The stage of curriculum writing and development has three important functions for the magnet schools:

- a) To organize existing, curricula, materials, and resources around the program theme;
- b) To build school staff teamwork and the magnet school identity;
- c) To encourage and stimulate innovation in teaching methods and use of resources.

The development of the magnet school curriculum is a crucial step in joining the program objectives and theme with ideas, energy, and expertise of magnet leaders and staff. It is the point at which many of the factors which are critical to a program's success are brought together.

The curriculum development process also provides the opportunity for creating a unique educational program that meets the interests of target students and will continue to attract students. For example, if a high school health/science magnet is intended to serve a broad range of student interests and ability-levels, the curriculum should include advanced mathematics and sciences courses as well as prevocational health and science education and exposure to career options in health occupations. Since students and parents often learn of a program by word-of-mouth, from the first day of operation a magnet school needs to have a well-designed curriculum, a strong program identity, and clearly-defined features that make it unique. In designing a school curriculum, it is also important to explicitly plan a course of study that incorporates the magnet school aim of racial/ethnic integration. The curriculum should be multiethnic in interest-value and multicultural in content. Intergroup respect and social learning from cross-group interaction is necessary in order to achieve the maximum benefits from the magnet experience. Fairness and methods for ensuring schoolwide participation in co-curricular life are equally important.

Many schools in the study found a major challenge in designing and implementing a magnet curriculum that has an innovative instructional approach integrated around a central theme, while also operating within the "regular" district curriculum guidelines and instructional system. Most magnet schools do not strive to be alternative schools, i.e., fundamentally different in content and teaching method from the comprehensive public school. Magnet schools are intended to have broad

student appeal, not to serve as special program for students who do not succeed in regular schools or are not desired there. Additionally, most districts view magnet schools as options for all students, with the understanding that any student can return to a non-magnet school if desired. Several approaches have been effective in organizing a magnet school curriculum within the district framework:

- o District leaders establish general outlines for magnet school themes and curricula in the district strategy, together with objectives for targeting groups of students; individual schools develop specific elements of the curriculum and program organization;
- o Magnet school themes and designs can be generated from several possible sources: principals, teachers, community groups, parents, and district staff, with district staff coordination to ensure that students can easily transfer between magnets and non-magnets;
- o Magnet schools' effectiveness in meeting district and school objectives should be evaluated, and results used to explore expansion of the magnet concept in other schools. And, operational linkages can be developed between successful magnets and the staff and students of non-magnet schools.

#### 8. Publicize the Program and Recruit Students

The recruitment of students for magnet schools is critical when a new magnet program is being initiated in a school district. Recruiting is often the task of principals, counselors, teachers, and students, but some districts have combined student recruitment with a districtwide campaign to gain publicity for its magnet program. A central district magnet school coordinator may lead the initial development of publicity concerning the plans, objectives, and ideas for magnet schools. Some districts also assign staff to coordinate the recruitment of students in individual schools.



Our research found the level of activity of districts in public relations and student recruiting for magnet schools was much higher than we had anticipated. Recruiting for magnet schools tends to expand the idea of the public as "consumers" of educational services. Common methods of publicity and recruiting are:

- o Surveys of parent and student interests;
- o Districtwide and school orientation meetings, seminars, and discussions on program plans and objectives;
- o Newspaper, radio, and television public service advertisements;
- o Involvement of community and neighborhood organizations, service organizations, human services agencies, arts and cultural groups, churches, parent-teacher associations, and parent groups;
- o Developing school links with local businesses and business organizations;
- o Parent-to-parent recruiting, such as having each magnet parent bring one other parent to a tour and orientation session;
- o Principal visits to other schools, community organizations, and parent groups;
- o Presentations by magnet counselors, teachers, and students at other schools;
- o Open houses at magnet schools;
- o Mailing brochures and flyers to parents, and placing posters and hand-outs in schools and offices; and
- o Students and parents informally spreading the word about their satisfaction with the school.

The primary goal of a publicity and recruiting campaign is to attract students to the schools. This is especially important when the program is aimed at changing a negative school identity. However, a secondary benefit that has been realized from publicizing magnet schools is that by



focusing attention on positive academic objectives, innovations, and accomplishments, the program tends to improve the public's perception of public schools in general.

