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ABSTRACT

In July 1985 the Supreme Court ruled in Aguilar v. Felton that public school employees could no longer provide instruction, including Chapter 1 services, on religious school premises, previously the most common service delivery model used. This study addresses the following questions: (1) what portion of the decline in services to nonpublic school students in Massachusetts is attributable to the Aguilar decision; (2) why have districts and nonpublic schools pursued particular options; and (3) what are continuing issues to be addressed to restore enrollments and respond to equitability issues? Among the findings were the following: (1) between 1984-85 and 1986-87 nonpublic school student enrollment in Massachusetts Chapter 1 programs dropped 40 percent and public school participation dropped less than 4 percent; (2) most of the drop in service for nonpublic school children may be attributed to the Aguilar decision; (3) Chapter 1 coordinators, nonpublic school principals, and church officials have invested much energy in finding alternative to Chapter 1 services for religious school children; and (4) a few districts are now using mobile vans and computer-assisted instruction after experiencing significant enrollment losses and other problems with alternate sites. Implications for Federal policy are discussed. A table illustrates the data. (BJV)

AFTER AGUILAR v FELTON:

CHAPTER 1 SERVICES FOR MASSACHUSETTS NONPUBLIC SCHOOL STUDENTS

FINAL REPORT

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and

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INTRODUCTION

In July 1985, the Supreme Court ruled in Aguilar v. Felton (105 S. Ct 3232) that public school employees could no longer provide instruction on religious premises. At issue was the provision of services authorized by Chapter 1 of the Education Consolidation and Improvement Act, the federal compensatory education program.* Regardless of the subject matter--typically, in Chapter 1 programs, basic reading and/or math--the location of public school instructional staff on religious premises was considered "entanglement" of church and state by the Court.

After the Aguilar decision, Chapter 1 (Sec. 557(a), U.S.C. 3806(a)) and Department of Education regulations (200.71)** continued to require compensatory education services and instructional expenditures for religious school students equitable to those given to public school students. But teachers could no longer provide instruction on religious school premises, previously the most common service delivery model used. Public and nonpublic school officials hurriedly sought viable service delivery options. They experienced substantial uncertainty about which options would stand up to judicial scrutiny. Participation of religious school students in Chapter 1 programs dropped markedly.

How to provide equitable services to students in religious schools within the parameters of the Aguilar decision will be a major issue as the Senate considers reauthorization of Chapter 1 this coming year. With these deliberations in mind, this study addresses three questions:

1. What amount of the decline in services to nonpublic school students in Massachusetts is attributable to the Aguilar decision and not to other factors?

2. Why have districts and nonpublic schools pursued particular options? What appear to be the advantages and disadvantages of the following: teachers providing instruction in alternate sites off religious school

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* Compensatory education services were initially provided in religious schools by public school employees under Title I of the Education and Secondary Act of 1965 and then under Chapter 1 of the Education Consolidation and Improvement Act of 1981 (PL 97-35).

** Citations for Department of Education regulations are from the Federal Register, Volume 45, Number 30 (2/12/82).

premises (public schools, nonprofit organizations or other neutral facilities); teachers providing instruction in mobile vans and portable classrooms (at times, parked on religious school property); and computer-delivered instruction on religious premises?

3. What are continuing issues to be addressed to restore enrollments and respond to equitability issues? For example, were a capital investment fund to help offset the costs authorized as Congress is now considering, what issues should be taken into account?

Most Massachusetts districts are now using alternate sites off religious school premises to provide instruction. Alternate sites are the first option selected. The decision occurred during the summer before it was to be implemented. Budgets were set and in many cases teachers were already under contract for the coming year. Districts were uncertain about the legality of other options and their educational effectiveness. These factors combined with the equity issues involved to encourage a basic decision rule in Massachusetts districts: Find an alternate site where the Chapter 1 teacher can provide essentially the same services as before. Keep the instructional program as close to the public school program as possible.

A few districts have chosen vans or portable classrooms and, recently, computer-assisted instruction. This study examines advantages and disadvantages of all three options, with special emphasis placed on computer-assisted instruction and the costs of vans. Not only are these two options less well understood, they are important to the discussion of a capital investment fund.

To best address the underlying equitability questions, a study should include a state and communities known to have provided equal access and comparable services to nonpublic school students prior to the Aguilar decision. Massachusetts is one such state, according to a study of its larger districts, completed just prior to the Aguilar decision (Millsap 1985).*

Among participating Massachusetts nonpublic schools in 1984-1985, nonpublic school students had equal access to Chapter 1 and

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* Millsap, Mary Ann. 1985. Chapter 1 and Nonpublic Schools: Do Students Have Equal Access? The Massachusetts Case. Report prepared for the ECIA Chapter 1 Assessment, National Institute of Education. Included in the 39 larger districts covered by the study were all school districts enrolling 5000 or more public school students plus seven additional smaller districts (enrolling between 2500 and 5000 students) with large concentrations of Chapter 1 students. These districts enroll 40 percent of the students in the Commonwealth.

were receiving services comparable to public school students.* The instructional program was largely the same in public and nonpublic schools. In fact, because there were often waiting lists in the most urban public schools, eligible nonpublic school students in these districts were somewhat more likely to receive Chapter 1 services than their public school counterparts. Equivalent criteria were used for student selection, an "excellent" relationship existed between the Chapter 1 program and the nonpublic schools according to nonpublic school principals, and the Chapter 1 program was known and accepted by nonpublic school principals as a program for nonpublic school students. In all districts, Chapter 1 coordinators were found to be committed to serving all eligible children within school district boundaries, and made extra efforts to ensure coverage. (Millsap 1985)

Nonparticipating nonpublic schools in 1984-1985 either enrolled no low achieving students (54 percent), were located in ineligible attendance areas (27 percent), enrolled very few Chapter 1 residents (13 percent), or chose not to participate (nine percent) either because they did not want to compromise their philosophies or they wanted more control over the program (for example, in student and teacher selection) (Millsap 1985, 16-17).

In some respects, it is not surprising that Massachusetts would provide equal access and comparable services. National figures indicate that where nonpublic schools are widely dispersed or enroll few residents of Chapter 1 attendance areas, the participation rates of nonpublic school students in Chapter 1 are lower than where nonpublic school students are found in higher concentrations.** More than one fifth of all school children in

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* Equal access is usually thought of in terms of equal participation rates for public and nonpublic school students. Participation rates should be defined as the number of Chapter 1 participants divided by the number of eligible students (that is, the number of low achieving students residing in Chapter 1 attendance areas). Millsap tabulated the number of Chapter 1 residents in nonpublic schools from district applications, and then interviewed nonpublic school principals to determine what proportion of these students were also low achieving. Because the number of eligible students in nonpublic schools is rarely available, national statistics are calculated by dividing the number of Chapter 1 students by the total school enrollment. These national participation rates, however, exaggerate the discrepancy between public and nonpublic school student participation in Chapter 1 because nonpublic schools typically enroll proportionately fewer low achieving Chapter 1 area residents.

** Jung, Richard. 1982. Nonpublic School Students in Title I ESEA Programs: A Question of "Equal" Services. McLean, VA: Advanced Technology, Inc.

Massachusetts' larger districts are enrolled in nonpublic schools, so the traditional stumbling block of size does not apply.

The state has a large Catholic population and its nonpublic schools are also primarily Catholic. Only a very small percentage of the students attending religious schools in Massachusetts are from those faiths whose beliefs lead them not to accept any federal funds. In many areas of Massachusetts, public administrators and teachers have strong ties with parochial schools. In some instances, the ties exist because the parochial schools serve a large portion of the community's children and are an important part of its overall educational system. In addition, although Chapter 1 coordinators were not asked their religious affiliation, a number mentioned they had attended parochial schools or had children who attended them.

Massachusetts has a strong history of compliance with Chapter 1 law and regulation. The state Chapter 1 program generally interprets federal Chapter 1 guidance conservatively, that is, in keeping with earlier Title I regulations. The state director is known for his detailed knowledge of the nuances of Chapter 1 law and regulation, and state supervisors actively pass federal guidance on to local Chapter 1 coordinators. District coordinators expect the state Chapter 1 office to be able to inform them of options that will give them security regarding audits or other legal challenges.

Massachusetts has also been a state leader in certain aspects of ensuring that all eligible children have equal access to appropriate services. The federal law governing handicapped children's access to services (PL 94-142) was based in large part on an earlier Massachusetts law (Chapter 766).

This report is organized as follows: After a brief methodology section, findings are summarized. Then they are described in detail. First, the decline in enrollment and factors associated with it are discussed. Next, the service delivery options--alternate sites, vans and computers--are described and assessed in turn. The report closes with a discussion of federal influences in Massachusetts and implications for federal policy makers.

DATA SOURCES AND METHODOLOGY

This study compares 1984-1985 with later enrollment statistics for Massachusetts' 39 larger districts. The 1984-1985 Chapter 1 enrollment data compiled by Millsap (1985) were based on figures contained in district program applications. Program coordinators in ten districts contacted for further information in 1985, indicated that the program application data, although based

on estimates, had been remarkably accurate. Its accuracy reflected the stability of the programs before Aguilar.

By contrast, estimates of nonpublic school enrollment on program applications for 1986-1987 did not appear to be accurate based on phone calls to eleven districts, probably a reflection of the comparative instability of the nonpublic school programs. Instead, a 1987 state Chapter 1 survey of nonpublic school services was used. Districts provided nonpublic school enrollment data to the state between November and January 1987 in response to a state questionnaire.

Telephone or on-site interviews were conducted in eleven districts to explore why communities chose particular options, their advantages and disadvantages, and factors responsible for the shifts in enrollment. Five of the eleven districts, including Boston, were also in Millsap's 1985 study; six districts were added to explore more fully the uses of mobile vans, portable classrooms and computer-assisted instruction. These districts are more fully described in Exhibit 1. In each district, the Chapter 1 coordinator was interviewed and, in small districts, all participating nonpublic school principals. In those districts with more than four participating nonpublic schools, three principals were interviewed. In the district where no nonpublic schools were participating, principals of the three schools that had participated earlier were interviewed. In addition, interviews were conducted on-site with the State Chapter 1 Director and Deputy Director and the state Chapter 1 Computer Cooperative Center Director. Visits were made to observe computer assisted instruction and interview staff in three schools in the two districts with computer-assisted instruction.

Interviews were also conducted with Department of Education employees to clarify constitutional and regulatory questions.

SUMMARY OF FINDINGS

Overall

- Enormous energy and commitment on the part of Chapter 1 coordinators, nonpublic school principals, and Archdiocese and Diocese officials have been invested in finding educationally sound alternatives to continue serving religious school children in Chapter 1 programs.

