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The impact extended day instruction has on the academic achievement of at-risk low socioeconomic students

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THE IMPACT EXTENDED DAY INSTRUCTION HAS ON THE

ACADEMIC ACHIEVEMENT OF AT- RISK

LOW SOCIOECONOMIC STUDENTS

by
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Diane L. Worthy

THE IMPACT EXTENDED DAY
INSTRUCTION HAS ON THE
ACADEMIC ACHIEVEMENT OF
AT-RISK, LOW-SOCIOECONOMIC
STUDENTS
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This study determines whether students from low socio-economic backgrounds, who function poorly on tests and report cards, improved academically after increasing time for instruction, and time for working on school related tasks. Research indicates that there is a relationship between time and learning. When distinctions have been made with time allocated for instruction, time engaged in instructional activities and time spent successfully completing instructional activities, the latter of these has been found to have a direct correlation with achievement. Participants worked after school on homework with certified teachers. Factors effecting student achievement in language arts have been identified. The academic outcomes of the participants are compared to other high-risk students of similar backgrounds who are not involved in the program. The educational background of the adult participants is key to understanding student motivation and commitment to working on tasks. Language arts learning objectives are measured through pre and post testing on a National Standardized Achievement Test.

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Acknowledgements

The successful completion of research is never the work of one individual. I would like to first thank the teachers for their support and cooperation. Without it this project would not have been completed. Their concern and understanding of the state of things for children from low socioeconomic and culturally diverse backgrounds propelled their efforts to make this a meaningful opportunity to facilitate learning. Their effort strengthens the belief that there are teachers willing to extend themselves beyond the status quo to help all children make academic gains. I would also like to thank the children who worked diligently at their tasks. Their desire to learn and improve academically was quite evident.

Finally, this project could not be submitted without acknowledging Dekeba Batte, my little Australian friend who struggles to do well in school in a culture that fails to understand pedagogy that would augment his ability for learning. It was my sincere love and concern for him, and children in similar circumstances that inspired my desire to explore and understand the learning strategies students from culturally diverse backgrounds develop.

Let me conclude by humbly acknowledging that this research is not complete. Other research is needed to provide guidance in practical aspects of teaching that can support the diverse learning styles of all students. My hope is that someone will explore this disparity in education in more depth.

Toms River, New Jersey   Diane L. Worthy
May, 2001

CHAPTER 1

INTRODUCTION

Students who attend Berkeley Township Schools and live in a federally

subsidized housing project plagued by illegal drug use and distribution,

consistently receive poor report card grades, and score lower on achievement tests

when compared to the more privileged student population. It has given the

impression that these students are cognitively inferior. The families of these

students are economically disadvantaged. They have only a high school education

and provide little support for their children's education. In contrasting the amount

of time spent enriching the education of these children to the efforts of the more

privilege group, the differences are astounding. No time is spent on enriching the

education of the children from the federally subsidized housing project. This

places these students at a disadvantage educationally. The limited exposure to

opportunities that could enhance the education of these children contributes to

their performance, or lack of it in school. This study examines the impact adding

instructional time and extending time for working on school tasks as they impact

on learning for students from low socioeconomic backgrounds. A study

conducted by (Finn and Rock, 1997 p.222) found that not all students who were at

risk for school problems because of being from a low income home or living with

one parent suffer poor performance in school. It seems that being involved in

school outweighs other factors that might impede an at-risk student. The length

of a school day was shown in other research to be positively correlated with student achievement. This study focuses on two areas, length of instruction and length of time working on tasks to show the relationship time has on the academic performance of students as indicated on a national standardized test. Students and teachers will work at an off-site housing project 3 days a week, having the opportunity to work up to 90 minutes each day for eight months. Data collection will provide the amount of time students worked on instructional activities independently, and the amount of time students received instruction while working to complete their tasks. Time on tasks varied for each student.

Purpose

There are studies that show a relationship between time and student achievement. This study will look specifically at the academic outcomes of at-risk elementary school students K thru 6, who worked at improving Language Expression skills. These children reside in poor communities throughout Berkeley Township, and live in conditions that have previously prevented school progress from occurring. Since the Supreme Court's Abbott v Burke ruling in New Jersey, sensitivity to the educational needs of children in poorer districts has progressed. This study takes it a step further to provide educators with a prescription to promote academic achievement of elementary school age children from low-socioeconomic environments who are placed at a disadvantage, and in need of special attention and special treatment. This study recognizes the impact of their disadvantage, and provides information on the effects after- school homework

help and instruction has on student achievement in Language Arts. Language Arts is the subject elementary students have had the lowest scores consistently as shown on national standardize tests. This study describes and evaluates the relationship that instructional time and more time on tasks has on academic achievement in language expression. How students' time was spent was closely monitored. Strategies, which are used for instruction and for keeping students working on task to maximize the quality of their educational experience, have also been noted. It is the responsibility of educational leaders to recognize the different learning styles of all children and wipe out disadvantages that result from monetary disparity as much as possible. Work is being done through research to provide educators with information that can help counter racism, sexism, and other forms of bias in schools. Administrators are challenged with the responsibility to invest time in providing staff members with current information that can create positive changes and provide a thorough and efficient education for all students. Being knowledgeable and sensitive of time and its impact on learning styles with cultural orientations can assist teachers who work at implementing the most effective instructional strategies for at-risk students. Implementing innovative programs can be a means for accommodating their diverse needs. Research is necessary to help understand what works and to help teachers develop a workable plan for helping these children learn. Selecting teachers to ascertain accomplishment of these goals provided some professional experience that was needed in identifying their strengths and weaknesses.

Definitions

Abbott v Burke –The Supreme Court rulings which establish the constitutional rights of children in poorer cities to high quality public education. Inadequate and unequal funding denies these students a thorough an efficient education. The Supreme Court's ruling requires the state to assure supplemental programs designed to wipe out disadvantages as much as a school district can.

