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ABSTRACT

This study examines three aspects of educational time: (1) quantity of time in school; (2) quality of time in school; and (3) students' uses of out-of-school time. The study identified two types of strategies that altered school uses of time--multiage groupings, and flexible school schedules. It concludes that the decision to increase the quantity of time for teaching and learning represents a hollow goal and can even work against other important changes. Undertaking quick policy fixes to extend the school day or year is ill-advised, particularly without deliberate and consensual assessment. Other findings are that: (1) extending noninstructional time at school has important impacts on students; (2) students are willing to commit their free time to well-conceived and well-structured activities provided through their local schools; (3) flexible schedules are important for schools serving at-risk high school students; (4) the most important commodity in which to invest is time itself; and (5) failure to invest in the necessary resources, particularly time, can doom even the most promising innovations. Two exhibits and two figures are included. (Contains 43 references.)
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Studies of Education Reform

**THE USES OF TIME FOR
TEACHING AND LEARNING**

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The Studies of Education Reform were initiated by the former Office of Research in OERI under the guiding hand of its Acting Director, Joseph C. Conaty, currently Director of OERI's National Institute on Student Achievement, Curriculum, and Assessment.

Studies of Education Reform

The 12 studies were commissioned by the Office of Educational Research and Improvement (OERI) in 1991 and were all completed by fall 1995. Each study comprises three volumes. Volume I contains a discussion of the study, case study summaries of the schools or school districts examined, and recommendations. Volume II contains detailed case studies. Volume III is a technical appendix explaining the study's methodology. OERI is publishing all Volumes I as a set. Titles in this series are:

Systemic Reform

Early Childhood Reform in Seven Communities

Education Reform and Students At Risk

Parent and Community Involvement in Education

The Uses of Time for Teaching and Learning

Systemic Reform in the Professionalism of Educators

Study of Curriculum Reform

Assessment of Student Performance

Assessment of School-Based Management

School Reform and Student Diversity

Technology and Education Reform

Study of School-to-Work Initiatives

The other two volumes for each study are available through the Education Resources Information Center (ERIC) system.

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PREFACE

In this volume, we present summary information that emerged from a three-year study of The Uses of Time for Teaching and Learning that was sponsored by the U.S. Department of Education's Office of Research. The study is one of 12 that, taken together, were designed to explore the status and impacts of reform strategies believed to hold great promise for improving the American educational system as it moved into the last decade of the 20th century. Many of the themes governing these studies are recognizable as reform "movements" of the decade from 1985 to 1995--systemic reform, school restructuring, standards-based curriculum reform, new forms of student assessment. Others, including the Uses of Time study, have examined variables in the education equation that might be expected to play a role in the change process no matter what "movement" is under consideration.

From the outset, the Uses of Time study has been conceptually challenging. The government specified that the study should examine three aspects of educational time: (1) the quantity of time in school; (2) the quality of time in school; and (3) students' uses of out-of-school time. This report primarily concentrates on the first two topics, although we ultimately argue that extensions of nonclassroom-based time at school may be a critical factor in improved student outcomes. We pursued a more extensive examination of the educational contributions of students' out-of-school activities through our research review (described in more detail in Chapter I) and a conference that brought together formal and nonformal educators. A summary of "timely ideas" that emerged from the conference is available from Policy Studies Associates under the title *Making the Most of Their Time: Timely Ideas on Coordinated Opportunities for Young Adolescent*.

This volume contains the results of our field research. Chapter I outlines what we learned from reviewing the research to help define the parameters of the quantity and quality of time factors that we used as site selection criteria. This chapter also summarizes the study's main purposes and key research questions. Chapter II introduces the 14 sites that we visited--each representing a unique combination of quantity and quality of time variables. While we were not specifically bound to study sites that primarily serve disadvantaged children and youth, we chose to make this a focus of our work. A majority of the students in twelve of the schools come from backgrounds that, according to well-established research, might put them at risk of school failure

Chapters III through V are the heart of our analyses. First, in Chapter III, we examine the student experience in the 14 schools and programs studied--the amount of educative time available, how it is used, and what the outcomes are. We end Chapter III with discussion of a second

curriculum that parallels the academic curriculum in many of the sites--a set of strongly enforced values that may be the most critical factors in student success. In Chapter IV, we move on to resource issues. As they say, time is money. Most of our sites do not have significantly more money than other schools in their local contexts. Rather, they have configured their existing resources to support the instructional approaches that they believe in. However, to the extent that instructional time has actually been increased in some sites, it does take more money. Chapter V explores the meaning of time for teachers in the 14 schools and programs studied. While the bottom line of the study is improved student learning, we came to the conclusion very early that teacher time issues can make or break attempts at educational reform.

We conclude this volume with a summary chapter on the meaning of our findings for policy and practice and a final chapter on suggestions for additional research that would both test our conclusions and fill in some gaps in our collective understanding of what constitutes educational time.

Two other volumes were prepared as a part of this study. Volume II offers detailed case studies of the 14 sites that we visited. These case studies have been reviewed and approved by the sites as public documents. Actual school names and locations are used, and interested readers should feel free to contact sites for additional information about the educational strategies that they have implemented. Volume III presents our full research design, much of which was prescribed in the government's original statement of work. In addition to these three volumes and *Making the Most of Their Time: Timely Ideas on Coordinated Learning Opportunities for Young Adolescents*, our review of the research, *A Research Review: The Educational Uses of Time*, is available as a separate product. Together, these documents represent the complete record of *The Study of Uses of Time for Teaching and Learning*.

ACKNOWLEDGMENTS

Our study of The Uses of Time for Teaching and Learning has benefitted from the cooperation, observations, and advice of many individuals. We are particularly indebted to our U.S. Department of Education (ED) project monitor, Ron Anson, who has pushed us when we needed to be pushed while simultaneously allowing us the latitude to implement a research and dissemination design that does justice to the broad and diffuse nature of the study's theme. We would also like to thank Carol Chelemer, also of ED, who has taken a particular interest in the research themes of our study.

A key factor in successful completion of the study has been the full cooperation of administrators and teachers at the 14 case study sites. They gave generously of their time--the time that, in this technical report, we describe as being in such short supply. We are sorry to have added to their burden but, at the same time, are privileged to be able to share their experiences with others in the field who may learn from it.

The study has also profited from the ideas of a number of technical reviewers. Particularly in the early months of the effort, Jomills Braddock, Rex Brown, Henry Levin, Karen Seashore Louis, Arthur Powell, and Joseph Salvati helped us conceptualize an overall study design that could do justice to the multiple themes of quantity and quality of educational time in and out of school. They particularly encouraged us to think creatively about dissemination vehicles beyond this required technical report. While we did not produce a videotape, we did develop a number of innovative products, including a case book about teacher time in teachers' own voices and a volume of "timely ideas" about ways in which formal and nonformal educators can work collaboratively.

Over the life of the study, the study team experienced some ebb and flow. The authors of this final technical report want to thank all of their colleagues and former colleagues at Policy Studies Associates who made contributions, including: Janie Funkhouser, Dan Humphrey, Matthew Janger, Karen Walking-Eagle, Eric Rosenthal, Brenda Turnbull, Angela Williams, and Peter Youngs. Acting in a consultant capacity, Sheila Rosenblum extended our conceptual and analytic capabilities, particularly with regard to lessons learned from the residential schools and programs that we visited.

Finally, Ben Lagueruela of Policy Studies Associates copy edited portions of the technical report manuscript, and Kimberly Thomas made the exhibits presentable. Together, they oversaw final production. We appreciate their attention to clarity and detail.

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I. INTRODUCTION

The study reported on in this volume and its companions began in the fall of 1991. In response to a Request for Proposals from the U.S. Department of Education (ED), two of the authors of this report submitted a proposal to conduct one of 12, multiple-year Studies of Education Reform that ED intended to sponsor. The themes of the studies had been determined through a process that solicited ideas from a broad spectrum of leaders in the education field. One theme in particular intrigued us: the uses of time for teaching and learning. Time is pervasive. Time lends itself to cliches. Time, as an issue, crops up when you thought that you were focusing on other things. In short, time is potentially a key element in reform efforts of any kind. In addition, the amount of time that American students spend in school--widely perceived to be less than in other industrialized nations and therefore a potential cause of disappointing results for U.S. students in international assessments of achievement--was about to become the focus of a congressionally-mandated Commission on Time and Learning. Time, it appeared, was coming into its own as an educational research variable.

The ED statement of work for the Uses of Time study laid out three very broad areas where research should focus: (1) quantity of time in school; (2) quality of time in school; and (3) the uses of out-of-school time to supplement school-based learning. Because of the potential scope of the subject, we needed to set some limits. Our first task was to define the parameters of what quantity and quality of time in and out of school would mean for our study and examine the existing research base within these parameters. Ultimately, this research review would influence our own research design, including the criteria that we would apply in selecting sites for case studies. In this chapter, we summarize what we found in the literature and lay out the research questions that we decided to pursue as our own contribution to the body of knowledge on teaching, learning, and time.

Quantity of Time in School

We began our research review with an examination of the research on (1) extending the school day or year; (2) year-round school schedules; and (3) extended school careers. Because of keen public and professional interest in comparisons between our own educational system and Japan's, we also paid particular attention to the research basis for the widely held belief that Japanese students do better because they attend school for more days per year. The key findings that we derived from the literature include the following:

- Both supporters and opponents of increasing the school day and year or switching to year-round schedules rely largely on exhortatory arguments. The debates lack solid evaluative data from states or localities that have tried such reforms to show that the change has produced improved student outcomes (Hossler et al., 1988).
- Comparisons of the time Japanese and American students spend in school are not as straightforward as some have tried to make them. The greater amount of school time in Japan is not all devoted to instruction. Furthermore, historical and cultural differences between the two countries seem to account for more of the gap in student outcomes than time per se (Hess and Azuma, 1991).
- Estimates of what it would cost the nation to uniformly increase the school day to eight hours or the school year by 20 days are in the \$20+ billion range (Mazzarella, 1984).
- In public opinion polls, public and parental support for increasing the quantity of time in school has been gradually increasing over the past 10 to 15 years. However, survey items have not mentioned the price tag (*Phi Delta Kappan*, Gallup Polls, 1982, 1984, 1989).
- The growth in numbers of schools operating on year-round schedules is largely in response to overcrowding and the lack of resources to build additional schools (Panton and Rosenthal, 1991).
- Generally speaking, year-round schedules do not result in added instructional time for all students, although some districts and schools use intersessions to offer remediation or enrichment for some students. Impacts of intersessions of increase in educational time on student outcomes has not been carefully documented (Panton and Rosenthal, 1991).
- There is some research evidence that year-round schedules have a beneficial effect on increasing attendance rates and decreasing dropout rates. Reasons for these findings remain theoretical (Gandara and Fish, 1991; White, 1988).
- Half-day kindergarten is now nearly universal in this country, and the number of full-day programs is growing. Publicly supported prekindergarten programs have also increased over the past 30 years. These measures add substantially to the time investment in students over their school careers (Trostle and Merrill, 1986).
- Conceptually speaking, retention-in-grade policies are another way to think of adding time to a student's school career. Research shows, however, that the impacts of this strategy are almost all negative on long-term student outcomes (Karweit, 1991).
- There is an increasing tendency for students to extend their high school careers beyond the traditional four years. The option of continuing in high school beyond age 18 is of particular benefit to immigrants and teenagers with adult responsibilities (Flax, 1991).

These key findings led us to the conclusion that our own field research on quantity of time issues should focus on some sites that had actually added time to the school day or year for all students--assuming that we could find any. We also decided to include at least one site where teenagers at risk of not completing high school can trade off shorter school day for a longer school career. Finally, we determined that we should conduct a census of districts operating on year-round schedules to solicit the results of any research--whether rigorously designed or not--showing positive or negative impacts on student outcome indicators. The results of this latter search are presented in a paper available from Policy Studies Associates and currently seeking a home in a professional journal.

Quality of Time in School

While time issues are a consistent thread running through the literature documenting educational reform (not enough time, time is of the essence, if we only had more time, etc.), time-related reforms that actually change the quality of students' educational experiences are more limited. We sought to identify a small number of strategies that altered school-based timeframes for students and had a research history.

In the end, we settled on two basic quality of time strategies with the potential to make a significant difference in students experience of schooling: grouping practices and scheduling practices. The specific reforms that interested us were (1) multi-age groupings that break the graded lock-step of traditional schools and (2) flexibility in school schedules that encourages varied approaches to curriculum and instruction. These variables became selection criteria for some our case study sites. The existing research literature on grouping and scheduling strategies, which is quite extensive, yielded the following findings:

- Research studies on graded versus nongraded organization for instruction have produced mixed results concerning student achievement. One recent meta-analysis (Katz et al., 1990) reviewed 25 previous studies and found that 10 reported higher achievement for students in multi-age settings and 12 were inconclusive. The remaining three studies noted better results for students in conventional, graded arrangements.
- There is some evidence that a nongraded environment is particularly beneficial to the academic achievement and mental health of minorities, boys, underachievers, and students from low SES backgrounds (Pavan, 1977).
- Research in cognitive science suggests that "cognitive conflict," (that is, the interactions between those who hold conflicting understandings) stimulates cognitive growth. One situation where this construct is regularly observed is in work and play

groups involving children of different ages or maturity levels (Brown and Palinscar, 1986).

- Even when research studies have not documented significant achievement gains from experiments with multi-age classrooms, they frequently have found positive social and emotional impacts for students (Pratt, 1983).
- Teachers of multi-grade classrooms may need more time for organizing and planning (Miller, 1989).
- Adoption of block schedules and other flexible scheduling policies at the school level have mushroomed in recent years, largely as a result of advocacy by groups such as the Coalition of Essential Schools and the Carnegie Commission on Early Adolescence (Adelman, Ed., 1995).
- There is little or no rigorous research evidence demonstrating that longer blocks of instructional time produce improved student outcomes (Adelman, Ed., 1995).

While ungraded structure and scheduling flexibility became official site selection criteria for our study, these two quality of time indicators never occurred in isolation from other kinds of reforms of curriculum, instruction, and student assessment. Thus, for example, at an elementary school with multi-age classrooms, teachers were also likely to be working on development of curricula since grade-level textbooks were a poor fit with the organizational structure. Chapter III of this report describes the many kinds of innovative strategies that we found in schools where graded structures and rigid schedules had been abandoned.

Students' Uses of Nonschool Time

Our mandate to examine what American children and youth do when they are not in schools was arguably the most daunting part of our assignment. As a former Assistant Secretary of Education often pointed out, time in school actually represents only 9 percent of a child's life from birth to age 18. In "the other 91 percent" of their time, children, of course, do many things, and we could not seriously study them all. The research review, therefore, offered an opportunity to read widely with an eye to determining a realistic contribution that our study might make to the field. The chapter of the research review that covers out-of-school time is itself a major contribution because of its synthesis of a wide array of separate research streams. Key findings about the ways in which nonschool time is used include the following:

- High achievers are engaged in "deliberate out-of-school learning activities"--defined as homework, part-time work, internships, apprenticeships, and leisure activities

involving communication skills, problem solving, and decision making--for about 25-35 of their approximately 60-70 waking hours in a given week (Clark, 1990).

- The regularity of literacy-related activities as part of family life (e.g., being read to, going to the library, buying books) is one of the most powerful predictors of literacy achievement in school (Snow et al., 1991).
- Some estimates suggest that as many as half of all children in grade K-3 and up to two-thirds of students in grades 4-6 are in self- or sibling care after school is over for the day (Hedin, 1986).
- Studies have found that children who are home alone after school express a number of negative emotions about the experience: fear, a sense of isolation, loneliness, and boredom (Long and Long, 1983; Miller and Mark, 1990).
- While there are many before and afterschool child care programs, very few have been evaluated to determine if they contribute to childrens' intellectual growth. This is also true for a wide variety of afterschool "enrichment" programs sponsored by many different kinds of groups and agencies (Adelman, Ed., 1995).
- According to surveys conducted by the National Assessment of Educational Progress (NAEP), high school students spend less time on homework and less time reading for pleasure than elementary or middle schools students.
- Adult involvement while homework is being done is associated with high achievement (Leone and Richards, 1989), but the exact nature of the relationship between homework and academic achievement is unclear.
- Most studies of tutoring and mentoring find positive impacts on students' achievement, motivation, attitudes toward education, self-esteem, and self-confidence (Richardson, 1992).
- There are literally thousands of national and community-based youth development clubs and organizations offering young people some structure for their out-of-school time and serving a nonformal, educative function. These organizations are often particularly important to disadvantaged children and youth. Better research is needed on how formal and nonformal educational institutions can complement each other (Adelman, Ed., 1995).
- Research on the effects of participation in school-based athletic and extracurricular activities exists but has limitations. Generally, studies have focused on one group (e.g., boys) and one kind of activity (e.g., sports). Differences in impacts of participation according to race, SES, or type of activity have not yet been well explained by the research (Adelman, Ed., 1995).
- The benefits of volunteerism and community service are quite well documented and include: connecting young people to their communities; promoting important values

such as respect and tolerance; exposure to positive adult role models; opportunities to apply academic learning in real life contexts (Conrad and Hedin, 1989).

- The research evidence on the effects of part-time jobs on school outcomes for students is mixed. Negative effects on academic achievement appear to be most strongly correlated with a higher number of hours worked per week (Bachman and Schulenberg, 1991).

The research literature that we examined on potential ways that students may use their out-of-school time was vast and diffuse. As we moved into the research design stage of the study, the issue for the study team was whether and how we could select schools on the basis of factors related to quantity and quality of instructional time and at the same time do justice to the many important issues associated with how students use the larger amount of daily time when they are not in the classroom.

We dealt with this dilemma in several ways. First, we decided to sponsor an invitational conference where formal and nonformal educators could explore ways in which they might cooperate more closely to support the education and development of young adolescents. This conference, held in April 1994, resulted in a short volume entitled *Making the Most of Their Time: Timely Ideas on Coordinated Learning Opportunities for Young Adolescents*, which is available from Policy Studies Associates.

Second, on the advice of our technical review group, we broadened our ideas about selection of case study sites to include residential schools and extended day programs. If we could not do family ethnographies or shadow students for extensive periods of time, we reasoned that we could at least attempt to verify some of the research findings about uses of out-of-school time by learning about institutions that serve *in loco parentis* for more than the conventional five or six hour school day.

Third, we developed a student time diary data collection instrument and invited individual teachers at all of our sites to use these with their classes as a learning activity. Students kept track of what they were doing from the end of school until bedtime for a week. Classes then aggregated their "data" and created graphs to summarize their use of out-of-school time. When teachers were done with this activity, they sent the completed time diaries for inclusion in our internal case reports.

Finally, we developed research questions about out-of-school time use and employed them to structure focus group discussions with students at all of the sites that we visited. The focus group interviews also covered student perceptions of their classroom experiences during the regular school day.

Research Questions

The research questions for our study fall into two groups: (1) quantity and quality of uses of time in school and (2) educative uses of out-of-school time. The full list of questions governing the study can be found in Volume III of this technical report. Many of the questions were posed in the government's original statement of work and applied to all 12 of the Studies of Educational Reform. Core questions included the following:

Quantity and Quality of Uses of Time in School

What was the context for adoption of time-related reforms in individual sites?

What are the key characteristics or components of the reform?

How did the reform evolve over time?

What were the incentives or barriers to full implementation of the reform strategy?

How were the barriers overcome?

How could similar reform strategies be reproduced elsewhere?

What impact have the time-related reforms had on student outcomes?

What are the overall strengths and weaknesses of the reform strategy?

Educative Uses of Out-of-School Time

What educative options are available to students outside of the regular school day? Who sponsors them? What are the goals?

What options do students take advantage of, and why?

What is the relationship, intended or unintended, between student learning that occurs in school and out of school?

What impacts do the out-of-school activities have on the participants?

We do not claim that we have fully answered all of these questions in the course of our study, or that we have addressed all of the issues raised by our research review. We have, however, learned a great deal about 14 very interesting sites where the experience of time for both students and adults is quite different from the norm in American schools in a variety of ways. In the next chapter, we

introduce the schools and programs that are at the core of our study of the uses of time for teaching and learning.

II. (RE)STRUCTURING TIME TO CREATE EFFECTIVE CONDITIONS FOR TEACHING AND LEARNING: AN INTRODUCTION TO THE STUDY SITES

Time has long been a defining element of American education. State laws determine when in an individual's life compulsory schooling begins and ends, for example. To progress in school, children move through a sequence of grades that roughly corresponds to their ages. Ten-year-olds, for instance, are typically expected to be in fifth grade. When they are not, they are considered to be either behind or ahead of schedule. Despite the emergence of year-round schooling in some locales, calendar years are still easily divided into "the school year" and "summer vacation" by virtually anyone over the age of six. These and many other time-based school practices represent the enduring and often unquestioned foundations of American education.

This chapter introduces a group of schools that have broken with tradition in configuring time for teaching and learning. Case studies of these schools and the ways in which they have confronted old and new time barriers form the basis of this study of education reform efforts viewed through the lens of time. The full case studies are available as Volume II of this report. Here, we briefly describe each of the 14 study sites and the school characteristics that pertain to time use innovations across the sites.