- Alternate sites are the first and continue to be the most frequent option selected.

- A few districts are now using mobile vans and computer-assisted instruction, after experiencing significant enrollment losses and other problems with alternate sites.

Enrollments

- Between 1984-1985 and 1986-1987, the enrollments of nonpublic school students in Chapter 1 programs in Massachusetts' 39 larger districts dropped 40 percent. The 1986-1987 year was an improvement over 1985-1986, when the enrollment loss had been 63 percent.

- Statewide participation figures are greatly influenced by its largest city. Excluding Boston, the average drop in enrollment from 1984-1985 to 1986-1987 was 52 percent. In 1984-1985, Boston enrolled just over one quarter (28 percent) of the nonpuolic school children in Chapter 1 programs in Massachusetts' larger districts. In 1986-1987, Boston enrolled 43 percent of these children.

- In contrast to the drop in enrollment for nonpublic school children, public school participation in Chapter 1 dropped less than four percent between 1984-1985 and 1986-1987 in the 39 districts. Excluding Boston, the average enrollment loss in Massachusetts Chapter 1 programs for public school students was eight percent.

- Most of the drop in service for nonpublic school children may be attributed to Aguilar v. Felton, especially to sharp declines in enrollment within participating nonpublic schools.

- But factors unrelated to the Aguilar decision appear to account for a small part of the drop in nonpublic school student enrollment in Chapter 1 programs. These factors include: schools not participating for reasons other than Aguilar, drops in the number of eligible nonpublic school students, program design changes, reduced budget (or increased costs), and artifacts of enrollment reporting (for example, changing from duplicated to unduplicated enrollment counts). The specific percentage of the drop attributable to non-Aguilar factors cannot be calculated from the data gathered for this study. An important point to note is that although each of these non-Aguilar factors probably plays only a small role when averaged across the state, any one factor or combination of them may account for a high percentage of the enrollment loss in particular districts.

- The greatest declines in service are for children currently enrolled in alternate site programs, followed by mobile vans and computer-assisted instruction. Enrollments are continuing to decline in just over half of the alternative site districts, while districts using computer-assisted instruction are almost at pre-Aguilar levels.

- Very small districts (serving fewer than 100 nonpublic school students in Chapter 1 programs) and very large ones (serving more than 400 students) experienced the biggest declines. The

largest district, Boston, experienced an 80 percent decline in 1985-1986; but began using computers in 1986-1987, returning almost to pre-Aguilar enrollment levels.

Alternate Sites

- Alternative sites that are right next door to the nonpublic school but not in a public school are seen as the ideal solution to the Aguilar decision. Alternate sites that fall short of this ideal are a disincentive for participation.

- Problems with alternative sites are associated with having children out of the building. They focus on loss of instructional time and safety during transit. Using a public school is also a factor, although not as central as simply having children out of the building.

- Unless the religious school principals and teachers are forceful advocates for the Chapter 1 program, the lack of continuity of service and disincentives to participation related to the use of alternative sites will erode needed parental approval for program services.

- Grave concern has been expressed about the lowest achieving students being absent for longer periods from their regular instructional program in order to travel to the Chapter 1 program. At the other extreme, it appears that students with less need (with test scores near the 40th percentile) are now less likely than before Aguilar to be referred by religious school teachers for Chapter 1 services.*

Mobile Vans and Portable Classrooms

- Vans and portables placed close to the nonpublic schools, at times in the religious school parking lot or playground, avoid many of the problems of alternate sites.

- Mobile vans are virtually always stationary in Massachusetts, serving one school.

- Costs are important; but the primary obstacles to the use vans and portables are the lack of secure and/or legal parking close to the nonpublic school, uncertainty about which parking areas will withstand judicial scrutiny, and prior negative experiences with vans or portables used for other educational

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* Massachusetts uses multiple criteria for Chapter 1 eligibility, including both test scores under the 40th percentile and teacher assessments.

purposes. Commitment and resources of the city, superintendent, and Chapter 1 coordinator can offset costs as an inhibitor of this service arrangement.

- The costs differ widely between districts and even between schools within districts. Costs depend upon whether vans or portables are bought, leased or renovated; whether labor and/or materials are donated; and whether the ongoing costs of electricity, installing hook-ups and maintenance are supported through non-Chapter 1 funds. Per pupil costs further depend on the number of eligible Chapter 1 students at a given school.

- Not only the acquisition but also the maintanence of vans and portables require considerable support from the city and/or school department as well as administrative time from the Chapter 1 coordinator.

- Federal guidance clarified many of the constitutional issues related to use and location of vans and portables, but the guidance cannot clarify all of the situational factors for each parking area.

Communications and Relationships between Nonpublic Schools and Off-Site Chapter 1 Programs

- Coordination of the off-site Chapter 1 programs and the regular curriculum was said to be good, often because the Chapter 1 teacher had worked with the school for a number of years.

- But ongoing, informal communication between Chapter 1 teachers and nonpublic school faculty has decreased markedly, as districts often interpreted the consultation allowed under the Aguilar decision with a conservative, no risk approach.

- The relationship between the district Chapter 1 office and the nonpublic schools was seen as good, with nonpublic school principals citing district cooperation and a willingness to work quickly to solve problems.

- Strains were acknowledged, however, especially since no matter what option was chosen, it was considered "second best" to having a teacher in a classroom on religious premises.

Computer-Delivered Instruction

- The largest program for religious school students in Massachusetts, that in Boston, uses computer-delivered instruction. In Boston and one small district a centrally located minicomputer manages and delivers instruction to students through so-called "dumb" terminals placed on religious premises. A second small

district uses a system similar to Boston. Elsewhere one district explored a home-based computer system, and teachers in many districts have computers to assist them in teacher-managed programs off religious premises.

- Computer-managed instruction is the choice of last resort, pursued only after alternate sites and mobile vans were not feasible. The state preference for teachers providing instruction, high initial investment costs, and the lack (as yet) of standardized student outcome data demonstrating its effectiveness, inhibit other districts from shifting to computer-managed instruction.

- Computer-managed instruction alters the way in which constitutional issues are addressed and control over instruction is maintained by the public school district. Controls are built into the technology that prevent diversion of the program to religious school or non-Chapter 1 purposes. The instructional content and equipment are controlled by a minicomputer located in the district Chapter 1 office, with the minicomputer accessible to programming only by a vendor and staff on contract with the district. The program is self-adjusting to student needs; it automatically branches to easier or more difficult tasks depending upon individual student performance. Access to the program is limited to Chapter 1 students through a password system. Computer generated student progress reports provide further controls.

- Instruction relies mostly on drill and practice in the Boston case, primarily because of the constitutional and regulatory constraints placed on the use of computers in religious schools. When computers are used off religious premises, it is less the inherent limitations of computer technology than the typical objectives of Chapter 1 programs and orientation and skills of Chapter 1 teachers that lead to the use of computers for drill and practice.

- Initial skepticism that an effective instructional program could be offered in the absence of a teacher has been overcome in many schools. Principals and teachers are impressed with the high motivation shown by students, their progress with the program and the lack of disruption of regular classes. Although no standardized NCE gains data were yet available, district Chapter 1 staff report no indication that the computer managed programs in use are falling short of teacher-delivered programs in terms of achievement gains or transferability of skills.

- A comprehensive evaluation is needed of the educational gains and losses of different types of computer instruction programs, comparing them with paper-and-pencil programs, and also comparing computer programs focused on drill and practice with ones focused on higher order skill development.

- Comparability and equitability issues become more complex with computer-managed instruction, especially because the instructional process and length of instruction differ considerably from public school programs. Standardized achievement tests may assume added importance as measures of educational equitability, but other measures--such as teachers' assessments of the influence of computer instruction on how students approach problems in regular classes--would not be neglected. Fiscal equity is also complex, particularly if the ongoing costs of computer-managed instruction after the initial investment are as low as currently estimated.

Implications for Federal Policy

Findings from this study highlight several possible issues for federal policymakers. Some consideration might be given to:

- systematic study of the strengths, weaknesses and effectiveness of various approaches to computer-assisted instruction in serving nonpublic school students.

- expanded discussion of restoring services to pre-Aguilar levels, including acknowledgement that some declines in the number of religious school students served may be unrelated to Aguilar. Application for the proposed capital expenditure grants should not be based on restoring pre-Aguilar levels of service if, for example, the number of eligible religious school students has changed or a change in the budget or program design would allow different levels of service. Discussion should focus on how to provide services to the same percentage of eligible students in nonpublic schools as in public schools.*

- continued maintenance of flexibility within the proposed capital expenditure grants to lease as well as purchase equipment.

- further discussion in subsequent guidance from the Department of Education about allowable locations for communication between Chapter 1 teachers and nonpublic school personnel and examples of the type of "consultation" likely to be permitted.

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* As found by Millsap (1985), however, it is important that districts determine their participation rates by dividing the number of Chapter 1 students by the number of low achieving students living in Chapter 1 attendance areas, not by the total school enrollment. Nonpublic school students who attend schools that chose not to participate in Chapter 1, should not be included in the comparison between public and nonpublic participation rates.

CHAPTER 1 PROGRAMS FOR NONPUBLIC SCHOOL STUDENTS IN MASSACHUSETTS

Pre-Aguilar Programs

In 1984-1985, the year prior to the Aguilar decision, over 6300 students in 145 nonpublic schools were enrolled in Chapter 1 programs in the state's 39 larger districts. Some 98 percent of the nonpublic school students in Chapter 1 programs attended religious-affiliated schools, almost all Catholic. All Chapter 1 programs in those schools were pullout programs on the school premises.

The Chapter 1 room was a well-established, stable feature of the nonpublic schools, according to interviews with nonpublic school principals in ten of the larger districts (Millsap 1985). Schools had been encouraged by the Archdiocese and the Diocese to participate in the Chapter 1 program, and all schools participated in Chapter 2 as well. In fact, principals and parents from several schools had visited or written members of Congress when budget cuts to the Chapter 1 program had been proposed.

The program was working well in the eyes of nonpublic school principals, and Chapter 1 teachers were seen as excellent and hardworking. Some of the teachers and aides had worked ten to fifteen years in the same school. In most cases, Chapter 1 and its predecessor Title I had been in the school longer than the principals, because principals usually rotated among parochial schools about every six years.

The Decline in Enrollment after Aguilar and Influencing Factors

Midway through 1986-1987, the second year after Aguilar v. Felton, 40 percent fewer children were served in nonpublic schools than in 1984-85, the year before Aguilar * While a significant drop, it was nevertheless an improvement over the first year after the Aguilar decision when enrollments dropped 63 percent over the previous year.