Economically Disadvantaged – Describes children from lower socioeconomic homes who receive less access to prenatal and early health care, quality early childhood programs and other supports or opportunities that higher income students receive.

Engaged Time – That portion of allocated time during which the student is paying attention to academic instruction or tasks.

High-Risk - Students are identified as high-risk who come to school hungry, abused, neglected suffering from the effects of poverty or suffering from family members' involvement in drugs.

Off-Site – Place located in another area of town where education for students from the school district is being provided

Privilege Group – These are students from middle to high-income backgrounds who are exposed to educationally enriching opportunities.

Time Allocated for Instruction – The amount of time planned or scheduled for instruction in each subject area.

Time- on- Tasks - This is the time a student is engaged in a task.

Limitations of the Study

One of the limitations of this study was the inability to prevent other variables from impacting learning, and determining the degree of impact on learning these variables will have. Teacher expectations for example could have effected student performance. In an effort to minimize its effect teachers were instructed to encourage all students to work diligently at their assigned tasks.

The size of the sample is small and varies within age groups. Previous data has shown that only a few students come to the center on a regular basis. Tracking of students can only take place with the students who attend on a consistent basis. The results describe the effects of time on performance of the sample group as a whole. It does not compare performance within age groups. A small sample weakens the credibility of the study. The ability to generalize is limited. However, even if a few students improve their performance in school and we provide the district with information that will help teachers identify learning styles that are effective, than this study is worthwhile.

This study does not employ multiple measures. The standardized test being used to measure language performance was normed using a more diverse sample, and not just students who are disadvantaged economically. That could lessen the reliability of the test results. Scores may differ on the pre and posttest due to some error variance, which will not be determined. Comparison of scores will be described using percentages.

Intelligence levels will vary. Knowing exactly how much extra time students need to improve their school performance, and having them commit to that amount of time is difficult. The time allotted may not be enough for certain students to make improvements. Students spent unequal amounts of time working on tasks. All students are provided with an hour and a half to work, however some students had to leave before that time expired because of other after-school activities.

Setting of the Study

Berkeley Township School District is a K-6 district servicing 1800 students in three elementary schools. Revenues in the Berkeley Township School District are received 79% from local taxes, 11% from state taxes, 2% from federal taxes, and 7% from other sources. The population of the Township of Berkeley is approximately 41,700. Of this number approximately 70% are senior citizens. Most seniors are living on fixed incomes and do not want to see taxes increased for educating students. Berkeley is considered a wealthy district and, if it were not for the supplemental stabilization aid, the amount of support the district receives from the state would be less than 12%. The school district is part of a diverse community, however the African American population is only about 10%. The Asian and Hispanic populations are even smaller. It is a mixture of summer residents, retirement communities, and new neighborhoods with young families. Due to this mixture in demographics, revenues and expenditures are carefully communicated to the public. Budgets have only been approved twice in the last

15 years. The community had been reluctant to support new innovative programs that may be costly, however this past year the budget was approved by a margin of nearly 800 votes. The district is governed by a 9-member school board that is comprised of mostly senior citizens. They carefully scrutinize educational programs.

The district provides a full range of educational services appropriate to grade levels, K through 6. These include regular programs as well as Pre-School and Special Education for handicapped students. During the past year, the district advanced its technology initiatives in several areas. All teachers were inserviced in terms of accessing the Internet to reinforce instruction. One student technology helper was hired to load some software and make simple computer repairs. In order to comply with state curriculum content standards, a Spanish teacher was hired to provide foreign language instruction. In addition the ESL curriculum was revised and aligned with state standards. A new music program was purchased for grades K-6 that also reflects the state standards. Committees for Math, Language Arts, and Science convened during the summer to examine each of these curriculum areas in light of the core curriculum content standards. They developed a project in each of these subjects, which enables teachers to match specific daily lessons to the state standards.

The school district has a principal in each of its three schools, one special services supervisor, one elementary school supervisor and a school business administrator.

The rest of the district's organizational structure is listed on the organizational chart in Appendix C.

Significance of the Study

This study as it reveals that time is an important factor for promoting the academic achievement of at-risk students will influence the expectations teachers have for these students in terms of their potential for learning. Teachers tend to form expectations about what students can achieve and how well they will behave. The concern has always been whether these preconceived assessments of a child's ability are accurate or even justified. Are they the result of stereotypes indicative of our society ills? Can they become self-fulfilling prophecies, which stigmatize certain students causing them to perform well below their potentials? Do teachers communicate high expectations for all, refusing to allow themselves to be influenced by sex, race, or socioeconomic status of a child in their classroom? Research findings clearly demonstrate that teachers have greater expectations for students from higher socioeconomic classes and students who are white. In a study by (Crowl, 1971), sixty-two white teachers were asked to evaluate taped oral responses containing identically worded answers spoken by White and black ninth grade boys. Teachers assigned significantly higher evaluations to recorded answers by white than by black males. When black males gave superior answers, their responses were not given higher evaluations than the poorer answers by white boys. These teachers whether intentionally or unintentionally did not have high expectations for all of these students.

Children need the help of teachers to understand just how capable they are, or they may continue adjusting their behaviors to low or marginal teacher expectations and demands. The task, which lies ahead, seems to be to change teacher behavior to reflect more positive teacher attitudes. Administrators are challenged with the responsibility to invest time providing staff members with current information that can facilitate change, offsetting assumptions that prevent understanding and growth. After conducting this research the credibility of non-traditional innovative ways of educating at-risk students was strengthened.

Empowering students to be more responsible for learning also occurred as a result of this research. Children see the progress they are making and are working harder at school related tasks. Encouraging students was an important result.