Schools That Are Breaking Time Barriers

This study looked at 14 school sites¹ that arrange and use time resourcefully as a key dimension of their efforts to improve the quality of teaching and learning. All but two of the schools in our sample serve a substantial number of disadvantaged students. Beyond that, the schools differ widely. The sample includes:

- Nine public schools and five private schools
- Three elementary schools, five middle schools, two high schools serving grades 9-12, two secondary schools serving grades 7-12, one school serving grades 1-12, and one school serving students aged 16-21 years

¹ In two cases the site is a school district in which many schools are part of the time-use innovation. In the other 12 cases, the site is a single school.

- Four residential schools
- Eleven urban schools
- Two schools that enroll only boys
- Schools with student enrollments that range from 20 (a residential school) to approximately 800 (an urban elementary school)

The Sites in a Nutshell

Alternative Middle Years (AMY). Established in 1974, AMY is a magnet program option for roughly 325 of Philadelphia's public school students in grades 6 through 8. Its defining time-related innovations are vertical and mixed-ability grouping plus small classes that allow greater teacher-student interaction.

Beaver Island Lighthouse Alternative School. The Beaver Island Lighthouse School is a residential dropout recovery program serving young people in a 10-county Job Training Partnership Act service delivery area of northern Michigan. The dropout recovery program, which began in 1985, is co-ed and can serve 20 to 25 students (ages 16-21 years) each ten-week session.

Chinquapin School. Chinquapin School is a private, residential school that was founded in 1969 to provide a college preparatory education for poor and minority students. Located on a quiet rural campus east of Houston, Texas, Chinquapin serves about 100 students in grades 7-12 (including girls, since 1978). Boys live on campus from Sunday night through Friday afternoon each week that school is in session; girls commute daily.

Chiron Middle School. Chiron is a public middle school that draws students citywide through a school choice program in Minneapolis, Minnesota. Designed to teach students through experiential education, the school makes the city and its environs the classroom through the use of several off-campus learning sites. Additional time-related innovations include block scheduling, mixed-age groups, small classes, and team teaching. Begun in 1989 with 120 students in grades 5 and 6, Chiron now serves roughly 200 students in grades 6 through 8 and will continue to grow until it reaches its maximum enrollment of 300 students.

ConCurrent Options. ConCurrent Options is a citywide dropout prevention program that offers New York City's public high school students various supplemental learning opportunities that

allow them to continue their education, earn additional credits, and graduate with a diploma. Student participation varies by educational alternative, from 5,000 students who attend afterschool classes to an estimated 60,000 who enroll in summer school.

Girard College. Girard College is a private, full-scholarship, residential school serving 550 students in grades 1 through 12. It is located on a large, walled campus in the gateway to North Philadelphia, one of the country's most economically depressed urban areas.

Hollibrook Elementary School. Hollibrook is a public elementary school in Houston, Texas, that enrolls nearly 1,000 students in Kindergarten through grade 5. In addition to being an Accelerated School, Hollibrook implements several time-related innovations, including afterschool activities, mixed-age classes, enrichment classes, and a two-way developmental bilingual program.

Metro High School. Metro High School is a public alternative school that began in 1974 as a small "second chance" school for high school dropouts in Cedar Rapids, Iowa. Now serving 600 students in grades 9 through 12, Metro is a member of the Coalition of Essential Schools and boasts a variety of time-related innovations, including less daily class time and no class on Friday, an expanded time frame in which to earn a high school diploma, a competency-based curriculum, and interdisciplinary instruction.

Moton and Lockett Elementary Schools. Moton and Lockett are public elementary schools that serve extremely impoverished and isolated areas of New Orleans, Louisiana. The two schools enroll 600 and 900 students respectively. For three years, from 1989 to 1991, Moton and Lockett were part of a district experiment to offer students a 220-day school year. Strong community support for the experiment stemmed largely from a belief that children would be safer and cooler if they spent more days in air-conditioned classrooms.

Nativity Mission School. Founded in 1950, Nativity Mission is a private Jesuit school that serves 45-50 boys in grades 6 through 8. The school operates out of the Nativity Mission Center on New York City's Lower East Side. In addition to a full academic program, Nativity Mission provides a comprehensive student support system that begins before students enroll, extends beyond the school day, and continues long after students graduate from the school.

Nativity Preparatory School. Nativity Prep was founded in Boston, Massachusetts, in 1990 and is modeled after Nativity Mission School in New York City. It serves roughly 60 boys in grades 5 through 8, providing them with, in addition to a traditional academic program, mandatory afterschool activities and a voluntary evening study program.

Piney Woods Country Life School. Piney Woods School is a private, residential school founded in 1909 to provide educational opportunity for poor black children in rural Rankin County in Mississippi. The school serves about 70 local students in pre-Kindergarten through grade 6 and more than 280 residential students in grades 7 through 12. The time-related features of Piney Woods School include full-time campus residence and block scheduling.

James P. Timilty Middle School. Timilty Middle School is a public, citywide magnet school in Boston, Massachusetts, that serves 500 students in grades 6 through 8. Its original time innovation, begun in 1985, is an extended school day that adds 90 minutes to daily reading and mathematics instruction, Monday through Thursday. The extended day has spawned a host of changes in the ways that school time is used, including flexibility in curricular decisions, small classes, and team teaching.

Wheeler Elementary School. Wheeler is a much-studied public elementary school in a suburban section of Jefferson County, Kentucky. The school serves about 500 students, ages 5 to 10 years. The time-related innovation that landed Wheeler in this study is multi-age grouping of students for instruction, which began in 1987. Other innovations associated with the Kentucky Education Reform Act (KERA) define this school's reform efforts.

Key Characteristics of the Sample

In nine cases, the time-related features that attracted our attention were part of the original school design (Figure II-1). For example, residential schools in this group were designed specifically to provide a full-time living and learning environment for students with particular needs. As such, these schools are not the products of reform efforts. They are established and rather traditional institutions if compared with reforms that currently engage many public schools. On the other hand, if other places were to try to replicate the idea of a college preparatory boarding school for disadvantaged students with high potential, the model would be a significant reform in the new context.

In the other five cases, the time-related innovations that we investigated represent important changes in the organization and structure of schools. At one of the study sites, for example, two schools lengthened the school year. At another site, the district has helped high schools organize an existing set of supplemental learning opportunities (with some additions) into a formal dropout prevention program. In many of the study sites, the original innovative school design prompted

additional time-related changes. The 14 study sites can be sorted and grouped in many other ways to highlight their key characteristics, similarities, and differences (Figure II-2).

The information gathered in visits to these 14 sites represent the "raw data" from which, through cross-site analysis, we have attempted to identify commonalities and differences among the schools that help explain their effectiveness as educative institutions. We should emphasize at the outset that the sites were selected as examples of interesting but not necessarily best practice with regard to use of time. Nevertheless, on the whole, they turned out to be success stories. The key analytic issue is whether or not the time-related innovations help explain the success. In the chapters that follow we examine (1) time and student learning; (2) time as a resource. We then draw some conclusions about the factors that seem to have the greatest impact on desirable outcomes; and (3) time and teachers' work lives.

Figure II-1
Starting Year and Original Purpose of Time-Related Innovation, by Site

Site	Year	Original Purpose
Time-Related Innovation Was Part of the Original School Design		
Alternative Middle Years (AMY)	1974	Magnet school to aid district's desegregation plan
Beaver Island Lighthouse Alternative School	1983	Residential dropout prevention and recovery program
Chinquapin School	1969	Residential school to prepare poor and minority youth for college
Chiron Middle School	1989	Experiment in public-private partnership to improve public education
Girard College	1848	Residential school for orphans
Metro High School	1974	Dropout recovery program
Nativity Mission School	1971	Extended educational program to break the cycle of poverty
Nativity Preparatory School	1990	Extended educational program to break the cycle of poverty
Piney Woods Country Life School	1909	Residential school for poor, southern Blacks
Time-Related Innovation Represents Change in the School/District Organization or Structure		
ConCurrent Options Program, New York High School Division	1987	Dropout prevention program
Hollibrook Elementary School	1989	Accelerated School to improve student achievement and discipline and to motivate faculty
James P. Timilty Middle School	1986	Extended day to improve basic skills achievement
Moton & Lockett Elementary Schools	1989 to 1992	Experiment in year-round schooling for disadvantaged students
Wheeler Elementary School	1983	Innovations in instruction and school management to improve teacher morale

Figure II-2
Study Sites, by Time-Related Innovations and Other Selected Characteristics

Site	Innovations Related To:		School Level	School Control	School Enrollment (Approx.)
	Quantity of Time	Quality of Time			
Alternative Middle Years		Vertical and mixed-ability grouping, small classes	Middle	Public	325
Beaver Island Lighthouse Alternative School	Residential school	Small classes, individualized curriculum and instruction	High	Public	20-25
Chinquapin School	Residential school	Small classes	Middle/High	Private	100
Chiron Middle School		Block scheduling, mixed-age groups, experiential learning, small classes, interdisciplinary instruction, team teaching, altered teacher time	Middle	Public	200-300
ConCurrent Options, New York High School Division	Flexibility in class time and lapsed time to graduation	Some options have small classes	High	Public	Varies by option
Girard College	Residential school	Small classes, Corner Development Program	All grades	Private	550
Hollbrook Elementary School	Afterschool activities	Accelerated school, mixed-age classes, enrichment classes, team teaching	Elementary	Public	1,000
Metro High School	Less daily class time, more lapsed time to graduation	Small classes, Coalition school, interdisciplinary instruction, team teaching, altered teacher time	High	Public	600
Moton & Lockett Elementary Schools	220-day school year		Elementary	Public	600, 900
Nativity Mission School	11-month school year, extended day	Small classes	Middle	Private	45-50
Nativity Preparatory School	Extended day	Small classes	Middle	Private	60
Piney Woods Country Life School	Residential school	Lower class per is	Middle/High	Private	284
J. P. Timilty Middle School	Extended day	Small classes, flexible schedule, altered teacher time, team teaching	Middle	Public	500
Wheeler Elementary School		Ungraded classes, team teaching	Elementary	Public	500

III. ALTERNATIVE USES OF TIME AND STUDENT LEARNING

In the previous chapter, we focused on the effects of strategies to alter school-based educational time on teachers' work lives. Particularly in the public schools that we studied, the time related innovations emerged from faculty experiences with site-based management or decisionmaking: given the unaccustomed authority to make curricular and instructional decisions for their schools, teachers chose time as one variable to manipulate. While some of the strategies selected (such as an increase in common planning or meeting time for teaching teams or whole faculty) may seem a step or two removed from students, in every case, the ultimate objective of reform activity was, nearly uniformly, improved educational outcomes for students.

This chapter is about students--the experiences that they have in the schools studied, the reasoning behind the experiences, and the results of those experiences. The original conceptual framework for our study of the uses of time for teaching and learning emphasized the interaction and co-dependence of quantity of time factors and quality of time factors in creating new, and hopefully fertile, educational environments. We argued that changes in the quantity of time (whether more or less) that students spend in educational settings will make little difference unless there is a concomitant change in what goes on during that time. The schools that we studied make essentially the same argument about measuring the impacts of their programs: they accept the reality of accountability systems that ask them for quantified evidence of student outcomes, but they often "count" their greatest achievements in terms of qualitatively estimated changes in student attitudes and behaviors. In the discussion that follows, we weigh both the objective and the subjective evidence that the schools offer as indicators of their effectiveness.

Our original hypothesis about the interrelationship of quantity and quality of time issues carried some implicit assumptions about improvement in the quality of educational time. These were rooted in *au courant* theories of reform that are being studied in more depth by other Studies of Education Reform projects. We expected that, to the extent that our case study sites were places that engaged students for more or less time than the norm for American schools and were successful, then they would also be variously committed to strategies emphasizing, for example, school-based management or decisionmaking; new approaches to curriculum, instruction, and assessment; research-based approaches to educating disadvantaged students; and/or extensive and creative use of technology.

As we reach the end of our study of time, we are less certain that our original premise was correct. In a number of cases, (especially among the private schools), sites that we ultimately judge

to be successful were largely unfamiliar with the reform "movements" that consume the policy world. They made their decisions and formulated their programs based on experience and common sense about students' developmental needs, on their own institutional contexts, and on a shared set of values, but they did not do so because they were, for example, "doing" site-based management. Often, what went on in classrooms was quite conventional and certainly low-tech. Many math teachers were largely unfamiliar with the NCTM standards as a blueprint for reform in that subject area. It was relatively common, however, to find teachers engaged in curriculum development, often along interdisciplinary or thematic lines, with an emphasis on communication skills. We begin our analysis in this chapter with some observations about curriculum and instruction in the 14 sites.

Curriculum and Instruction

Factors related to the quantity and quality of instructional time were major criteria in selecting case study sites (see pages 10-11 of Volume III: Research Design and Method). In general, each site represents some unique combination of quantity and quality of time factors that distinguishes it from the "typical" American school serving students of the same ages or grades and from other schools in our sample. In the final analysis, however, no site substantially **increased** the quantity of classroom time for students **and** simultaneously addressed significant reform of curriculum and instruction in the classroom. Strategies affecting the quality of school time tended to occur within the traditional amount of time allocated to classroom instruction in a given jurisdiction. Where more instructional (or supervised) time was available, curriculum and instruction tended to be very conventional.

Amount of Time Allocated to Instruction and Related Activities

Exhibit III-1 summarizes the quantity of time variables that characterize the 14 sites investigated for this study. In terms of formal instructional time, the sites fall into three categories (1) those offering a standard school day and year; (2) those that have added more time; and (3) those that require less time in the classroom on a daily or weekly basis. As the exhibit clearly demonstrates, the majority of the sites (nine of 14) operate on schedules and calendars that approximate the five-to-six hour academic school day and 175-80 day school year that are typical in the United States--a seemingly curious circumstance for a study that is explicitly focused on innovative (or at least different) uses of time. The explanation lies primarily in the last row of the Exhibit: seven of the nine schools offering standard academic school days and years augment contact time with students outside of normal classroom hours.

EXHIBIT III-1

	AMY (6-8)	Beaver Island (dropouts)	Chinquapin (7-12)	Chiron (6-8)	Concurrent Options (9-12)	Girard College (1-12)	Hollibrook (K-5)	Metro High Sch. (9-12)	New Orleans (K-6)	Nativity Mission (6-8)	Nativity Prep (5-8)	Piney Woods (7-12) ¹	Timilty (6-8)	Wheeler (K-5)
Standard amount of classroom time (5-6 hours)	●	●	●			●	●			●	●	●		●
More classroom time					Late afternoon, evening				220 day year				Additional 1.5 hours/day	
Less classroom time				Transition time ¹				3 hours/day 4 days/week						
Other added time		Residential	Residential			Residential	Extended day			Extended day summer camp	Extended day summer camp	Residential		

¹ Students at Chiron spend part of each day at the school's homebase and part at community based learning sites. The commute between these places shaves some time off the standard school day required by the district, although the amount of time lost is not large.

² Piney Woods Country Life School has an elementary school component that is non-residential. Its program is not included in our case study.

Extending Time Outside the Classroom

Among our sample of schools and programs, two structures are used to significantly extend learning time in settings where the time allocated to formal, classroom-based instruction is about average for the nation. These two strategies are residential schools and extended day programs.

Residential schools. The ultimate answer to maximizing the influence of educational or caretaking institutions on young lives is the residential program. In these settings, the formal academic program constitutes perhaps one-fourth to one-third of the total time available for "learning." Because they are living and learning communities, however, there are many additional opportunities beyond the classroom for adults to mentor, supervise, discipline, motivate, and enjoy being with students.

The tradition of sending young people to boarding school is strongest among two very disparate groups in the United States: expensive boarding schools have long been the preferred approach to schooling for many of America's elite families, but they also represent a strong tradition on a number of Indian reservations. Lesser known but just as established are several residential schools serving low income and primarily minority youth. Three schools that we visited--Chinquapin, Girard College, and the Piney Woods Country Life School--fall in this latter group. The Beaver Island Lighthouse School, also a residential program, serves mainly older teens from several counties in rural Michigan; all of them are at risk of school failure.

Despite significant differences among the purposes and programs of these four residential schools for economically or educationally disadvantaged youth, they share certain characteristics for structuring the non-classroom time of students. All students, for example, have assigned chores that contribute to the smooth operation of group living arrangements. There are study halls and designated times for doing homework, with assistance available. Physical activity is either required or strongly encouraged, as is participation in other kinds of extracurricular or club activities. Enforced "lights out" rules ensure that students--particularly the younger ones--get enough sleep and that all students are accounted for during the evening hours.

The residential schools vary considerably in policies and practices governing students' discretionary time. Television watching policies illustrate this point. Many studies drawing on nationally representative samples have documented that American children typically watch a great deal of television (NCES, 1993) and some reports have speculated that this fact contributes to their relatively poor showing in international comparisons of educational achievement (National Commission on Time and Learning, 1994). Two of the residential schools in particular have

restrictive policies on television viewing because it interferes with their academic and developmental goals for students.

There are no televisions in the dorms at Chinquapin, and the prohibition on TV is made explicit to prospective students and their families. The policy is, in fact, a self-selection factor in the admissions process: potential students who cannot live without television will not be happy at the school. Beaver Island, on the other hand, makes use of its single television set for educational purposes and intends to increase its access to educational programming with a satellite link to the Public Broadcasting Service on the mainland. Students and staff at Beaver Island watch and discuss a national network news program after dinner each evening. Other television viewing (including selection of videotaped movies) is monitored by the staff since students are not allowed to be in the recreation room unless a staff member is present. Television watching policies appeared to be more relaxed at Piney Woods, where some students mentioned TV as a favorite weekend activity, and especially at Girard College where some students were observed watching late weekday afternoon shows in a student lounge, much as many live-at-home young people do.

There is some variability in the total amount of time spent at school among these four residential sites. Two of the schools (Chinquapin and Girard College) send all or most of their boarding students home on the weekends. This has always been the case at Chinquapin, where all enrolled students are from the same metropolitan area. Girard draws students from a somewhat wider geographic area and, until recent years, boarded them seven days per week. Now, however, as a cost-cutting measure, most students reluctantly leave campus on the weekends. Several Girard students indicated that they would prefer to remain at school since their weekend activities at home are often restricted by safety issues in their neighborhoods.

At the other two residential schools--Beaver Island and Piney Woods, weekends are part of the overall educational time available to program planners. Both schools use some weekend hours for formal educational purposes. Students at Beaver Island, for example, can earn additional high school credits for participation in academically-related Sunday evening classes on topics such as navigation or cost estimation for construction projects. Piney Woods operates some classes on Saturdays for students in academic difficulty. Participation in Sunday religious services is required at Piney Woods and optional at Beaver Island. Weekends also provide opportunities for cultural enrichment activities--excursions, dinners with international themes, and talent shows, to name a few.

All of these weekend activities are things that students **might** experience with their families at one time or another. In group living situations like boarding schools and summer camps, the spectre of mischief in idle hours ensures daily structure, advance planning, and a full roster of events that the

average family is unlikely to match. Assuming that most of the planned activities potentially serve some educative function, there seems to be little doubt that the boarding school experience adds significantly to total educational time. Based on our observations and interviews with students and staff at these four schools, we estimate that the typical student had no more than one to two hours per day of truly "free" time; most commonly, this time came just before dinner. Activities designed to build body, mind, and character consumed just about all the waking hours, with the day beginning as early as 6:00 a.m. for students at Piney Woods and with a 6:30 a.m. jog at Chinquapin. Yet we heard few complaints from students about how busy they were. They reserved their griping for particular rules and regulations that they found constraining.

Extended day programs. Three of the schools in our sample of 14 offered enrolled students additional activities after the regular school day ends. The most traditional of these--The After School Activities Program or ASAP at Hollibrook Elementary School--provides essentially free homework assistance and tutoring, athletics, dance, and computer classes for 1.5 hours on three days of the week. About 200 students (25 percent of a student body that is nearly 100 percent poor and Hispanic) attend regularly. The activities and classes have been supervised by volunteer teachers and parents--primarily teachers. At the time of our visit, however, the spirit of volunteerism was wearing thin. Through its school-based decisionmaking process, the school was considering a plan that would require every teacher to teach one afterschool enrichment class per week in exchange for one early release day. With no significant money available to run the afterschool enrichment program, this proposed strategy at least compensated teachers with time, which has an appeal.

The more comprehensive extended day programs that we visited are associated with two small, private Catholic schools--Nativity Mission School (established in 1971) and Nativity Preparatory School (established in 1990). Both schools serve male students in grades 6-8.² The afterschool program at Nativity Mission Center (a settlement house) actually predated development of the school day academic program and serves a wider age range than the school. Public school students in grades 4 and 5 attend the Brother Lawrence Program where they receive homework assistance and participate in recreational activities. These boys represent the pool from which 15 or 20 are selected each year for the academic program. When the Nativity Mission School boys move on to high school, the Center continues to encourage them through an afterschool High School Support Program.

²Nativity Mission School is the original model on which Nativity Preparatory Academy and several other replications around the country are based. The replications differ from the original in various ways, but all provide the extended day that drew our attention for this study. Our description and analysis in this section focuses on the original school

The parameters of the extended day program at Nativity Mission and the other schools that have adopted its approach are so comprehensive that the participating students are "at school" from early in the morning until 9:00 at night. From 3:00 to 5:00 p.m., they attend study hall (required if the student is in academic difficulty) or engage in recreational activities. There is a supper time break when many students go home, although some do not. Study hall resumes from 7:15 to 8:15, followed by more recreation until 9:00. Students are driven home in a van. By this time, they have spent nearly as much time at school as students in residential programs where "lights out" for this age group is 9:30 or 10:00 p.m.