#### 9. Organize Students and Staff

The magnet school can be a means of innovation of the organization of staff, students, and resources, as well as a new approach to school curriculum. Magnet schools can help to renew staff interest and motivation, primarily through their participation in building a positive identity for the school and organizing a new approach to education.

Magnet programs that comprise a whole school have an advantage in constructing a positive educational identity. Part-school magnets sometimes build their identity by assigning one part of the building as "the magnet school," where students take their classes together and have the same teachers and counselors. A part-school magnet identity can be built by identifying a core group of students who are highly interested in the magnet theme, and establishing a strong relationship between the magnet theme and program staff. Often students who transfer from other schools for the magnet program contribute to building the program identity.

Some of the magnet schools in our survey gained a reputation through attracting high-achieving students from other schools. A program using this approach can produce a two-tiered student body, divided by the magnet program. To decrease this tendency, some principals have purposefully integrated magnet students with non-magnet students for a part of the

school day. A better solution might be to provide broader opportunities for magnets, not only for students in advanced academic courses. Another solution is to demonstrate to the staff, parents, and students that the magnet selection process is fair and equitable for all students. The principal should also demonstrate that school funds and resources are equally proportioned between magnet and non-magnet students.

A major effect of many magnet schools is raising expectations for students and improving their attitudes and aspirations for education. By being part of a program comprised of students with similar interests, and teachers who have chosen the program, a student comes to place a higher value on his/her education. A major responsibility of the magnet school principal is to lead and coordinate teachers and counselors in order to build the positive values associated with the magnet choice. Students can be assigned relatively easily to the same courses and teachers, but the magnet school becomes a reality with the development of the common purpose for which they are enrolled.

#### 10. Maintain Support

The final key step in development of a magnet school program is to ensure its continuation over time. The magnet school must become part of the "regular" system of instruction in the district and not be viewed as an experimental or temporary program, or one that continues only with a special allocation of district or federal funds, or other outside funds. Additionally, the magnet program and schools need to preserve the essential ingredients and features that make them unique. In the last

twenty years, American public education has been filled with examples of educational innovations that were developed with temporary support and enthusiasm, but survived in name only, due to lack of relevance to the basic system of instruction. To avoid this pattern, the magnet school must gain full support as a means of educational diversity and opportunity within the boundaries of the normal operation of schools.

There are several methods by which districts in our survey have achieved long-term acceptance for magnet schools:

- o Commitments were made to magnet schools by the school board, superintendent, and top administrators as part of the regular budgetary and administrative structure;
- o Publicity on the outcomes of the school's performance after its initial period of operation matched the publicity attached to goals and expectations during planning and development;
- o Magnet programs were not viewed as a panacea for problems in all schools, but they were used as models for improving quality in a range of schools with different student populations;
- o Active involvement of the community has been maintained through advisory committees, special instructors, support functions, and shared community resources, which has helped maintain magnets as a high priority and encourage innovation in curricula and teaching methods.

### **Summary**

These ten steps in the planning and development of a magnet school program focus upon only the major categories of decisions and actions. They do not outline a specific plan for magnet schools in any one district. However, these ten areas have been important for development of the successful programs analyzed in the national study. This ten-step model might be viewed as a set of basic ingredients for a magnet school program, which set the stage for local conditions, needs, decisions, and talents to define and create a successful local program.

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REFLECTIONS ON UNDERSTANDING, STUDYING, AND MANAGING MAGNET SCHOOLS

Introduction

The papers comprising this volume represent an unusual collection, drawing on the work both of school people and researchers. In principle, at least, the collection extends both the practitioner's knowledge-in-practice -- the sort of knowledge available only to one actively engaged in a pursuit -- and the analyses of those who study that pursuit and have observed it in multiple contexts. The two perspectives are, indeed, visible in these statements. But it is important to note at the outset that the practitioner statements are not those of people who operate magnet schools. Rather they are the perspectives of those who manage systems of such schools. This is a vitally important perspective. Indeed, it extensively sets the parameters for how magnet schools will operate. But it is a vantage point quite different from that of the practitioner functioning daily within one of those schools. And, as is the case for all of us, the focus of these magnet system administrators, their concerns, and the challenges they see, are marked as much by their particular roles and responsibilities as by the questions they address.