The remainder of this study focuses on the review of the literature, which supports and/or refutes the conclusions. It also discusses the design; methodology used and presents the findings. Suggestions for working with at-risk students are also included.

Chapter 2

REVIEW OF LITERATURE

Several studies were found that investigated the effects time-on-task had on learning for students at-risk. One elementary school showed consistent improvement in the proportion of students scoring above the national average in reading on the California Achievement Test, and a decline in the proportion scoring below the 25th percentile when extra time for working on task was provided. Although this study could not point to achievement data as proof because of other factors that had significant impact on learning, the elementary schools that participated in this study noted other indicators of positive change they attributed to extra work time.

Teachers spoke of improved attendance, decreases in disciplinary referrals, increased student motivation and increased parental involvement especially among at-risk students. (Adelman, Haslem & Pringle, 1996). Those variables were noted in other studies as directly affecting student academic success (Finn & Rock, 1997). The conditions were also identified and noted in the current study as variables that foster academic gains. They seem necessary to maximize time-on-task, and vital for at-risk students to experience long-term academic improvements. These conditions had a direct impact on students' time spent in school working on academic tasks.

Finn & Rock (1997) found that improved attendance, parent involvement and less disciplinary action towards at-risk students directly impacted the amount of time spent in school and student success. A sample of 1,083 minority students from low-income homes was classified into 3 groups on the basis of grades, test scores, and persistence

from Grade 8 through Grade 12. The classifications were academically successful school completers, school completers with poorer academic performance (non-resilient completers), and noncompleters (dropouts). Groups were compared in terms of psychological characteristics and measures of "school engagement." Large, significant differences were found among groups on engagement behaviors, even after background and psychological characteristics were controlled statistically. The findings support the hypothesis that student engagement is an important component of academic resilience. When time spent in school increased so did a student's exposure to the school's curriculum. The study suggests that the primary obstacles to school success for at-risk students, are the at-risk conditions in which they thrive. These conditions often plague their lives and minimize the opportunity for learning.

Additional studies further substantiated the improvements of academic performance observed. They reported significant relationships between achievement and the amount of time spent on tasks or allocated to instruction for a content area. (Stuck, 1980) Correlational studies that were found showed relationships between achievement and increasing students' opportunity to learn, (Rosenshine, 1979). All except one of fourteen descriptive studies reviewed reported significant relationships between opportunity to learn and pupil achievement. One study documented student behavior during a seventeen-week period of time allocated to reading and mathematics instruction in teachers' logs. Observations of selected students took place. In most cases each classroom was observed about 15 minutes. Teachers in this study recorded allocated time per content and per student. Students were observed every four minutes to note the activity, the content area, student's engagement and level of success. A major finding

was that the amount of time that teachers allocated to instruction for a content area is positively associated with student learning in that content area. These studies have been included to show that the amount of time spent on academic subjects can contribute to, or hinder achievement. Whenever extra time on task, or instruction was provided during the school day for the general student population, significant academic improvements were observed. The current research continues examining the impact of time on learning providing after school tutoring as an extension to the existing language arts curriculum. At-risk students, 90% of which are African-Americans, were provided an innovative opportunity to excel.

The impact of two time elements were examined, time allocated to instruction, and time on task. Both time elements were increased for students during the school day in the above studies and academic gains were experienced. Maximizing the existing time in a school day however, was the popular trend. The current study measures extending the school day to provide students with additional time to work on language arts tasks. The effectiveness of after school programs has been getting more attention as an instructional strategy these days to supplement the school curriculum and promote student achievement, especially for at-risk students. Under these conditions teaching approaches that can meet the needs of a diverse student population are being employed and significant progress is expected.

The second component of the current research includes cross age, one-to-one and small group tutoring as instructional strategies to promote student achievement. Even when at-risk and African-American students are allotted additional amounts of time for

instruction, learning does not always occur. The students in the current study are not learning language in the traditional classroom. Then what helps learning to occur?

A problem of great concern in education has been teachers who do not respond to the multicultural instructional needs of students from different ethnic groups. Although teacher education programs throughout the nation purport to offer preparation for meeting the needs of racially, ethnically, culturally, and linguistically diverse students, scholars have documented the fact that these efforts are uneven and unproven. (Ladson-Billings, 2001, p. 12).

In her article "Ebonics and Culturally Responsive Instruction," Delpit (1997) examined the effects culture has on language development of African-American children and the implications for classroom practice. Delpit (1997) explains that enlightenment has been a non-existent commodity. Few teacher education programs prepare teachers to be effective in classrooms serving diverse groups of students. Consequently, they work at things that fail to serve the interest of students and families of color or families who live in poverty (Ladson-Billings, 2001, p. 6).

Researchers are now paying attention to the manner in which children from other cultures and ethnic groups learn (Castaneda & Gray, 1974, Cohen, 1969; Shade, 1982, 1993). They are examining the research that shows that as cultures of ethnically distinct communities vary, so do their learning styles. (Anderson, 1988; Hale-Benson, 1986). They have noted significant beneficial effects on language arts achievement of students receiving cross age, one-to-one and small group tutoring (Kalkowski, 1998), particularly African American students and other students at-risk. Cross age–tutoring refers to older

students helping younger students. Research suggests that tutoring helps to improve the academic skills of both the tutee and tutor (Heron & Harris, 1993). A meta analysis of previous research involved elementary students in one-to-one tutoring and positive results were found for both short and long term tutoring (Elbaum, Moody, & Vaughn, 1996). The same study mentioned when comparing small group supplemental instruction to one-to-one tutoring, there was no advantage for one-to-one programs.

