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SETTING THE STAGE FOR LENGTHENED SCHOOL YEAR PROGRAMS--A SPECIAL REPORT PREPARED FOR THE GOVERNOR AND THE LEGISLATURE OF THE STATE OF NEW YORK.

NEW YORK STATE EDUCATION DEPT., ALBANY

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DESCRIPTORS- *EXTENDED SCHOOL YEAR, EDUCATIONAL IMPROVEMENT, *COSTS, *SCHOOL SCHEDULES, *SCHOOL ORGANIZATION, YEAR ROUND SCHOOLS, SUMMER SCHOOLS, TRIMESTER SCHEDULES, QUARTER SYSTEM, CURRICULUM DEVELOPMENT, *EXPERIMENTAL PROGRAMS, PARENT REACTION, ACADEMIC ACHIEVEMENT, TEACHER ATTITUDES, STUDENT REACTION, STAFF UTILIZATION, SPACE UTILIZATION, NEW YORK,

THIS REPORT TO THE NEW YORK LEGISLATURE DESCRIBES SEVERAL EXTENDED SCHOOL YEAR DESIGNS WHICH HAVE BEEN CREATED TO HELP ATTAIN THE GOALS OF ECONOMY AND INCREASED EDUCATIONAL OPPORTUNITY--(1) THE CONTINUOUS PROGRESS DESIGN, (2) THE MODIFIED SUMMER SCHOOL, (3) THE TRIMESTER DESIGN, (4) THE QUADRIMESTER DESIGN, (5) THE EXTENDED K TO 12 PLAN, AND (6) THE MULTIPLE TRAILS PLAN. THE REPORT SUPPLEMENTS EARLIER PUBLICATIONS AND PRESENTS SPECIFIC FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS WHICH MAY BECOME THE BASIS FOR NEW EXTENDED SCHOOL YEAR PROGRAMS. EA 001 444 IS A RELATED DOCUMENT. (TT)

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MARCH, 1968

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
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The University of the State of New York
THE STATE EDUCATION DEPARTMENT
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THE UNIVERSITY OF THE STATE OF NEW YORK

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To the Governor and the Legislature of the State of New York

In accordance with Section 3602a, Subdivision 16, of the Education Law of New York State, I have the honor of submitting herwith a report of the special experimental project on the rescheduling of the school year. It is a summary which includes State Education Department research and exploratory activities with the lengthened school year concept. Brief descriptions of several pilot extended school year projects are followed by a list of observations, conclusions and recommendations.

This report points up specific directions which can be taken by the State Legislature, the State Education Department and the local school district to achieve the combined objectives of quality education, economy, plus increased educational offerings and occupational training opportunities for disadvantaged children.

I commend this report on the Extended School Year for your consideration.

Respectfully,

James E. Allen, Jr.
Commissioner of Education

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CHAPTER I

CHRONOLOGY

On the recommendation of the Joint Legislative Committee on School Financing, in 1963 the New York State Legislature combined the goals of educational improvement with that of economy through an amendment to the education law which directed the State Education Department to:

> "...design demonstration programs and conduct experimentation to discover the educational, social and other impacts of re-scheduling the school year from the present thirteen year system to a twelve or eleven year system but still providing as many instructional hours or more than are now available under the present thirteen year system."[1]

Many people see in the foregoing quotation only on economic basis for attempting to reschedule the school year. However, the original legislative intent was to promote quality education as well as to promote economy. This is evident in the introduction to the amendment which states:

> "In order to enrich and intensify the school program, to make better use of educational facilities, at the same time, to achieve significant economy and..."

Responsibility for the Rescheduling of the School Year Project

In the spring of 1963 responsibility for testing the feasibility of Rescheduling the School Year was assigned to the Office of Research and Evaluation. It immediately took steps leading to the ultimate involvement of several school systems in programs established to test various concepts or techniques basic to adoption of specific lengthened school year patterns of organization.