I was invited, as a scholar/advocate of magnets and other schools of choice, to review the statements and to share some reactions, along with my own sense of the prospects and challenges facing magnet schools. It is an interesting time at which to do so. After more than a decade, the magnet school movement appears active and growing. There remain approximately 500 school districts under desegregation orders.<sup>1</sup> And

magnet schools remain the most favored alternative to forced busing. Kansas City is to open 46 magnet schools in the next several years,<sup>2</sup> and as of next year, St. Paul is increasing its present 13 programs by five.<sup>3</sup> It is becoming increasingly familiar to see ads in national publications for magnet school principals and magnet system directors, and increasingly common to hear of districts turning to magnet schools as the best route to school revitalization and effectiveness. The unanticipated finding of the major magnet school study to date<sup>4</sup> -- that such schools are quite effective in improving school quality -- might alone tend to ensure an increase in the number of such programs. And the enhanced public confidence which magnets inspire may keep the demand high for adopting and extending the arrangement. One hears with growing frequency about parents removing their children from private schools to enroll them in public magnets<sup>5</sup> -- and about the long lines of parents who have spent up to six days in a line, waiting to enroll their children<sup>6</sup> -- and about the high schools with 900 openings and 35,000 applicants. (It has been commented that some New York City magnet high schools are harder to get into than Harvard or Yale!)<sup>7</sup>

It does not appear unlikely, then, that the number of the nation's magnet schools and systems will continue to grow. When one adds the demand generated by the growing proportion of disadvantaged students in our schools -- and the overwhelming numbers of students deemed 'at risk' -- it appears that strong pressures for magnet schools may well be with us for at least a decade. The programs that open may also be extensively influenced by two other prospects as well.

It is very likely that schools will be experiencing intensified pressures for instructional innovation. There is substantial evidence



that there has been little fundamental change in this regard for a century or more.<sup>8</sup> Magnet schools have tended to rely more heavily on curricular innovation than on instructional.<sup>9</sup> And indeed, the evidence suggests that in other kinds of schools of choice as well, teachers have been less innovative with respect to pedagogy than they have sought to be.<sup>10</sup> Yet the array of evidence showing that schools are not working for large numbers of youngsters -- the truancy and dropout rates, the incidence of misbehavior, the failure rates, the minimal-work 'treaties,' the alarming extent of student 'disengagement' -- all testify to the number of young people who need a different kind of instruction in order to succeed. The proportion of disadvantaged youngsters in schools, those most likely to be 'at risk,' is currently estimated at 30%, and their number is increasing rapidly.<sup>11</sup> There will be strong pressures on schools to find new pedagogies that can succeed with such youngsters. Magnet programs, with their innovative tradition and their capacity for flexibility, will be encouraged to devise such pedagogical strategies. If they respond positively, this too will intensify the demand for magnet schools.

A second emerging focus is also likely to affect magnet schools and their development. This is the persistent demand for revising school structure. According to some, this demand is likely to be the main target of reform efforts for the next several years.<sup>12</sup> By "restructuring" is usually meant a fundamental reordering of school resources and control arrangements -- school time, staffing and staff deployment, student groupings, school governance. Because of their typically smaller size and greater flexibility, schools of choice are in a good position to pilot the search for new structures. They might very well become the vanguard in the search for new ways to organize and present schooling. If so, this

will surely strengthen the demand for such programs, as well as their direction.

Whether or not they choose to move in the directions just indicated, magnet school prospects appear strong for the remainder of the century. If they are to function optimally, however, a great deal more needs to be known about them. There has been a fair amount of investigation of their contribution to desegregation. But there has been much less regarding such matters as their educational effectiveness, student achievement, the organizational conditions of success. There is much to be done before we even have detailed descriptions of such matters, let alone explanations of contributants and obstacles to success. For instance, just how important is teacher choice to magnet school success? What types of students succeed in magnet schools and are there some who do less well than in their previous school? Do particular types of students succeed or fail in particular types of magnet programs? Does it make much difference to effectiveness whether the magnet is full-time or part-time ... a school-within-a-school or a mini-school or a separate school ... how it is administered? Are different role allocation patterns systematically associated with success or failure? And then there are all the questions that need to be answered about the optimal context for magnet schools -- e.g., about the most effective strategies for designing and launching and coordinating such programs, for obtaining professional organization cooperation, for coordinating parent information programs and recruitment procedures. Thus, a great deal needs to be learned, and it is to be hoped that far more extensive research will soon be under way.