Research with Black children has found them to be more people oriented. A cultural trait identified through research suggests that certain children would work only if an older student worked with them (Hale-Benson & McCracken, 1987). This trait is being acknowledged in the current study to facilitate learning. More human interaction, student/tutor dyads and peer tutoring are characteristic of the learning climate at the after school center. Tutors will also be sensitive to recent research findings that suggests children from different ethnic backgrounds become aware of group membership and its importance to their well being. This realization, Delpit (1997) is reflected in their oral language. Tutors will not correct a student's choice of oral language. Language arts content areas that have been previously examined include story grammar, comprehension, acquisition of vocabulary, identification of sight words and general reading skills. In the current research similar language skills will be reinforced.

To further facilitate learning, students will work with certified teachers, receive immediate feedback and personal attention to help keep them focused on tasks and increase engagement time. Engagement time, an operational term coined by Caldwell, Huitt and Graeber (1982), is the amount of time that students are actively engaged in or paying attention to academic tasks or instruction. In studies by Anderson (1975) and

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Fisher (1978), engagement rates are significantly related to student achievement. Engaged time was positively related to total reading achievement scores in second and fifth grades. When the amount of engaged time in classrooms was compared, students with the most engaged time did better than those with low average engaged time.

The intervention of the current research; cross age, one-to-one and small group instruction in conjunction with increasing time on tasks (engaged time) to improve student's performance in Language Arts is a unique feature and the focus of the current research. All studies that were found agree on time as a resource that can be controlled to improve student learning. Student participants in the current study have been selected because frequent absenteeism contributes to their poor performance in school. Time has been identified as a major disruption to the education of these students contributing to the high failure rate. There are other conditions that impact on learning which are beyond the boundaries of educating children, however time is the major concern. The current research plans to provide more opportunity for engaged time and instruction to help at-risk students make academic gains. Stuck's critical review of intervention research on time on task concluded that even considering the methodological shortcomings of these studies, the strength and consistency of the findings allowed cautious confidence to be placed in the results. One of the most convincing features of the intervention research is that, despite marked differences in the strategies used, all of the interventions were able to significantly increase pupil time on task and achievement gains (Stuck & Wyne, 1982).

Homework, researchers found is also a way to extend academic learning time. According to a study by (Butler, 1987) homework reveals a positive relationship to

learning outcomes.   Students will complete homework assignments with tutors to reinforce the school's curriculum.

In summary to promote student achievement in language arts it has been recommended to increase engaged-time in that content area and to provide diverse teaching approaches sensitive to learning styles of ethnic minorities (Durodoye & Hildreth, 1995).   Instruction in the current study will also focus on the district's content objectives for language skill development. This reinforces the school curriculum, which also has an effect on learning a content area.

CHAPTER 3

DESIGN AND METHODOLOGY

The sample of students in this study represents an at-risk low- socioeconomic population who usually performs poorly in school. These students live in a federally subsidized housing complex and experience the conditions and risk factors, which impact negatively on their ability to learn and perform well in school. "The concept of risk embodies the notion that exposure to particular conditions or risk factors increase the likelihood that an individual will experience certain adverse consequences. In terms of academic outcomes, well established risk factors include group status characteristics associated with academic difficulty or dropping out of school, for example being a minority student attending an inner-city school, or coming from a low-income home or a home where English is not the primary language. Many youngsters who experience these conditions manage to achieve some level of school success. But all too often these risk factors are accompanied by a set of risk behaviors," (Finn and Rock, 1997, p. 221). Those behaviors that have been identified among Berkeley's at-risk students include not being prepared for school, not completing classwork or homework, and frequent absenteeism. These students also qualify for free or reduced lunch. This information is used to identify and confirm their low socioeconomic status. They have had limited experiences to enrich their education. All twenty students who are participating in the study live in a single parent home where a parent has dropped out of school, or has had only a high school education.

The site for the study is located in a housing complex experiencing a major drug problem. In January 1990 a former Ocean County Prosecutor learned that the Berkeley Township Board of Education was considering an after-school tutorial program at the

federally subsidized housing project. Although (46) students live there, only twenty, K through 6 grade students, comprise the sample group. These students come on a regular basis 2 to 3 times a week. Other students from the district can come to the Center for homework help however; the district provides no transportation so it is often difficult for them. The sample of 20 students included (5) Hispanic children (2) White children and (13) African American children. The academic outcome of these students on report cards, national standardized and state tests place them in the lower 2% of their classes. Language Arts Skills are the weakest. Three students speak English as a second language. All students are receiving remedial services during the regular school day in each of their schools. Remedial services provide small group instruction during the integrated language/reading scheduled time for all students attending Berkeley Schools. Students receive an hour of instruction in school. The Otis-Lennon School Ability Index for each of these students falls between 72 and 102. Teachers selected to work with students are fully certified and work full time in the Berkeley Township School District. There are six teachers, one African-American and five who are White. Two have worked at the program for two years and the others have worked for at least four years. The teachers have been selected for their experience because it would help eliminate discipline problems as an impediment to learning.

This study involved a pretest/posttest design. Students were administered the California Achievement Test, Fifth Edition as a pretest to identify current levels of skill development in Language Expression. The results provide a baseline of each student's current level of achievement and a guidepost to plan instruction. The assessment helped to focus the teaching at the Center on specific language expression concepts and skills.

The CAT 5 measured skills that are recognized as essential for the mastery of Standard English. These skills contribute to the achievement of full literacy. Thirteen items were identified and measured; Usage, the items focus on subject-verb agreement, understanding nominative pronouns and proofreading four related sentences for usage errors. Sentence formation, the items measure a student's understanding of sentence formation and structure by asking the student to identify a statement that has been turned into a question, whether a student understands and recognizes a complete sentence, recognizing correctly formed sentences distinguishing them from run-on sentences and fragments, and whether a student recognizes simple subjects and predicates. Sentence combining, the item measures the student's ability to recognize compound, subordinate, and coordinate sentence elements and add modifiers. Paragraph structure, the item measures beginning skills in evaluating paragraph structure, recognizing the relationships between several paragraph elements and a students ability to read a topic sentence and from four sets of sentences chooses the one that clearly supports the topic. Paragraph coherence, the item measures the ability to analyze a paragraph for focus, coherence, sequence of ideas, and transitional devices, and finally how well a student can distinguish between what is extraneous and what is essential in a paragraph. Students in the no treatment group were not given the pretest. All students received a language composite score below the 30th national percentile standard. Grade equivalent scores were below each student's grade level.