Statewide participation figures are greatly influenced by its largest city. Excluding Boston, the average drop in enrollment from 1984-1985 to 1986-1987 was 52 percent. In 1984-1985, Boston enrolled just over one quarter (28 percent) of the nonpublic school children in Chapter 1 programs in Massachusetts' larger districts. In 1986-1987, Boston enrolled 43 percent of these children.

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* Mid-year data provided by the Chapter 1 district coordinators in response to a state-wide request for data from the state Chapter 1 office.

In contrast to the drop in enrollment for nonpublic school children, public school participation in Chapter 1 dropped less than four percent between 1984-1985 and 1986-1987 in the 39 districts. Excluding Boston, the average enrollment loss in Massachusetts Chapter 1 programs for public school students was eight percent.

How much of the 40 percent drop in enrollment is a consequence of the Aguilar decision? It appears that most of the drop in enrollment is attributable to the Aguilar decision, but other factors include participating schools withdrawing for other reasons, drops in the number of eligible nonpublic school children, program design changes, and artifacts of enrollment reporting practices.

Only a small proportion of the drop in enrollments is connected with a decline in the number of participating nonpublic schools. Some 83 percent of the schools participating in 1984-1985 were also participating in 1986-1987. Of the 23 schools that no longer had Chapter 1 students, information was available on eleven of them. The Aguilar decision was the primary reason seven of the eleven schools no longer participating. Four schools opted out of the program, two were located out of the school district (with Aguilar complicating development of services), and one school was still rewiring to meet CAI needs. The other four schools dropped out for reasons unrelated to Aguilar. Two schools enrolled too few Chapter 1 eligible students in 1986-1987, one school had too few students when its corresponding public school lost its eligibility, and one school closed. The eleven schools combined had enrolled some 315 Chapter 1 students in 1984-1985.

Whether reduced enrollments came from changes in the number of eligible Chapter 1 students within participating nonpublic schools is unclear. We have reliable information about few districts, so the data must be interpreted with caution. All these districts had at least a seven percent loss in the number of nonpublic school children living in Chapter 1 attendance areas.

Changes in program design can influence enrollment shifts. One district visited this year had dropped its kindergarten program in 1986, and much of the enrollment loss was due to that shift. Another district had reported duplicated counts in its enrollment figures for 1984-1985 and switched to unduplicated counts in 1986. About one third of its enrollment loss was an artifact of its own reporting. Although most districts in this sample had not experienced cuts in their Chapter 1 budget, such reductions would automatically influence the total number of students who could be served.

Particularly important to note is that while for the state as a whole only a small part of the enrollment drop appears attributable to factors other than the Aguilar decision, for any

particular district other factors may be more important. In some districts sampled, the types of changes noted in the preceding paragraph were particularly important. Although not the case for any of the districts visited, the closure of a single nonpublic school in a small district, for example, could mean a very high percentage decrease in enrollment. Any assistance, such as the capital investment fund, tied to restoring pre-Aguilar enrollment levels, must take such factors into account.

The Decline Relative to Program Type and Size

The most common alternative to on-site instruction has been alternate sites (that is, public schools or "neutral" sites) for Chapter 1 services for eligible nonpublic school children. Almost 70 percent (20) of the larger districts offering services in 1986-1987 were using this option. Five districts were using mobile vans, one had portable classrooms, and three were using computer-assisted instruction (CAI). Most of these districts had provided day services in alternative sites during 1985-1986 for at least some of their nonpublic students. The others had tried after school or summer school programs.

The type of program selected by school districts for nonpublic school children is also related to enrollment loss. Of all districts, alternate site districts have experienced the greatest enrollment loss and enrolled half as many students in 1986-1987 as they had before Aguilar. The average loss in mobile van districts is just under 40 percent, while the districts using CAI have an average loss of fifteen percent from pre-Aguilar enrollments.

All districts using CAI greatly increased service between the first and second years after Aguilar v. Felton, as did the district with portable classrooms. Districts with mobile vans have a mixed pattern. Compared with the first year after Aguilar, one district increased enrollments, one decreased, and one remained the same. Unlike other districts, the majority (55 percent) of districts using alternate sites are continuing to experience enrollment declines. During the second year after Aguilar, they enrolled fewer nonpublic school students than during the initial year after the Aguilar decision. Some 35 percent have increased enrollments over the first year of Aguilar, and the remaining ten percent have held post-Aguilar enrollments constant.

The overall size of the district's program for nonpublic school students appears related to enrollment loss. Of the 30 districts with nonpublic school students in Chapter 1 programs in 1984-1985, half had an average loss of 54 percent during the year 1986-1987. Those with the smallest and largest programs for nonpublic school students suffered the highest losses. The programs enrolling less than 100 nonpublic school children in 1984-1985 had losses of well over 60 percent, as did those districts

with over 400 nonpublic school students in 1984-1985. Boston, the largest district in the state, had an 80 percent drop in enrollment the first year after Aguilar.* The programs in the middle range--100 to 400 nonpublic school students--had average losses of just under 40 percent.

THE USE OF ALTERNATE SITES

In 1985-1986, the first year after the Aguilar decision, all eleven districts studied for this report sought to provide Chapter 1 instruction for nonpublic school students in alternate sites.** The focus of this section is on the four selected districts that continue using only alternate sites to serve nonpublic school students. These districts, also included in the earlier study of nonpublic schools (Millsap 1985), were selected in part because they had suffered large losses in nonpublic school enrollments since the Aguilar decision. The four districts' losses range from close to 60 percent to 100 percent. In the latter case, some services may be provided next year.

Except for the district where none of the three nonpublic schools is currently participating, the other three districts resemble the rest of the state in having few dropouts among the nonpublic schools. Of the nineteen nonpublic schools that were participating in 1984-1985, before the Aguilar decision, seventeen have continued services, although at greatly reduced rates.***

Getting Started

When it became clear that there would be no transition year to continue using Chapter 1 teachers in the nonpublic schools, Chapter 1 administrators, Archidiocese and Diocese officials, and nonpublic school principals sought alternate sites as close to individual

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* After switching to computers in 1986-1987, Boston's enrollments were only ten percent lower than pre-Aguilar enrollments. Ten percent may overestimate the loss somewhat, because Boston was still installing computer equipment at the time of the 1987 state survey on which these calculations were based.

** Alternate sites include public schools, city-owned buildings, nonprofit organizations, private homes, and facilities constructed with state or federal funds.

*** Of the two nonparticipating schools, one refused to allow students to leave the building, while no suitable alternate site was found for the other. This year its corresponding public school lost Chapter 1 eligibility so efforts to find a suitable site have been halted.

schools as possible. The process was often frustrating and time consuming because the most convenient locations did not always meet local fire, safety, and health codes for children. The search for alternate sites was also exhausting; one nonpublic school principal recalled visiting eleven different locations with district Chapter 1 personnel before they found a suitable site. Few found ideal sites close by, and students were frequently bused to another location. Programs started about six to eight weeks late, with greatly reduced participation. By the end of the second year, a number of nonpublic school students were walking to more conveniently located sites, although the three districts serving students continued to bus students from at least one nonpublic school to an alternate site.

Description of Alternate Site Programs

Two districts have programs during the school day, while the third district has a mixed day and after-school program using public school facilities. Children from three of the five nonpublic schools in this third district meet after regular school hours in a public school. The fourth district provided services last year to two students during the day in public schools, and is proposing a public school day program next year. Alternate sites include a Boys Club, parish center, bingo hall, and senior center built with federal funds in a church basement.

In most cases, Chapter 1 coordinators and nonpublic school principals report that the same teachers are being used and that the content of the Chapter 1 program has not changed from pre-Aguilar program. In fact, nonpublic school principals volunteered praise for the efforts of the Chapter 1 teachers, including their willingness to make the best of a much less than ideal situation. In only one school was there a problem noted with a Chapter 1 teacher; that problem, according to nonpublic school officials, was being addressed by the district coordinator. While they remarked that the content of the program had not changed, coordinators and nonpublic school principals cited less time for direct instruction since Aguilar v. Felton, saying that time is taken up in settling students down from the bus ride and in getting students out of and then back into winter gear.

The additional costs incurred for alternate sites consist largely of bus transportation. In the two larger districts, transportation costs ran from $18,000 a year to $24,000 a year. The highest rent budget was $6,000 annually.

Problems with Alternate Sites

Few coordinators or nonpublic school principals are pleased with alternate sites, except when sites are right next door or

across the playground. Sites a block away, across a busy street, or (in some cases) next door but in a public school, can be a disincentive to participation. Even in those districts where programs were moved this year to locations next door, enrollments are still down although nonpublic principals are optimistic that enrollments will rise next year.

The most frequently cited problems with alternate sites are those associated with having the children out of the building. Everyone spoke of lost or disrupted instructional time--time lost in transit, time lost in getting winter gear onto and off of students, time lost in getting children settled down again after being on the bus. In one school the principal said that parents removed their children from the Chapter 1 program because "they thought their children were failing because of the time taken away by Chapter 1."

Both principals and Chapter 1 coordinators expressed reluctance to send the lowest achievers out for as much an an hour when they receive only 30 minutes of instruction. Typical of the concerns of nonpublic school principals was the following:

> We are taking the worst readers, putting them on a bus for 30 minutes round trip where we could be spending time with them in class. We're looking for other alternatives. There has to be a better way.

Students marginally in need of service as defined by Chapter 1 standards--that is, near the 40th percentile--are not as likely to referred for to Chapter 1. Massachusetts uses multiple criteria for academic eligibility, including both test scores and teacher assessments. In some schools, teachers do not refer those students on the margin, said principals, because the services were not worth the loss in other instructional time.

The effects of the time spent out of the school building appears to be cumulative. According to principals, the dailiness of the program seemed to dissuade some parents from allowing their children to participate. Having their children out of the building for an hour each day seemed to take away too much from their parochial school education.

New England winters exacerbated the problems of being in an alternate site. Not only was time wasted getting winter clothes on and off, but classes would be cancelled on days when snow, rain or severe cold made walking difficult.

Being on a bus was a problem with some schools. As one principal reported: "Some students thought it was like going on a field trip. They saw it as a lark, a fooling around and play time." Now that the site is next door, the principal finds the

Chapter 1 program "more educationally productive and under constant supervision now."

Using public school facilities was also a factor in some schools. Parents did not want their children attending the public schools, according to nonpublic school principals. At the same time, several nonpublic school principals and diocesan officials remarked that using public schools was not the most important concern of parents. They reported that parents were reluctant to sign approval forms for children to leave the building, regardless of where off-site instruction was taking place.

Student safety was also mentioned by some nonpublic school principals. In one district, students would have to cross a major thoroughfare. Even escorted by a Chapter 1 aide, principals said parents were reluctant to sign permission slips. The Chapter 1 coordinator said the reluctance may have come from an incident several years before when a nonpublic school child was killed by a car while walking to a public school for speech therapy.