Meanwhile, attempts to understand magnet schools have been marked by two rather different perspectives. They are the two broad types repre-

sented in this collection -- which anthropologists have called the Emic and the Etic viewpoints.<sup>13</sup> The Emic account of situations and events is the explanations offered by those who are enmeshed and involved in them. Such explanations typically provide a depth and richness of understanding which is difficult for outsiders to achieve. In contrast, the Etic account is that of observers who are not themselves part of the conditions and activities under study. It is thought to possess the advantages of objectivity and systematic warrant.

We can all cite Emic accounts that appear misleading and useless (such as the attribution by primitive peoples of natural events to evil forces); and we can also recall Etic explanations which seem simply to have missed the boat so far as insightful understanding is concerned (such as the insistence that a criminal 'type' accounts for crime, or that bumps on the head indicate character and ability). So it is difficult to argue the assured superiority of the one approach over the other. It is possible, however, to identify the major challenges to each approach so far as its potential for improving practice is concerned.

The major relevant challenges to the Etic approach are, of course, pertinence and accessibility: If Etics offer explanations leaving events beyond the control of practitioners (e.g., by attributing school failure to socio-economic status or parent orientation), then they cannot be surprised if practitioners turn elsewhere to guide their practice. Or, if the explanations offered by Etics are so esoteric or obtuse as to be inaccessible to practitioners, then they cannot hope to make a difference -- at least until an able translator comes along.

The major challenge to the Emic explanation of circumstances and events is warrantability. Even if it can be assumed that accurate predic-

tions confirm one's interpretation of things, it can still be asked whether that interpretation can safely be applied elsewhere. To put it differently, the Emic approach must contend with the problem of generalizability. The clear strengths of the practitioner papers in this collection lead me to cite some examples of how the generalizability question arises. Recall that the descriptions and suggestions of these authors come from people who have really "been there." Each is experienced at dealing with the challenges he or she describes, and very probably the advice is well tested by that experience. The hitch, however, is that other practitioners with successful programs would be offering different, even contradictory advice. Two or three examples seem worthwhile.

William Pearson's paper finds magnet schools quite costly, and he concludes that "resourcing magnet schools is a formidable task" demanding "a carefully designed plan for [supplementary] resource garnering." (p. 29) Yet the most comprehensive magnet school study to date suggests that after start-up, average per pupil costs in the magnet schools of most districts are not a great deal higher than overall district averages -- and, indeed, that elementary school magnets average lower per pupil costs than do other elementary schools in the district!<sup>14</sup> Is Mr. Pearson in error, then? Not for his situation. What is necessary, however, is to establish the contingencies of his situation to be able to say "under circumstances X, Y, and Z, magnet schools will require higher per pupil expenditures." Or, to cite a different example, Grace Fairlee recommends a Gifted and Talented magnet as a promising start likely to attract parents. Quite probably. But such a tying of magnet themes to particular ability levels has sometimes proved regrettable elsewhere, provoking charges of elitism, tracking, and betrayal of the very equity-focused

purposes giving rise to magnet schools. Again, research is needed in order to establish the conditions under which the advice "start with a Gifted and Talented program" is good advice, and when it seems contra-indicated. As a final example, Faye Bryant, Lee Laws, Ms. Fairlee, and Mr. Pearson all urge careful, detailed, advance planning including needs assessments for new magnet programs. There is considerable evidence to support such a recommendation. The form of the planning, however, and more particularly, just who should do it -- remains a major question. The conventional purposes of thoroughness, coordination, control are all well served by the recommendation of these authors that the planning occur at the district level, by central office administrators. Yet considerable experience recommends instead that the teachers to be involved in the program must do the bulk of such planning. Once again, only much-needed research can confirm the relevant contingencies -- the circumstances under which it makes sense to have administrators do most of the planning and those recommending that teachers do it instead.

Thus, a great deal of research remains to be done on magnet schools. Meanwhile, however, some interesting aspects of these schools can be noted, and of the choice systems they comprise.