Intervention research is employed in terms of providing additional time for students to work on these skills after school at the Center. An important characteristic of the after-school program that has played a major role in student achievement has been to maintain

the standards outlined in the district's curriculum when planning and implementing instruction in Language Arts. The District's Language Arts Curriculum has been aligned with the objectives tested on the CAT 5. After (8) weeks of tutoring, teachers were given a list of skills pretaught at the Center. A test was designed and given to students the Monday of each eighth week to measure these skills. The California Achievement Test, Fifth Edition was also used as the posttest in the Spring. Student's report card grades are included as interpretive data in the descriptive summary for student' achievement in Language Expression.

At the Center, teachers spent time reteaching Language Arts skills to the sample group. In addition, teachers made sure these students completed their language arts homework at the Center that was assigned in school. An hour and thirty minutes increased the student's school day. In an attempt to increase engagement time in language arts for the sample group, teachers provided language activities every time a student came to the Center focusing specifically on developing their language expression skills. Engagement behaviors are those behaviors where students are working on an academic task independently or with a teacher who preteaches. When students were ready to work on a language activity, they went to the coordinator of the program for the language activity sheet that listed the objective. Some students brought their own language homework from school. They were permitted to work only on that assignment as long as it addressed the objectives that would be tested on the CAT 5. If it did not address a CAT 5 objective, they were given another language activity. Students worked on identifying the appropriate use of pronouns, nouns, verbs, adjectives and adverbs in sentences. They used computer software to select the appropriate parts of speech to

complete sentences. Reader Rabbit, Kids Work Deluxe and Jump-Start computer programs provided reinforcement of these skills. Other activities included identifying run-on sentences, sentence fragments, simple subjects and predicates. Students worked on writing and editing sentences. They practiced constructing topic sentences and developing those topic sentences into paragraphs. Finally, they identified appropriate sequences, appropriate use of connective and transitional devices, and sentences that detract from the cohesion of a paragraph.

The students who were part of the sample were required to work on language expression skills and concepts at the Center a minimum of 15 minutes each day. Some students chose to work with a teacher and some chose to work independently. Preteaching also took place while students worked on academic skills utilizing a computer. Students were told to let teachers know when they completed the language assignment. Intervention strategies were not used for students who occasionally came to the Center to work on homework. If the study was based on the premise that language scores were higher for the sample group than for students who occasionally attended the program, than it could be concluded that the additional time the program provided for the sample group to work on skills measured on the CAT 5 made a difference.

In other studies the length of the school day positively correlated with student achievement in reading in grades 1 and 2 (Wyne and Stuck, 1982, p. 473). A strong positive and consistent relationship has existed between the time students spent engaged in learning and their subsequent achievement performance. (Wyne and Stuck, 1979, p.).

In an effort to track and identify the amount of time students actually worked on homework at the Center, time by the minute was documented. Tables 1.1 and 1.2,

provide data showing time spent working before the pretest and posttest were administered. Total time spent and test results are explained in Chapter 4. Sample forms used for tracking time spent on language tasks can be found in Appendix A.

TABLE 1.1

Time Spent Working On Language Tasks (Oct. – Dec.)			
Subject	Time (min)	Subject	Time (min)
SN1	105	SN6	80
SN2	105	SN7	140
SN3	145	SN8	170
SN4	90	SN9	159
SN5	135	SN10	100

TABLE 1.2

Time Spent Working On Language Tasks (Jan. – March)			
Subject	Time (min)	Subject	Time (min)
SN1	175	SN6	125
SN2	75	SN7	193
SN3	140	SN8	241
SN4	131	SN9	161
SN5	175	SN10	182

When students entered the Center they worked first on language arts assignments and they let teachers know when it was completed. The time was recorded from start to finish. If the language assignment they brought with them didn't take 15 minutes to complete they were given another language task. Attendance reporting on a separate chart kept track of the days and overall time a student worked at the Center. (Appendix A) Whenever a student showed up for homework help the student's name was recorded on an attendance sheet along with the time they began working. Students also reported to

teachers the subjects they chose to work on. This provided information on how much engaged time was added to the student's day in language arts and other subjects. We have a total amount of time they spent working on other academics as well as the amount of time they spent working on language arts. It was interesting to compare academic outcomes in other subject areas that students chose to work on at the Center.

Surveys were sent to the classroom teachers in December requesting information on completion of homework and student's preparedness for class. (Appendix B) Did teachers see a difference in the amount of homework being handed-in, specifically language arts? Were students becoming more engaged with tasks in the classroom? When students are better prepared for school in terms of having assignments ready to hand in and feeling confident, they will become more engaged in class. Test scores will improve. As explained in chapter 4, this additional information was helpful with monitoring and describing the impact the program had on improving academic performance.

The focus in this study has been to understand and measure the effectiveness the additional time the after-school program provided had on the academic outcome of students. In order to explain the relationship increasing time-on-tasks had on student achievement in language, the relationship between time and posttest data was analyzed and a comparison of individual standings before and after treatment was expressed using normal percentile charts. Scores will be plotted showing how students did in comparison with the National Norm group. Growth indicators will be computed. A descriptive evaluation summary will explain achievement differences.