Several nonpublic school principals mentioned that parents withdrew their children from Chapter 1 because the program started late in the year. As one principal reported:

> Parents would say, well, my child seems to be okay for the first six to eight weeks, so why should we bus to another place? Parents then pulled their children out. It just didn't make sense to them.

When the program was moved next door the following year, the principal reported that parents were no longer interested, and participation is still well below pre-Aguilar levels:

> With the program starting late and with busing the first year, we lost the parents and we haven't gotten them back [even with the program now next door].

Principals report that parents seem less interested in the program, and that they are getting less interested each year. Several reported that nonpublic school teachers also know less of what is going on with Chapter 1, and do not encourage parents of needy children to have their children participate. With services no longer provided down the hall or downstairs, it was clear from the principal interviews that both teachers and principals have to be forceful advocates for the program.

Principals and coordinators alike expressed serious concern over the long-term consequences of relying on alternate sites for Chapter 1 instruction when those sites are not next door or across the street. They saw the services as not meeting the needs of their low achieving students and projected that enrollments would continue to decline. Although no schools said they were no longer

enrolling low achieving students, some students were now being retained in grade, and a few have transferred to public schools.

The negative consequences of alternate sites were perhaps best expressed by an outgoing principal of a nonpublic school that formerly enrolled a quarter of its students in Chapter 1 programs but now enrolled a scant handful:

> Our mission is to teach all the students in the parish. We're not serving our mission. We're going to end up as a school for the smart and rich. We're going to have to make changes, like hire our own remedial teachers and raise tuition [to provide for low achieving students]... But I don't see that happening.

The Chapter 1 coordinators in these districts are still considering vans and/or following with interest the implementation of Boston's computer program. A few nonpublic schools have, in fact, hired their own remedial teachers. But no simple solutions exist for these districts.

THE USE OF VANS AND PORTABLES

Five Massachusetts districts were identified as using mobile vans. One additional district uses portable classrooms. Information was collected from the state files concerning all districts using vans in the state. This information was supplemented by follow-up calls to the Chapter 1 coordinator and nonpublic school principals in three of the districts using vans and the one using portable classrooms. This section describes factors that appear to be important to the choice to use vans or portables and their costs. The per district (and per pupil) costs of vans vary greatly in the state.

For simplicity sake, districts using either vans or portables will be called "van" districts. In all the districts contacted, the mobile vans in fact remained stationary for the duration of the school year, parked near one of the nonpublic schools, except for maintanence purposes.* When differences between vans and portables are relevant, they will be noted.

If Chapter 1 teachers cannot offer instruction on religious property, mobile vans or portable classrooms often appear to be the next best location. If they can be placed close to the nonpublic

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* It is possible for vans to be driven between schools to serve students at more than one school, but districts did not generally choose to use them in this way. One district had moved a van between two schools with about ten to fifteen students each in Chapter 1 in 1985-1986 and may do so again in 1987-1988.

school, many of the problems--particularly the loss of instructional time--associated with offering services in public schools or neutral sites can be avoided. These problems are usually said to outweigh the disadvantages of the smaller space and, often, less reliable electrical systems for heat and other purposes.*

In spite of their attractiveness, it was not until 1986-1987 that programs using vans started. Two districts started van service in some of their schools in 1985-1986.

Most decided fairly early in 1985-1986, shortly after the Aguilar decision, that they wanted to use vans or portables. The delays were at least as much due to lack of clarity about where vans or portables could legally be placed close to nonpublic school and relatively secure from theft or vandalism as to concerns about costs. Lack of clarity does continue to some degree. One district now using vans may have to go back to alternate sites because the state is questioning whether its placement of the van meets constitutional requirements; any other placement would be significantly more costly.

In addition, even after federal guidance suggested ways to meet constitutional requirements while placing the van on religious premises, some districts experienced difficulty making appropriate arrangements. For example, in one district it took two months to get approval to remove a curb to make a driveway for the van.

By far the most significant ongoing problems were experienced in a district that chose to use vans with gas generators rather than electrical hook-ups, in order to maintain them as self-contained classrooms in case the guidance changed about where they could be placed. The coordinator stated that all five vans had probably been in operation for no more than three consecutive days of the year. Usually at least one was not in service. In this district, an estimated $8000 was spent for the salary of a person who drove the vans for repair and maintanence and filling the gas tanks. Luckily, they were under warranty for the year.

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* Issues of space should not, however, be minimized. Students may not only feel cramped, but the nature of the interaction between the teacher and students and among the students themselves can change. Some vans come equipped with fixed desks that may inhibit the use of more interactive teaching methods. It is not possible to have the number of different sized chairs and tables formerly found in many Chapter 1 rooms in nonpublic schools; but programs typically continue to involve students from a wide range of grade levels, that is, of quite different sizes. The shortage of storage space gives the teacher less flexibility regarding curriculum materials used at any given time. Classroom space may be an advantage of the portables over vans.

Van districts were able to overcome the obstacle of cost in several different ways:

-- One district had a particularly supportive superintendent. Catholic schools are also an integral part of the educational system in this city, serving 28 percent of the city's children. The district loaned local funds to the Chapter 1 program and is allowing them a two year payback period. Six portable classrooms were purchased at $55,000 each. The school department also since picked up at the cost of health benefits for Chapter 1 instructional staff for 1986-1987, because repaying the cost of the portables did not allow sufficient Chapter 1 funds to pay benefits.

-- A second district had carryover funds sufficient to cover the initial investment in five vans at $45,000 each.

-- In a third district, vans were the least costly alternative. The school department in this district already owned one van and the Chapter 1 program was able to lease a second one for one dollar a year from the city. This lease and an additional $1460 to renovate the leased van were the only costs to the Chapter 1 program. All electrical work to renovate the van was donated by a parent. Insurance and electricity costs were picked up by the city and nonpublic schools. In contrast, transportation costs to convey nonpublic school students to the closest public school were $3600 during the preceding year.*

-- In the fourth district, a combination of factors was apparent. Two of three vans were already owned by the city; the Chapter 1 program was not charged for their use and they were placed in service as soon as possible at the nonpublic schools in 1985-1986. The vans greatly reduced instructional time lost using alternate sites and strongly appealed to the Chapter 1 coordinator, who was highly committed

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* This district is quite affluent, which limited its potential Chapter 1 funding more severely than other van districts. Unlike the two preceding districts, which receive large Chapter 1 allocations to fund significant capital investments, the <u>total</u> Chapter 1 budget for all students in this district is small--about equal to the cost of purchasing one van. Two other districts in Massachusetts, including one other small affluent one, have similarly been able to renovate old city or school department vans.

to developing a program that maximized student time on task. When it became clear that, under certain conditions, vans could be placed on nonpublic school property--the only option for the third school given its surroundings--leasing arrangements ($200 a month) were made for a third van because the budget did not allow for purchase. Costs were somewhat higher than using alternate sites per year, particularly when electricity (about $1000 a year per van) is included.

All van districts received substantial city and/or school department support in order to make the van-located program operational and to maintain it. It took considerable dedication and a significant amount of administrative time on the part of Chapter 1 coordinators to get services started. Ongoing issues with portables and vans continue to occupy their time and that of city or school department officials. One Chapter 1 coordinator compared her new duties to those of a principal. Now she is responsible not only for the instructional program in the vans but also for making certain that the facilities are working properly--from the toilets to the heating system and mats for keeping mud off the carpet in bad weather. She needs to know who on her staff, in the school department or the city will make sure that these tasks are handled promptly as needed.

To varying degrees, the four districts contacted had all experienced problems associated with the provision of services in alternate sites during 1985-1986. Often nonpublic school enrollments had dropped considerably. These problems were not, however, necessarily more severe than problems noted in the districts that continued to use public schools or neutral sites in 1986-1987. And in some of the schools within the van districts, use of public schools or neutral sites had been quite smooth, with no loss of students and little disruption of the school day. But the districts chose to use vans (or portables) for all of the religious schools, citing the need to treat all the religious schools equally.

From the other side, why have alternate site districts not shifted to vans when they have experienced significant drops in enrollment using alternate sites? Costs are an issue preventing a change to vans in most districts, but other issues usually seem primary. Most often noted by the alternate site districts is the lack of a secure, legal area in which to park the van close to at least some of the schools in the district. The strength of the security issue was most pointedly stated by the coordinator in the district that finally chose portables. She spoke of her not very farfetched nightmare, given the nature of some of the areas in which the nonpublic schools were located, of waking up to headlines that read "SCHOOL STOLEN!" But portables present additional obstacles. For one, should the current guidelines for where they

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may be placed change, the district risks having purchased classrooms that it may be unable to place near the schools that it needs to serve. Another obstacle in the way of using portables or vans that appeared more salient than costs, was the strongly negative experience of the districts (or the superintendents when they worked in other districts) with portables or vans used for other purposes. Negative prior experiences seemed to stand in the way of renting vans, one solution that involves less risk (in terms of legal placement) and cost for the district.

Initial one-time costs varied considerably by district, from $55,000 per van to nothing. Costs per van depended on whether fully-equipped portables and vans were purchased ($45-55,000), whether they were rented ($200 per month with a small initial delivery charge), or whether a van already owned by the city or school department could be renovated for Chapter 1 use and the extent of renovation needed ($0-5000). Donated labor and materials from the city, school department, nonpublic school and parents, made a difference in the costs of renovations as well as the installation of electrical hook-ups ($0-$180) and other minor start-up tasks.

Ongoing costs also varied depending on the contributions of the city, school department, and nonpublic school. Most Chapter 1 programs did have to pay the costs of electricity (or gas), including heat; but they had not yet been billed for the 1986-1987 charges at the time of study interviews, making a calculation of average ongoing costs of vans impossible. The only known bill was $1000 per van in one district. On the negative side, the Chapter 1 coordinator in the small district that had renovated the van for $1470 was not sure that he would be able to continue to offer the Catholic schools services in the vans, because he anticipated having to assume the costs of electricity, the costs of installing new electrical hookups, and possible maintanence charges because the vans were old. Insurance costs were to be paid by the Chapter 1 program in half the districts, ranging from about $160 to $180 per van. For one school, one Chapter 1 program paid to lease property from a private party on which the van was placed at $150 a month. The city purchased property near the nonpublic schools where portables were placed from the parishes involved, at no cost to the Chapter 1 program.

Given the length of Chapter 1 instructional time as regulated by the state and the length of the school day, a single van can serve a total of about 40 to 45 Chapter 1 students. Class sizes in Massachusetts van districts, like those in regular Chapter 1 classrooms, are small: typically four to six students. The state requires the small class size to comply with federal guidelines, but the size of vans used in Massachusetts districts also do not seem to allow more than about six students at one time.