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[1]Education Law. Sec. 3602-a, par. 16.

Developing the Experimental Design

Several work sessions and conferences were held before a long range experimental design was formulated. For example, a May 21, 1963 conference included State Education Department staff, leading college educators, school administrators, and representatives from two private organizations. There was agreement that the experimental design should:

> Include at least one (a) suburban community (b) small city, (c) large city and (d) rural community.
>
> Center around the following organizational patterns: (a) Continuous Modules, (b) Trimester, (c) Quadrimester and (d) other imaginative approaches.
>
> Provide for experiments involving primary, intermediate, junior high, and senior high pupils.

Selecting Pilot Schools

Twenty school systems indicated a willingness to take part in the rescheduling school year project. All but six of these were eliminated in the original screening. Of these only three, namely, Syosset, Cato-Meridian and Hornell have continued with the project. The other three schools were withdrawn from the project before anyone had thoroughly examined the potentialities of an extended school year design in the light of local needs and conditions.

Appointment of a Project Coordinator

In the fall of 1963 a consultant was appointed to develop experimental designs and to work with local school districts interested in some phase of the new project. The consultant, later designated as Coordinator for Rescheduling the School Year, assumed responsibility for implementing the project in terms of the guidelines established in the spring and summer workshops. On occasions the services of key staff

members from the entire Department contributed to the development of the lengthened school year project.

Setting the Stage for School Reorganizational Patterns

During the first year, the project proceeded with the following activities:

Development of several experimental designs. This led to the production of flow charts and a number of exploratory cost studies.

Testing the concept of the Extended School Year Designs on various types of school systems. Statistical studies were prepared and presented to approximately thirty school administrators for review and analysis.

Meeting with parents, teachers, principals, school board members and other to explain the program. After the school administrator was convinced that a proposed extended school year plan had inherent values, meetings were held with several groups in the community including board members, teachers, parents, citizen groups and representatives of the various news media. Study groups frequently spent several months reviewing proposals and developing the type of design which would meet the needs of the local school district.

Modification of curriculum and teaching techniques. After a program was approved by a school board, assistance was given to school admininistrators and teachers to modify the curriculum and some teaching techniques in terms of the new time schedules.

The Experimental Designs

Considerable time and effort was expended on the construction and refinement of workable extended school year organizational plans notably:

A Continuous Progress Extended School Year Design, grades K-6.

The Modified Summer Segment Design, grades 7-12.

The Trimester Design for grades 9-12, 7-12, 6-12.

The Quadrimester Design for grades 9-12, 7-12, 6-12.

The Extended K to 12 Plan.

More recently attention has centered around the development of several variations of a new plan referred to as

The Multiple Trails Plan for grades 9-12, 8-12, 7-12, or grades 6-12.

Attempts were made to test certain features of each design such as cost, changing enrollment flow patterns, scheduling problems, type of calendar and/or administrative changes necessary to realize desired objectives. At the outset, it became apparent that rescheduling a school in terms ofalengthened school year calendar required much more than the mere addition of hours or days.

Each extended school year plan of organization contains specific features which can change the nature of a school or school system. For example, the trimester plan provides a number of "E" terms (extra or enrichment terms) which while offering educational advantages, require a mandatory acceptance of something more than shortened vacation periods in order to guarantee constant or fixed enrollment flow patterns.

Extended school year plans include features which require fundamental changes, not only in educational philosophy, curriculum and school administration, but in family and community patterns of living. Since the designs must be studied to be understood, a subsequent section of this report is devoted to descriptions of Extended School Year Designs which can achieve economy and desirable educational goals.

The Pilot Schools

In 1964 pilot experimental extended school year programs were started to test the feasibility of some phases of the Rescheduling of the

School Year Project. The initial design called for a minimum involvement through three lengthened school years of programs instituted in Commack, Cato-Meridian, Hornell and Syosset. Later studies were made of special extended school year programs started in the School of Human Resources and Green Chimneys. A description of these pilot programs with a summary of significant findings will be found in Chapter II.