Chapter 4

RESULTS

This chapter will review the data that reveals the impact increasing time after-school had for at-risk students working to improve language expression skills. Exploring the concept of time on task in terms of what impact it had on student achievement can be complex and problematic. The question of how much time was needed to help students achieve varied among individual students. Table 1.2 shows the total amount of time each student spent working on language expression.

TABLE 1.2

Total Time Spent Working On Language Tasks Oct.- March			
Subject	Time (min.)	Subject	Time (min.)
SN1	280	SN6	305
SN2	180	SN7	333
SN3	285	SN8	411
SN4	266	SN9	320
SN5	310	SN10	282

The average amount of time added to the length of their school day from October to March, was 215 minutes. When students spent at least the average amount of time working on language expression, improvements in learning occurred. Student attendance was a factor in creating the variation in work time. Absenteeism was a major factor in

reducing the amount of time at the center. For at-risk students in general absenteeism has been and continues to be an educational disruption.

Intelligence was also found to be a factor that influenced learning the language skills that were tested. Students who made the greatest amount of gain were the students who had average to above average IQ indicators and spent the most time overall working on tasks. At the other end of the spectrum, among those students whose IQ indicators were below average, based on the Otis-Lennon School Ability Test, insignificant progress was noted even when their time at the center exceeded the average amount for students in the sample group. The IQ indicators of (5) students; (SN4, SN7, SN8, SN9, SN10) as reported on the Otis-Lennon School Ability test showed above average ability. These students learned skills more quickly and took less time to complete language assignments. They were able to complete more homework and review more language objectives as time permitted. These students made not only the greatest amount of gain, but when compared to the national norm group they out scored 50 percent of students tested. See figure 1.1 for pre and posttest results.

When students with lower IQ indicators were compared, students who spent the most time on language had the greater amount of gain. When we look at students who fell below average in

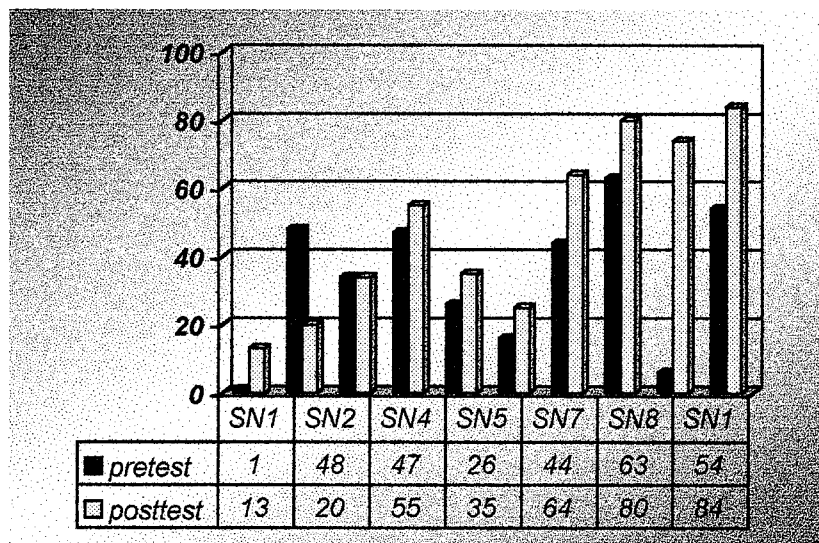Comparison of Achievement as measured by the CAT 5

Figure 1.1

	SN1	SN2	SN4	SN5	SN7	SN8	SN1
■ pretest	1	48	47	26	44	63	54
□ posttest	13	20	55	35	64	80	84

25

terms of IQ indicators (SN1, SN5, SN6), improvements in performance were found however, these improvements were insignificant when compared to the national norm group for the CAT 5. Overall, children with higher IQ indicators spent the most time working, performed well on the posttest when compared to students nationally, and made significant gains than students with less aptitude. Therefore, the additional time at the center had a positive impact on learning, however student differences, ability levels and difficulty levels of the subject being learned had an impact on how well they performed when compared to the achievement levels of the national norm group on the CAT 5. Even though improvements were made, those students with low IQ indicators were not brought up to the national standard ranking of 50 percent or better on the CAT 5.

Items that were common errors on the CAT 5 for all students were skills that were not reinforced at the center.

Lengthening the school day for students to work on skills at the after-school center was positively associated with students learning that subject. Improvements were made regardless of differences in the amount of time a student spent working on language tasks. As the proportion of time students worked on language expression increased, it was noted that achievement gains also increased. In addition, when progress reports were reviewed and surveys were analyzed, students who consistently attended the program improved at least one letter grade in language arts. Students averaged (75) or better at the end of each marking period. When compared to students tested nationally during the winter and spring months, 5 students showed significant achievement. They performed better than 50 percent of the population. Student number 8 (SN8), spent the greatest amount of time working on language, (411 minutes). He increased his score by 23 percentage points. Student 2 (SN2) went down on the posttest. This student came late for the test and had some emotional issues. He randomly responded to test questions without carefully reading it. The random responses invalidated his test. SN1 had the lowest IQ indicator as reported on the Otis-Lennon School Ability test. Figure 1.1 shows the posttest scores for this student improved, however when compared to the national standardized group her performance is considered poor. Ten students did not show up for either test.

In summarizing the data it was found that IQ indicators and the amount of time students worked at the Center, played a significant role on how well the at-risk students performed on the California Achievement Test, Edition 5. However, when students worked longer on the subject of language expression they showed significant gains despite aptitude. Achievement gains were greater for students who spent the most time working. Time is a valuable resource for schools and when used efficiently, increases student performance. The academic program if extended beyond the regular school day can provide meaningful learning opportunities for at-risk children to promote better student learning.