All students do not attend the Nativities' extended day options every day, but they do so often enough that the additional time is a defining characteristic of "school" in their own minds and those of their families. One boy reported, "I haven't missed an evening study yet. At home, I can't do my homework; here, it's quiet." This observation was echoed by other students. At Nativity Prep, attendance at three evening study periods per week earns the student the right to participate in a purely social Friday evening at the school.

At least partially through their long hours of operation, both Nativity Mission (the original model) and Nativity Prep have succeeded in creating safe havens and in establishing strong, personal connections between student and school. There are differences between them, however, in terms of their connectedness to other parts of students' lives. As a settlement house as well as a school, Nativity Mission is solidly rooted in its community. Adults from the neighborhood--including parents of students--flow comfortably in and out of the Nativity Center. Nativity Prep, on the other hand, draws students from a wider catchment area, making it more difficult for families to connect with the school themselves or to understand their child's attachment. A boy said, "My family thinks I'm crazy to go here at 7:00 p.m." Another noted, "My mother supported me at first, but now she's not sure because she never sees me."

Nativity Mission and Nativity Prep both also extend the educational year for most students through a summer camp experience. Nativity Prep does so through an arrangement with another program. Using a combination of private foundation and government funding, Nativity Mission has sent 50-60 middle school-age boys to an archdiocese-owned camp facility on Lake Placid in upper New York state for over three decades. High school-aged alumni of Nativity Mission School serve as junior counselors at the camp--one of the ways in which the school continues to support and encourage its graduates. The camp program focuses on academics (particularly English as a second language), athletics, and leadership training. It also serves as a screening process for selection of the entering 6th grade class at Nativity Mission School the following fall.

Added Time for Classroom Instruction

Only three of our sites provided students with additional time for formal instruction, and each did it in a different way and for different reasons. One site increased the number of days in the school year and two increased the length of the school day. Each site also differed in the degree to which more time in the classroom was accompanied by other kinds of reforms affecting what goes on in the classroom, as we shall see later in the chapter.

A longer school year. Largely based on invidious comparisons between the achievement of American students and their peers in other industrialized nations, much has been written in the past 10 or 12 years about the need to lengthen the typical U.S. school year.³ From a policy perspective, the decision to go to a longer school year rests with states and local districts. So far, no state has mandated a significantly expanded school year, and our efforts to locate local sites that had adopted this type of time-related innovation turned up only one recent experiment. By the time we actually collected data, even this experiment had ended. Thus, our case study of two year-round schools in New Orleans is historical.

From 1989-90 to 1991-92, Moton and Lockett Elementary Schools in New Orleans operated on a 220-day school year. All of the students served by both schools were (and are) poor and of African-American descent. Many of the children live in public housing projects, and generally speaking, the neighborhoods served by the schools are crime-infested and dangerous. The day before we arrived for our site visit, an infant had been killed by a stray bullet.

Discussion about moving to an extended school year began as a districtwide possibility in New Orleans. The focus narrowed to an experiment at two elementary schools for a variety of reasons (e.g., potential scheduling conflicts with athletics and students' jobs at the secondary school level, public resistance), but the primary barrier was money. Planners estimated that adding 40 days to the school year would cost \$375,000 per school for salaries and operating expenses.

Despite the continuing reluctance of the New Orleans Parish School Board to embark on the extended year experiment, Moton and Lockett finally gained permission to proceed because of two circumstances: (1) strong support from parents, who viewed a longer school year as more days when

³We examined the available literature on both extending the school year and adopting various configurations for year-round schooling (most of which do not actually add time to the school year for the typical student) at an early point in the study. Syntheses of our findings can be found in the following publications: [Adelman, Editor (1995); Funkhouser (1995)].

their children would be in a safe, air conditioned environment for part of the day and (2) their eligibility for additional federal funds as schoolwide projects under the Chapter 1 program. Of the \$750,000 needed to support 40 extra days in the two schools, 60 percent came from Chapter I and 40 percent from the local district budget (see the more extensive discussion of resources in Chapter IV).

This extended school year experiment lasted three years. It was popular with parents and moderately popular with faculty and other staff. While some fairly minimal qualitative changes in curriculum and instruction accompanied the added time (see next section), the primary innovation was simply more days in schools, and, as we will discuss later in this chapter, its impacts on student outcomes were mixed, at best. The demise of the experiment occurred primarily because of severe cuts in the local education budget. However, it might have survived if indicators of improved student achievement had been stronger.

More daily instructional time. Since 1986, Timilty Middle School in the Roxbury neighborhood of Boston has offered all of its students a 7.5 hour school day, four days a week--1.5 hours longer than that of the typical district middle school. The added time is devoted to one extra period of math and one of reading on Monday through Thursday of each week; on Fridays, students attend school for 6 hours, allowing teachers a regularly scheduled time block for professional development and common planning. Over the course of a year, the longer school day for students yields the equivalent of 36 extra days of instruction over schools that follow the norm of 6-hour days.

The instructional time added by Timilty's longer day is nearly equivalent to the extended year design at the two New Orleans schools described above--a difference of only four days per year. As a reform strategy, however, Timilty's approach may seem less radical than a 220-day year. Students have the same vacation schedule as other schools, including the long summer break. The added instructional time at Timilty has some associated costs for faculty and staff salaries (see Chapter IV), but they are not as great as keeping a building open when all the others in the district are closed. Finally, in addition to adding a significant quantity of instructional time for students, Timilty's plan has provided time for teachers to undertake a qualitative restructuring of curriculum and instruction. It is, therefore, a more comprehensive reform effort than that in New Orleans.

The third program in our group of case studies where additional classroom time is available to students is ConCurrent Options in New York City. This program is complex and attempts to meet many kinds of student needs through an array of alternative approaches to earning credits toward high school graduation. In some cases, participants in one or more of the options may spend less daily time in school than the average student. We have chosen to include it with the programs that add time because program leaders emphasized its particular utility for (1) immigrant students, who are

slowed in earning credits at regular high schools by required enrollment in noncredit English language courses and (2) students who must take noncredit remedial courses because of low test scores. The "concurrent" in ConCurrent Options means that students may be enrolled in a regular high school for a normal school day and then add instructional time through a variety of mechanisms. The program is also designed for students whose life circumstances make it difficult for them to attend regular school. The availability of the instructional options allows thousands of New York City high school students to complete their diplomas more or less on time. Through this program, students may attend late afternoon, evening, or summer classes, contract to do independent study, take adult education or community college classes for high school credit, and/or participate in vocational or community-based training.

Less Time for Classroom Instruction

From the outset of this study, we have entertained the idea that educational innovations involving time might well include sites where students actually spend less time in school than the average student at a given level of schooling. In Exhibit III-1, we note that two of the schools in our sample fall into this category.

Metro High School, an alternative school in Cedar Rapids, Iowa has shortened the school day and the school week to meet the needs of its students, all of whom are in some sense at risk of not completing high school. Students attend classes for three hours per day (either in the morning or the afternoon, depending on their personal preference) from Monday through Thursday. Friday is reserved for faculty meetings, planning and preparation, and faculty visits to students' homes or places of work.

This lower dose of daily classtime at Metro means that students accumulate credits at a slower rate--about four units per semester rather than the more typical six or seven units in a mainstream school. The aim in regular schools is graduation in four years; at Metro, the expectation is that most students will take longer and that there is no stigma attached to the pace at which students progress.

Metro's approach to the amount of time that its students are expected to be at school and engaged in learning is reality-based and tested by 20 years of experience. For a wide variety of reasons, the students it serves could not handle the time configurations and requirements of mainstream high school. The reduction in daily time at school is a very significant factor in encouraging students to hang in for a real diploma rather than opting for an equivalency certificate. Without the more flexible time frame at Metro, most of its students would be dropouts.

At Chiron Middle School in Minneapolis, reduced instructional time is not a deliberate feature of the school's design. Rather, the fact that students spend somewhat less time in classrooms than their peers is an artifact of the school's community-based approach to education. Students experience part of their school time in classrooms at a "homebase" facility and the rest at one of the school's "learning sites," some of which are at a distance from homebase. Transportation between the educational venues cuts a modest amount of time out of the school day and year, although school staff believe that the loss is largely inconsequential.

Strategies to Improve the Quality of Learning Time

The groupings of schools and programs by quantity of instructional time that we employed in the previous section provide an analytic framework for examining the even more critical question of what goes on within the time available for teaching and learning. In Exhibit III-2, the 14 sites that we visited are arrayed in three categories: standard amount of classroom time (the majority of sites); more classroom time; and less classroom time. The "Y" axis lists characteristics of instruction, curriculum, and assessment employed by the sites.

To the extent that the sites utilized or were in the process of implementing innovative approaches to teaching and learning, most were concentrating their efforts on different approaches to instruction. Indeed, some of the sites were selected because we knew that even though they had not added or subtracted time, they configured or conceptualized the standard ration of school time differently than the typical school--specifically through multi-age grouping and/or flexible scheduling.

Multi-age grouping. Philosophically, the idea of multi-age grouping, or ungradedness, removes some of the time-related pressure from both students and teachers of being ready to "pass" to a new level at the end of every school year. Instead, forward progress is benchmarked to longer time frames (typically three years), allowing greater tolerance for developmental and maturational differences among children. Thus, for example, the Alternative Middle Years (AMY) program in Philadelphia has used multi-age (their term is "vertical") grouping of students throughout its 25-year history. Students do not sit in classrooms because they are 12 years old or in the 6th grade. Rather, with the exception of some math courses which are offered in the traditional graded way, students select classes because the themes interest them. Chiron, a relatively new magnet middle school in Minneapolis has adopted a similar approach to grouping students, as have two elementary schools in the sample--Hollibrook and Wheeler. Generally speaking, mixed age groupings also mean mixed ability groupings at these schools.

EXHIBIT III-2

	Standard Amount of Classroom Time											More Classroom Time			Less Classroom Time	
	AMY	Beaver Island	Chinquapin	Girard College	Hollbrook	Nativity Mission	Nativity Prep.	Piney Woods	Wheeler	ConCurrent Options	New Orleans	Timothy	Chiron	Metro		
Instructional Strategies																
Multi-age groups*	•	•			•				•	•			•	•		
Flexible scheduling*					•			•		•			•	•		
Team teaching	•				•				•				•			
Instructional "families"									•							
Small class size		•	•	•		•								•		
Individualization, tutoring	•	•			•											
Home-work assistance			•	•		•										
Use of technology					•											
Curriculum																
Traditional		•	•	•		•		•		•			•	•		
Teacher-developed	•				•				•				•			
Interdisciplinary	•								•				•			
Enrichment									•							
Workplace preparation										•				•		
Applied/experiential		•								•			•	•		
Assessment																
Traditional			•	•				•		•				•		
Performance assessment									•				•	•		
Portfolios	•				•				•				•	•		
Competency-based		•						•		•			•	•		

* Site selection criteria



In two high school sites--ConCurrent Options and Beaver Island Lighthouse School--mixed-age grouping is a matter of practicality. Both programs offer opportunities for mainly older high school students to rectify credit deficiencies in their pursuit of a high school diploma. For these students, the correlation between age and grade in school has ceased to be relevant. They need a math or a history credit. At the Beaver Island school, some of the instruction is, by necessity, individualized, but wherever possible, the 16-21-year-old students are clustered into subject specific classes. Thus, for example, in the fall of 1993, nine students of varying ages were taking algebra and 12 were enrolled in general science.

An ungraded structure seems to be particularly felicitous at the middle school level because of the wide variation in physical and social maturation. The intellectual mixing of ages and stages in an academic climate downplays the tendency of larger students and early bloomers to intimidate those who are maturing more slowly. At AMY, students were able to compare the vertical grouping arrangement with their previous experiences in elementary school. They professed that they liked the mixture of ages in their classes for a variety of reasons--being friends with everyone, being able to help classmates, the tendency of teachers to explain concepts in several ways to ensure that students at all developmental stages grasped the point. At the elementary schools, students were largely unaware that the ungraded structure that they were experiencing was atypical or unusual; most had never attended school under any other circumstances.

Multi-age grouping is certainly not a new idea. Its historical roots are in the one-room schoolhouse, and it has been in continuous use as an organizational structure in some places throughout the history of American education. As noted in our summary of research, the evidence on its impacts on student achievement are mixed, mixed-age classrooms appear to be enjoying a renaissance. Encouraged by district reform policies, teachers at Wheeler Elementary School in Louisville made their own decision to experiment with mixed groupings as one result of a schoolwide restructuring process. However, Kentucky now requires this structure in the primary grades. Wheeler was thus in the vanguard of a much larger wave of reform in its state. Nevertheless, state mandates are not primarily responsible for the growth in the number of schools turning to an ungraded structure. Adoption of this instructional strategy is more typically the result of school-based decisionmaking in the contexts of schoolwide restructuring (Hollibrook) or the creation of new magnet schools (AMY and Chiron).

Flexible scheduling. As we developed our site selection plan for the Uses of Time study, we were aware of increased interest, particularly at the secondary level, in breaking out of the constraints of the traditional daily schedule of six or seven 45-50 minute periods. For middle and high schools, this interest was partially driven by the desire to create longer blocks of time that would allow

experiments with constructivist learning in accordance with the recommendations of newly emerging, discipline-based instructional standards. Elementary school teachers were less concerned about establishing longer blocks of time, since even when states or districts mandate the number of minutes of instruction in given subject areas, elementary school teachers have always had more classroom-level discretion over how instructional time is configured. However, teachers at all levels were examining schedules to find time for joint planning, team teaching, and curriculum development, among other things--again, generally within the context of schoolwide restructuring.

There is no particular pattern to the strategies that the schools we visited adopted to add flexibility to their schedules. In some cases, the changes affect all teachers and students; in others, the flexibility is available but optional. For example:

- Chiron Middle School uses two levels of block scheduling. The year is divided into blocks of weeks; at the end of each block, students rotate to a different venue among the school's community-based learning sites. At another level, daily school time involves a large block of "site" time, framed by a traditional period of math and a life skills class.
- Piney Woods adopted two-hour block classes in 1986 as part of a broader school improvement strategy. The decision was made by administrators, but teachers are pleased with the arrangement. They noted that it provides an opportunity for them to complete a variety of instructional activities and projects during a single class period. Under the block schedule, students meet with three of their classes on Monday and Thursday and with the other three on Tuesday and Friday. On Wednesdays, all classes meet for one hour. Some teachers observed that the Thursday-Monday and Friday-Tuesday gaps created some discontinuity in instruction, particularly for the 7th and 8th graders.
- At Hollibrook Elementary School, individuals, teams, or grade level groups of teachers can make ad hoc decisions about how instructional time will be configured for a day, a week, an instructional unit, or a year. Two teachers developed a curriculum called the Two-Way Developmental Bilingual Program designed to speed acquisition of English by monolingual Spanish speakers and to promote bilingualism in monolingual English speakers. They team teach both groups of children in the same room for most of the day, with the discourse and instruction moving back and forth between the languages almost from minute to minute.

The reasons for interest in new ways of scheduling such as those just described reflect the professional interest of educators in the recommendations of research on improving curriculum and pedagogy. Some of the high school programs in our sample of sites were also interested in flexible scheduling that could accommodate students' life situations. In the previous section of this chapter, we noted that Metro High School restricted required daily school time to three hours. Students

choose whether to attend school in the morning or the afternoon based on considerations such as child care arrangements, work schedules, court-required counseling sessions, or simply personal preference. The ConCurrent Options program, concerned with the same kinds of student issues, makes it possible for the New York City teens who take advantage of it to earn graduation credits from sun-up to nearly midnight and on Saturdays.

Other programmatic innovations. While we used the time-related variables of multi-age grouping and flexible scheduling as selection variables for some of our sites, we inevitably found that the 14 schools and programs in the sample were pursuing other kinds of classroom innovations as well. Reforms that alter time, after all, are strategies designed to allow certain desirable things to happen that had not previously been possible. Exhibit IV-2 matches a list of the school and classroom-based reforms that we encountered with the sites that had adopted them.

In general, we observed that if these sites were either experimenting with or had fully institutionalized reforms of instruction, curriculum, or assessment practices, the reforms represented approaches that were being advocated in the professional and research literature of the time. Indeed, some of the sites could have been selected as case studies for other themes under OERI's Studies of Education Reform program. However, careful attention to Exhibit IV-2 yields the following conclusions:

- A majority of sites (10 of 14) believe that small class size is a key variable in improving student outcomes.
- A majority of sites (10 of 14) rely on traditional, textbook-based curricula, sometimes in combination with more innovative, teacher-developed materials.
- A majority of sites (9 of 14) measure student success using traditional student assessment practices.

Small class size. The dedication to reducing class size is an interesting phenomenon. Despite substantial research demonstrating that the student-to-teacher ratio must be very low (perhaps as personalized as 1:1 tutorials) to produce statistically significant differences in student achievement outcomes (see the research review for this study), many educators and parents are persistent in their belief that classes in regular public schools are too large and that this factor is a major contributor to poor student outcomes. The sites in our sample provide ample evidence of this belief: 10 of 14 schools emphasized small classes in promotional literature and in the interviews that we conducted. Most of these schools had student:teacher ratios of about 15:1, which is not greatly lower than the national average for all public schools of 17:1 (NCES, 1994).

At two of the residential schools (Beaver Island and Chinquapin) and the two Jesuit schools, small class size is really a byproduct of small total enrollment. These places were designed to serve very small numbers of highly at-risk students in very special ways. While financial and space considerations are one reason these schools remain small, their primary arguments for smallness are based on philosophic grounds. Their goals are to have a large impact on a small number of children.

The private schools in our sample can make their own decisions about keeping classes small and the budget trade-offs that must be made to achieve this end without reference to policies and conventions governing publicly supported schools. But, as Exhibit IV-2 shows, many of the public schools in our sample also value smaller classes. However, maintaining small class size in the face of surrounding bureaucracies has been a struggle for several of them. Because reduced class size means more faculty members in relation to number of students, it means an increase in a school's labor costs, which is unpopular with a district's central office. Two of the public schools in this study--AMY and Chiron--negotiated with their district offices to trade teachers' planning time for additional instructional staff to decrease the student/teacher ratio without increasing building-level operating budgets. Metro High School keeps class sizes small by having only half of its total enrollment on campus at a time (A.M. and P.M. sessions). Timilty Middle School must make an annual argument for the extra resources that allow its extended day and small classes. So far, the arguments have succeeded because the school has produced some rather astounding results (see later section on student outcomes).

Traditional versus innovative curriculum and assessment. As we began our data analysis, we were somewhat surprised by our conclusion that, when all is said and done, curriculum and assessment were quite traditional at a majority of our sites. On reflection, however, we should not have been. The time variables that constituted our main selection criteria are primarily instructional variations. They alter **when** and **how** teaching and learning take place. They do not necessarily require change in **what** is taught and learned. Nevertheless, we observed some relationships between particular quantity and quality of time innovations and concomitant innovations in other technologies of schooling.

Once again referring back to Exhibit III-2, we note that the schools that have adopted multi-age grouping and/or flexible scheduling are more likely to have also altered their approaches to curriculum and assessment. Multi-age grouping, in particular, has several implications for curriculum:

- Mixed-age groups require a different type of curriculum organization. When a curriculum is not organized by traditional grade levels, it must have some other structure to ensure not only that students learn the basic concepts covered in a district's curriculum for those grades but also that students do not unnecessarily repeat learning tasks from one year to the next.
- Mixed-age grouping deters teachers from basing classroom instruction primarily on textbooks. Most textbooks are written for use at a specific grade level. Thus, the content that a teacher wishes to cover for every student in the mixed-age group may not be contained in a single book. Consequently, teachers of mixed-age classes tend to gravitate toward creating their own curricula, drawing on multiple sources of information and materials.
- Standardized tests are less appropriate in assessing the effectiveness of an educational program for mixed-age groups. Most current standardized assessment instruments are based on assumptions about students' exposure to a curriculum that is sequenced and paced grade-by-grade. Teachers in schools with mixed-age classrooms and a philosophy of continuous progress reported increasing reliance on student portfolios and teacher-created performance assessments to gauge student progress.

The generalizations above apply primarily to the situations that we observed at the nonresidential elementary and middle schools in the study: AMY, Hollibrook, Wheeler, Timilty, and Chiron. In general, the three public high school sites in the study--Beaver Island, ConCurrent Options, and Metro--offer students fairly traditional academic fare. Metro teachers are inclined to be innovative, particularly in terms of interdisciplinary courses, but the students resist, preferring academic classes that are similar to those they would take if they still attended their city's regular high schools. The high school programs exercise their greatest curricular creativity around their workforce preparation and experiential learning offerings:

- Metro offers credit for "voademics" (applied courses) and work study experiences. Voademics courses, which are school-based, combine applied academics with vocational education in courses such as *Bake-A-Teria* (a class in which students actually run a community bakery), *Metro Laundry*, *Metro Bicycle Repair Shop*, and *Recycling Program*. Metro also offers a school-to-work program in which students may earn up to five hours of elective credit for off-campus job placements. These options, in combination with the shorter school day, are what attract many students to the alternative high school.
- ConCurrent Options includes several ways in which students may earn credit for workplace or experiential learning. Jobs that they already hold can be evaluated for the value added to an individual's education. If they are 17 or older, they may attend the New York City Vocational Training Center. Internships in community-based organizations are available, and a shared instruction option allows schools and employers to jointly mentor students in on-the-job training placements.