Due to time, budget, and administrative limitations no public school system in New York State actually adopted the trimester, quadrimester or Multiple Trails secondary school Extended School Year plans. However, these designs were created and refined through testing specific features of the plans in major cities, suburban communities, and small town or central school districts. This involved endless hours of consultation and work with high school principals, guidance counselors, department heads, teachers, and other staff members. They resulted in activities such as the following:

1. The preparation of pupil schedules based upon acceptance of an extended school year trimester, quadrimester, or multiple trails plan.

2. The preparation of teacher schedules

3. The preparation of room and school usage charts with and without an extended school year.

4. Meetings with local teacher associations and teacher union representatives to negotiate salary and working condition agreements.

5. The preparation of charts and tables depicting changing enrollment flow patterns anticipated in a school district with the adoption of specific extended school year plans.

6. The preparation of multiple school year calendars to cope with local school interests and administrative needs.

7. The preparation of models to demonstrate the nature of Modular scheduling.

8. Studies which demonstrated where costs and dollar savings could be anticipated with specific designs.

9. Meetings with local school board members.

10. Meetings with parent and civic groups.

11. The preparation of newsreleases and bulletins for local school districts.

12. Interviews with newspaper, radio, and television reporters.

13. The preparation of special curriculum materials for new extended school year programs.

Activities such the following led to the development of workable models which can be adopted by interested school systems in the future.

Computer Scheduling and Extended School Year Plans

Original proponents of the Rescheduling of the School Year did not see the need to do more than measure the impact of a longer school year upon children and teachers. It soon became apparent that something had to be done to demonstrate the administrative feasibility of programs calling for multimesters or modules. To resolve the issue a special research study was instituted with the cooperation of the Board of Education of the City of New York.

Since no New York City high school had been successfully scheduled by computer, the pilot project called for a multi-phase experiment, namely:

The scheduling of one or more New York City high schools and at least one junior high school.

The stimulation of a multi-mester schedule based upon the use of mixed length time modules.

The refinement of computer programming techniques to test the feasibility of rescheduling all or a portion of a school after it has completely scheduled. (This experiment has been referred to as the Freezing the Deck concept.)

Christopher Columbus High School, with an enrollment of approximately 4,500, was successfully scheduled by computer in January and again in June 1967. This phase of the project successfully demonstrated the administrative feasibility of rescheduling a school one or more times during the year. It should be noted that the computer scheduling process was complicated by the fact that Christopher Columbus High School operates an overlapping or double session program which means that there are multiple student entries and dismissals during the day.

Wadleigh Intermediate School #88 was successfully scheduled in 1966 and again in 1967. Here a school within a school concept was introduced with an attempt to build individual schedules assigning students to classes on the basis of reading scores, math scores, I.Q., and sex.

Several innovative intermediate schools were also scheduled as a part of a shared contract with the Board of Education of the City of New York. Here again, computer programming had to incorporate some use of modules and the requests for more individualized pupil schedules based upon multiple factors such as test scores in special subject fields, sex and race, the "I" factor.

The Freezing the Deck Concept was initially tested successfully with a small sampling of 50 students in February, 1967, but when an attempt was made to test the experimental program in the fall of 1967 the results were far from satisfactory. Further work with this concept may be desired under more normal conditions than was possible since the teacher work stoppage in New York City limited the updating of input data and the production of simulation runs.

Publications

A small introductory brochure entitled, "Economy and Increased

Educational Opportunity Through Extended School Year Programs," was prepared to acquaint the public with the nature of projected lengthened school year plans. This brochure has had a wide circulation and helped set the stage for numerous local studies of the extended school year plans described.

A more detailed guide or manual entitled, "Extended School Year Designs," was released in 1966. This publication may be considered in the light of a "best seller." There is a constant demand for copies since it demonstrates how and when enrollments are reduced for different lengthened school year organizational plans.

Additional publications are in the planning stage.