Vans in the districts contacted actually serve from twelve to 40 students each; portables serve an average of 40 students each. They serve all eligible nonpublic school students in the schools, except those students whose parents choose not to participate. The per pupil costs of vans depend not only on district costs per van but also the number of eligible students at each of the religious schools served.

Thus both the per pupil and per van costs vary considerably across districts. Per pupil costs varied significantly even between schools within districts. To cite "average" per van or per pupil costs as if doing so would explain district decision making about whether to use vans would obscure the multitude of local factors that affects the range of possible costs for any given district, set limits to what costs will be "reasonable," and influence the degree to which costs become inhibiting factors for choosing vans.

District decision making takes into account a number of other factors. Significant support is needed from the district superintendent, other district officials and the city to make the transition to vans. Even when the Chapter 1 program can afford the purchase or rental fees, this support is needed to maintain the vans. And a strong commitment from the superintendent and/or Chapter 1 coordinator can offset costs as an inhibitor. At the same time, even if the district would prefer to use vans and cost is not an overriding consideration, the following can be obstacles to van use: lack of secure parking area; uncertainty about legal placement close to the religious school; and/or previous negative experiences with vans.

COMMUNICATION BETWEEN OFF-PREMISES CHAPTER 1 PROGRAMS AND NONPUBLIC SCHOOLS

Since Aguilar v. Felton, a concern has been the extent to which Chapter 1 instruction provided off religious school premises is coordinated with the instructional program offered in the nonpublic schools. At issue is the daily updating of teachers that reportedly occurred when services were provided on religious school premises. The district-level curriculum planning and individual diagnoses of student needs that take place before each school year have not changed; it was not affected by Aguilar v. Felton. This section discusses communication between instructional staff and coordination of the instructional program when vans, portables, and alternative sites are used. The issues are similar at all off-premises sites.

Before the Supreme Court ruling, coordination was informal; lunch time was the most common time to discuss student needs. Teachers would share information about problems that students had with particular skills or exercises, and information about their

home, peer relations, or other emotional issues that might be affecting their performance. In a few schools, in addition, lesson plans were written and individual student plans sent back and forth between the teachers. Often, Chapter 1 teachers also attended the religious school faculty meetings and parent open houses.

District coordinators indicated considerable confusion about what contact on religious property between teachers is currently allowed by the Supreme Court ruling. They also seemed unclear about federal guidance. Although federal guidance only stated that "consultation should not occur at the site of the Chapter 1 services while the services are being provided" (June 1986); two coordinators mentioned that, at one time, regulations prohibited contact between Chapter 1 teachers and nonpublic school faculty. For the most part, when districts disallowed all consultation on religious premises, it was because of insecurity about what was and was not allowed. A conservative, no-risk approach was also taken because of uncertainty about the outcome of future court rulings. Confusion extended in a few schools to such issues as whether it was legal for the Chapter 1 instructor to use the phone in the nonpublic school principal's office when phones were lacking in vans.

The extent to which Chapter 1 teachers off-premises and regular nonpublic school teachers consult with each other on individual student needs now varies considerably among districts and, in some districts, among schools. It is influenced by the policies of district coordinators, the initiative of Chapter 1 and religious school teachers, and the distance of the site from the nonpublic school.

Ongoing informal communication about individual students' needs to coordinate lesson planning between Chapter 1 and nonpublic school teachers has decreased sharply. In some districts, it has been virtually eliminated; in others it has declined but continues to a limited degree. In a few, teachers continue to have lunch together on religious premises and/or meet before or after school as they deem necessary.

In most districts, Chapter 1 coordinators tell Chapter 1 teachers to avoid or minimize going into the nonpublic school to consult with the religious school teachers; some forbid any consultation on religious premises. In one district, most contact with the Chapter 1 program was restricted to district Chapter 1 specialists talking with nonpublic school principals, rather than between Chapter 1 and regular teachers.

On the other hand, some districts allow consultation on religious premises provided that it is not during the school day. Only two districts continue to allow the Chapter 1 teachers to enter the nonpublic schools during lunch. The coordinator in one argued that lunch time is the teacher's own, to spend as she

chooses. One district has a scheduled consultation period once a week in the vans, although it appears that the religious school teachers take little advantage of this scheduled time.

Some Chapter 1 teachers have found ways to maintain informal contact when not allowed on religious premises. Some do not follow district policy; according to the principals, they eat lunch in the nonpublic school anyway. Others take the initiative to walk the students back and forth to the alternative site or ride the bus with them, meeting the teacher at the religious school to exchange information.

In a few districts, structured written communication--usually some type of checklist or short answer form carried back and forth by the student--has been added to replace the informal verbal communication. A few Chapter 1 teachers and their religious school counterparts have initiated such communication in their schools, where the district has not.

In a few districts, the loss of ongoing communication was cited as a reason for drops in enrollment. Nonpublic school principals and teachers no longer knew what was happening in the program. They only saw that the children missed instructional time in the parochial program. Therefore, they did not encourage parents to have their children participate.

In most districts, however, in spite of the drop in communication, coordination of the Chapter 1 and regular curriculum was said to be good. This assessment of coordination was often based on the fact that the same Chapter 1 teacher now served the nonpublic school as had for the ten or fifteen years prior to the Supreme Court decision. Some principals stated that coordination might decline should staff change. In effect, it appears that coordination was assumed because neither the nonpublic teachers nor the Chapter 1 teachers had changed.

When principals did not consider coordination to be good, their schools were ones in which informal contact had been virtually eliminated. One such principal said of the teacher in the van, "She's in her own little world." Coordinators offered a more mixed assessment. Most considered severely restricted informal communication to be a problem, but one had the opposite opinion. She said that coordination was much better now that it was formalized and written. She argued that the lunchtime coordination had been hit or miss, and that it had not accomplished as much as teachers claimed. An unexpected benefit of Aguilar v. Felton, she argued, was that it allowed her to institute a system of formal communication that teachers would have otherwise protested.

RELATIONSHIPS WITH PRINCIPALS IN SCHOOLS WITH OFF-PREMISES PROGRAMS

Nonpublic school principals interviewed by Millsap (1985) reported that district Chapter 1 staff were extremely dedicated, accommodating, and generous with their time. Principals felt they could discuss problems with their program with Chapter 1 staff and could work out solutions. Communications were seen as open, and principals were as involved with the program as they wanted to be. No one saw any barriers to nonpublic school participation, and no one had any concerns about program administration. All but three nonpublic school principals of the 50 interviewed reported that relations with the Chapter 1 program were excellent. The exceptions were a principal with a new program for ten students; and two principals of nonparticipating schools who wanted services but had yet to receive them. Of these, one was located outside of the district, while the other was in an ineligible attendance area.

As was true before the Aguilar decision, the relationship between the nonpublic schools and the district Chapter 1 office was seen as good. Behind this assessment, when it was made, was the principal's understanding that the coordinators were not to blame for problems related to Aguilar. Nonpublic school principals cited the "good rapport" and cooperation with the Chapter 1 office as well as their willingness to work quickly to solve any problems. Even in the alternate site district where only two students have been served in the last two years, the nonpublic school principals said the relationship was very good and that the Chapter 1 director had done everything possible. One principal said that the director "had bent over backwards to come up with a plan."

At the same time, strains were acknowledged because of Aguilar v. Felton. As one coordinator put it, "We were asked to fix something that didn't need fixing." Principals and coordinators had different issues; they did not completely agree on the best way to provide services. And, no matter what option was chosen, it was "second-best" to pre-Aguilar programs.

In three schools (from different districts), the principals had major complaints; one was hostile. Comparisons were made to districts where the principals had contact with other Catholic school principals. One principal, for example, asked why an empty convent room could not be used as in another district. (The coordinator said it was because the convent housed the teaching nuns; in the other district, the convent building had not been used for religious purposes for some time.) A second principal was angry that the district had not agreed to use vans like a neighboring town, seeing the failure as an unwillingness to provide appropriately for the nonpublic schools. The coordinator in this district was characterized as "too legalistic" compared to neighboring coordinators. Other principals in this district also would have preferred vans, but were more accepting of the decision

to continue to use alternate sites. They appeared to understand the district's point of view, even if they did not agree.

The decline in communication took some toll on principals. Whereas principals expressed considerable knowledge about the Chapter 1 program in 1985, some interviewed for this study had little knowledge of the program. It had become peripheral instructionally from the principal's point of view. Some principals continue an active interest and are strong advocates for Chapter 1 children not only vis-a-vis the district office but also parents. Others are distanced or disillusioned, even if they do not blame the local Chapter 1 office for the problem.

USE OF COMPUTERS

Computer technology is used in three ways to provide services to nonpublic school students in Massachusetts. First, microcomputers are used in the context of teacher-managed, teacher-delivered instruction off religious premises. Second, stand-alone computer systems may be placed in the child's home for take-home learning programs. Third, minicomputer systems located off religious premises manage instruction and deliver it to students through so-called "dumb" terminals placed on religious premises. The terminals communicate with the minicomputer's instructional programs but have no programming capabilities of their own.

The use of computer technology as the manager-deliverer of instruction, allowing students to receive Chapter 1 instruction on the premises of the religious school without a teacher present, is of greatest interest in relation to the Aguilar decision. It is the main topic of this section. What influences the decision to use computer-managed instruction? What was involved, particularly in Boston, in getting the system up and running? What do students do in a computer managed and delivered system? How is compliance with constitutional and Chapter 1 requirements maintained? How effective is such a system educationally? What issues require further attention?

Before beginning discussion of this topic, the Massachusetts Chapter 1 Computer Cooperative Center, important to the development of computer assisted instruction for Chapter 1 purposes in Massachusetts, will be described. A few points relevant to implementation of the Aguilar decision about the other two uses of computers in Massachusetts districts will also be noted. Following the discussion of computer-managed instruction, will be a brief discussion of educational concerns about the use of computers for Chapter 1.

The Chapter 1 Computer Cooperative Center

The Chapter 1 Computer Cooperative Center began offering services in 1985-1986 to assist local Chapter 1 programs in using computer technology for instructional and administrative purposes. The Center was conceived by the state Chapter 1 Director to facilitate more efficient and effective spending on the technology, and is an optional service for district Chapter 1 programs. Most of the Center's $180,000 budget comes from district membership fees, .35 percent of the district's Chapter 1 budget. The remainder, some $40,000, comes from grants, income generating activities (primarily training and space rental), and contracts.