- The Beaver Island Lighthouse School combines its need to be a self-sufficient living community with students' needs for course credits toward graduation. Elective credits can be earned by assisting with meal preparation and routine maintenance of the facility.

The eight sites that we have discussed above represent all of the public schools sites in the study, with the exception of the extended year experiment in New Orleans. There, the only change to curriculum and instruction engendered by the additional time in school involved a more relaxed pace for delivering traditional, grade-by-grade content.

The remaining study sites are the private residential and Jesuit schools. These schools offer students solid but very traditional, strictly college preparatory, academic programs. Perhaps because they are largely out of the public eye and not subject to either the sometimes harsh criticisms that public education has received over the past 15 years or the policy mandates designed to address the criticisms, the private schools seem less concerned with change, less tuned in to recent research on curriculum and pedagogy, more self-confident that they are succeeding with the students they educate.

This observation does not mean that we found the private schools to be complacent, nor that they do not seek out ways to improve their programs. For example, in 1991, Piney Woods Country Life School in Mississippi established a long-term relationship with the Breadloaf Writing School in Middlebury, Vermont and introduced a writing-across-the-curriculum project. More recently, Girard College in Philadelphia began a restructuring process to, among other things, create better communication between instructional and residential staff about students' progress and problems. Overall, however, the curriculum and instruction in the private schools visited for this study looked and felt very much like good education of the 1950s and 1960s.

It is our experience in visiting the private schools that has caused us to give additional thought to our original hypothesis about the interrelationship between quantity and quality of time variables. More time in classrooms, we thought, coupled with engaging content taught in varied ways, might well lead to demonstrable improvement in student outcomes. These private schools, however, offer "disadvantaged" students a standard amount of classroom time and a textbook and worksheet-driven curriculum delivered by teachers standing at the front of the room. And it seems to work. We turn now to a discussion of the evidence that the 14 study sites could offer about the effectiveness of their programs in helping students learn.

Student Outcomes

The great variation among the schools in our sample makes it difficult to neatly present the evidence that they shared with us about program outcomes. In this section, we examine the "hard" data that we have--facts, figures, and analyses that school officials gave us in response to questions about student outcomes. We do not, however, believe that this tells the whole story. We therefore complete the chapter with a final section that offers evidence of another sort about the impacts of these schools and programs on their students.

The 14 schools in the sample cover the full range of K-12 education. Obviously, indicators of student success differ for elementary, middle, and high schools. Even among the schools serving students of similar ages or grades, contexts differ significantly in terms of program goals, the aims of school improvement plans, accountability procedures, testing requirements, and so on. Here, we organize and discuss documented indicators of student success by level of schooling, presenting the evidence that each school cited on its own terms.

High Schools

Six of the 14 schools and programs that we visited serve students in the traditional high school age range. Three of these (Chinquapin, Girard College, Piney Woods Country Life School) are private, residential, and very traditional in terms of curriculum and instruction. The remaining three (Beaver Island, ConCurrent Options, Metro) are publicly-funded alternatives or supplements to traditional high school. The goals of these two groups of schools are obviously quite different, as are the indicators by which they judge their own success.

The private, residential schools are avowedly college preparatory programs. Their primary measures of success, therefore, are related to college admissions and, by any reasonable standard, they are extraordinarily successful:

<u>School</u>	<u>Percent of Graduates Admitted to College</u>
Chinquapin	100
Girard College	90
Piney Woods	95

These figures are not attached to any particular year. Rather, they are averages over time. In general, nearly all of the graduates of these institutions go on to postsecondary education. The few

who don't have made other deliberate decisions about post-high school plans. Nobody leaves without some personal goal in mind.

As administrators and teachers at all three of these schools are well aware, college admission is only a first and quite tentative step beyond the sheltered world of high school that their students have experienced. Nationally, rates of persistence in college for students from educationally and economically disadvantaged backgrounds are low (Carter and Wilson, 1994) for reasons that are often discussed and much disputed. One concern for these schools is whether or not they have prepared their graduates well enough to meet the demands of college-level work.

The guides that Chinquapin, Girard, and Piney Woods use to estimate high school achievement levels are the SAT and the ACT tests. Nearly all Chinquapin and Girard seniors take the SAT. On average, Chinquapin students--who are primarily Hispanic and African-American--score about 100 points higher than seniors nationally and in Texas; in some years, they have done even better. School officials at Girard report that, on average, students score about 50 points above the national average combined verbal and mathematics score, which was 899 in 1992 (NCES, 1993). Piney Woods students' ACT scores are, on average, several points lower than those for all students nationally or in the state of Mississippi. In most years, however, they are higher than the average for all African-American students nationally, which the school considers a more valid reference point.

All three of these private residential schools routinely place their top students in selective higher education institutions. Because of their long traditions of educating disadvantaged students, they are well-known to colleges and universities as sources of well-prepared minority freshmen. Smith College, for example, regularly recruits applicants at Chinquapin. Other institutions that have recently enrolled Chinquapin graduates include Northwestern, Wellesley, and Stanford. In 1992, Girard College sent its top three graduates to Yale, Duke, and Johns Hopkins. Graduates of Piney Woods most typically attend colleges in the south.

Although they are small in comparison with many public high schools, the senior classes at Girard and Piney Woods are large enough that the schools have not pursued comprehensive follow-up on all graduates. Piney Woods was, for the first time, in the process of developing a survey for this purpose at the time of our visit. Girard did not have actual data on college persistence to share, but school officials were aware that too many of their graduates failed to complete college for two primary reasons: money and the impersonality of college campuses in comparison with Girard.

With graduating classes of only 10 or so students, Chinquapin has been able to track graduates' progress more carefully. The school makes a point of staying in touch with as many

graduates as possible and provides scholarship assistance to some. The numbers show that most former Chinquapin students do graduate from college, taking--on average--five years to do so. The school had recently hired one of its graduates, educated to the Masters level, as a teacher.

There seems to be little doubt that these three residential schools for disadvantaged students have high success rates with the students that they retain through all four years of high school. It is also true that they are selective to begin with and are empowered to dismiss students who violate codes of conduct. By their own admission, they do not attempt to deal with potential students who have demonstrated serious behavioral or emotional problems. They are also looking for students with academic promise. Once students are admitted, however, the schools do everything in their power to help them succeed. Their efforts go well beyond academic instruction in classrooms, as we shall see in the final section of this chapter.

In contrast to the private high schools, the three publicly-funded high school programs in our sample explicitly serve the adolescents most at-risk of not graduating. As one might expect, their challenges are greater and their success rates more modest. In their local contexts, however, they make a tremendous difference--in two cases, to a large number of students.

The primary academic goal of the Beaver Island Lighthouse School, ConCurrent Options, and Metro High School is credit accrual leading to a high school diploma. These schools do care about what students are learning, but the bottom line is passing courses at the minimum level at which full credit can be assigned. Beaver Island and ConCurrent Options do not themselves award diplomas. Rather, they provide supplementary academic services to help credit-deficient students re-establish themselves on a diploma (or equivalent) track. Metro is a full-service alternative school that does award standard school district diplomas but allows students a longer time to get there than regular high schools. All three programs have indicators showing that they are succeeding at what they do:

<u>School</u>	<u>Indicators of Academic Success</u>
Beaver Island	30 percent of participants re-enroll in regular school 10 percent of participants pass the GED
ConCurrent Options	1992-93: 115,000 credits earned Average, annualized dropout rate in 32 participating schools: 5.2 percent
Metro	Of 51 graduates (1991): 45 percent employed; 32 percent enrolled in further education or training; 4 percent in the military; 20 percent other or unknown

Over the long term, Beaver Island and ConCurrent Options do not have hard data showing numbers of students served who have actually completed high school. The large number of credits earned through ConCurrent Options, cited above, is not an unduplicated count in terms of participating individuals. The annualized dropout rate for participating high schools is lower than for New York City high schools overall.

Metro High School, on the other hand, is scrupulous about keeping track of student status, both before and after graduation. At the end of each school year, the school takes a census of students' plans for the following fall. On average, 50-60 percent of the school's approximately 600 students return to Metro, while another 10-15 percent continue to pursue a diploma or GED elsewhere. The school's rolls generally continue to carry a certain number (10 percent or so) of students who are inactive but not yet considered real dropouts. The dropout rate for the school is calculated to be about 5 percent annually.

As a restructuring school, Metro has been particularly concerned in recent years with the adequacy of students' communications skills. It administers two diagnostic tests to students annually: Degrees of Reading Power and a district writing proficiency test that other students take only in 11th grade. In general, test results show that students are struggling. However, the school's emphasis on writing-across-the-curriculum has produced a positive upward trend, with the proportion of students scoring average or above on the writing proficiency test climbing from 18 percent to 40 percent over a three-year period.

To some readers of this report, the "hard" data available for evaluating the success of Beaver Island and ConCurrent Options may seem inadequate. These two programs would argue that they are providing essential academic support services for students who otherwise would likely leave school in frustration, and that alone is reason enough for their existence. The implementation of ConCurrent Options has actually had a positive effect on academic standards in some participating schools. State-required course accreditation committees that had long languished in many schools were revived to review Options courses and now actively scrutinize regular courses as well.

Middle Schools

Our sample of sites includes five middle schools: AMY, Chiron, Nativity Mission, Nativity Preparatory, and Timilty. In addition, the three private residential schools, discussed above as high schools, also serve a middle or junior high school age group. We incorporate discussion of them, as appropriate, in this section as well.

Institutionally, the middle grades form the bridge between elementary school and high school. Developmentally, they are charged with shepherding the transition from childhood to adolescence. Academically, they must ease students from the pattern of one teacher and a relatively wholistic curriculum in the early grades to the typically discipline-based courses and multiple instructors in high school. The middle schools in our sample all approach these challenges differently, but all except Chiron ultimately measure their success by a single indicator: high school placement:

<u>School</u>	<u>High School Placement</u>
AMY	Magnet schools: 90 percent Selective magnets: 60-75 percent
Nativity Mission	Private, parochial, or selective public high schools: 97 percent over a two-year period
Nativity Preparatory	Private and parochial high school: 91 percent
Timilty	Growth in proportion of graduates admitted to selective public "exam" schools: from 22 percent in 1986-87 to 73 percent in 1992-93

Chiron graduates do have some choices at the high school level but, at the time of our data collection, the school had not yet developed a systematic way of following up on the next stage of its students' education.

By the measures outlined above, it seems clear that these four middle schools are very highly regarded by the next level of schooling within their local contexts (and sometimes beyond, since a small number of students from the Nativity schools are admitted to selective boarding schools on scholarships). Why are these schools' students so attractive to elite high schools? School officials typically cited standardized test scores, including patterns of improvement that reflect well on the effectiveness of their own programs (note that Chiron and Chinquapin are also included in the information presented below):

<u>School</u>	<u>Test Score Indicators</u>
AMY	84 percent of students at or above grade level in math and reading, 1992-93 (no growth data available)
Chinquapin	On average, students register a 2-year gain on the Iowa Test of Basic Skills after their first year at the school
Chiron	3-year growth pattern on California Achievement Test for 1993 8th graders: Reading Comprehension increased from 45th percentile to 65th percentile Math Concepts increased from 41st percentile to 69th percentile
Nativity Mission	3-year growth pattern on Comprehensive Test of Basic Skills, Total Battery, for classes of 1990, 1991, and 1992: 1990: from grade level equivalent of 3.3 in 5th grade to 9.7 in 8th grade 1991: from grade level equivalent of 4.7 in 5th grade to 9.2 in 8th grade 1992: from grade level equivalent of 4.7 in 6th grade to 8.7 in 8th grade
Nativity Prep	No test data available at time of data collection
Timilty	3-year growth pattern in proportion of students passing state basic skills test: Reading: from 77 percent in 1986-87 to 90 percent in 1988-89 (last year of test)

We cannot, of course, attribute these impressive growth patterns directly to the schools' innovations in the uses of time for teaching and learning. Many, many variables contribute to the overall impact that the schools have on their students. Nevertheless, we selected these sites because of time-related factors, not because of any foreknowledge of student outcomes. Their unique combinations of amount of educational time and how that time is used quite probably are significant factors in their equations for success.

Elementary Schools

In terms of evidence that time-related reforms may have an impact on student outcomes, the three elementary school sites in our sample are the weakest link in the argument. While there is always room for improvement, Wheeler Elementary in Louisville was already posting decent student

test scores before its experiment with restructuring began. Philosophically, its reform efforts have moved the school away from placing much reliance on standardized tests as indicators of student success and toward alternative approaches to assessment and reporting progress. (At the time of data collection, the new statewide Kentucky assessment system, KIRIS, had not yet been implemented, and the school has been unresponsive to our requests for updated information.) Basically, we do not know whether the school's efforts with multi-age groupings, enrichment activities, and interdisciplinary, thematic curriculum have produced the kinds of outcomes that teachers hoped for.

Hollibrook Elementary in the Houston area also represents a comprehensive restructuring experiment, modeled on Levin's Accelerated Schools Program. School administrators and teachers hoped that the combination of more challenging curriculum, varied instructional approaches, enrichment activities, school-level decisionmaking, and increased parent involvement would, among other things, produce improvement in chronically low student achievement, as measured by required state tests. However, early data showing that 5th graders experienced sharp growth in achievement levels, particularly in reading and language arts, has not been replicated more recently. Further, the school and grade-level data that are available are confounded by changing state policies on whether students enrolled in ESL or bilingual programs must take the state tests: sometimes they are in and sometimes they are out, causing considerable fluctuation in results at a school like Hollibrook where 88 percent of students are of Hispanic origin and many speak only Spanish when they first enroll.

Finally, there is the case of Moton and Lockett Elementary Schools in New Orleans--40 more school days per year with little effort to determine how the extra time might be employed to produce improved student outcomes. One of the schools showed a consistent improvement in the proportion of students scoring above the national average in reading on the California Achievement Test and a more or less parallel decline in the proportion scoring below the 25th percentile. However, results for math at this school and in both skill areas at the other school fluctuated, producing no discernible patterns of improvement that might have been used to defend continuation of the experiment on academic grounds. Ironically, some of the added time was actually allocated to test preparation activities.

While they could not point to achievement data as proof, the elementary schools all noted other indicators of positive change which they attributed to time-related and other innovations. Teachers at Wheeler spoke of improved attendance, decreases in disciplinary referrals, increased student motivation, and increased parental involvement. At Hollibrook, student mobility has decreased as the school's self-image has improved. Teachers observed growth in students' self-confidence and self-esteem and improved attitudes toward learning. Moton and Lockett staff cited similar kinds of outcomes: a drop in suspensions, higher attendance, higher self-esteem. An attempt

to measure growth in self-esteem with an instrument actually pointed to a decline over the life of the experiment.

On balance, then, most of the high schools and middle schools in our study have marshalled "hard" evidence that their academic programs--which, as we have discussed, are variable in terms of their innovativeness--produce results; the elementary schools have not. Where does this leave us? We cannot say, "The additional 1.5 hours per day of classroom instruction at Timitly makes the difference," because that example is counterbalanced by Chiron where students lose some instructional time by moving among learning sites. In fact, with this sample, any attempt to argue that one classroom-based strategy looks more promising than another fails because so many permutations of quantity and quality of time are represented. We therefore challenged ourselves to find another factor that linked sites that were indisputably successful. We concluded that, in addition to academics, these schools emphasize another kind of curriculum that has a strong effect on students' attitudes and efforts in the classroom. We discuss this "other" curriculum next.

The Fourth and Fifth "R's": Responsibility and Respect

The successes that many of our schools have had and the ways in which they measure them suggested to us that there are deeper lessons being learned by students than the information they give back on tests or the excellent work that they accumulate in their portfolios. They are lessons about values, responsibility, and respect, and they are delivered in many ways.

The greatest contribution of extended hours, days, or weeks in school may well be the increased opportunities for caring adults to reinforce these deeper lessons. The evidence from this study has convinced us that research-based, innovative, challenging curriculum and instruction--however much of it there is--cannot alone turn back the alleged tide of mediocrity, particularly for students who are at risk of school failure. In the schools that we found to be the most impressive, there is a bedrock of high personal standards and an almost spiritual dimension to the commitment of the adults to ensuring that students reach them. We detected this phenomenon most strongly in the residential and Jesuit schools, but it was certainly discernible in some of the other schools as well. In this last section of the chapter, we discuss the strategies that sites used to develop and sustain a tone that breeds student success.

Residential and Jesuit Schools

Administrators at the residential schools explained that, when people are living and working together 24-hours per day, the issue of what will be tolerated and what will not is fundamental. As one school director put it, "If we can just get them to assume responsibility for themselves and their actions, that will be a big step in the right direction." Behavior codes at these schools require that students treat faculty and one another with respect and take responsibility for their own learning. Certain behaviors are strictly forbidden, and sanctions are enforced, including temporary or permanent expulsion.

The student handbook of one residential school includes several pages of rules that, give or take a bit, are typical of the residential schools in this study. A sampling of these rules gives a flavor of the standards that living/learning communities set and live by:

- The school is a closed campus; no student may leave it with permission.
- Students are not allowed in the house supervisor's room or in cabins of the opposite sex.
- Students are expected to attend all meals and classes and are responsible for getting themselves there.
- Students are expected to treat all members of the community with respect and consideration. Pairing off and public displays of affection are strongly discouraged. Communication about problems and concerns is encouraged, but abusive language is not tolerated.
- Possession or use of alcohol, drugs, and weapons will result in automatic dismissal from the program. Practical jokes are also absolutely forbidden.

This set of rules--which is for older teenagers--makes very clear what kinds of infractions are nonnegotiable and will have severe consequences. In each school year, a small number of students are inevitably asked to leave the residential schools and, while most of the schools have procedures for reinstatement, that option is generally not available until a new term or a new year.

The residential schools (and indeed, many public schools) must directly state the behaviors that will result in dismissal to protect themselves. Those rules, however, are not the ones that are emphasized on a day-to-day basis. Rather, the expectations captured in the third and fourth bullets of the above list are the guiding principles for behavior at all of the residential schools (and the two Jesuit schools as well): personal **responsibility** and **respect** for others. These principles are

pervasively and consistently reinforced by all adults, in all of a school's venues, during all waking hours. As one teacher explained: "In public schools, kids are going back to their home environments at the end of every day. Then they bring their out-of-school behavior to the school. At Piney Woods Country Life School, during out-of-school activities--whether it be working on the farm or in the library, participating in sporting events, or eating meals--the same high standards of behavior are expected."

Certain conventions for instilling responsibility and respect are common to all of the residential schools that we visited. There is a heavy emphasis on homework and the development of study skills; excuses are not accepted. The schools offer a variety of extracurricular and athletic activities in which students are expected to participate. Moreover, at the residential schools, students help the school run by assisting with the preparation of meals and cleaning buildings and grounds. At Beaver Island Lighthouse School in the middle of Lake Michigan, school buildings will go unheated unless the assigned students feed the school's wood-burning heating system regularly. Piney Woods is largely self-sustaining, with acres of garden, animals raised for slaughter, a dry-cleaning establishment, campus stores, a security office, a health service, and so on. Student jobs are available in all of these areas of community life. In addition to assigned chores, seniors at Girard College are also required to perform community service, some of which is on-campus with younger students and some of which is off-campus.

The consistency of the messages about responsibility and respect make their mark with students at the residential schools. Virtually all of the students interviewed were able to articulate their school's values and compare them with schools they had previously attended. We also had the sense that students--particularly the older ones--had accepted and internalized the lessons. That is not to say, however, that there are not rebellions, mischief, fights, and questioning of the rules on these campuses. Beaver Island, which deals with a volatile mix of students, convenes a community meeting daily where both procedural matters and interpersonal difficulties are discussed. Chinquapin has a Student Leadership Committee that reviews cases of minor rule-breaking and assigns appropriate punishments for infractions such as skipping the morning jog. These kinds of structures are designed to reinforce the idea that the good of the community depends on the responsible behavior of all its members.

The unrelenting "lessons" about personal responsibility and respect for others at the residential schools are particularly important in the innately rebellious years of early adolescence. However, as students mature and demonstrate their internalization of the school's values, there is opportunity to offer them both freedoms and increased levels of responsibility that signal adult appreciation of progress made. Girard College, for example, issues off-campus privileges. Chinquapin puts

residence hall monitoring responsibilities in the hands of older students. At Piney Woods, there is less inclination to recognize the emerging maturity of juniors and seniors with a relaxation of the rules. Several students commented on this, observing that if school officials really believed in and trusted students, they would give them more opportunities to exercise their good judgment independently.