### Ironies

There are many ironies associated with schools of choice, and these frame the central challenges with which magnet schooling must contend. Some are worth mentioning, since they so clearly indicate the major pitfalls to be avoided. In the first place, of course, magnet schools got their start as a desegregation strategy and mechanism. Yet, it has

sometimes appeared that they have desegregated schooling for white youngsters to a greater extent than they have done so for their intended minority beneficiaries.<sup>15</sup> It has, indeed, been charged that magnet schools have left some systems more segregated than they were without them.<sup>16</sup> Magnet schools are an equity measure, but some have disproportionately burdened their beneficiaries -- e.g., by requiring more busing for more minority than for majority students.<sup>17</sup> Moreover, it is sometimes difficult to get the neediest students and their families to take advantage of the very opportunity magnets are designed to extend to them: choice.

A further irony has been noted in the suggestion that magnet schools must appear superior in order to attract students -- but they must not be superior in any significant sense lest they create inequities in the system of which they are a part.<sup>18</sup> And despite the equity commitment, magnet schools can quite blatantly create and sanction tracking arrangements.

Installed in some locales with the distinct hope of making schools more responsive, the most successful ones have sometimes become less so than schools of assignment! The principal of one of New York's most successful magnet schools reports that when she put any questions to the very popular school of choice that her own children attended, the answer was always the same: "Many others are waiting to get in here, if you don't like it."

A final pair of ironies: it very early appeared (as far back as Alum Rock, the first choice system venture) that instead of empowering parents, as presupposed, a choice system actually empowered teachers instead.<sup>19</sup> Some took this to be an advantage, and have sought schools of choice with

it in mind. Yet that search, too, has sometimes proved ironic, because while magnet schools can yield substantial increases in teacher autonomy and empowerment, they can also yield significant decreases therein: the latter is particularly likely, as Mary Metz shows,<sup>20</sup> when insufficient planning time is coupled with contractual provisions enabling all teachers who so choose to remain in a building, whether sympathetic to its new magnet or not. In such a situation, the only way the principal can implement the new theme is with a firm hand and close monitoring. Ergo, greater teacher autonomy quite understandably becomes less.

The reason for documenting this list of ironies is not to impugn the magnet concept -- to which I am strongly committed. It is, however, to suggest that a great deal rides on the implementation details. One can implement the magnet school proposal to precisely opposite goals -- and arrange the system so as to fulfill them quite successfully. This places heavy burdens on the design phase of any magnet program -- as well as on the execution phase. It also means that close monitoring of the system will remain important, in order to be sure that it continues to serve instead of undermining the very purposes to which it was established.

### Organizational Properties

The 'insider' or Emic explanation of magnet school success is likely to be offered in terms of pedagogical technology: It is typically a unique curriculum, or distinctive curricular packaging, which is said to account for the effectiveness. Occasionally explanations are framed in terms of superior delivery systems, but usually curriculum is given most of the credit. At least some Eticas would offer quite a different sort of



explanation, identifying the success secrets quite otherwise. Because these explanations offer new directions in which magnet schools might look to improve themselves -- and new concerns in the design of subsequent magnet schools -- it might be useful to explore them.

One increasingly convincing explanation for magnet school success is to be found in the work of organizational experts. They suggest that school effectiveness may be less a matter of what is done -- i.e., the curriculum taught -- than of the overall context in which that occurs. Schools of choice, they point out, are often smaller than schools of assignment. They can thus afford less complexity and bureaucratization. They are therefore frequently less hierarchical. This enables them to retain more flexibility with respect to roles and operation. Moreover, their charge to be distinctive automatically yields exemption from some districtwide regulations -- and such exemption enables them to be more responsive to the clientele with which they deal. The smaller size, plus the assigned mission, also make for quite different role allocations in many schools of choice. There may be fewer specialists and, in any event, the roles of classroom teachers are likely to be expanded. It is typically necessary, for instance, for magnet school teachers to write their own curriculum -- a rare expectation of teachers in other schools. This need, in turn, frequently puts them into collaborative relationships with other teachers, which is also unusual in most schools today.