Member districts are eligible for a wide variety of services. Services include training and consultation with Chapter 1 teachers, regular classroom teachers and principals in Chapter 1 schools. Chapter 1 parents are invited to some workshops. Members may use the Center's library to review educational software (currently about 3000 commercial and public domain packages) and evaluation reports about various hardware and software. Other benefits include use of center equipment (including a variety of microcomputers and peripheral devices), cooperative purchasing of software and supplies, use of certain instructional and administrative software especially developed by the Center's staff for Chapter 1 purposes, desktop publishing, and technical assistance.

Since the adoption of computer-managed instruction in Boston, the Computer Center has developed a plan to offer districts the same system used in Boston on a time-sharing basis. The minicomputer that manages the students' instructional programs would be housed at the Center, with telephone connections made to terminals located in participating district nonpublic schools. Before the Center can afford to invest in the system, it needs ten to twelve participating schools. A school would generally need to serve at least 30 students to justify the initial costs of setting up the computer lab, primarily the purchase of terminals and possibly wiring or additional security for the schools.

Computers in the Context of Teacher-Managed Instruction

Computers, primarily micros, are one of a number of instructional tools used by teachers and teacher aides to facilitate learning in Chapter 1 instructional programs managed and delivered by teachers off religious premises. According to the Director of the Computer Center, word processing programs are used most widely, with some 75 percent of the schools using a mix of word processing with some drill and practice or gains-oriented software packages. Regardless of whether public or nonpublic school students are involved, the degree and type of use reportedly depends primarily on the teachers--their philosophies of

instruction and classroom management, or their relative comfort with computers in general and the specific software provided by the district. Limited numbers of computers per classroom also often result in low exposure times per student.

In some districts the location of Chapter 1 program in neutral sites or vans influenced the provision of computers for nonpublic school students. Intractable electrical problems with one-third of the vans in one district ruled out the use of computers. At least two districts that used neutral sites also either had problems with electricity in some sites or building security problems. In one district where micros were provided to Chapter 1 teachers for nonpublic students, they were seldom used. According to the Chapter 1 coordinator, the time that could have been used on the computer was taken up with settling students down after the bus ride and outfitting them for the return ride to the nonpublic school. In these districts, had the Chapter 1 program been allowed to operate on religious premises, the nonpublic school students would have been provided with computer instruction opportunities.

Computers as the Basis for Take Home Instruction

Take home computer-based instruction was used in 1986-1987 in one Massachusetts district. According to the Chapter 1 coordinator, it "hit no home runs but didn't strike out either." It will not be continued during 1987-1988 but may suggest lessons for other small districts who might consider such an option.

The program began in mid-October with a two-hour training for parents and children. Computers were then placed in the homes and hooked up to a television set. Once a month, a Chapter 1 teacher went to the child's home, tested the student, met with parents and exchanged diskettes and workbooks as needed. Although formal evaluation results are not yet available, both the Chapter 1 coordinator and the nonpublic school principal agreed that the program worked only in some instances. Parents who generally help their children with homework worked with them with the CAI program, while parents who were not involved with their children's education generally also were not involved with the computer. Although some simultaneous translation was provided, nonenglish speaking parents had great difficulty with instructions. According to the nonpublic school principal, the children who most needed the services were not getting them, and she noted that five of the 17 students in the program will repeat the same grade next year.

Computer-Managed Instruction

In contrast to take home computer-based instruction, computer-managed instruction delivered on religious premises is reported to be remarkably successful in the two districts in which

it is used. It also serves 44 percent of Massachusetts nonpublic school students because of its use in Boston. The time-sharing system like that in Boston that would be housed in the Computer Center is also under consideration by other districts in the state. One district has been trying to determine the possibility of time-sharing using Boston's minicomputer. And Boston has been visited by representatives of large urban districts in other states who are considering its use. Thus, it merits extended discussion.

The second district that uses computer-managed instruction is relatively small, with a total public school enrollment of slightly less than 5000. The district has one nonpublic elementary school, serving about 30 Chapter 1 students. The district uses an early version of the Boston system, purchased a number of years before the Aguilar decision from the same vendor. The minicomputer is located in a regional center that provides technical assistance and other services to school districts in its geographical area; districts purchase their own dumb terminals and tie in to the minicomputer via telephone.

Deciding to Use Computer-Managed Instruction. In Massachusetts, computer-managed instruction is the choice of last resort for three reasons. The first is lack of familiarity with the option or its constitutionality. In most districts, the idea that instruction using computers could be educationally effective except in the context of a teacher-managed program was not initially considered. The second is the state Chapter 1 director's preference for teacher-managed programs. Computer-managed instruction is encouraged by the state only after all off-premises options have been eliminated, because it is considered to be second-best educationally to teachers. The Computer Center director agrees that computers used in the context of instruction by teachers is preferable. Third is the high initial financial investment involved. In the one district in which it appears to have been initially considered, using computer technology alone was thought to threaten affective and motivational benefits provided to Chapter 1 students by teachers and considered important by the coordinator.

Very recently, several more districts that have experienced sharp declines in nonpublic school Chapter 1 enrollment have become interested in computer-managed instruction, largely because of the Boston example and the possibility of time-sharing through the Computer Center. But the state preference for teachers and the high initial investment costs, often in combination, continue to inhibit districts from shifting to computer-managed instruction. In more than one district, the coordinator received clear messages from the state Chapter 1 director that efforts should first be directed to finding a way to provide instruction off-premises using teachers. A district, particularly one that is able to serve some of its nonpublic school students off-premises with relative ease, will be encouraged by the state and budget limitations to continue

to search for an off-premises option for its (remaining) nonpublic schools. It also appears that a "wait and see" attitude has developed, with administrators at all levels waiting for evaluation of the Boston program before making further investments.

Computer-managed instruction was the choice of last resort in Boston. Most nonpublic schools were not close enough to public or other non-religious facilities that met building codes and parental concerns to arrange off-premises programs. Only five schools could be provided with off-premises programs in 1985-1986. Vandalism and the costs of providing vans or portable classrooms for the remaining 24 schools involved ruled out these options. More than 1400 eligible nonpublic school students did not receive services in 1985-1986.

The smaller district also attempted to find alternate sites for the students in its one religious school during 1985-1986, but none could be found and no services were provided. Because the district already owned the technology, it was in a unique position in terms of costs. Only a one-time phone installation charge and the annual costs of connecting with the minicomputer, maintanence and insurance were required. The Chapter 1 program had initially purchased the terminals to provide services for students in rank order of the school's greatest need, to the extent allowed by the budget. A sufficient number of terminals were moved to the nonpublic school premises to serve the students eligible there for the 1986-1987 school year.

Getting Started in Boston. With such high numbers of nonpublic school students not receiving services in 1985-1986, district Chapter 1 staff continued to look for a workable option. The Archidiocese and several particularly interested nonpublic school principals continued active advocacy on behalf of the eligible students and assisted in the search. Midway through the 1985-1986 school year, Boston's Chapter 1 coordinator called Chuck Hitchcock, the director of the Chapter 1 Computer Cooperative Center, to explore the possibility of computer technology. Hitchcock's technical expertise was relied on to determine options and draw up the bid specifications to meet federal Chapter 1 requirements, address the Constitutional issues of the Aguilar decision, and effectively serve educational objectives. Because the cost was high--1.2 million dollars--the purchase had to be approved not only by the School Department and usual city officials, but also the independent financial commission that reviews city purchases. The vendor was selected to provide services July 1, 1986, but the contract was not finally approved until September 16, 1986.

Awarding the contract was only the beginning of the administrative effort to get the system running. One administrator joked that at one point in the process he imagined the system being named as a memorial in his honor--that is, that it would be the

death of him. Telephone lines and wiring had to be installed before the computer equipment could be used. School monitors had to be designated and trained. Faculty had to be oriented to what would happen and the capabilities of the system to generate reports for them on student progress.* It was a remarkable achievement that the program began operating between November and January, with a few as early as October. Some, however, started as late as February or March, and one school has been too severely plagued by vandalism and break-ins to place the terminals as yet. The program is still in its infancy.

What students do. Picture four computer terminals in a small room. Children enter according to their individual schedules. Each child sits down at a terminal, enters his or her password and the instructional program begins. Some students remain for ten minutes, studying either reading or math. A number stay for two ten-minute segments, taking both subjects. Over the two hour observation period in one school, the population in the room shifts like a room in the United Nations. Recent immigrants from Africa, Europe, the Carribean, Southeast Asia, and Central America, as well as Black, Hispanic, and white U.S. born children--enter in turn, sit down, work intently, record their scores, and leave.

At one time, a second grader who has not yet learned to read is using headphones for audio instruction, while she follows the words on the screen. She sits next to a sixth grader who is developing reading comprehension skills. Each concentrates on her work, absorbed in answering problems within the time allowed before the program moves on to the next problem. Their focused attention is impressive: They are not distracted by the presence of two visitors, the visitors' conversation with the monitor or their occasional questions to students leaving, or the other students coming, going, and working next to them. It is the sixth grader's recess time. She has asked for permission to use recess today as a make-up period, because she was absent from school earlier in the week. She is unaware that the program has branched back to an easier level in response to her earlier errors.

Another second grader finishes his ten minutes of math and walks to the file of notebooks where each student records the score shown on the screen at the end of each session. He proudly tells the monitor, "Look, a 90!" A printout of the student's progress indiciates that he has advanced two grade levels since the program

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* Further description of the implementation process can be found in "How to Implement Computer-Assisted Instruction in 24 Boston Nonpublic Schools in 10 Not-So-Easy Steps," an article in the April/May 1987 issue of the Massachusetts Chapter 1 Exchange: The Newsletter of Compensatory Education published by the state Chapter 1 office.

began. Next year, he will not be eligible--likely to be a disappointment to him, according to the monitor.

The program differs slightly in other elementary schools and in high schools. Some elementary schools have arranged schedules so that groups of students arrive together, essentially creating short periods for computer time. Some serve all grade levels in the school (starting with first grade); others have chosen to limit the computer instruction to certain grades for a variety of individual school reasons.

At the high school, the Chapter 1 program focuses on 9th and 10th grade students who scored lowest on the Catholic High School Entrance Exam. In the high school observed, three 45-minute periods of "reading" class are offered each day, enrolling a total of 35 students, down from the 55 students served before Aguilar. Four terminals line the back wall of the 12 student classroom located five floors up in the tower of the school building. Students work 20 minutes at the machines and then read books from the paperback book shelf for the remaining 25 minutes. While at the machine, students sat straight-backed, and appeared completely focused on the screen. That day students were answering multiple choice items about reading comprehension, with a heavy emphasis on vocabulary development. The room was very quiet. When whispers started between two students who had been reading, one student at a machine good-naturedly said, "Shush, come on, quiet down." And the room again became quiet.

The monitor in the room keeps time, letting students know when their 20 minutes is up, and occasionally prods students to settle into the reading. She reported that it is difficult at the end of the year to keep the students reading, especially since the seniors had already graduated. When students had their time at the terminals, however, they appeared very attentive.