Public Schools

The public schools--particularly the middle and high schools--have also established an ethos of high expectations and structured discipline, although their methods are somewhat different. In general, the public schools in this study (with the exception of the one public residential school) do not have authority to mete out some of the consequences for rule violation that help the residential schools maintain discipline (e.g., Saturday work assignments, expulsion), nor can they rely on the religious guidance used in some of the private schools to help establish a culture of discipline, commitment, responsibility, and respect. They emphasize the school's commitment to educate each individual student, offering support services and a sense of caring, and emphasizing that each individual--adults and students alike--has responsibility for the welfare of the school community. Examples of the strategies they use include the following:

- AMY instituted a "no fail" policy that represents the school's commitment to ensuring that all students will get the academic instruction and other supports necessary for them to be successful at school. The first lesson, which is hammered home in every classroom, is personal responsibility for completing assignments. A teacher said, "I've seen kids who came in the sixth grade and didn't do a stitch of work become kids in the eighth grade who complete their work and realize this work is the key to their own success."
- Metro High School's mission is to help students become better prepared to meet their responsibilities which, in many cases, are significant ones--parenting, supporting dependents, staying clean and sober, obeying the rules of parole. In addition to their instructional roles, teachers also act as advisors to students and, in this capacity, visit them at home and at work to underscore the school's commitment to every student's success.
- Chiron Middle School uses a "house" system to create a stable relationship between students and a team of teachers. This, in addition to block scheduling, is intended to reduce anonymity and facilitate a sense of belonging among students. Strategies such as these also promote personal responsibility for academic tasks and for personal behavior since there are fewer opportunities for students to fall between the cracks.

- Timilty Middle School provides a number of services that, taken together, convey high expectations for students and teachers and establish a disciplined environment. A cadre of quasi-administrators are responsible for, among other things, keeping parents apprised of the school's high expectations for student behavior and achievement and students' success or failure in meeting those expectations. The school also has a strong family literacy program designed to foster open lines of communication and respect among students, parents, and the school.

Most schools in the United States, whether public or private, would likely articulate the development of personal responsibility and respect for others as key goals of their programs. Not all of them, however, pursue these goals as assiduously and consistently as most of the schools that we visited for this study. Internalization of these two values was viewed as more than half the battle to putting students on the track to success. Once students recognized that (1) they could control their actions, including working hard and (2) they could not shift the blame for failure to outside forces, then they were able to negotiate the academic part of a school's program rather easily. Of course, not all students accept the lessons about responsibility and respect without a struggle. In fact, it is sometimes quite remarkable how much psychological energy that might be used for learning goes into bucking the system--particularly in early adolescence.

The particular strength of the residential schools and the extended day Jesuit schools seemed to lie in structures and supports that helped students move past their resistance: tutoring, mentoring, group discussions to resolve problems, peer-mediated discipline, required study halls, and so on. These are essentially *in loco parentis* functions that the institutions assume because their students spend relatively little time at home. Some of the public schools, such as Timilty and Metro, invest time and resources in creating partnerships with parents to achieve the same ends. If parents and the school agree on goals for students and support each other, students cannot play off one against the other. This kind of pact functions quite routinely in schools serving middle class students. For schools serving large numbers of educationally at-risk students--including most of the public schools in our sample, parent-school relationships to support student learning must be deliberately created.

Concluding Observations About Time and Student Learning

A key research question for this study has been whether or not altering the time for teaching and learning has demonstrable impacts on students. The evidence presented in this chapter suggests that, for most of the sites that we studied, the answer is yes. However, the evidence also makes it clear that there is no single, time-related reform that we can point to and say, "Aha! This is the answer." Instead, we have an array of strategies and combinations of strategies that have worked in

particular local contexts and may work in others. The most important lessons learned are the following:

Simply adding more classroom time to the school year or day is a weak reform strategy.

This finding is a little worrisome since requiring more time in the classroom is an easy route for policymakers to take if they become convinced that time is a fundamental issue in educational improvement. Anyone tempted by this route should pay careful attention to the New Orleans experiment with a Japanese-length school year in two schools. This experiment might have worked if the district had invested in a planning and development stage prior to full implementation and if there had been clear and mutually understood goals for how the time should be used. These two conditions were met at Timilty Middle School in Boston when it added daily school time that adds up to the equivalent of 36 more days per year. Outcomes for the Boston children improved dramatically; outcomes for the New Orleans children remained poor. The Boston experiment is thriving; the New Orleans experiment is dead.

More academic time is not necessarily needed if there is flexibility to reconfigure existing time in ways that make more sense to students and teachers. This lesson is at the heart of what many innovative magnet programs (such as AMY and Chiron) and restructuring schools (such as Hollibrook) have done to distinguish their practice from that of more conventional schools. Flexibility in the use of time is a key corollary of site-based decision making. To the extent that devolution of decision making authority to the school level represents a trend, we can also expect to see a growing number of schools where the traditional school day and week are chunked up differently.

Extending noninstructional time at school has important impacts on students. In the hours before or after the regular school day ends, a number of the schools in our study provided their students with structure, enrichment, adult role models, and emphatic lessons about personal responsibility, responsibility to the school community, and respect for others. Ultimately, this additional time has an impact on academic learning as well. Homework gets done. Tutoring is often available. Eventually, students internalize the lesson that their education is in their own hands.

Flexibility of educational time is an especially important characteristic for schools that serve high school students at risk of school failure. When students drop out of school, it is often because the rigidities of traditional school time are a poor fit with situations and responsibilities in other parts of their lives. As course failures and incompletions pile up or credit accrual is slowed by the need for remediation or English language instruction, many students become discouraged. Schools and

programs that teach when students are available to be taught and acknowledge variation in the pace at which students learn are important supplements to the mainstream education system.

IV. RESOURCES REQUIRED TO ALTER THE USES OF TIME FOR LEARNING

Previous chapters have described the many ways that the schools we studied modified the quantity and quality of time available for teaching and learning. Like the schools themselves, these efforts are diverse. The experiences of the teachers, principals, and students we met illustrate the complexity of the change process, including the benefits and barriers that result from either changing existing schools or creating new ones. In this chapter, we look at a perennial topic and source of concern in most discussions about school reform: resources. What we found is that when the primary goal of a change effort is--either implicitly or explicitly--to increase the quantity of time for teaching and learning, the principal challenge is to figure out how to pay for the increase. But, when the goal is to change the quality of time for teaching and learning, the issue becomes more complicated. There are, of course, cost factors. Most changes bring price tags, and most substantial changes bring substantial price tags, although determining exactly what the costs are is difficult. When the schools that we studied focused on changing the quality of time, time itself often became an important resource. How much time is required to prepare for the changes? How much time is required to implement them? In addition, other resources are required and a considerable amount of effort and time is spent getting them.

This chapter begins with a look at (1) the costs of increasing the quantity of time for instruction and (2) how some of the schools in this study increased the quantity and quality of time through thoughtful uses of nonformal educational experiences. In the second section, there is a discussion of time itself as a resource necessary for planning, implementation, and professional development. The third section looks at three structural resources that are important in supporting time-related innovations, and the fourth section examines the entrepreneurial behavior of these schools as they seek the resources necessary to operate their programs. Finally, the fifth section examines the resource base of four schools with very limited annual operating budgets that manage to provide quality programs for their students. The chapter ends with four conclusions about the resources necessary to alter the uses of time.

Wherever possible, our discussion of resources includes quantitative data on costs. However, our primary focus is on the types of resources that schools require and use to alter the quantity and quality of time for teaching and learning. Our analysis concentrates on the kinds of investments, rather than on the specific amounts. In addition, we examine investments that increase resources that are necessary to support changes or that are specifically linked to the development of new programs.

We offer few detailed comparisons of the costs of the innovations we studied with the cost of other programs or of basic operations, as it was beyond the scope of our study to collect complete information about individual school and district budgets.

Increasing the Quantity of Time for Teaching and Learning

In 1983, the National Commission on Excellence in Education recommended that states and school districts increase the amount of time available for learning by adding either hours to the school day or days to the school year. This recommendation, along with another recommendation to increase the number of credits in core curriculum areas required for high school graduation, attracted an enormous amount of attention because the recommendations were relatively straightforward and easy for policymakers to deal with. Not surprisingly, the recommendations for increased time led to a number of efforts to estimate the cost of increased time nationwide. Two frequently cited 1984 estimates put the annual cost of adding 20 days of instruction to the average 180-day school year at between \$20 billion and \$22 billion--an investment that was unlikely to receive much public support.

Paying for Increased Time for Teaching and Learning

Data from three of the case studies of the public school sites in our sample describe the capital outlays needed to increase the amount of instructional time in individual schools. The experiences of these schools also illustrate the difficulties that some schools face in garnering and retaining resources, particularly schools that serve large populations of at-risk students. Finally, as we discuss in more detail later in this chapter, the experiences of these schools illustrate why more time by itself is unlikely to solve the problems the reformers set out to address.

As we have described in previous chapters, Moton and Lockett Elementary Schools and Timilty Middle School won district approval to increase the amount of time their students spend developing basic skills in mathematics and reading. At Moton and Lockett, the school decided to switch to a year-round schedule and to add 40 days to the school calendar. Under the plan they adopted, which is a standard model in year-round schools, students would attend school in 45-day blocks of instruction, followed by 15 days of vacation. There was also to be intersession instruction available for the lowest achieving students. In addition, local school board members who supported this experiment argued that increased time in school, besides providing more instructional time, meant that students would spend less time in the unsafe neighborhoods surrounding these schools.

The 40-day extension represented a 22 percent increase in time spent in school, and school district officials estimated that the cost would increase routine operating costs by 25 percent. Their estimates included (1) salaries and fringe benefits for teachers, administrators, clerical staff, food service personnel, custodians, security officers and crossing guards, and other instructional support staff; (2) instructional supplies; and (3) utilities. Expenditures for utilities, which included the costs of air conditioning, were particularly important because these schools would remain open during the hot, humid New Orleans summers. Reports from these schools indicate that only a small portion of the additional funds was spent on planning and staff development. The total cost of this experiment was approximately \$750,000 a year.

Despite the promise of the extended year schedule, school board members and others at Moton and Lockett were more concerned with its costs. To overcome these objections, supporters of the experiment negotiated an agreement with the state department of education to use Chapter 1 funds to pay for about 60 percent of the costs. Under this agreement, the schools were designated schoolwide projects so that they could use Chapter 1 funds for the entire instructional program. Chapter 1 provided \$455,000, and the district provided \$295,000. In the end, local officials concluded that the Moton and Lockett experiment would not have occurred if the Chapter 1 funds had not been made available.

Increasing the quantity of time at Timilty Middle School was also part of an experiment by a school district to increase the amount of time that students spend on basic skills. The primary approach of this experiment was to add 1.5 hours to the school day, although, as we describe in earlier chapters, the change spawned a number of other changes in the school. The increase in salaries from extending the school day was approximately \$9,000 per teacher and somewhat less for other building staff. As in the case of Moton and Lockett, the support for Timilty's extended-day program has come from a district special project fund.

A third site where there have been substantial investments to increase the amount of instructional time is ConCurrent Options in New York City. Among the 125 schools served by ConCurrent Options, 32 receive state support from Project Achieve, which is part of the state's Attendance Improvement Dropout Prevention Program. The other 93 schools that offer options do so at their own discretion and pay for them out of regular operating expenses. The Project Achieve Schools receive approximately \$90,000 in supplementary funds. Teachers are paid at a per-session rate of \$28 per hour, and guidance counselors receive \$30 per hour when they work beyond their regular schedule. These stipends fall outside of the teachers' union contract, which has created some opposition to the program from union officials.

Together, these three sites clearly illustrate that investing in a longer school day or longer school year can be very expensive, particularly when teachers and other staff are paid for their time at prevailing salary rates. The demise of the extended-time experiment at Moton and Lockett, the continuing struggle for funds that the principal at Timilty wages with the district, and the friction between ConCurrent Options and the teachers' union all point to how difficult it is to maintain these levels of expenditures over time. What is interesting in comparing the experiences of Moton and Lockett with those of Timilty is that the investment in the extended day at Timilty was accompanied by investments in other areas, such as professional development and opportunities for increased time for planning and program implementation. There were no similar investments made at Moton and Lockett. Teachers were thrust into the new extended-year schedule without real planning and without support through staff development or training. As one teacher put it, "It was like you were going into a dark room and you didn't even know what was there." In the absence of planning and staff preparation that would have changed the traditional content and instruction of the two schools' programs, instruction became just more of the same for a longer period of time. The result, as we noted in the previous chapter, was no improvement in student outcomes.

The change process in Timilty has been quite different. Investments have supported a dramatic restructuring of teachers' work time so that teachers have more time to participate in planning and implementation. Before discussing how Timilty and a number of other schools in our sample brought these other resources to bear on the change process, we look at another strategy for increasing the quantity of time for learning: the use of nonformal educators.

The Value Added by Volunteers and Nonformal Educators

Teachers and administrators in a number of schools in our sample report that they have observed that students learn from an array of sources both in and out of the classroom. At the same time, many are concerned that students are not using their out-of-school time to engage in positive learning experiences that can contribute to increased self-esteem, feelings of personal efficacy, and intellectual growth. To take better advantage of students' out-of-school time and to extend the overall quantity of time available for productive learning, a number of the schools we studied have created a variety of nonformal learning activities for their students. Often, the activities bring students into contact with adults--other than teachers--who perform their educative functions on a voluntary basis. Their contributions are thus a value added to the quantity and quality of a school's educational program at little or no additional cost.

At Timilty Middle School, nonformal experiences add to the already expanded quantity of time for instruction. Two full-time professionals seek educational opportunities for students outside the regular school schedule. Among the many arrangements made by the school over the past several years is *Promising Pals*, a pen-pal program that helps to broaden Timilty students' writing beyond basic academic writing. In 1993, every student in the school had an adult pal with whom to correspond. The program's culminating activity--a breakfast reception and recognition ceremony--helps students and their pen pals forge closer relationships and make additional plans for getting together in the future. In addition to *Promising Pals*, other nonformal programs at Timilty provide opportunities for students to shadow adults in health care jobs in a local hospital and to participate in a variety of community service activities.

At Chiron Middle School one of the basic goals of the instructional program is to blur the distinction between learning that occurs in the classroom and learning that can occur in the community. To reach this goal, the school has established a community-based curriculum as part of the foundation of the new program. In addition, the faculty works hard to place students in nonformal education experiences where they work and study with mentors and tutors.

At Hollibrook Elementary School, the time for learning is expanded through the After School Activities Program (ASAP). Initially, teachers assumed much of the responsibility for this program. Later, they realized that this effort, along with implementation of the Accelerated Schools Program, required more time than individual teachers could give. As a solution, they recruited large numbers of parents and students from a nearby high school to serve as volunteer nonformal educators in the ASAP.

The two Jesuit schools in this study have also made strong commitments to making nonformal educational experiences available to their students as a way of not only increasing the time available for instruction but also enriching the regular school program. Indeed, from the perspective of the faculty at Nativity Mission, the most innovative component of the school program is the activities that take place outside the regular school day and school year (e.g., the evening study hall, summer camp, and high school support program discussed in the previous chapter). Although the school's director feels strongly that school faculty should be involved in the nonclassroom activities as much as possible, a large cadre of volunteers is a school mainstay. Indeed, even the instructional faculty at the two Nativity schools are mostly low paid or unpaid clergy or Jesuit volunteers. At these schools, working with youth, both in and out of school, is as much a mission as it is a job. The director at Nativity Mission clearly understands that taking on the dual responsibility can be taxing. His observations have important implications for all schools: "I don't know if staff with their own family could work here. I've wondered about that. . . . The staff at Nativity is extremely dedicated; the

director needs to keep them from overloading." To help reduce this burden, a large group of college students, parents, and other community members work alongside faculty at the Nativity schools to ensure that students get the attention and support they need from early in the morning until late at night.

The Chinquapin School in Texas puts a slightly different spin on the role of volunteerism in enriching the educational experience. This school strongly encourages community service as a way of showing the disadvantaged students that it serves how blessed they are in comparison with many other people. In fact, the school's motto is *Quid Pro Quo*--giving something in return. For example, the school's Interact Club, in partnership with the local Rotary Club, organizes an annual Christmas party for handicapped youngsters in the area. In return, the Rotary donates a \$1,000 scholarship for a graduating senior. Even more important to the financial health of the school is a long-term relationship with the Houston chapter of the Professional Golf Association. Each year, 50 Chinquapin students volunteer their labor at the PGA tournament. In exchange, the PGA gives the school a substantial annual gift (from \$30,000 to \$100,000). Over a 14-year period, these resources--garnered from student volunteerism--have been used to improve the physical plant and purchase school vans.

Together, the nonformal education activities and the donated time of volunteers make three important contributions to the educational experiences provided in each of these schools. First, they represent significant additions to the amount of time available for learning. As such, they help students and their teachers recognize and appreciate that valuable learning takes place in many different circumstances. Second, they substantially increase the opportunities for students to interact with peers and with adults in a variety of settings. These interactions are critical to developing a sense of self and to learning to work with others. Finally, these activities help to instill a sense of belonging to a community by involving students in the community and by providing opportunities for them to make tangible contributions to the quality of life there. For many students, membership in these school communities is an important hedge against the anomie of the environments in which they live.

Time as a Resource for Planning, Implementation and Professional Development

In their comprehensive study of improving urban secondary schools, Louis and Miles (1990) found that teachers who are closely associated with change projects spend, on the average, 70 days

working on the project over a three- or four-year period. The median amount of time for administrators was 70 days a year. Based on their surveys and case studies, they concluded that: "Time is a crucial resource for improvement, and is most typically used for change management, and for training and assistance to staff. Centrally involved people can expect overload." Teachers and principals in the schools in our sample in which there were significant changes in the quality of time for teaching and learning spent large amounts of time working on the change process and, to a lesser extent, on professional development and training.

Time for Planning and Implementation

Teachers and administrators in some of the schools we studied have found a variety of ways to carve time out of their schedules for planning and implementing changes intended to improve the quality of time spent on teaching and learning. Typically, strategies have involved altering class schedules and teaching assignments to free up planning time and time for developing new content and instructional strategies. In contrast, in several of the schools there has not been adequate time for planning and implementation, and the consequences have been severe.

Protecting time for planning and implementation. Timilty Middle School, Wheeler Elementary School, and Metro High School all offer examples of relatively effective strategies for setting aside time for planning and implementation. At Timilty, the daily schedule includes two planning periods for teachers to work together in their clusters to develop interdisciplinary themes, plan weekly blocks of instruction, and assess individual student performance. In addition, two hours and fifteen minutes are set aside every Friday for professional development and common planning. At Wheeler, teachers have daily group-planning periods of 35 to 45 minutes. In addition, teachers not participating in the Learning Connection, a special program held every Friday, can use the time for planning. At Metro High School, the only school in our study in which the quantity of classroom time for students has been substantially reduced, teachers have one full day a week for planning, program development, and working collectively to address individual student problems. Teachers and administrators in these schools generally agree that the blocks of times that they set aside to work together are essential for the success of their programs. They also represent substantial investments of the schools' resources.

The perils of inadequate time for planning and implementation. Several schools in the sample demonstrate what happens when schools embark on an ambitious course to alter quantity and/or quality of time for teaching and learning without allocating sufficient time for planning and implementation. The extended-year experiment at Moton and Lockett Elementary School in New

Orleans represents our most extreme example of the failure to anticipate staff needs for planning time to consider how added time might most profitably be used to improve curriculum and instruction. In this case, almost no time was allocated for planning purposes, which may have contributed to the cancellation of the experiment. Other experiments survive, but their struggles to find or make time for planning and implementation seem to be chronic.

At Chiron, three factors contributed to the almost complete lack of time for operational planning and implementation. First, considerable pressure was exerted to open the then-new school following a year of conceptual planning by a steering committee whose members did not include any of the instructional staff. Thus, the school opened its doors to the first group of students just two months after the staff was hired. According to staff, the primary design flaw was that teachers had no time to think about or plan the myriad components of the new school. Second, because those promoting the design were committed to creating a school that cost no more to operate than other schools do, there were no resources set aside for ongoing planning and development. Third, to honor a commitment to have smaller class sizes, Chiron agreed to exchange some of its regular contractual allotment of teacher planning time for an increased number of classes each day. As a result, virtually all of the planning and development that has been required to operationalize this new school has been done outside of the regular school day and without any pay. Teachers have found several solutions to the problems and pressures. As a staff member explained: "The struggle has been to ritualize, to establish routines, and to write things down. But finally we have some built-ins. . . . Ideally, we should spend 25 percent less time with the students. We need Fridays off to plan. [As it is right now], we have to deliver the system and change it simultaneously." Teachers have also developed informal arrangements to increase planning time. One team has taken advantage of the school's Friday "options period" to co-teach a chess class. In fact, there is little instruction as teachers use the 110-minute block for planning. Another team has found a volunteer to teach Japanese for a half-hour per day. The team members use this time for planning, but this is not group planning.

At Hollibrook, a number of innovations are under way as the staff has attempted to alter the school's governance structure, improve curriculum and instruction, extend the school day by providing after-school learning opportunities, and increase parent involvement. Although flexibility is one of the hallmarks of the school's daily schedule, there has been little time set aside for planning and implementation. A particular concern is the competing demands made on teachers to participate in the After School Activities Program and in the site-based governance structure being created as part of the school's evolution as a member of the Accelerated Schools Program. To participate in these two activities, some teachers must work for several hours immediately after school and then attend meetings that begin at 4:00 p.m. or 4:30 p.m.