There seems to be substantial evidence that it is these sorts of features of schools of choice that loom large in explaining their success. That evidence is coming from several different sources. One is the literature on corporate excellence and what makes for productivity in the workplace.<sup>21</sup> That literature is highly relevant to understanding schools,



of course, not only because teachers are workers in schools, but because we expect students to be also. Another increasingly rich source is research on private schools, which is pointing to a number of structural contrasts in private and public school organization, and attributing strong private school advantages directly to these features.<sup>22</sup> And as at least some of these researchers have pointed out, there are distinct organizational similarities between public schools of choice and private schools.<sup>23</sup>

The relevance of pointing to organizational structures and arrangements as plausible explanations for the success of magnet schools should be clear: if it is these sorts of properties which extensively account for magnet school success, then we want to be sure to incorporate and maintain them in schools of choice. Such an understanding of the requisites of success should enable us better to capitalize on our assets and to avoid undermining them inadvertently.

There is another, related Etic account of the success of schools of choice that might also prove useful. It, too, locates the explanation in properties of the school as an organization, but these are less tangible and more ephemeral properties: the culture and climate of such schools. Visitors in schools of choice often comment on their remarkable tone and flavor. One is simply struck with quite a different set of feelings on entering such a school, in contrast to other schools. This is a matter of school climate. Many have attributed to schools of choice a "user friendliness" missing from most schools. There is a personalizing and a responsiveness to individuals which strengthens their sense of affiliation with the school. They thus incline to identify themselves with it, to feel a sense of ownership in relation to it, and to assume responsibility toward

it. Because such effects are often associated with all who are affiliated with a school of choice -- teachers and parents as well as students -- it is not surprising that considerable collegiality and personal association often evolve.

Some analysts attribute the climate of an organization to its culture -- i.e., to the shared beliefs, commitments, and assumptions so fundamental to the group that they have become its taken-for-granted reality.<sup>24</sup> Schools of choice often tend to have strong homogeneous cultures, in the sense that a wide number of beliefs and operating assumptions are common to their affiliates. This comes in part from the choice feature enabling staff and students alike to affiliate with the school that comes closest to their own orientation. It assures that there will be a broader range of fundamental agreement and more commitment to a shared sense of mission than most schools enjoy. This condition (mission consensus), plus others associated with choice (e.g., heightened student motivation, and student similarity or commonality in some educationally significant sense) enable teachers to afford a sense of efficacy that is not widely shared elsewhere in public schools. That is, fundamental expectations of success -- and an ensuing confidence and optimism -- are often key elements in the cultures of schools of choice.

Even such a brief account suggests how closely organizational structures, culture, and climate are interwoven and affect one another. The evidence supporting their role in the success and effectiveness of schools suggests that magnet schools might well want to exploit such avenues for maintaining and enhancing their success. To date they have not tended to do so, instead concentrating their attention and efforts rather exclusively on their curricular specialty. Other sorts of public

schools of choice -- alternative schools in particular -- have seemed much more oriented toward the importance of organizational features. Whether consciously or otherwise, private schools have also often reaped the benefits of their organizational properties. But to date, magnet schools have appeared to take relatively slight notice of them. It might be that such concern could yield better insight on what one is doing right -- and hence, better means for improving that and firmer assurance of being able to understand and control the situation when things are not going well.

### Concerns

Despite the clear strengths of these papers, they underscore for me some concerns about directions and tendencies in magnet systems. The first is a possible shift in emphasis from equity to excellence. Such a temptation is strong and eminently understandable: it appears the whole world is demanding Excellence -- and with the clear evidence that magnet schools are an extremely promising route to improved school quality<sup>25</sup> (possibly even the most assured route to Effective Schools),<sup>26</sup> the temptation to shift focus is reasonable. Yet a great deal remains to be done to satisfy the equity needs that originally gave rise to magnet schools. And as many have pointed out, the search for educational excellence has not always been pursued in ways compatible with the requisites of equity.

More specifically, I am concerned that magnet systems seem so often to concentrate their resources on programs for the more fortunate youngster -- the "Gifted and Talented" or the one with high aptitude in the "Performing Arts" or the budding scholar in "Math and Science." This is an understandable turn in the quest for excellence, since one of the

meanings of that term is outstandingness or statistical atypicality. But such a development often undermines the pursuit of equity, since it is obviously the weakest not the ablest students who appear to need the most help and encouragement. And those who do are quite typically excluded from magnet schools. A good case has also been made for the importance and the lack of programs for the average youngster<sup>27</sup> -- who is also excluded from many of the magnet programs we have established.<sup>28</sup> Without arguing that all magnets should be open to all students (which could immediately prove self-defeating for a number of programs), it appears that considerably more resources, effort, and imagination might very desirably go into magnets targeted for average to at risk students. If the choice movement is to produce a generation of excellence, and not just a well-schooled elite, then a much broader focus is necessary in designing magnet schools. The challenge is not simply a matter of creating the conditions that enable the ablest to succeed; it is rather, in terms suggested by a study of corporate excellence, eliciting "extraordinary performance from ordinary people."<sup>29</sup>