Monitors may be nonpublic school employees, retired nuns, or parent volunteers, sometimes working in shifts over the course of the day. (At the time the system started, guidance had not yet been issued that allowed the district to pay monitors.) Some nonpublic school principals have taken a greater interest in the program than others, which reportedly affects how smoothly and effectively it operates. But the same sort of intense concentration on the task, instruction adjusted to the individual needs of the students, sense of pride in accomplishments, and high motivation can be witnessed in most schools according to district Chapter 1 staff.

Maintaining Compliance. The computer-managed systems studied are designed to address constitutional and Chapter 1 requirements. These requirements are largely responsible for the choice of a centralized minicomputer system in Boston and the particular vendor.

Most salient among the requirements in the wake of Aguilar v. Felton is that no publically funded staff can provide instruction on religious school premises. Any vendor chosen had to provide software that could deliver an effective instructional program in the absence of a teacher. In addition, Chapter 1 regulations (200.70) stipulate that the nonpublic school program and equipment must be under the direction and control of the district. Services must be provided by employees of a public agency or a contractor independent of the nonpublic schools. Additional regulations (200.72) require that Chapter 1 supplement private school services that would be given in its absence, be given only to eligible students and serve only these students' special educational needs, not the needs of the private school. Salient in relation to this requirement in the post-Aguilar atmosphere was concern that not even the appearance be given that Chapter 1 equipment could be diverted from remedial education to religious purposes. It quickly became clear, for example, that microcomputers placed on religious premises could be subject to challenge. Neither Boston Chapter 1 staff nor the Computer Center could devise a plan to control their usage and meet these requirements.*

The chosen vendor, Instructional Systems, Inc. (ISI), the East Coast distributor of Computer Curriculum Corporation, was able to provide a system to meet these requirements. Control of the Chapter 1 program by the district is ensured and constitutional requirements are met by virtue of the following:

(1) The minicomputer that stores and runs the instructional program is housed in the district Chapter 1 office.

(2) The instructional program cannot be changed by personnel on-site at the religious schools.

(3) Staff hired by ISI under the district contract monitor student progress at the Chapter 1 office, through reports generated by the minicomputer. They are former teachers. The progress reports that they generate are also provided to the nonpublic school principals for distribution and use by the teachers.

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* Computer companies are developing the technology to make microcomputers non-divertable. A study of technical possibilities has been commissioned by the U.S. Department of Education. The job of controlling usage was, of course, more difficult in Boston because, at the time, guidance had not yet been issued that the district could pay "technicians" to perform the role played by monitors. It appeared that district control had to be maintained remotely; that is, without the presence of a district employee on religious premises.

(4) The instructional program is self-adjusting to meet each student's special educational needs. After the first ten sessions, which are diagnostic, the ISI staff at the Chapter 1 office start the students with the appropriate programs. Then the computer branches to easier or more difficult tasks depending on the student's performance during each session until the student "tops out" of the program, performing at the highest levels for several sessions in a row.

(5) Use of the system is limited to designated students by a password system combined with ISI staff monitoring of progress and student connect time. ISI monitoring would indicate odd changes in student performance should someone other than the designated student use the password.

(6) The terminals are set up to deliver only the Chapter 1 instructional program from the minicomputer.

Together, these features of the system provide control to the district over Chapter 1 instruction and equipment on religious school premises that appears to be more failsafe than control can be off-premises in teacher-managed classrooms. They ensure that Chapter 1 instruction and equipment can be used only for Chapter 1 purposes.

Educational issues. Computer-managed instruction raises a number of educational concerns, three of which should be noted. First, will the achievement gains at least equal those of Chapter 1 students who receive instruction from teachers? Second, will students' gains be as transferable to the regular classroom (and larger social) setting than those of other Chapter 1 students? Will computer instruction affect the way in which students tackle problems in the regular classroom and elsewhere? Third, will Chapter 1 students gain as much in terms of higher-order skills and affective growth from computer-managed instruction?

Underlying these questions are the following differences between computer- and teacher-managed instruction: First, with computers, students receive instruction for much shorter but, on the other hand, more intense period of time. They have only ten minute, compared to 30 or 40 minute periods with teachers; but may be given more exercises to do during the ten minutes. Second, computer-managed instruction is not directly timed or linked to the teaching of related concepts by the regular classroom teacher. Third, it consists overwhelmingly of drill and practice exercises. And, fourth, it appears to replace the development of what has become the trademark of Chapter 1 classes, a relationship between a

particularly interested adult--the Chapter 1 instructor--and individual students in a small group or tutorial setting. The Chapter 1 instructor is often said to provide attention or encouragement that the student does not receive elsewhere, or to provide a safe environment within which the student opens up about emotional or family difficulties that block learning, which then can be addressed by counselors or the regular classroom teacher. Sometimes the Chapter 1 instructor encourages peer relationships to enhance learning. These affective benefits, said to spillover to increase achievement and the student's ability to participate in other learning activities, appear to be eliminated when instruction is computer-managed.*

To date, Chapter 1 district staff report no indications that the computer-managed programs in use are falling short of the teacher-delivered programs in terms of achievement gains or transferability of skills. In fact, if the achievement gains indicated by the grade level advancement of students through the computer program are reflected in achievement testing (not yet completed) of Chapter 1 students, NCE gains will be as strong or better than those expected in classrooms with teachers. The gains indicated by the progress reports generated by the minicomputer are remarkable, particularly because students did not begin receiving the program at the beginning of the year and because they spend only ten minutes receiving computer-managed Chapter 1 instruction per subject compared to 40 minutes in teacher-managed Chapter 1 classrooms. At the high school level, the discussion sessions that had characterized Chapter 1's small classes were missed. In those sessions, students' ideas about what they were reading were challenged. But nonpublic school faculty felt they could balance that loss in the regular classes.

Reportedly, students are also doing better in their regular classrooms and teachers are pleased that their regular instructional program is far less disrupted than it was under the previous Chapter 1 program. The few principals interviewed indicated that they would not want to return to the old program; the computer-managed system appears to be an improvement largely because of the intensive instruction it provides without disrupting the normal school program. The system is described as supplementary to instruction in necessary concepts and background by the teachers. Although Chapter 1 instruction and the regular curriculum are not coordinated in the sense that teachers present concepts and the students then practice exercises on the computer that drill these concepts home, principals and Chapter 1 district staff stated that they were impressed by the grade-appropriate material offered by the vendor. The material was reported to be appropriate and not confusing to students in spite of its

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* Aguilar v. Felton also ruled out the use of publicly funded counselors in nonpublic schools on an ongoing basis.

independent timing from the classroom presentation. One principal noted that in some areas--she mentioned metrics--the computer drill and practice seemed to convey concepts better than her own teachers did.

District Chapter 1 staff and nonpublic school principals seldom remark on the effects of computer-managed instruction on higher-order skills or affective development as previously defined; instead, they draw attention to other related benefits. They are impressed by the high motivation demonstrated by students, both their concentration while doing the program and the fact that they see "going to use the computer" as something to be proud of as opposed to being ashamed of "going for extra help" from another teacher. In the high school, in particular, because the stigma of Chapter 1 increases as the students get older, this benefit is pronounced. They talk about the students' sense of achievement in getting many exercises right, regardless of the level of the exercises presented to them by the computer. Nonpublic high school faculty also commented on how students appeared to have increased skills in diagnosing their own reading problems. As one faculty member described it:

> Students now seem more aware of their problems and can articulate them. For example, one student figured out that for straight definitions of words, she did fine; but that she lost it with analogies and antonyms. Before [computers] they would make up a more general comment or shrug their shoulders.

The system has won "believers" in schools in which it was initially opposed, because of how avidly it is used by students. Typically, these were schools that had purchased microcomputers for teachers, who then did not know enough about how to make use of them to integrate them into the program. Principals report that they are also better able to get the parents to come in for parent evenings at the school if they are promised a demonstration session on the computer.

Much of the concern about computer-managed instruction (and other types of computer-based instruction, including that used with teachers) centers around the extent to which it is limited to "drill and practice." The Boston system includes an elementary-level math "problem-solving" program with tutorial exercises to focus on math "thinking skills," according to ISI promotional materials. Tutorial explanations are provided and the student uses an embedded calculator to allow a focus on problem-solving strategies. But the system is still largely limited to drill and practice.

In contrast to the drill and practice of computer-managed instruction, it should be noted that two Massachusetts districts are piloting a Chapter 1 computer-assisted program whose

objectives are to teach higher-order skills to Chapter 1 students while teaching reading and math. To date, it appears very successful. The pilot program, now in a total of three public schools, requires highly-skilled teachers who share both sets of goals and are ready for the type of training required to accomplish them. For students in religious schools to be involved, the program would require that the district find sites for off-premises instruction.

The question of gains and losses in a computer-managed system requires a comprehensive evaluation not yet undertaken in Massachusetts, largely because the programs have just begun operation. Comprehensive evaluation, both immediate and over a longer term, is needed in both these pilot programs to teach higher-order skills and the computer-managed program used in Boston. The gains and losses for students found in each must be assessed. Evaluation should include but not be limited to achievement testing. Considerable investment is being made in these and other districts in the technology, development of sites off-religious premises, teacher training, and so on.

These pilot programs suggest that it is less the computer technology than the typical objectives of Chapter 1 programs and the skills and orientations of Chapter 1 teachers that generate drill and practice in the classroom. The coordinator in one of the districts with the pilot program in higher-order skills noted that no matter how motivating the project or how successfully it teaches higher-order skills, unless it also raises standardized reading and math scores it will be unlikely to satisfy Chapter 1 requirements. The combination of the Chapter 1 focus on NCE gains and the need for highly-qualified teachers to work effectively with Chapter 1 students when the program requires more than drill and practice, seems to be what drives Chapter 1 programs toward drill and practice more than available computer technology. Other studies have underscored the importance of teachers' philosophies, skills and objectives for determining the use of computers and type of learning found in classrooms that have computer technology available.* Pencil-and-paper Chapter 1 programs managed by teachers often rely primarily on drill and practice. Unless the district has the vision and resources to develop a core of teachers who are prepared to undertake the more creative teacher-based programs, the question may be (1) whether and which computer-managed drill and practice programs are superior to pencil-and-paper drill and practice programs and (2) how best to fit computer-managed programs with classroom instruction.

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* For striking examples of the influence of teachers' philosophies, see Andee Rubin and Bertram Bruce "Learning with Quill: Lessons for Students, Teachers and Software Designers." BBN Report No. 6019, Bolt Beranek and Newman, Inc., Cambridge MA 02238, August 1985, pp. 20-27.