The original design for AMY, the most mature public school experiment in our study, included substantial planning time for teachers. Students were dismissed earlier than in other district schools to allow common teacher planning periods at the end of the school day. Teachers also used this time to discuss individual students and exchange their classroom experiences with students who were having problems. At the beginning of each term, time was set aside for teachers to meet with parents and students to decide on the courses that the students would take. According to staff, the amounts of time available for these activities have eroded; although teachers continue to adhere to the school's basic philosophy, they find that more and more of the essential tasks necessary to sustain the school's "alternativeness" must be completed outside of regular school hours.

Although inadequate time for planning and implementation of reforms has caused problems in all three of these schools, the problems are most acute at Chiron. The most serious problem there has been teacher turnover. At the end of the first year, four of the six teachers at the school transferred to other schools. At the end of the second year, six of the nine teachers left. It was not until the third year that the faculty began to acquire some stability. The high faculty attrition made it difficult to build on programmatic successes and failures from one year to the next and resulted in a lack of continuity in the instructional program. At Hollibrook, the tensions are less severe, possibly because the faculty was more involved in the original decisions about the reforms and innovations and, as we discuss below, because there was considerable time expended on planning and implementation several years earlier when the school joined the Accelerated Schools Program. Nevertheless, several of the people we interviewed suggested that burnout is a real concern and that the pressures are particularly great for teachers with family responsibilities. They pointed out that although volunteerism among the teachers is a clear sign of strong commitment, it is probably not a secure foundation on which to build long-term change efforts.

Time for Professional Development

Our case study data suggest that the standard forms of professional development (e.g., workshops, inservice training, technical assistance) were not critical resources in the change efforts that have occurred in many of the schools in our sample. At the same time, we have evidence that professional development opportunities designed according to the needs of staff in their particular reform context can be an important resource. Further, our data suggest, albeit indirectly, that teachers and other staff have used some of the time allotted for planning and implementation to develop problem-solving skills together with other skills in order to carry out the expanded roles that they have assumed since the quantity and quality of time for teaching and learning have changed.

External assistance. At least two schools in our study, Wheeler and Timilty, have made extensive use of professional development activities provided by an external source. Overall, Wheeler's investment in professional development was quite large, and it continued for almost four years. In 1985 teachers voted to participate in an experimental program operated by the Gheens Professional Development Academy, the Jefferson County (Kentucky) Public Schools' nationally recognized professional development center. Under this program, two teachers from each of the 14 participating schools attended the academy sessions once a month for two years to review recent research and discuss issues among themselves. Teachers attended regional and national conferences to augment these study sessions, and they were expected to share what they were learning with their colleagues. After the first two years, Wheeler teachers voted to continue their ties with the Gheens Academy by agreeing to join a pilot project on participatory management. Participation in the project included on-site technical assistance in designing and implementing a model of shared decisionmaking. In addition, two teachers and the principal received special training as facilitators, and there were workshops on consensus building, communications, running productive meetings, problem solving, leadership, and conflict resolution for the entire staff.

Timilty's investment was not as large as Wheeler's, nor did it span the same amount of time. Nevertheless, it was a significant investment. Soon after the school began receiving support from Project Promise, it became clear that if the teachers were going to learn how to implement major changes, they were going to need considerable help. As an example of the assistance available to teachers, a local university faculty member worked closely with the faculty to sharpen their skills at teaching writing and at integrating writing with the rest of the school curriculum. This assistance extended over several years.

Four features of these two professional development agendas were vital to their effectiveness as resources for improving the schools:

- After reaching consensus about future directions, the school staffs selected these professional development activities because they felt that the activities would help them accomplish their reform objectives
- Staff development and other assistance were available when teachers needed it, and the improvement initiatives proceeded at a pace established by the school rather than by an external mandate or directive
- The staff development activities were relatively intensive--once a month or more--and extended over a long period of time--several years or more
- External help was accompanied by time and opportunities to try out new ideas and practices

These factors are, of course, among the central indicators of high-quality professional development activities.

Professional development as an internal process. When compared with Wheeler and Timilty, other schools in our sample had more limited external staff development opportunities. Nevertheless, our findings about ongoing opportunities for planning and implementation, which we discussed above, lead us to conclude that these fairly routine--at least in these schools--internal processes represent important mechanisms for staff to develop their professional perspectives and skills. Metro, AMY, and Hollibrook offer good examples of how this can work.

As discussed above, Metro teachers have one full day a week for nonclassroom activities. These days begin with full staff meetings in which teachers review positive events from the past week and individual student problems that require immediate action. Next, there are staff presentations on topics of common interest (e.g., AIDS awareness). Following this portion of the meeting, the teachers go into the community to visit students at home or at work. The day ends after teachers return to school for a large group meeting or for smaller cluster meetings to review what they learned. Fridays can also be devoted to working on interdisciplinary courses, building Metro's ties to the Coalition of Essential Schools, and finding ways to gain access to other professional networks. The cumulative result of these activities has been the articulation and evolution of important new roles for Metro teachers: teacher as student advisor, teacher as academic coach, and teacher as researcher and problem solver.

At AMY, a combination of the school's designation as an experimental site and the amount of time formally budgeted for nonclassroom activities during the school day made it possible for teachers to develop the skills necessary to affect and maintain fundamental changes in curriculum and instruction. A similar, staff-centered process occurred at Hollibrook during the early stages of its efforts to restructure. The difference is that the principal played a key role and that some external professional development and technical assistance were available at key junctures. Beginning in the 1989-1990 school year, the principal asked teachers to outline major issues and problems facing the school. Then, she asked them to draw upon the findings of the effective schools research to develop a basic campus improvement plan. As teachers were working on this task, the principal began introducing more concepts from the effective schools research and from the Accelerated Schools Program, although she did not label the concepts as such. By the end of the school year, teachers noted several positive changes, especially improvements in attitude and morale. In the following year, funding was available for staff to participate in training officially provided by the Accelerated Schools Program; district office staff served as facilitators and provided technical assistance.

Additional Structural Resources to Support Improvement

Thus far, our discussion of resources has focused not only on the straightforward issue of the costs of extending the school day and the school year but also on the much more complicated issue of garnering time for planning, implementation, and professional development. The case study data point to three additional structural resources essential to successful change efforts: (1) support in the policy arena resulting in reform activities and/or encouragement of experimental programs; (2) assignment of special staff as in-school resources; and (3) the support of teacher unions.

Reform Initiatives and Experimental Programs

A full examination of the contributions of various state and local reform initiatives to the time-related innovations in our sample of school is beyond the scope of this study. Nevertheless, our data do permit several observations about this relationship. Only one of the time-related innovations that attracted our attention, Timilty, was carried out to address a reform initiative or mandate, although the establishment of AMY was part of a larger school district desegregation effort. At five sites, including AMY, as well as Moton and Lockett, Hollibrook, Wheeler, and Concurrent Options, broader state and/or local initiatives either supported or legitimized reforms as changes that were already underway at the school level.

- AMY's formal designation as an experimental school meant that the school could get waivers on all but the most basic academic requirements and those related to health and safety
- Increased state department interest in Chapter 1 schoolwide projects resulted in a special agreement to designate Moton and Lockett as schoolwide project sites, thus making substantial amounts of Chapter 1 funds available to support extending its school year by 40 days
- At Hollibrook, commitment to the school by several district administrators helped reduce resistance to reform in some quarters, and the Accelerated Schools Program provided a rationale and resources for changes begun by the principal and staff
- In the minds of staff at Wheeler, the sweeping mandates of the Kentucky Education Reform Act, which came five years after the school's initial time-related innovations, provided clear affirmation for much of what had already been accomplished. Initial reform efforts received strong encouragement from the school district and from the Gheens Academy

- In New York City, 32 of the high schools that participate in Concurrent Options receive support from Project Achieve, which is part of a larger state dropout prevention program

Within the context of these broad reform and policy initiatives, policies that foster, or at least do not inhibit, school autonomy are sources of support for time-related innovations. Staff in a number of the schools in our sample point to local policies related to site-based management and school-based authority for hiring staff as being particularly important.

The double-edged sword of site-based management. Metro has had almost full autonomy since the school established. AMY's original designation as an experimental school also ensured extensive autonomy in virtually all areas of decisionmaking. As AMY staff put it, "We had site-based management before site-based management was invented." At Wheeler and Hollibrook, adoption and implementation of site-based management strategies were key elements in the schools' reform efforts.

In each of these schools, autonomy to make decisions about curriculum, instruction, and, to some extent, assessment has, in effect, transformed time into a resource that is very much under the control of teachers and administrators. Indeed, many of the in decisions are either explicitly linked to time allocations (e.g., daily schedules, allocation of planning periods) or have direct implications for them (e.g., reforming curriculum, adopting team teaching or cooperative learning strategies), and almost all of the decisions enhance the quality of time for teaching and learning.

Teachers in these schools are justifiably proud of their accomplishments. They also recognize that learning to manage their schools has been achieved at some cost. It takes a considerable amount of time to learn how to work together to make decisions about teaching strategies, content, allocation of resources, and communicating with parents, to name but a few of the recurring responsibilities that teachers and others have assumed. Recall, for example, that one of the major themes in the professional development activities at Wheeler was site-based management strategies, including such topics as building consensus, communications skills, meeting management skills, problem solving skills, leadership skills, and developing conflict resolution. The range of this list suggests the scope of the learning task that confronts staffs who assume these new responsibilities. The governance tasks and the time it takes to learn them increase as the base of participation broadens. For example, the governance council at AMY includes six teachers, four parents, the principal, and a member of the nonteaching staff. For these groups to work together, they must learn to break down the boundaries created by differences in personal and professional roles and status and by differences in race and

ethnicity. This process also involves learning the intricacies of district policies and procedures. And much of this takes place before getting to the task of governing.

Chiron's experience illustrates what can happen when school staffs do not have adequate time and resources to carry out the increased responsibilities that come with autonomy. Faced with the pressures of creating a new school as it was opening, a group of teachers with new assignments and new colleagues had to solve problems as they came up, with little or no opportunity for careful consideration or reflection. As a result, many of their early choices did not set precedents for later choices. Another result was that meetings and other opportunities for deliberation and planning were often unproductive, even in the short term, because teachers and the principal had not mastered the fundamental skills of working collaboratively.

Advantages of control over selecting staff. In one way or another, the role of the teachers in each of the public schools in our study represented a fundamental departure from the typical teacher role in their respective districts. For example, at Moton and Lockett and at Timilty, the amount of contact time required of teachers was much greater than it was for teachers in other schools in New Orleans and Boston. At Wheeler, Hollibrook, Metro, and AMY, team teaching, ungraded classrooms, and heightened responsibility for decisionmaking, to cite but three examples, created new roles for teachers and new, often higher, expectations for performance inside and outside of the classroom. As they looked back on the various innovations, faculty and administrators in each of these schools noted the importance of having either some choice over which teachers were assigned to the school or the option of a relatively easy transfer to another school if teachers wanted out. Timilty had both. When the school became a Project Promise School, faculty were given the option to transfer. A number of them took this option, citing the extra time at the end of the school day and the Saturday program as undesirable working conditions. Subsequently, the school received full authority for hiring new teachers. A faculty committee interviews all applicants and makes recommendations to the principal. One result of this process is that teachers are in the school because they want to be. The principal agrees and sees additional benefits: "I have never worked with such dedicated teachers, because they have bought into the program. Also, the self-esteem of the teachers is higher because they have been selected through a competitive process." Once again, it is important to note that exercising this responsibility takes time--time to review resumes, time to conduct interviews, and time to make decisions.

Special Staff

Quality of time reforms in at least three of the schools in our study, Timilty, Chiron, and Hollibrook, include the addition of special professional staff to assist in the reform effort. Of these, Timilty has the largest contingent, with six. Together, these staff members support the school's community outreach activities, continue developing new curricula, and facilitate classroom instruction. The six positions include a community outreach worker, an administrative support specialist, and four cluster leaders. The outreach professional oversees a number of special programs and helps teachers and other staff make daily telephone calls to parents whose children have attendance problems. The administrative support specialist oversees many of the school's efforts to find additional resources. The four cluster leaders are primarily responsible for leading instructional improvement activities, planning special programs such as internships and field trips, maintaining daily contact with parents, and serving as their cluster's link to the school's administrative team. Timilty is the only one of the Project Promise schools in which the cluster leaders had no classroom teaching responsibilities. These four positions represent a very large investment of the school's instructional resources--about 20 percent of the salaries for each cluster.

The rationale for creating the community outreach professional's role has a simple and straightforward time-related dimension: Effective outreach requires professionals who are free to communicate with parents, businesses, and community agencies during the day, when teachers are teaching. Timilty faculty and administrators agree that it is not reasonable to assume that this important function can be effectively carried out by teachers in their spare time. Similar cases can be made for the other special staff positions at the school.

After two years of hectic and often unproductive development efforts, Chiron employed a community curriculum coordinator to manage the development of the community-based resources, which were critical to implementing the overall design of the school. As at Timilty, this person completed tasks that teachers had been struggling with during out-of-school time and in addition to all of their other responsibilities. In 1992, as part of its overhaul of curriculum and instruction, Hollibrook was able to hire a full-time computer specialist as a resource for teachers. Teachers train in small groups, and sessions may last an entire day with substitute teachers covering classes.

In two of these three examples, hiring special professional staff was explicitly related to concerns about teachers' time. Teacher could not accomplish tasks that were central to achieving the schools' missions without sacrificing instructional time or without giving up some of their personal time after school, in the evenings, or on weekends. Ultimately, these schools found it more efficient and productive to establish some differentiated roles.

Union Support

In most large urban and suburban school districts, teachers' unions exert considerable influence in determining teachers' working conditions. Union contracts set teacher salaries and benefits, establish procedures through which teachers can be hired and fired, and define the number of hours in teachers' work days. A number of the time-related innovations in the schools we studied effectively altered school schedules, and, in several cases, ran counter to other provisions of existing union contracts. In these cases, the schools were able to negotiate special agreements with the unions that permitted the schools to continue with their new programs.

At AMY, a decision to reduce the number of preparation periods for teachers as part of a larger strategy to reduce class size required an agreement with the union. In addition, a key step in the hiring process for AMY is to discuss the school's experimental contract with prospective teachers to inform them of the expectations they will be expected to meet. AMY's contract modifications were hard-won in negotiations with the union. Now, union leaders praise the contract and acknowledge that sharing it with prospective teachers is an important part of the selection process. Nevertheless, future collective bargaining agreements could reduce or eliminate the school's relative autonomy in these areas, forcing a return to the standard districtwide number of preparation periods.

As a condition of Project Promise implementation, Timilty is exempt from some of the local union contract provisions. For example, the standard seniority rules do not apply in hiring decisions that are controlled at the school. At the time of our site visit to the school, several Timilty staff expressed the concern that the school might get caught in the crossfire if the district attempts to write into the contract a longer working day without extra pay. According to the teachers, compensation for the extended day at Timilty is the most important symbol of the district's commitment to high-quality education. As one faculty member put it: "Giving us the extra time and money to help our students learn says that the district values what teachers do and is willing to pay for it." Writing extra time into the contract without extra pay could draw the ire of the union, jeopardize Timilty's extended-day program, and undermine staff morale.

These special contractual agreements and several others that we learned about were essential to progress in the schools. In all cases, these agreements were exceptions to existing contracts and policies. In this way, the agreements highlighted the experimental nature of the programs, an attribute that may have kept them on the margins of reform-oriented policymaking in their respective districts. In short, defining these innovations as exceptions and experiments probably makes it more

difficult for them to serve as examples or demonstrations for more widespread changes in the districts.

Garnering Resources: The Role of Entrepreneurship

In every case, the successes that the schools we studied have had are due, in part, to their entrepreneurial behavior. They have been effective at garnering most, although in some instances not all, of the resources they need. The challenges to the residential schools and to the two private day schools have been greater than those the public schools face, although declining public school budgets have posed problems in several of the districts in our sample.

Investing Time in Entrepreneurship

Although we can not provide detailed estimates in hours or days of the amount of time spent in seeking resources, it is clear that administrators and, in some schools, teachers spend a considerable amount of time on this task. Fundraising is particularly important and time-consuming for the private schools. Because the private schools we studied serve poor students, tuition is not a significant source of revenues, often accounting for less than 5 percent of the total annual budget. For example, at Chiquapin, tuition revenues are about \$16,000, or 3 percent, of the annual budget of \$564,000. A recent annual report from the school shows that 57 percent of the revenues came from individual donations, with the remainder coming from fundraisers and interest on investments. In each of the private, residential schools, working with governing boards, contacting potential donors, and arranging for fundraisers all take time and are recurring tasks. Staff at Nativity Mission estimate that these tasks are roughly equivalent to a half-time job.

Three other examples, from Chiron, Timilty, and Hollibrook, represent another kind of entrepreneurial task, that of obtaining nonmonetary resources from the community. At the heart of Chiron's philosophy of educating young adolescents is the belief that these students learn best when they draw on real-life experiences in real-life settings. To that end, the staff has created four learning sites in various locations in Minneapolis: (1) a state university site where students study science and the environment, (2) a site near one of the school's business partners, where students study business, government, and law, (3) a site near theaters and galleries where learning focuses on the visual and performing arts, and (4) a site located in the same facility as the arts site where the curriculum revolves around community service and technology. Staff at Timilty have also been aggressive in identifying resources in the community and linking the resources to various facets of the school

program. There is, for example, a relationship with the Lesley College Collaborative which is a clinical model for faculty development to improve educational opportunities for faculty and students in urban middle schools. A partnership with a local hospital provides four programs for students, including (1) an opportunity for students to make connections between school and work by shadowing hospital employees once a week; (2) a science fair mentor program that links students interested in carrying out a science fair project with a mentor from the hospital staff; (3) a speakers' bureau with hospital staff available to talk with students about career options in health; and (4) a health and fitness program that contributes to the school's annual health fair.

Although Hollibrook has received a variety of resources to support its various innovations, none is more important than its network of parent volunteers. These volunteers, who work closely with the teachers, have been instrumental in keeping the after-school program alive. They have also made modest but important financial contributions to the program. Perhaps the most important benefit of the volunteer efforts has been improved relations between the school and the community.

These examples lead us to three observations about resources and entrepreneurial behavior. First, most of the schools we studied have been aggressive in seeking the resources they need to support their programs. Being aggressive means that they work hard to identify resources and that they are active in seeking these resources for their schools. Second, the entrepreneurial efforts are strategic. The schools seek the resources they need to support core elements of their program. For the private and residential schools, this effort often includes seeking funds for basic operating costs because these are never guaranteed. But for most of the schools, it involves seeking resources in their communities that are needed to enhance student learning and, in some cases, teacher professional development.

The third observation is that entrepreneurial activities take time. Sources must be identified and nurtured. At Chinquapin, considerable time and a full-time administrative staff position are devoted to nurturing relationships with donors. At Chiron and Timilty, considerable time was spent identifying the schools' various partners and nurturing those relationships. The resources that become available may require additional work and development. Thus, at Chiron, identifying the four learning sites was one time-consuming task. Making them suitable for students and teachers was another time-consuming task.

Instability of Resources

One of the reasons why some of these schools must devote as much time and energy as they do to seeking resources is that their resource bases are not stable. The public schools, with the exception of the residential program on Beaver Island, have relatively stable bases of resources provided by their districts. At the same time, these schools are buffeted by district-wide financial pressures. They can and do suffer the results of budget shortfalls. We also found that funding for the time-related innovations in particular is uncertain. In Boston, Timilty and the other Project Promise schools were among the targets of district budget cuts. The principal was able to convince the district to restore the cuts by threatening to go to the press and reveal the decision to reduce funds to a highly effective school. The principal also reports an annual battle with the district to maintain the school's enrollment cap that guarantees smaller classes. (The average class size at Timilty is 25 and the district average is 29.) Extra pay for the extended-day programs is also threatened by a state reform initiative that may include an extended school day with no additional compensation.

In Minneapolis, the recession caused serious problems for the school district and for local business, much as it did across the country. For Chiron, local business contributions that were expected to support the innovations failed to fully materialize. The problem was compounded by the fact that under the terms of the agreements on which the school was established, no district resources would be provided beyond those available to other schools. As we found during our visit to the school, staff have taken this requirement very seriously. However, the agreement may have established an unfortunate precedent, giving the district an impression that bold experiments cost the same as business-as-usual.

Two of the private residential schools, Piney Woods and Girard College, are venerable institutions and have rather large endowments that have built up over many decades. At the risk of some oversimplification, these endowments can be thought of as the same kind of resource base that the public schools enjoy. In recent years, these schools have embarked on improvement efforts that carry large price tags, including the addition or renovation of facilities. These improvements, like capital improvements to public schools, have taxed the resources of these schools and forced administrators and board members to make some difficult choices. For example, at Girard it was decided that, whenever possible, students should go home for weekends as a way of cutting back on operating expenses.

The Special Case of Schools with Very Limited Annual Operating Budgets

Four of the schools in our sample, Beaver Island, Chinquapin, Nativity Mission, and Nativity Prep, operate on very small annual budgets and lack the security afforded by an endowment or by regular commitments of resources from a school district. The fact that these schools provide solid educational programs is a tribute to their commitment and dedication, as well as to their stamina. Our case studies of these schools, particularly their experiences garnering and maintaining the resources necessary to sustain their programs, lead to several observations about the costs of time-related reforms--and other reforms as well.