A strengthened equity focus might also recommend a stronger preoccupation with integration than is often encountered. It very early became obvious that desegregating a school is a long way from integrating it. Short of deliberate structures and arrangements and activities to stimulate positive interaction among different racial groups within a school, "desegregation" may just move segregation indoors. I wish we were hearing more about the use in magnet schools of the activities and strategies that are effective in integrating mixed-race classrooms. Such approaches have been developed and are available. I just wish there were more evidence of their widespread use in magnet schools.

I am concerned too lest the promise of schools of choice be lost in the mechanics of institutionalizing them. In the nature of the case, as soon as we undertake widescale implementation of an idea, we must attend to mechanics -- the procedures and arrangements and management details that operationalize the idea. The trick is not to get bogged down in the technology and forget the goals. I hope that is not happening in large choice systems, but it is a constant danger. A successful magnet school depends as much on heart and soul as on effective technology and delivery systems. We have recently learned a great deal more about the nature of heart and soul in organizations, and how to cultivate such qualities. We would do well to put some of our effort and attention directly into such cultivation.

Some say there is a major lesson for other enterprises in what happened to the railroads in this country. Once a major American institution with a pivotal role in our economy, they are now quite peripheral and only marginally self-sustaining. One provocative explanation is that the decline was due to a failure of leadership and vision: the managers saw the challenge before them as running the system -- making trains available, on time, in good operating order. Management's internal preoccupations -- the focus on running their own systems -- caused them to ignore the goals of their clientele: getting people and products to their destinations. Thus, other forms of transportation replaced the trains when the alternatives proved more responsive to external needs and demands.<sup>30</sup> Perhaps any major enterprise must consistently guard against such a development. Indeed, some have asserted that this is just what has happened in education and that it is what is wrong with the regular schools in big cities. But it can happen

in magnet schools as well. As the demands of large-scale options systems become more intricate and urgent, the temptations toward internal preoccupation become stronger. Schools of choice must not be lured into dealing only with the technological problems. They must devise ways to keep themselves looking outward -- to remain attuned to the concerns and desires of students and their families. Or they will become just one more component in the self-preoccupied bureaucracies at least some of them were designed to offset.

### Conclusion

I will close with a final comment on magnet school prospects and how to realize them. I am convinced that magnets and other schools of choice offer tremendous promise. Indeed, despite current limitations on our knowledge, there is much to suggest that such schools may eventually prove the Cinderella of our reform efforts.<sup>31</sup> They could be just the kind of institutions that reformers have been looking for. There is a surprising amount of indirect research support for such a speculation. It comes from study not directly of magnet schools but of private schools, of those labeled 'Effective Schools,' and of successful corporate practice. This research suggests that many magnet schools begin with the essential conditions upon which educational excellence must be built -- reduced size, a commitment to differentiation and responsiveness, increased autonomy of the administrative unit. Some of them have capitalized most successfully on these assets -- so that it already seems clear, for instance, that magnet schools can sustain superior leadership,<sup>32</sup> and that at least some schools of choice can claim superior teacher commitment and



investment<sup>33</sup> and extraordinary staff morale.<sup>34</sup> Indeed, some private school researchers have concluded that schools of choice in the public sector have the potential for bringing the same sorts of benefits to public education that private schools enjoy.<sup>35</sup>

Thus, magnet schools offer promise extending well beyond the impressive positives they have realized to date. If any single piece of advice could yield fuller realization of that promise, it might lie in suggesting less innovative timidity. For the next decade, magnet schools can and should be in the vanguard, offering leadership and direction to other schools in the revitalization so needed in American education. But to do so, many would need to experiment with even more venturesome curricular departures than most have undertaken so far. Others would have to begin experimenting with instructional as well as curricular innovation. New pedagogies are urgently needed, schools of choice are perhaps our best prospective source, and creativity along these lines would be most desirable.