CHAPTER 5

Discussion

This study provides a glimpse into the relationship between time and student achievement. It appears that students at-risk can make significant gains on standardized test when provided additional time after-school to work on specific content areas. The results further suggest that as time increased the greater the gain in student achievement. Gilbert and Price (1981) found that participation in an extended-day program improved student achievement at all levels. From an achievement perspective, the results are consistent with the study that found an additional 60 minutes a day allocated to reading comprehension alone would be required to raise test scores by a quarter of a standard deviation that is, 25 points on a SAT-style test scored from 200-800 points (Karweit 1982). However caution is warranted in the interpretation of the impact time in this study had on student achievement because other studies have found other variables have an affect on student achievement. For example class size is an important consideration. A major experiment with small classes demonstrated that elementary grade students in classes of 12 to 17 pupils achieved more academically. They were more engaged which promoted student achievement, (Finn, Fulton, Zaharics and Nye, 1989).

Small group, one-to-one and peer/cross age tutoring was observed to be effective with increasing engagement behaviors of students in this study. Smaller numbers of students worked together at one time making it easier for tutors to provide one-to-one attention, which kept them, focused on their tasks. A key dimension of the program was child-centered learning. Teachers adapted the learning environment to conditions that supported self-motivated learning. Computer centers were used for students to work

together on writing projects and to facilitate discovery of other relevant information. Instruction matched closely with each student's language skill level.

At the same time, 10 students originally included in the study did not show up for testing. This prevented a more intense look at the performance gains for a larger number of participants. We can only speculate on how these students would have performed on the pre and posttest. Further research is needed to explore the impact teaching pedagogy has on achievement for students at-risk and from culturally diverse backgrounds.

Knowing that this preliminary study does show positive correlation between time and achievement, the question still remains how to translate it into practice. Will lengthening the school day be successful in increasing student achievement for all students? How much time should a school district allocate for homework help when establishing after-school programs to improve student performance in school? What students will benefit most from the additional time? What should be explored to make the decision to maximize existing instructional time rather than provide after school instruction?

There were several findings concerned with adding time and student achievement:

1. As minutes increased, the gains in achievement on the language expression California Achievement subtest also increased.

2. A portion of the additional amount of time, an average of 215 minutes in a 3 month period, allocated for instruction at the center in a particular content area is positively associated with learning in that content area.

3. The proportion of time a student spent on a subject determined the amount of gain on the posttest.

4. Students with lower IQ's when provided the additional time on task, and who worked at least the average amount of time at the center also made significant gains. These students however, did not perform well when compared to the national norm group.

5. Other variables that were not tightly controlled and have been associated with improving student achievement such as teacher expectation, one-to-one tutoring and a small group setting may have had more impact than acknowledged on increasing performance in this study.

Although this study was short in duration the results suggest that when students are consistently provided additional time to work on a specific subject that learning will be enhanced. Improvements may be reflected on standardized achievement tests. Report card grades and feedback teachers provided on the survey also indicated that language expression skills and homework completion had improved.

From this study the researcher recommends creating a framework that will maximize, the use of time within the school. Techniques that will motivate students to stay on task should be explored and implemented. Sensitivity to the influence culture has on the development of different learning styles when working with students from diverse ethnic backgrounds can facilitate learning. (Ladson-Billings, 1997). If it is monetarily feasible to have an off-site after school program, create a safe and supportive environment for all students. The fact that there were no discipline problems contributed to the success of this after-school program. Students could attend to task without behavioral disturbances. The structure of the program should be child-centered, adapting to those conditions that support the self-motivated behaviors of students. If students wanted to work at a computer, they could. If they

preferred working with a tutor or independently, they were allowed. Students determined the instructional approach that was needed. Teachers adapted quickly.

Provide certified teaching staff and opportunities for one-to-one tutoring. Students remained more focused in this student/tutor dyad. The result was more engaged-time. The more engaged-time a student spent on a subject the greater the success rate in that subject. Engagement rates are significantly related to student achievement (Fisher et al .,1977; Anderson, 1975). All students need to have the opportunity to excel academically. After school tutoring has been recognized as effective in achieving this objective for at-risk students.

A unique feature of the program was child centered learning. The student population was diverse and the instructional strategies varied. They included:

    a. Small group and one-to-one tutoring was provided for more individual attention.
    b. Cross-age tutoring.
    c. Computer centers were used for instruction.
    d. Student interaction was encouraged but monitored for inappropriateness.
    e. Independent homework completion was encouraged especially with upper grade students.
    f. Tutors provided feedback that was sensitive to cultural diversity.
    g. Students asked questions freely.

These elements are recommended when developing after school programs. Learning styles differ and the instructional approaches should depend on the child's instructional need.

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APPENDIX A

Instruments for Collecting Data

Operation Schoolhouse Attendance
(2000-2001)

Date_____

Student	School	Time Spent
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		

Teachers:_____   _____

Date _____

	Math	Science	Soc. St.	Reading	Spelling	Language	
Pgeopfert							
Rgeopfert						3:45-4:15	
I Thaxton						4:00-4:30	
Chester							
A. Floyd							
L Cooper							
AnFloyd							
A Davis							
D. Colon							
A. Brown							
S. Fowler							
S. Tormey							
S. Colon							
S. Hardy							
A. Parker							
M.Overton							
T. Thaxton							
E. Hester							
Mcontreras							
Hcontreras							
T. Tormey							
Rcontreras							
V. Davis							
Su. Colon							
A.Kimball							
C. Parker							
St. Colon							
R. Kimball							
Mar Overton							
R. Irvin							

Appendix B

Survey

OPERATION SCHOOLHOUSE
SURVEY

Teachers,

    Please complete the following homework survey for students attending Operation Schoolhouse weekly. It would really help us understand the needs of students who attend the program.
    Thank You.