Study of the Length of the School Year in Foreign Countries

One answer to the question, "Can children take a longer school Year?", may be found in a study of the length of the school year in 51 countries of the world. This report shows an average elementary school year of 210 days and an average school year of 204 days. On a comparative basis the 180 day school year is among the shortest school year listed by any. Figure 1 shows the length of the school year in representative countries of the world.

Some reporting countries have children attending school in July but others have managed to keep the summer months open by compacting the school year. This has been done by eliminating winter and spring vacations and by keeping schools open for six days a week.

A study of the school day for these 51 countries show

(a) the average number of hours in the secondary school days in 5.6 hours.

(b) the average number of hours in the elementary school day is 4.8 hours.

(c) the average number of hours in the secondary school week is 31.7 hours.

(d) the average number of hours in the elementary school week is 27.3 hours.

(e) the length of the class period in the secondary school is 48.6 minutes.

This study included a number of fairly small countries in South America and Africa. If it had been limited to Europe the comparative average figures for the number of school days would be somewhat higher than the ones shown.

FIGURE 1

COMPARATIVE LENGTH OF THE SCHOOL YEAR IN REPRESENTATIVE COUNTRIES OF THE WORLD

Name of Country	Number of Elementary School Days	Number of Secondary School Days
China	252	240
Austria	240	240
Czechoslavakia	240	240
Denmark	240	240
Venezuela	236	236
U.S.S.R.	228-234	228-234
Germany (West)	233	233
Netherlands	200-240	233
Norway	228	228
Poland	220	220
Rumania	216	222
Sweden	214	214
Australia	213	213
Japan	210	210
Greece	210	190
India	200	200-210
Finland	200	185
France	185	185
United States	180	180
Ecuador	170	165
Italy	154	154

CHAPTER II

EXPERIMENTAL PROGRAMS--REPORTS OF PROGRESS

Between 1964 and 1967 pilot projects were instituted in several school districts to test the feasibility of various features of recommended Extended School Year Organizational Plans. A summary of these programs follows:

Commack's Continuous Progress Plan. In 1964 one Commack elementary school instituted a program based upon adoption of an eleven month school year. In August, 1967 the program was considered successful enough to be expanded to four elementary schools.

Cato-Meridian's Quadrimester Plan. In 1964 a modified elementary school quadrimester program was instituted in grades K to 6 of a central school. A combination of a lengthened school day plus a small extension of the school year provided the equivalent of a weighted school year approximately 220 to 225 school days.

Syosset's Modified Summer School Program for Junior High School. An experimental group of seventh grade students worked through three modified summer school programs to demonstrate the feasibility of taking first time, full year courses in six weeks.

Hornell's Modified Summer Segment for Secondary School Students. Junior and senior high school students took first time, full year courses in seven weeks of summer activity to demonstrate the feasibility of teaching and learning in compacted time blocks.

The School of Human Resources Extended School Year Program for Physically Handicapped Children. This report describes the effects of extended school year programs upon physically handicapped children. It could set a pattern of education for other types of disadvantaged children, i.e., blind, deaf, mentally retarded, etc.

Green Chimneys School-Camp Program. This private school, without financial support from the State, has completed an extended school year program involving a large number of emotionally disturbed and brain damaged children. The pupils worked through a twelve month program which combined a structured academic program with a camp experience in July and August.

COMMACK'S CONTINUOUS PROGRESS EXTENDED SCHOOL YEAR PROGRAM

The Schools Open Early

It was early August, a period when tradition says boys and girls should be at the beaches, in the mountains, at camps, relaxing at home or just anywhere except school, but something was happening in Commack. The children, approximately 1200 of them came trooping back to school. Why?

Their calendars said, "August is for fun, for travel, for relaxing. It is a time to forget teachers and textbooks." These children didn't have to return to school because of a history of failure or a need to make up a deficiency. They were not under any pressure to return to school, but when the doors of the four elementary schools opened that hot, sticky day in August the children came. They were excited and full of enthusiasm when they took their seats in school. This was not a summer school. August 2, 1967 was the first day of a new school year, a lengthened school year.