An additional question is the type of technical support and maintanence offered by the vendor, and the vendor's willingness to further develop the system on an ongoing basis to address educational needs. In a rapidly developing technical area, these issues are critical. Boston has been very pleased in this respect with ISI. But the small district using the earlier system developed by ISI has been less pleased. ISI has chosen to put its resources into its new technology, not into refinements or additions to the old version. In particular, the old system cannot serve first grade. Lacking alternatives, the district no longer serves nonpublic school first graders. The company does not offer a trade-in policy to upgrade to the state of the art technology that would allow the district to upgrade, given its budget constraints. To the district coordinator, the company's priorities appear misplaced.

Equitability issues. Equitability issues regarding computer-managed instruction fall into two categories: fiscal and educational. Chapter 1 (Sec. 557(a), U.S.C. 3806(a)) and Department of Education regulations (220.71) require equitable services and instructional expenditures for public and nonpublic school students. Fiscal equity appears to be a proxy for educational equity. In the past, other measures to show that students received the same program--for example, number of minutes of instruction, staff with equivalent credentials, the same or similar curriculum materials--were also monitored by the state and/or used by the district to demonstrate its commitment to equivalent opportunities for public and nonpublic school students. The use of computers raises new issues about measures of equitability.

The Department of Education has instructed states and districts to use administrative funds to cover the costs of renting space, providing transportation, and otherwise implementing the Aguilar decision. The purchase of computers, however, is considered an instructional expense that may be counted when determining fiscal equity. In Boston, during the two years that the program will be paying for purchase of the system, Chapter 1 officials report that costs will be about equal between public and religious schools. After the first two years, the costs will drop to about one-third of the current level, raising fiscal equity questions. Although equity may be achieved in the future by the payment of "technicians" on religious premises, concern exists that the use of technicians may be successfully challenged in court.* To enhance fiscal equity, districts with computer programs also

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* Proposed legislation for funding for capital expenses views computers as a capital expense, not instruction, raising further issues.

offer summer school programs; to date, these services have been refused by the nonpublic schools.

The educational equity issue is more confusing. In a public school, students may have both computers and teachers, considered by all to be the preferred alternative. Elementary school students in the computer program may receive as little as ten minutes a day of instruction compared to 30 or 40 minutes in the public school program. On the other hand, because of the intensity of the instruction, nonpublic school students may attempt more exercises in ten minutes than their counterparts would in 40 minutes. And, it is generally considered inadvisable to give students more than ten minutes instruction in a subject, without a break, given the intensity of the program.

Gains on achievement tests take on added importance. The instructional process cannot be compared; therefore, greater weight will be paid to outcomes, particularly reading and math scores.* Ironically, district Chapter 1 staff are beginning to wonder how the public schools will respond if achievement testing indicates equal or greater gains than the public schools. In part because the computer program is less disruptive of the regular instructional program (and perhaps because it does not require highly qualified teachers), public schools may want to be able to use it.

THE FEDERAL INFLUENCE IN MASSACHUSETTS

The Aguilar v [illegible]ton ruling was a surprise to Massachusetts Chapter 1 coordina[illegible] When interviewed for Millsap's 1985 study, they indicated tha[illegible] did not believe that the Supreme Court would rule that thei[illegible] programs were unconstitutional. They found it hard to believe that the Court would decide to disrupt a well-functioning program that benefitted low-achieving children, a program that in their opinion taught only reading and math, not religion. They did not and still do not see instruction by public employees to be "entanglement" of church and state as the Supreme Court ruled. But they immediately began to seek alternatives to instruction by Chapter 1 teachers on religious premises.

After the ruling, district coordinators felt caught between a rock and a hard place on several levels. To give three examples: First, while offering comparable services in terms of such measures as number of minutes per week in Chapter 1 instruction, they found that nonpublic school children missed their regular instructional

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* Less likely to be given attention but of importance educationally, are other outcomes such as changes in how students approach problems, transferability of skills, development of higher-order skills, and affective growth.

program for longer periods. In other words, to provide the services required by law and believed to be helpful prior to Aguilar, they had to further disrupt the child's regular instructional program. Second, to meet federal equitability requirements regarding costs they had to offer services to the nonpublic schools that they knew the nonpublic schools would refuse, such as summer school; but they were prohibited from offering the desired services. Third, they had to spend more money for nonpublic school students on transportation, rentals, and so on, using funds that would previously have gone to instruction or supplies for both public and private school students. At the same time, they needed to avoid any appearance, symbol, or technicality that could be viewed as aiding the religious schools, and thereby trigger litigation, citations from monitors, or audit exceptions.

The timing of the Aguilar decision sent everyone scrambling. Announced July 1, as principals and those coordinators who worked ten month school years were beginning vacations; it was to be implemented at the start of the school year in September. Budgets were already approved and, in some cases, teacher contracts signed. This timing combined with the equity issues to encourage a basic decision rule in Massachusetts districts: find an alternate site where a teacher can provide essentially the same services as before. Keep the program as close to the public school program as possible.

Time, effort and creativity were initially directed to developing alternate sites for the same instructional program as before; no serious exploration of alternate forms of instruction was undertaken. The old forms of instruction had already been judged effective. What the Supreme Court indicated needed "fixing" was not the educational program but its placement in religious schools. In the context of recent interest in computer-assisted instruction, however, it is noteworthy that the decision was clearly not viewed as an opportunity to be seized for developing instructional alternatives. It was and continues to be seen by both coordinators and principals as an administrative burden, a waste of money, an attack on religious schools, and an injustice to children in those schools.

In addition, the surprise which the ruling constituted and the several lawsuits filed since this decision that would further restrict or alter use of public funds to assist nonpublic school students, all contributed to a state of caution and concern about the issue. In this context, the three sets of Questions and Answers from the Department of Education have been very helpful. They address the fear of lawsuits and audit exceptions by offering interpretations of how both constitutional and regulatory issues may be addressed. They have also opened possibilities. For the most part, districts did not, for example, park vans anywhere on religious premises until receiving the guidance. Most recently, the Questions and Answers have been important for suggesting that

it may be possible for the district to hire technicians for certain purposes related to computer assisted instruction on religious premises.

At the same time, the guidance has not been sufficient to meet Massachusetts districts' expectations for clarity and security. First, again, is the problem of timing. The guidance was not immediately forthcoming, from the districts' perspective. And it has been issued in response to district questions nationally; it has not anticipated the questions. Coordinators did not want to invest in program arrangements that would soon have to be changed to meet future guidance, but initial decisions about how to develop the program had to be made. Second, the lack of clarity continues. Although 42 "Questions and Answers," most including subparts, have been issued already; at the local level, situational complexitites outstrip those addressed by the guidance. Every nuance or possible situation cannot be addressed by the guidance; yet the districts do not want to act without the prior reassurance it gives.

Given the history of Massachusetts as a state with a strong orientation towards compliance with regulations to prevent audit exceptions and maintain Title I goals, local coordinators expect the state Chapter 1 office to be able to inform them of options that will give them security in relation to audits or other legal challenges. The situation does not allow such security. The Department noted in its June 1986 guidance that, in the future, it may need to change its audit policies if definitive rulings on any of the constitutional issues involved are made (Question 38, p. 12). As has been noted, decisions about the use of vans and/or portable classrooms and communication between Chapter 1 and nonpublic school teachers have been particularly affected.

The lack of federal resources provided for the implementation of the Aguilar decision was noted by several districts as problematic. Coordinators in these districts argued that, given that the policy came from the national level and added to administrative costs--at times, reducing funds available for instruction for both public and religious school students--federal resources to implement it were justifiable. A number felt that they could provide more satisfactory services for nonpublic school students with resources to cover the costs of capital investments, rental fees, equipment maintenance, or electricity.

IMPLICATIONS FOR FEDERAL POLICYMAKERS

Findings from this study highlight several possible issues for federal policymakers. Some considerations are discussed below.

As more districts turn to computer-assisted instruction to restore nonpublic school enrollments, the more urgent the need for a systematic study of the strengths, weaknesses and effectiveness

of various approaches to computer-assisted instruction in serving nonpublic school students.

Turning to the topic of the proposed capital expenditure grants--in House Bill 5, section 10.17 01, some $30 million is authorized for school districts to use to recoup and pay for the capital investments necessary to restore services for nonpublic school students to pre-Aguilar levels (1984-1985). In allocating funds, state education agencies are to award grants only if expenditures to be covered have or would restore pre-Aguilar enrollments. Funds are not to go to districts to maintain the status quo, where it is lower than pre-Aguilar enrollments.

Three considerations emerge from this study. First, as discussions continue on efforts to restore services for nonpublic school students, acknowledgement should be given to the fact that some declines may be unrelated to Aguilar v. Felton. Discussion may better focus on how to provide comparable services to the same percentage of eligible students in nonpublic [illegible] in public schools. Second, flexibility should be maintained (as it has been so far in discussion of the grants) to lease as well as purchase equipment, in the event that allowable options may change with subsequent court rulings. Third, discussions of mechanisms to counter the effects of the Aguilar decision should go beyond capital expenditure grants, because such grants may not be fully responsive to the needs of some districts (e.g., districts where no safe and legal place is available to park a van or portable classroom and computer installation is not cost-effective).

Lastly, based upon the Massachusetts example, it may be worthwhile in the next set of guidelines from the Department of Education to include further discussion of allowable locations for communication between Chapter 1 and nonpublic school personnel and to provide some descriptions of "consultation" that is likely to be allowed by the Court on religious premises. Guidance from the Department of Education in the form of questions and answers is widely used and cited as very helpful by state and district Chapter 1 officials.

This study has chronicled how one state and select communities with a history of providing equal access and comparable services to nonpublic school students in Chapter 1 programs have responded to Aguilar v. Felton. Public and nonpublic school officials alike have invested a great deal of time, ingenuity, and commitment to find educationally viable solutions to this unpopular Supreme Court decision. It is hoped that this study of their efforts will contribute to finding ways to again provide equitable services for nonpublic and public school children.

Exhibit 1. Sample of Massachusetts Districts

District	Total Public School Enroll-ment	Non-Public Chap 1 Enroll-ment	Percent Loss in Non-Public Enrcll-ment**	Option Chosen
A*	60,704	1,576	10%	CAI
B*	22,686	162	73	Alternate
C	14,277	173	22	Vans
D	11,950	113	73	Alternate
E*	11,108	85	58	Alternate
F	9,358	240	31	Portables
G	6,334	105	42	Vans
H	4,745	28	30	CAI
I*	4,162	0	100	Alternate
J*	4,059	32	18	CAI
K	2,778	25	22	Vans

* District was included in the previous study of Nonpublic School Student Participation in Chapter 1 Programs (Millsap 1985).

** From the 1984-85 school year to January 1987.