Ms. Diane Worthy
Coordinator

Student's Name _____   Date_____

Teacher_____   Grade_____

1.) Student   is   is not   handing homework.
        (circle one)

2.) Quality of work is: good   poor
              (circle one)

3.) Student is engaged in classwork: sometimes   often   most of the time
                          (circle one)

4.) Student's performance in language arts after the first marking period :_____

Comments: _____

_____

_____

_____

_____

Appendix C

School District Organizational Chart

BERKELEY TOWNSHIP BOARD OF EDUCATION
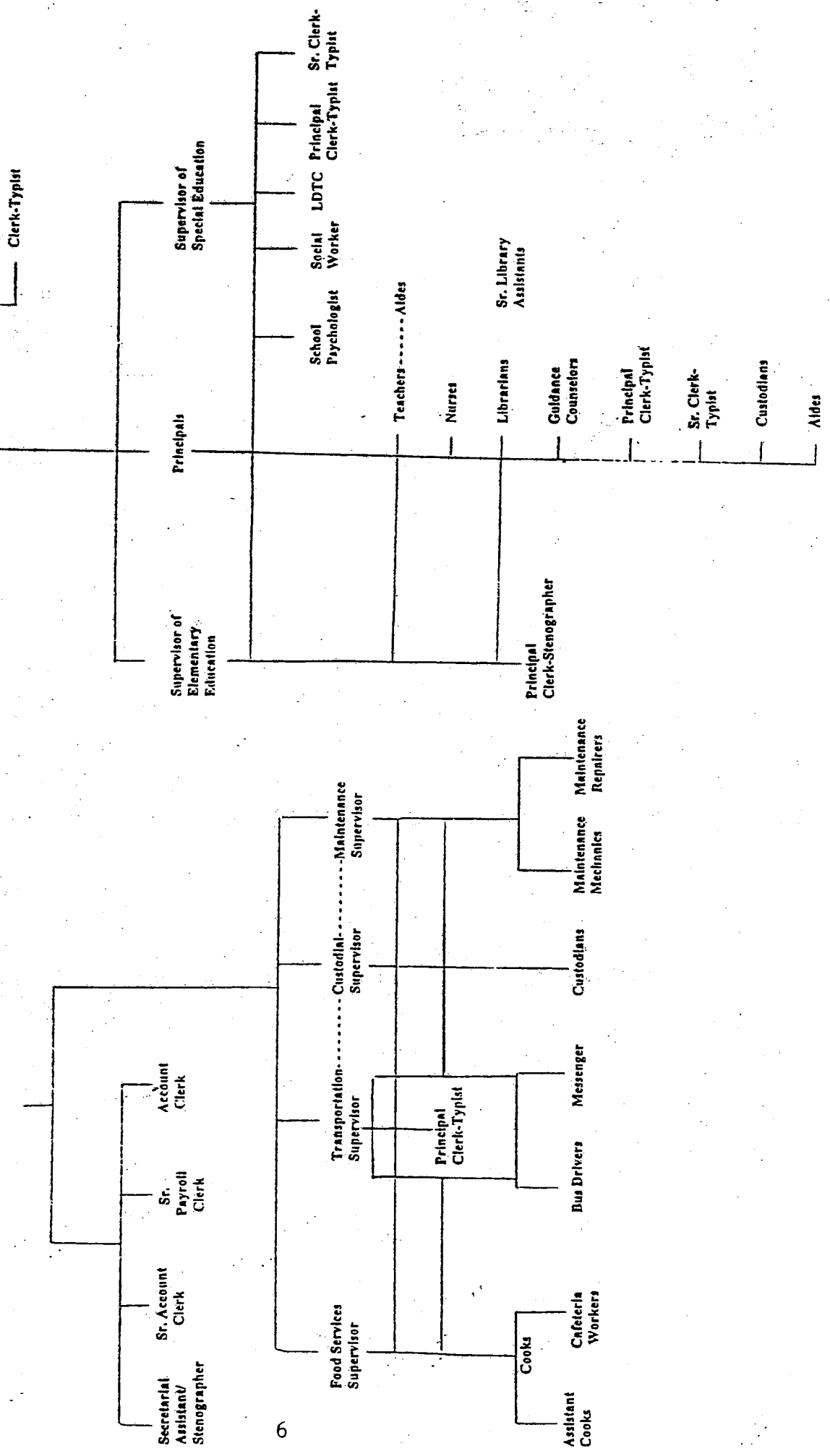
Board of Education

Board Secretary

- Secretarial Assistant/Stenographer

Superintendent Of Schools

- Administrative Secretary
  - Clerk-Typist

Supervisor of Special Education
- School Psychologist
- Social Worker
- LDTC
- Principal Clerk-Typist
- Sr. Clerk-Typist

Principals
- Teachers ------ Aides
- Nurses
- Librarians
- Guidance Counselors
- Principal Clerk-Typist
- Sr. Clerk-Typist
- Custodians
- Aides

Supervisor of Elementary Education
- Principal Clerk-Stenographer
- Sr. Library Assistants

School Business Administrator

- Secretarial Assistant/Stenographer
- Sr. Account Clerk
- Sr. Payroll Clerk
- Account Clerk

Food Services Supervisor
- Cooks
  - Assistant Cooks
- Cafeteria Workers

Transportation Supervisor
- Principal Clerk-Typist
- Bus Drivers
- Messenger

Custodial Supervisor
- Custodians

Maintenance Supervisor
- Maintenance Mechanics
- Maintenance Repairers

6

Biographical Data

Name	Diane L. Worthy
High School	Monsignor Donovan Toms River, NJ
Undergraduate	Bachelor of Science Elementary Education Texas Christian University Fort Worth, Tx.
Graduate	Master of Arts School Administration Rowan University Glassboro, NJ
Present Occupation	Guidance Counselor H & M Potter School Bayville, NJ