The total annual operating budget in each of these schools is quite low. For example, in 1992-93, Nativity Mission reported an annual budget of \$375,190, which includes \$141,900 for financial aid to graduates who went on to private high schools. At Nativity Prep, the reported operating budget was between \$180,000 and \$200,000. At Chinquapin, the annual budget is \$564,000, and at Beaver Island, the budget for two ten-week terms is \$136,000. In each case, these figures represent all of the school's expenditures for its programs, including after-school, evening, and summer programs. Using data provided by the schools, we estimate the per-pupil expenditures to be approximately \$5,000 at Nativity Mission, \$6,000 at Chinquapin, and \$6,200 at Beaver Island. (Bear in mind that these figures include room and board for students at Chinquapin and Beaver Island and that Nativity Mission operates 14 hours per day.)

Our data on specific expenditures help to explain how these schools stretch their modest resources to provide quality programs in residential settings. First, in all of the schools, staff salaries are low. As we discussed earlier, Nativity Prep and Nativity Mission rely heavily on volunteers and interns. The latter receive small stipends. In addition, faculties in these two schools include several members of the clergy. In several cases, the low salaries are somewhat balanced by the fact that the schools provide free room and board for staff members and, in the case of Chinquapin, their families.

The second factor that keeps overall costs to the schools low is the absence of significant expenditures for facilities and maintenance. For example, Nativity Prep occupies a building owned by the Archdiocese and pays no rent. At Chinquapin and Beaver Island, staff and students do much of the work on the facilities. Chinquapin owns its facilities. The Beaver Island property--once listed as a federal government surplus lighthouse--was purchased by the Charlevoix Public Schools for \$1.00 in 1975. Over the years since the original purchase, CETA and JTPA training funds have been used for the labor and for some of the other costs associated with renovation and construction facilities.

Despite their successes at gathering resources, none of these schools appears to have achieved any real stability in funding. Therefore, their entrepreneurial activities are even more important than in the other schools, and they must consider even the smallest expenditures carefully. Frugality is the watchword in all fiscal affairs, and relatively small donations, such as a vehicle, can make or break an entire program or series of activities. Time for seeking resources and time for carefully managing resources are even more critical in these schools than in the others we studied.

What the experiences of these schools demonstrate is what is possible when committed leaders, staff, and community members not only work together to marshal resources from a variety of sources but also use them wisely in support of programs that they value and about which they share consensus. Our second observation about these schools is that despite their small operating budgets, they demonstrate the relatively high costs of providing quality education to relatively small numbers of students. That is, if the actual costs of facilities and routine operations were added to current budgets, the actual per-pupil expenditures in each of these schools would increase, although it is not possible to estimate just how much.

Concluding Observations about Resources Necessary to Alter the Uses of Time

All of the time-related innovations and programs we studied require resources. In the case of innovations and changes in existing programs, the required resources are in addition to those necessary for routine operations. With the exception of straightforward increases in the quantity of time for instruction, such as what happened at Moton, Lockett, and Timilty, there are no simple formulas for calculating the costs of these innovations. In examining innovations intended to alter the quality of time for instruction, it is possible to identify areas where investments are necessary and to identify the consequences of not making the investments.

The most important commodity to invest in is time itself. For the past 20 years, one of the most consistent--and least heeded--findings of the research is that change and innovation take time. This research also points to two dimensions of time--duration and intensity. The change process typically extends over a number of years--three to five is the standard increment, and there are periods of intense concentration and effort. Our findings certainly confirm these observations; if anything, they suggest that the amount of time necessary for change to occur or for a new program to mature may be even longer than five years. Indeed, a recurrent theme in many of our interviews was that the innovations were not yet finished. In recognition of this basic fact about change, most,

although by no means all, of the schools in our study have found ways of making time available for teachers to think about, plan, discuss, experiment, and implement new ideas and practices. Two important considerations guided those schools whose investments produced the greatest payoff. First, there should be enough time for teachers to work collaboratively. Thus, rather than merely adding a planning period for all teachers, the challenge was to create blocks of time for teams, committees, or the entire faculty to work together. The second consideration was that these blocks of time would be available over a long period of time, e.g., a school faculty would have two hours for planning every Friday throughout the school year.

Professional development is a critical resource for some schools, but not for others. In a number of the public schools in our study, there were substantial investments in professional development opportunities. These investments included support for teachers to participate in workshops and other training activities held in the schools, in events elsewhere in the district, and in regional or national meetings. In some cases, such as at Wheeler and Hollibrook, professional development activities were extended over long periods of time and accompanied by opportunities for follow-up and sharing with colleagues. In our view, this general approach to professional development can support and evolve into the development of collective problem-solving strategies, particularly in schools in which there is consensus around a vision for what the schools should be about.

Professional development and external assistance do not figure prominently in the histories of the residential schools or the two Jesuit schools in our study. One simple explanation is that, for most of them, professional development is a luxury that they cannot afford. However, even with a stronger financial base, it is unclear that these schools would devote much time or money to professional development as we think of it in the public school context. They have their visions of high quality education firmly established and, given their records of success with students, have no particular reason to question the adequacy of their approaches to teaching and learning. Teachers who question the vision or cannot meet the standards will generally leave voluntarily or by request. Teachers who want to expand their knowledge base or their pedagogy are welcome to do so on a personal basis, but there is simply no impulse in these schools to get everyone pointed in the same direction through workshops or hired facilitators.

Investments in resources to alter the uses of time have the greatest impact when they are strategic. As we have reported in this chapter, all of the schools in our study have found it necessary to be aggressive in either seeking the resources they need to sustain their programs or creating new ones. One of the keys to their successes has been that they have, with some notable exceptions, been able to garner the resources they need when they need them. With the exception of Moton, Lockett,

and Timilty, this has not meant large infusions of money. Instead, it has meant that teachers were able to participate in professional development activities when such participation was necessary or that it was possible to negotiate an exception to a union contract to facilitate either changing a school schedule or altering the way that teachers are assigned to a building.

Failure to invest in the necessary resources, particularly time, can doom even the most promising innovations. Adding 40 days to the school year at Moton and Lockett looked like a solution to several critical problems. The absence of adequate support for teachers to find ways of taking advantage of the increased time resulted in instructional business being carried on as usual for more days each year. Because student achievement did not improve as had been hoped, the experiment was stopped. Failure to provide sufficient support to carry out Chiron's radical experiment resulted in high faculty turnover and general frustration among the teachers. Proposed changes at Hollibrook, after some important early successes, became too ambitious in both scope and pace. The result has been that some teachers are beginning to burn out.

V. TIME-RELATED INNOVATIONS AND TEACHERS' WORK LIVES

In Chapter III, we described how the sites in this study have restructured time--both the quantity and quality--and other dimensions of school life to create effective learning conditions for students. These efforts, viewed together, suggest that education reform has many different starting points and that it can grow in many directions or fail altogether. Some focused initially on the amount of time that students spend in school, while others began with a reconstruction of existing time. In some sites, one type of innovation has led to others. In other cases, the original time-related innovation is static. In all cases, teachers are at the center of the reform efforts, either changing existing schools or creating new ones. We take their perspective in this chapter, as we look at time-related innovations and teachers' work lives.

Not surprisingly, this study has found that the implementation of time-related innovations in schools reverberates through many aspects of school life, including the professional lives--and sometimes personal lives--of the teachers who work in them. We have found that time-related innovations touch on many aspects of teachers' professional lives, including their roles and relationships, the amount of time they allocate to their work and the compensation they receive, and the additional responsibilities and personal sacrifices they expect--or are expected--to take on.

The case study data suggest four issues related to teachers' work lives in innovative schools: (1) teacher time and compensation, (2) teachers' learning needs and students' learning needs, (3) accountability and time for reform, and (4) teacher collaboration and school structure. We discuss each of these in turn in this chapter and end with some concluding observations.

Teacher Time and Compensation

Our examination of the various time-related innovations in our sites exposes a tension around what is judged to be the professional, compensated work of teachers. All of the schools in this study require teachers to serve in nontraditional roles and/or to work nontraditional amounts of time. In very few sites, however, are teachers compensated for their additional time and responsibilities. In fact, the only schools that provide teachers with extra compensation are those implementing scheduling innovations that require them to spend more time delivering formal instruction to students than their colleagues in other schools do (Timilty and Moton and Lockett).

Teachers in schools in which (1) there are significant classroom-based reforms or (2) where participatory governance was either part of the original design or introduced as an element of reform devote considerable time to learning how to teach differently, developing long-term reform plans, and serving as decisionmakers, budget analysts, personnel specialists, and liaisons to the community. At some of these schools, notably AMY, Chiron, and Hollibrook, we heard the most consistent reports of workplace stress associated with time pressures. Teachers at these schools recognize that their jobs require more time than is available during the traditional work day and that those teachers who do not acknowledge this and are not willing to volunteer substantial amounts of personal time to the school will be uncomfortable. These schools have, in a sense, established an institutionalized culture of volunteerism among teachers, a culture that is pervasive and strong enough to drive out teachers who do not subscribe to it, as we have seen at Chiron.

The residential schools and the Jesuit schools in our study involve teachers in substantial amounts of teacher-student interaction both in and out of the classroom. In addition, in several of these schools, teachers, along with everyone else in the school community, share some responsibility for maintenance and routine operations. Our data suggest that teachers in these schools work long days and receive some of the lowest compensation across the study sites. Recall, for example, that the Jesuit schools pay teachers \$200 a month and that Nativity Mission makes a point of using the same staff for school and afterschool activities because the school views continuity and depth in teacher-student relationships as important. The low teacher compensation rates at residential and private schools in this study are consistent with national patterns that show private school compensation rates to be lower than those for teachers with the same qualifications and experience in public schools (Choy, Henke, Alt, & Medrich, 1993). In the residential and private schools we examined, this pattern may be based, at least in part, on a view of teaching as a form of community service (or religious calling, in the case of the Jesuit schools), on the hiring of young and often uncertified staff, and on institutionalized acceptance of teacher turnover and recruitment issues.

Compensation patterns across the innovation categories show discrepancies in the value that schools place on different uses of teachers' time. In some instances where more time is required for teachers' professional work, teachers are compensated. In other instances, they are not. These discrepancies raise important issues for education reformers about the uses of teacher time that are valued and thus should be legitimized by compensation. In schools intending to make deep changes in classroom practice or school governance, reformers must ask whether they are willing to place the burden of change on the personal time that teachers are willing to volunteer. Given the serious need and recent calls for the next generation of education reform to "reach beyond the islands where [innovation] is tried, into the broader educational system" (Elmore, 1991, p. 4), such a decision seems short-sighted.

The impressive achievement records of students who attend the residential schools in this study (discussed in Chapter III of this report), suggest that full-time living and learning environments hold promise for more wide-spread use in educating disadvantaged children. But, with this realization, the issue of adequate compensation looms large. Once again, the dilemma is how to take a proven model of educational effectiveness and "scale up." But, the size of the pool of teachers willing to work long hours for low pay is unknown.

Teacher support and willingness to "go the extra mile" without additional compensation has contributed significantly to the successful implementation of classroom-based reforms in many schools in this study. However, our data clearly suggest that a heavy reliance on volunteerism among staff is not a secure foundation on which to build expectations for the future of education reform.

Teachers' Learning Needs and Students' Learning Needs

A second cross-cutting issue involves balancing time for teacher learning and time for student learning. Focus on the improvement of student learning in all of the study sites is justified on the basis that student learning is the central mission of schools. But, student learning and teacher learning are not unrelated. Our data, particularly the data on the investments in professional development which we discussed in Chapter IV, suggest that teacher learning is especially important in schools where teachers are the chief architects and builders of reform initiatives. There, teacher learning is at the very epicenter of classroom-based reforms. Therefore, the degree to which it is overlooked or undervalued in some schools and districts is somewhat surprising. This oversight may reflect what Roland Barth describes as a misguided tendency among educators--teachers included--to view schools "as places where children learn and adults teach" (Barth, 1990, p. 50).

As we have seen, nearly every innovation examined in this study has required teachers to serve in new and different roles. Implementation of these innovations requires time and opportunity for teachers to learn new skills and knowledge to fill their new roles effectively--all while delivering services. Indeed, the teachers we interviewed at Chiron, Hollibrook, Metro, Timilty, and Wheeler said they have spent more time and effort attending to their own continuing professional development because of their participation in the quality-of-time innovations at their schools. Professional development in these cases goes well beyond traditional forms of professional development, although strategically selected formal and didactic presentations have played a part. Professional development in the context of these innovations has also meant trial-and-error attempts at new behaviors, analytic discussions with colleagues, strategic modifications in classroom practice, reflection, reanalysis, and

further refining. It is through this iterative learning process that teachers become proficient in their new roles and in carrying out new tasks.

In contrast, teacher learning appears to have been less important in schools that have limited their innovations to changes in scheduling and in the residential schools and the Jesuit schools. One reason for this may be that teachers in these schools are not expected to make and sustain fundamental changes in their professional work. As organizations, these schools are relatively static, and, consequently, place a limited premium on continuous teacher learning.

Our data suggest that although student learning is the central reason schools exist, teacher learning is also critical, particularly for those who are attempting to overhaul a long-institutionalized system. Moreover, at sites where a goal or a byproduct of the reform process is an institutionalized habit of professional inquiry--innovation that is regenerative--the need for professional time to individually and collectively examine, experiment with, reflect on, assess, and refine improved conditions of teaching and learning may never cease. It may, however, lessen as new procedures for supporting faculty inquiry are institutionalized. Because the learning needs of teachers cannot be neglected if the educational reforms they are charged with crafting and achieving are to be successful, a balance of equal attention to student and teacher learning is needed.

Accountability and Time for Reform

Another issue to emerge from our interviews with teachers is that of balance between the time frames for accountability and the time frames for reform. Several of the innovations in this study, such as those carried out at Moton and Lockett Elementary Schools and Chiron Middle School, were pressured to simultaneously implement and defend the innovations' value. The teachers and principals we met in these sites argue that it is difficult enough to break established individual and organizational behaviors through school reform initiatives. The added pressure of high-stakes accountability--such as pressure to improve standardized test scores immediately--turns work into a personal liability that could, under different circumstances, be viewed as experimentation and experienced as professional growth. A teacher in California --who participated in another phase of this study--said this about her school district's efforts to implement several innovations and to demonstrate improved student achievement at the same time:

[Teachers] need time not only to accept [reform], but time also to adapt and to practice. We would never expect a student to be able to multiply a two-digit number by a two-digit number without first [helping her to develop] the necessary skills and

providing her with ample time to practice. So why would we expect a teacher to successfully manage a cooperative learning group without ample opportunity to learn the skills and to practice them? 'Practice' by definition involves an element of freedom of risk. It is a time for constructive feedback--by others and self--and for monitoring and adjusting without judgment and evaluation.

Similarly, the schools in the New Orleans study site did not enjoy a "safe" or "hold harmless" period in which they could break out of their mold, learn, and experiment without the pressure to produce immediate results. Moton and Lockett did not have the support they needed to be open year-round, especially during the summer when other district schools were closed. All the while, the district was gathering student test scores to track the school's progress in improving student achievement. When test scores did not improve, and continuation funds could not be garnered without hard evidence of positive effects on student achievement, the innovation was halted. The fact that the district evaluation took such a narrow view of outcomes was also disturbing to teachers.

A few of the schools in this study have found ways to protect their experimental work from accountability systems until they are ready to "go public." In some regards they are special cases; however, they are instructive as examples of successful incubators for professional growth within the context of education reform. Because reforms at Wheeler began with the combined support of the Board of Education, the superintendent, the principal, and the Gheens Foundation, the school has had the authority and resources necessary to develop and implement their time-related innovations. But before the changes could be made, the principal had to convince the faculty members that they had nothing to lose by taking action. During its two-year, self-study and experimentation period, Wheeler was given a "hold harmless" provision by the superintendent and Board of Education for the purpose of freeing them to take risks. Metro provides another example. In its early years, Metro was composed of a small group of teachers dedicated to working with students whom no one else wanted to serve: high school dropouts. According to an informed observer, "The teachers were left alone to fend for themselves. . . . The school's 'invisibility,' I suspect, gave students and teachers alike a sense of autonomy." Our interviews with teachers bear this observation out. The school's early low profile seems to have protected teachers so that they could experiment. According to the district's perspective at the time, the school was out of sight and out of mind. The result was development of a cohesive and self-supportive faculty that was free to explore innovative ideas and that has produced impressive results with a hard-to-teach population. It is not clear that these schools would have fared any better under intense scrutiny in their early years than did other innovations that came to an early demise as a consequence of flat student assessment results.

Clearly, innovations must be assessed. But our data suggest that timing is important, regardless of the type of innovation. A careful look at the optimal time frame for assessment, given

the nature of the innovation, would be more useful to schools engaged in reform efforts and to the wider education community that has an interest and a stake in learning about effective innovations.

Collaboration and School Structure

The experiences of the study sites engaged in classroom-based reforms and associated changes in school governance suggest that teacher collaboration facilitates school reform especially well when it emerges from teachers' work as the device of choice to help a faculty build a professional community. But, the move to implement collaborative decisionmaking--regardless of the focus--begs for change in the traditional school schedule. In most cases, time has to be reallocated to allow teachers to meet, discuss, reflect, and debate the merits and drawbacks of the issues being examined. Tensions arise when, after discovering compelling reasons for engaging in collaborative work, teachers discover that they have little control over aspects of the school that need to be adjusted in order to make collaboration possible. Our data suggest that two aspects of school structure are particularly significant in the restriction or facilitation of teacher collaboration: time and administrative skill.

Collaboration takes time. The spirit of reform and opportunities for teacher collaboration have inspired and supported many of the changes that have occurred at Hollibrook, according to faculty members. However, nearly every change that has taken place over the past several years has required teachers to volunteer more of their time, a situation that has raised the level of concern about teacher "burnout." One teacher who had been very active in collaborative school governance activities explained her reasons for reducing her involvement this way: "Time must be restructured because if you are dead on your feet, wise decisions cannot be made." At Chiron Middle School, day-to-day operations are based almost entirely on decisions made jointly by staff. Together, they have developed every aspect of the school's curricula, from deciding how subjects will be combined for interdisciplinary study to choosing the annual schoolwide theme that provides a unifying context for all curricula, and writing individual lesson plans for mixed-aged classes. Teachers work together to develop alternative assessments, the school's report card, and their professional development agenda. In addition, most classes are team taught. The main problem Chiron has faced is lack of time, according to all faculty members. The school's original design plan stipulates that the experimental school is to compete equally with other schools for district resources, despite the fact that it is a new school inventing itself as it goes. The contradiction is crippling. Teachers know they need common time away from children to accomplish their collaborative work, but they are unable to request the resource they need most: time.

As we have seen, collaboration requires teachers to have time away from their classes to work and plan with colleagues. This can be arranged, but it usually requires some combination of flexibility, resources, and volunteerism. Moreover, collaborations are relationships, and, as such, they require time for nurturing. Our data suggest that the benefits commonly associated with collaboration--such as improved effectiveness, reduced overload, increased capacity for reflection, and organizational responsiveness (Hargreaves, 1994)--do not happen instantaneously the moment joint work begins. Time is needed to explicitly and implicitly establish the terms and conditions of collaboration, to establish trust and open discourse, and to learn each teacher's absolute requirements, negotiable wishes, and communication styles. As relationships, collaborations also require maintenance, which means spending some time in behaviors that might appear, on occasion, to be "off task." This is the nature of collaborative work.

On the matter of administrative skill, our data suggest that principals, and possibly other administrators, set the tone for collaboration in a school. In schools with established collaborative practices, the principals model collaboration by sharing their responsibility and authority. The principal at Wheeler has done this by publicly working with her faculty members in exploring new conditions for teaching, learning, and assessment that could help transform the school. Tolerance for and effective management of dissension--which is inevitable when faculty members grapple with issues of educational theory, long-term plans, and the basic purposes and underlying assumptions of school practices--are also important skills of administrators in schools aspiring to collaborative cultures. At Hollibrook, for example, we observed that communication and debate are encouraged among the staff. There was evidence of a recent deliberation in the faculty conference room, where notes from a discussion about the pros and cons of year-round education were recorded on large sheets of paper posted on the conference room wall. Our data suggest that administrators and teachers there have successfully managed their joint exploration of sometimes controversial topics.

A second issue has to do with district-imposed designs to generate and facilitate teacher collaboration. Without a specific purpose that teachers can subscribe to, collaboration accomplishes little. It becomes a series of meetings in search of a *raison d'etre*, as we saw in the case of a district-designed, site-based decisionmaking team at Timilty.

Consideration of faculty coherence and control of hiring also weigh significantly in the scope and effectiveness of teacher collaboration. Attempting to reconcile the professional judgments of teachers with fundamentally divergent views--on the roles of teachers and students; existing and optimal conditions of teaching and learning; and means of assessing student, teacher, and school progress--increases the likelihood of dissension among faculty members. In the absence of some mutually agreed-upon principles of teaching and learning that all faculty members can subscribe to,

and that can be used as the basis for determining teacher compatibility in hiring decisions, teachers will probably reproduce the individualized cultures of traditional schools.