Finally, but by no means least, I would urge official to insist that magnet schools take far fuller advantage of the unit autonomy extended them -- i.e., the exemption from district practice and procedure attending the charge to become a school that is distinctive. In particular, such autonomy might desirably be used to depart from traditional school structure. As David Clark has commented about Effective Schools, there is a danger that magnet schools may remain "for the most part...dominated by conservative organizational perspectives." They may be far too tempted to "overemphasize the significance of bureaucratic characteristics" and thus to understand successful programs as "well organized bureaucracies that work."<sup>36</sup> As a sharp and perceptive critic has already warned, strong

top-down management and the tight control that has operated in some magnet schools not only fails to stimulate innovative practice but may even defeat it. Such management practices "help bring about mechanistic, disengaged, depressed teaching...[and]...the exit of some of our best teachers."<sup>37</sup> Certainly, magnet schools must move quickly and decisively to avoid this sort of recapitulation of the problems of other schools. To fulfill their promise and substantially improve public education, magnet schools must be freed to pursue the organizational innovation essential to the programmatic creativity we have asked of them.



# Footnotes

- 1 "Magnetic Attraction," The Economist, October 18, 1986, reprinted in The Educational Excellence Network, December 1986/January 1987, p. 103
- 2 "Kansas City Proposes Magnetization," School Board News, October 15, 1986, p. 6
- 3 According to Superintendent David A. Bennett, in Executive Educator, February, 1987, p. A9
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- 6 See, e.g., Lawrence Feinberg, "A 'Crazy System' That Seems to Work," Washington Post, October 2, 1986; and Sally Kalson, "On the Magnet Front Lines," Pittsburgh Post-Gazette, November 14, 1986
- 7 See Diane Ravitch, "Making Good Schools Worse," New York Times, October 3, 1986; and Jane Perlez, "Board Votes to Ease Admission to 8 Career High Schools in New York City," New York Times, September 18, 1986
- 8 See Larry Cuban, "How Did Teachers Teach, 1890-1980?" Theory Into Practice, 22 (Summer, 1983), pp. 159-165.
- 9 Blank et al., Op. cit.
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- 11 Henry M. Levin, The Educationally Disadvantaged: A National Crisis. Philadelphia: Public/Private Ventures, July, 1985
- 12 See, e.g., Chris Phipps, "Restructuring the Schools: States Take on the Challenge," Education Week, November 26, 1986, p. 19
- 13 The distinction is elaborated by Marvin Harris in The Rise of Anthropological Theory. New York: Thomas Y. Crowell, 1968, pp. 568-604
- 14 Blank et al., Op. cit.
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- 20 Op. cit.
- 21 See e.g., Thomas J. Peters and Robert H. Waterman, In Search of Excellence: Lessons from America's Best-Run Companies. New York: Harper & Row, 1982
- 22 See, e.g., John E. Chubb and Terry M. Moe, Politics, Markets, and the Organization of Schools. Institute for Research on Educational Finance and Governance, Stanford University, Project Report No. 85-A15, November, 1985
- 23 Donald Erickson, The British Columbia Story: Antecedents and Consequences of Aid to Private Schools. Los Angeles: Institute for the Study of Private Schools, 1982
- 24 See, e.g., R.H. Kilmann, M.J. Saxton, and R. Serpa, Gaining Control of the Corporate Culture. San Francisco: Jossey-Bass, 1985
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- 26 The evidence with respect to the costs and attrition rates associated with school improvement projects at least gives rise to question whether the magnet school route to improvement is not more assured and less costly. See, e.g., Eugene E. Eubanks and Daniel U. Levine, "A First Look at Effective Schools Projects in New York City and Milwaukee," Phi Delta Kappan, June, 1983, pp. 697-702
- 27 See Arthur G. Powell, Eleanor Farrar, and David K. Cohen, The Shopping Mall High School: Winners and Losers in the Educational Marketplace. Boston: Houghton Mifflin, 1985
- 28 See, e.g., Jane Perlez, Op. cit.
- 29 Peters and Waterman, Op. cit.
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- 31 The suggestion is that of Thomas Gregory, in "Alternative School As Cinderella: What the Reform Reports Didn't Look at and Don't Say," Changing Schools, 13:3 (Fall, 1985), pp. 2-4

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