The results of the various forms of collaborative decisionmaking in the study sites are mixed. For the most part, teachers claim that participating in shared decisionmaking groups breaks the isolation of their work, confers on them a degree of authority that is commensurate with their responsibilities, and helps the entire faculty develop a shared educational ethic and make decisions that are consistent with that ethic. On the other hand, collaborative decisionmaking requires more meetings, more time for interpersonal communication, more time to make a decision that everyone (or at least a majority) can live with, and more flexibility in time management to get everything done. These multifaceted functions demand changes in the way schools are structured. Moreover, it remains to be seen whether school flexibility in the use of teacher time for collaborative decisionmaking can survive or spring from the growth in bureaucratic designs for site-based decisionmaking that are increasingly common in education reform policies.

Concluding Observations about Teachers' Time and School Reform

These, then, are the systemic tensions around teachers' work lives that characterize the time-related innovations examined in this study. To summarize the lessons they can provide to other reform efforts, we offer the following:

Adding more time to the school day or year is an insufficient response to the time pressures experienced by teachers, regardless of the type of innovation they are attempting to implement, but additional time can facilitate the planning and implementation of classroom-based innovations.

Although the most commonly expressed view about time at many of the schools in this study is that there is not enough of it, closer examination reveals that teachers want and need not just more time, but specific kinds of time, including (1) sustained time away from the stress of daily teaching responsibilities to reflect on long-term goals, assess their own progress, and work on refining their work; (2) protected time for experimentation without the pressure of evaluation; and (3) flexibility in time and curriculum decisions. To the extent that additional time is allocated to these purposes, it is a worthwhile investment.

A combination of classroom-based innovation focused on teaching and learning, plus scheduling innovation that provides time for strategic, long-term planning and reflection without shortchanging short-term planning time, promotes regenerative change better than either type of innovation alone. Reform of teaching and learning requires additional time especially when teachers

are attempting to break old behavior patterns and learn new ones. When that additional time is formalized and institutionalized as opportunities to engage in strategic long-range planning, reflection, instructional experimentation, and analytic discussion with colleagues, the result can be a culture of inquiry and improvement. Without additional structured time, classroom-based reforms place burdens on teachers that can lead to individual burnout and high faculty turnover in schools. On the other hand, scheduling innovations that do not include simultaneous commitment to innovation in curriculum and instruction have limited capacity to improve student achievement. Taken together, however, a combination of these two types of innovation can produce regenerative improvement in schools.

As the demands on teachers grow disproportionately to the resources available for meeting those demands, the possibilities for teacher burnout grow. What distinguishes the sites in this study that point to teacher burnout and high staff turnover as issues from those that did not is, among other things, the existence of a combination of resources--and their availability to teachers--for meeting the demands that time-related innovations pose. The resources include additional compensated time for collegial work apart from direct interaction with students, professional development opportunities, flexibility in time and curricular decisions, and a reasonable time frame in which to experiment before being held accountable for substantive increases in students' achievement.

Collaboration is an important source of support for teachers engaged in some but not all time-related innovations; it involves a complex set of relationships that take time and skill to develop and sustain. For teachers engaged in classroom-based reforms and participatory school governance, collaboration facilitates school reform, especially when it emerges from teachers' work as the device of choice to help a faculty cohere in its efforts to pursue and examine its own objectives as a professional community. But, collaborative decisionmaking requires changes in the traditional school schedule to permit teachers to meet, discuss, reflect on, and debate the strengths and weaknesses of their individual and collective work. Collaboration takes time, and it takes administrative skill in managing the inevitable diversity of perspectives that emerge when teachers engage in meaningful discussion about issues that are central to their work in school.

VI. IMPLICATIONS FOR POLICY AND PRACTICE REGARDING EDUCATION REFORM

In this report, we have described and analyzed 14 schools and programs that have adopted innovative approaches to the uses of time for teaching and learning. In our analyses, our enthusiasm for what some of the sites have accomplished and our more tepid reactions to others have no doubt shown through. Taken together, the sites raise critical issues and suggest important implications for future policy and practice. Furthermore, despite the somewhat off-beat organizing constructs of the study (quantity and quality of time in school and out), the themes that have emerged from cross-site analysis are highly synchronous with current policy debates. They are also in concert with the conclusions that other researchers are reaching, although their starting points are quite different from ours.

We organize this chapter around four important policy themes: (1) school size; (2) flexibility; (3) choices; and (4) learning time beyond the classroom. We begin our discussion with a core premise that reflects the realities of the mid-1990s:

The American public and its political leaders are unlikely to support the large infusion of resources that would be needed to significantly increase required time in school for all students.

This conclusion leaves us undismayed since much change and improvement can be made with good ideas, the rechanneling of existing resources, and modest amounts of additional resources.

The Size Issue

Several of the schools that we studied were very small--under 100 students. Others were larger but, as part of their original designs or current restructuring plans, have organized faculty and students into small, stable "family" units for teaching, learning, counseling, and nurturing. A majority of the schools attributed a large part of their success with students to keeping classes small. Size--with the emphasis on reducing it--was very definitely a quality of time theme among this quite disparate set of schools. It is a theme that we did not choose as a site selection variable because we did not anticipate its prominence as a reform strategy. This fact increases the power of our observation: we did not look for places that sought to improve the quality of time in school by reducing and personalizing the scale of daily interactions, but we found them nevertheless.

We know that the impetus to reduce scale and create groupings that might truly grow into learning communities is not restricted to the sites in our study. Darling-Hammond and her colleagues at the National Center for Restructuring Education, Schools, and Teaching (NCREST) have been conducting and will shortly report on a study that they call "Big School, Small School." This study specifically examines the benefits to teachers and students of smaller educational units. We ourselves have been involved with an evaluation of clusters of feeder schools that have undertaken restructuring as a dropout prevention measure. A key strategy in the large urban schools (particularly at the middle and high school levels) has been the creation of "pods," "houses," and "families"--physical and educational spaces that keep four or five teachers and 100-125 students together for two years or more (Hershey, Adelman, and Murray, 1995)). Schools affiliated with the Coalition of Essential Schools and the network of middle schools that have been implementing recommendations of the Carnegie Council on Adolescent Development represent hundreds of other sites where reducing the size of educational settings is actively promoted as a reform strategy.

Why is smallness considered a virtue? The schools in our study that value it enough to make trade-offs to preserve it would argue that small communities of learners are the only way to put muscle behind the often-articulated goal of holding all students to high standards and expectations. Large institutions have a hard time making students believe this assertion. There is too much daily evidence suggesting otherwise, and the controlling structures that keep anarchy at bay also tend to depersonalize any ringing statements of goals and expectations into so many words. In smaller institutions, or large ones that have subdivided, there is far more opportunity for the adults to reiterate the institutional expectations regularly, to understand what it will take for everyone to meet them, and to provide instruction, encouragement, support, tough love, or whatever else is needed to get them there.

Jane Rollins Martin (1995) has argued that the "moral equivalent of home" is precisely the dimension that is needed in today's schools to make them responsive to current social conditions. She writes: "... there is now a great domestic vacuum in the lives of children from all walks of life. In light of this radical change in conditions, once again the pressing question has become, 'What radical change in schools will suffice?'" We suspect that the appeal of smallness at this particular juncture represents both recognition of the point Martin makes and an answer to her question.

Flexibility

So far, and to the extent that there is one, the movement toward smallness has been a matter of school-level policy or decision making. No state or district that we are aware of has yet mandated

that all schools--or all schools over a certain size--must break themselves down into smaller units. However, the public schools in our sample have distinctly benefited from a policy trend at the federal, state, and district levels to allow more flexibility at the school level. Whether the term used is waivers, devolution, or site-based management, the overall effect has been to allow the schools to make decisions, within certain limits, about how they will organize, what they will teach, how they will teach it, and--most important from our point of view, how they will structure time. The private schools, of course, already had decision making authority over these kinds of matters.

When states first made waivers available several years ago, they often complained that no one was taking advantage of this opportunity, leading some to believe that policy flexibility was not really an urgently needed component of educational reform. Others wisely argued, however, that districts and schools would need time to determine where they wanted to go and which rules and regulations were in their way. Our evidence, while limited to a few locations, is that districts and schools figured it out and today enjoy far greater latitude to design and implement their own improvement plans within certain accountability guidelines.

Our greatest interest in flexibility for this study was at the school level and specifically in the context of building-level freedom to arrange and rearrange time to fit the learning needs defined by the faculty. We found that in almost all of the sites, flexibility was both an organizational principle and a fact of daily life that both teachers and students appreciated. Teachers, in particular, were articulate about the ways in which instructional flexibility coupled with flexible time use has enhanced professional collaboration and supported creative teaching practices. But the outcome data that alternative high school programs like Metro in Cedar Rapids and ConCurrent Options in New York City were able to provide are strong indicators that flexibility in when students attend school is a critical need for many in this age group.

While we found the policy trend toward school-level flexibility, management, and decision making to be a largely positive development for most of our public school sites, our sample did include one school where a new, district flexibility policy had an ironic effect. The Alternative Middle Years (AMY) program in Philadelphia has had a 25-year history of site-based management, interrupted briefly at one point by a back-to-basics initiative. Shortly before we visited this school, the district introduced a site-based management program requiring schools that wished to operate in this way to submit a plan for review by district and union officials. AMY, with its long and successful experience of school-level decision making, was initially turned down for reasons that indicated misunderstanding of its institutional mission and history as a citywide magnet program. This is policy run amok. If the school--with its special philosophy, structures, and curriculum--had

not been succeeding, it would not have lasted as long as it has. In this case, the waiver policy itself should have been waived.

Choices

We have studiously avoided a direct discussion of choice and the magnitude of its effects on outcomes, preferring to save our comments on the choice phenomenon for this discussion of policy and practice. The fact is that our entire sample--not just the private schools--is heavily biased toward sites where students, families, and teachers deliberately choose to be.

The only examples that we have of true catchment area schools that have experimented with the time-related innovations that were our focus are the two extended-year schools in New Orleans, Wheeler Elementary School in Louisville, and to some extent, Hollibrook Elementary School in the Houston area. As we have documented, the New Orleans experiment failed, primarily because quality of time innovations did not accompany the increase in quantity of time. Wheeler must be counted a success story, although it was not battling the same odds with respect to student outcomes as most of the other schools in the sample--whether private or public. Hollibrook is essentially a neighborhood school, but in its pre-restructuring phase, families often abandoned it for other schools with better records of student success. In other words, they chose with their feet.

The most important fact about school choice that emerges from our study is that it exists and appears to be flourishing. We can also assert that it is providing options for some students who are economically and educationally disadvantaged. Finally, choice operates in different ways among the sites, particularly in terms of who does the choosing.

The publicly-funded high school alternatives among the sites--Metro and the Beaver Island Lighthouse School--work exclusively with students who have been rejected by mainstream high schools. As second chance (or perhaps last chance) programs, these schools and the students they serve essentially choose each other. Beaver Island actively recruits students from among the dropout population. Metro is well-known in its district, and most disaffected youth who want to continue their education gravitate to it. (A few students, placed at Metro as a condition of parole or a drug treatment program, do not technically "choose" the school for themselves.) Both of these schools appear to be able to accommodate all interested students. For them, there is no issue of selection criteria, rejections, waiting lists, and so on.

When it comes to the three public, middle school magnets in our sample, students and families do all of the choosing. None of these schools apply selection criteria to the applications they receive. Timilty and AMY typically have more applicants each year than they can enroll. They address this issue through a lottery for the available slots; students whose numbers are too high are placed on a waiting list. So far, Chiron has been able to take all applicants.

With the private schools, establishing the relationship between students and families and the school involves many choices and decision points for all parties. The schools use recruitment, application, and selection processes that variously involve written applications, testing, interviews, and, in two cases, trial residential experiences where school and prospective student can evaluate the fit between institutional ethos and individual preferences.

At every step of the application and admission process to the private schools, families and students must choose whether or not to proceed. All of the private schools in our study are seeking low income, minority students with no major academic weaknesses and no record of difficult behavior in school. One might assume that it takes little thought to decide to accept an invitation to attend, virtually tuition free, a school with a rigorous academic program and a nearly watertight guarantee of moving on to the next level of education if you do your part. That is not necessarily the case, however. Many recruits are apprehensive about the restrictions, rules, regulations, and high standards that the schools apply. When living at school is an issue, many families do not want to send their children away. The result of what is really a rather lengthy choice process is a fairly good match between the private schools and students who will benefit from what they have to offer.

Some observers would argue that the fact that choice is an enrollment variable in so many of our sites has bearing on what we have reported about student outcomes. In general, research has not yet figured out how to best measure the impacts of choosing schools on student outcomes, although several attempts have been made. Most studies hypothesize that self-selection explains some of the variation between outcomes for students who choose a school and those who don't. Many of the magnet schools, alternative schools, and private schools in our sample have documented considerable success with their students, but we do not know what role personal self-selection or institutional selectivity have played in their positive results. Furthermore, we know nothing about the educational experiences and outcomes for students who do not "get in" to the schools that we studied. As choice options and charter schools proliferate, policymakers must take these factors into account when judging their success.

Out-of-School Time Reconsidered

One of the most striking features of the schools in this study is the extent to which classroom-based academic instruction, while viewed as very important, is only one aspect of the overall school program. The students' personal and social development share center stage with academic achievement among the schools' missions. The faculty at most of the schools view the students as individuals who require more than formal academic instruction to learn and grow into healthy, productive adulthood. Knowing how to socialize in safe and healthy ways, for example, is viewed as an equally important set of life skills to be learned.

This concern for the whole child has taken on a very practical focus for the schools, given that many of their students have very few healthy out-of-school options for learning and personal development. During our interviews with public school students, they commonly mentioned watching television, hanging out with friends, or playing sports in the neighborhood, but not much else. Safety is a serious concern for most students attending urban schools, one that is intensified for those who come from homes where parents work or are otherwise unavailable to supervise or simply watch out for their children. We found that many students are aware of the precarious futures they face as adolescents growing up in poor urban areas, and they recognize their schools as both refuge and ticket to a more stable future.

Concern for the healthy growth and development of youth's intellectual, personal, social, and physical skills, coupled with recognition that out-of-school time is full of underutilized learning opportunities to foster growth and development, has prompted these schools to expand the time that they are open and available to students. All of the schools in this study have maintained a full academic program, but many also offer different educational activities afterschool. Several also provide at least some structured and constructive activities during a portion of the summer break.

It is particularly in the context of educating the whole child that the residential and Jesuit schools have influenced our thinking. Sometimes using their instructional staff, sometimes involving other adults, these schools extend the learning time in the day by many hours and explicitly accept responsibility for types of learning that go well beyond academics. We do not suggest that many more residential schools should be built (although orphanages have re-entered the policy arena). Nor do we mean to imply that families do not play the most critical role when it comes to learning values such as respect and responsibility. We do, however, come away from this study convinced that better use could be made of the total time available for education.

If there is one area that seems ripe for policy attention, it is the relationship between the schools and other educators in the society. In a recently published book entitled *Urban Sanctuaries*, McLaughlin, Irby, and Langman (1994) argue that lack of attractive out-of-school opportunities, not lack of interest, is the main reason inner-city youth spend so much time in unproductive and often destructive activities. Our conversations with students and faculty bear this out.

Schools in this study that are located in the most economically deprived neighborhoods in their cities report high participation rates in their afterschool, weekend, and summer programs. This may not seem surprising given that roughly 40 percent of an adolescent's time is discretionary and uncommitted (Medrich, 1991; Carnegie Council on Adolescent Development, 1992). But these participation rates do run counter to a common view of adolescents that McLaughlin and her colleagues encountered among foundations, government, and social agencies: the view that adolescents have no interest in organized activities no matter what their content. Our data suggest that young people are willing and eager to commit their free time to participation in activities that are provided through, or in association with, local schools when the activities are well-conceived and well-structured.

Finally, McLaughlin and her colleagues point out that many of the nonschool experiences that young people have result in learning--sometimes learning that is more relevant and important to them than what they learn at school (assuming that they have not yet dropped out). To the best of our knowledge, the educational system in the United States--public and private schools alike--has never seriously entertained the idea that learning derived somewhere other than a school should be allowed to "count" toward the all-important credentials that mark completion or mastery. We suggest that now is an excellent time to examine this issue. The schools complain that problems are multiplying and that they are expected to "do it all." That does not have to be the case. Help is available--if schools, policymakers, and citizens will accept it as legitimate.

VII: IMPLICATIONS FOR NEEDED RESEARCH

Our study of the uses of time for teaching and learning, with its multiple themes of quantity and quality of time in school and out, has brought together several streams of research literature and has caused us to think about issues, structures, and policies in new ways. As a result, we have uncovered a number of gaps and weaknesses in the knowledge base about educational time. Some of these may be relatively easy to correct. Others suggest the need for significant replication of previous research or new examinations of an issue using more rigorous research designs. In this chapter, we organize our ideas about needed research around our own three research foci: (1) quantity of time in school; (2) quality of time in school; and (3) out-of-school time.

Needed Research on Quantity of Time in School

Researchers and other close observers of the education scene have tended to approach the question of whether children should spend more time in school rationally and from perspectives in which they have expertise. For example, some policy analysts who specialize in international comparisons argue that if our children do not score as well on tests as the Japanese and if Japanese children attend school for more days, then we must add days to the school year. Economists respond that adding more time in school will cost the nation billions and will not yield a high enough payoff to support the investment. Both logics seem convincing, but they arrive at contradictory conclusions. Not surprisingly, given the mixed messages that they hear, Americans are ambivalent about the education system and especially about whether children should spend more time in it. There is the need for a well-conceptualized study that uses multiple methods to examine the full social and political context for how we, as a people, currently view our schools and how our schools could be changed to better serve their constituencies. We can guarantee that the issue of time will come up, but we would not lay any odds on consensus about whether there should be more of it, or less.

Other, more specific quantity of time studies that would be useful include the following:

- A controlled experiment on the impact of extending the school year
- A similar study on extending the school day
- Rigorous studies of the impacts of year-round schedules on student outcome

- An investigation of the trends in time to high school graduation, with a particular emphasis on recent immigrants and other educationally at-risk groups

Needed Research on Quality of Time in School

Since we conducted our original research review in 1991-92, there has been considerable research on many strategies to reform curriculum, instruction, assessment, and school organizational structures--the core variables in our conceptual framework regarding quality of time issues. We therefore hesitate to put too much stock in the research gaps that we identified at that time since they may have been at least partially filled. However, one area that we targeted as deficient--the nature of teachers' time in a professional context--continues to need more attention, a fact that we reconfirmed in efforts to prepare a paper on this topic in the winter of 1995. We are currently conducting a study for ED that will compare the work lives of "typical" teachers in the United States with those of their counterparts in Germany, Japan, and a small number of innovative schools in this country. This study will help, but its research design is geared to finding some interesting ideas that can be widely broadcast to stimulate some debate about the status quo. It is not a scholarly effort, nor will it involve large or representative samples of teachers in any of the countries. There is much room for additional work in this area.

Another area in which the available research lacks rigor and tends toward the exhortatory concerns the organizational concept of nongradedness or multi-age grouping. Research continues to be added to the knowledge base on this idea in every decade, but we seem to get no closer to understanding whether it really makes a difference, and for whom. Research syntheses repeatedly report that the results of the most recent studies "are mixed." Meanwhile, schools, districts, and even states continue to be attracted to the strategy, which has considerable intuitive appeal as a reform. They have no trouble defending their choice, since there are research studies to support any view of nongraded structure that you like. What they should expect to happen as a result of adopting this structure remains unclear.

Finally, there is a great deal of current interest in the schools and districts about new alternatives for scheduling the traditional amount of school time. We have received a number of calls from the field over the course of this study, asking if we were aware of research demonstrating the strengths and weaknesses of this scheduling plan or the other. We were unable to be very helpful, because the literature on scheduling is sparse and dominated by the people who invented the alternative schedules. Better descriptions of the various plans in action, including comparative views from student, teacher, and parents about the new way and the old way, would be very helpful to the

field at this point. In the longer term, studies should be designed to evaluate the schedules that have been most widely adopted, such as two-hour blocks of time at secondary school level.

Needed Research on the Uses of Nonschool Time

As we have noted in our research review for this study, most of the literature on quantity of instructional time has limited the definition of that time to what goes on in school and, even more specifically, in classrooms. In our view, the most pressing research need in this area is far better documentation of the kinds of learning--including academic learning--that children and youth acquire as a result of what they do when they are not in school. We believe that such research might well show that other educators in our society already complement and supplement what the schools teach to a significant degree. However, one or more well-designed studies of the skills and knowledge that students acquire through afterschool care programs, community-based activities, membership organizations, sports, extracurricular participation, and community service would allow formal and nonformal educators to better evaluate how they could work together to support student growth and development.

In addition to this research priority, we found a number of other areas within various research literatures that would bear further investigation:

- More work on the role of families in childrens' acquisition of literacy and numeracy, along the lines of the ethnographic work pursued by Snow
- Research on the different types of afterschool care for children in grades K-8 and their respective impacts on school-related outcomes
- Continued research on the benefits of work experience, including comparisons of outcomes from the same kind of work when students find their own jobs versus when the work experience is part of the formal school-to-work transition structure

The diffuseness of the uses of time theme led us to explore the available research literature in many areas. However, collecting and analyzing the data made us keenly aware of areas that we had neglected in our research review. A key one is student motivation. In the end, given adequate opportunities for learning, the decision to learn is up to the individual. That is what many of the schools and programs that we studied understood well and sought to develop both in the classroom and beyond.

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