Precedent for this early return to school dates back to late August, 1964 with the inauguration of a pilot extended school year program at the Grace L. Hubbs School. A number of children (216) selected from over 500 volunteers helped test the feasibility of instituting an eleven month program of continuous schooling. For three summers these boys and girls returned to school earlier than their playmates because they had chosen to leave their neighborhood school for one which brought children together from fourteen widely scattered elementary schools to test the impact of a 210 day school year upon children and teachers.

The Commack School District

In 1959 Commack was a relatively small, quiet suburban Long Island community. The three schools housed its 3000 pupils without difficulty.

Suddenly an explosion took place and the school board was unable to build schools fast enough to cope with the construction and sale of new homes. In 1967, three years after the start of the first Commack Extended School Year project, 13,000 children were enrolled in the district's 18 schools. In 1968, a second high school will open, but space for the new children who are still coming to Commack will be a problem for sometime.

Goals and Objectives

The Commack Project is a deliberate attempt to show that a school district can save one year of schooling at the elementary school level through changing the nature of the children's educational time line.* Several separate goals must be realized in order to achieve the ultimate or long range objective, such as the following.

Goal #1--to see what happens to children when they attend school for a full eleven month period instead of the normal ten.

Goal #2--to determine whether learning continues through an eleven month school year based upon rescheduling graded 180 day time lines into several more or less continuous educational time lines of approximately 210 days.

Goal #3--to determine whether a program of extended school year activities based upon acceptance of a continuous progress philosophy will ultimately lead to increase in academic learning, especially in the field of reading.

Goal #4--to determine whether an eleven month program has any deleterious effect upon children's physical or mental health.

Goal #5--to determine, if possible, whether an eleven month program will be of equal benefit to slow, average, and fast learning students.

*This study does show how one year of schooling can be saved at the elementary school level, but for reasons described elsewhere, the Legislature and/or interested school boards are advised to avoid adopting extended school year programs based upon the concept of saving two years out of a thirteen year cycle.

Goal #6--to determine whether elementary school teachers can continue to teach young children, grades 1-6, through a full eleven month school year.

Goal #7--to determine the effect of an eleven month school year upon parents, the community, and the school system as a whole.

The Nature of Commack's Continuous Progress Extended School Year Plan

Elementary school teachers have no need to divide the school year into terms, semester, quadrimester, or trimester. The module, if there is any, is the ten month or 180 day school year. Generally, their teaching is structured around grade requirements outlined in a course of study or textbook which can be completed in the regular school year by the average learner. With the adoption of lengthened school year calendars teachers repackage their teaching and learning activities in terms of an educational time line providing 210 days of continuous schooling.

This creates problems for classroom teachers conditioned to thinking in terms of grade requirements and the practice of preserving the next level graded textbook for subsequent teachers. The adoption of the continuous progress concept did not immediately transform the Grace L. Hubbs School into a nongraded school, however, the teachers were forced to take a new look at traditional graded school practices. For example, teachers who could ordinarily pace pupil progress through a basic reader in ten months now found it difficult to hold back average and fast learning students. The addition of an extra 30 instructional days brought on a demand for higher level teaching materials and textbooks. Thus, a third grade teacher who might have deferred placing fast learning students into fourth grade materials in June, now found herself coping with the problem in late March or early April.

The concept of continuous progress within the confines of Commack's Extended School Year meant a gradual chronological acceleration of students through normal grade requirements. For average and above average students the addition of an extra 70 to 90 days of schooling could mean an academic advancement of three to five months. It would be less for slow learning students since they seldom make ten months academic growth in a regular school year.

General Findings

Observations

Students can learn proportionately more in a lengthened school year than comparable students who have not been in such a program. Student attendance was slightly higher during the summer period than during the regular school year.

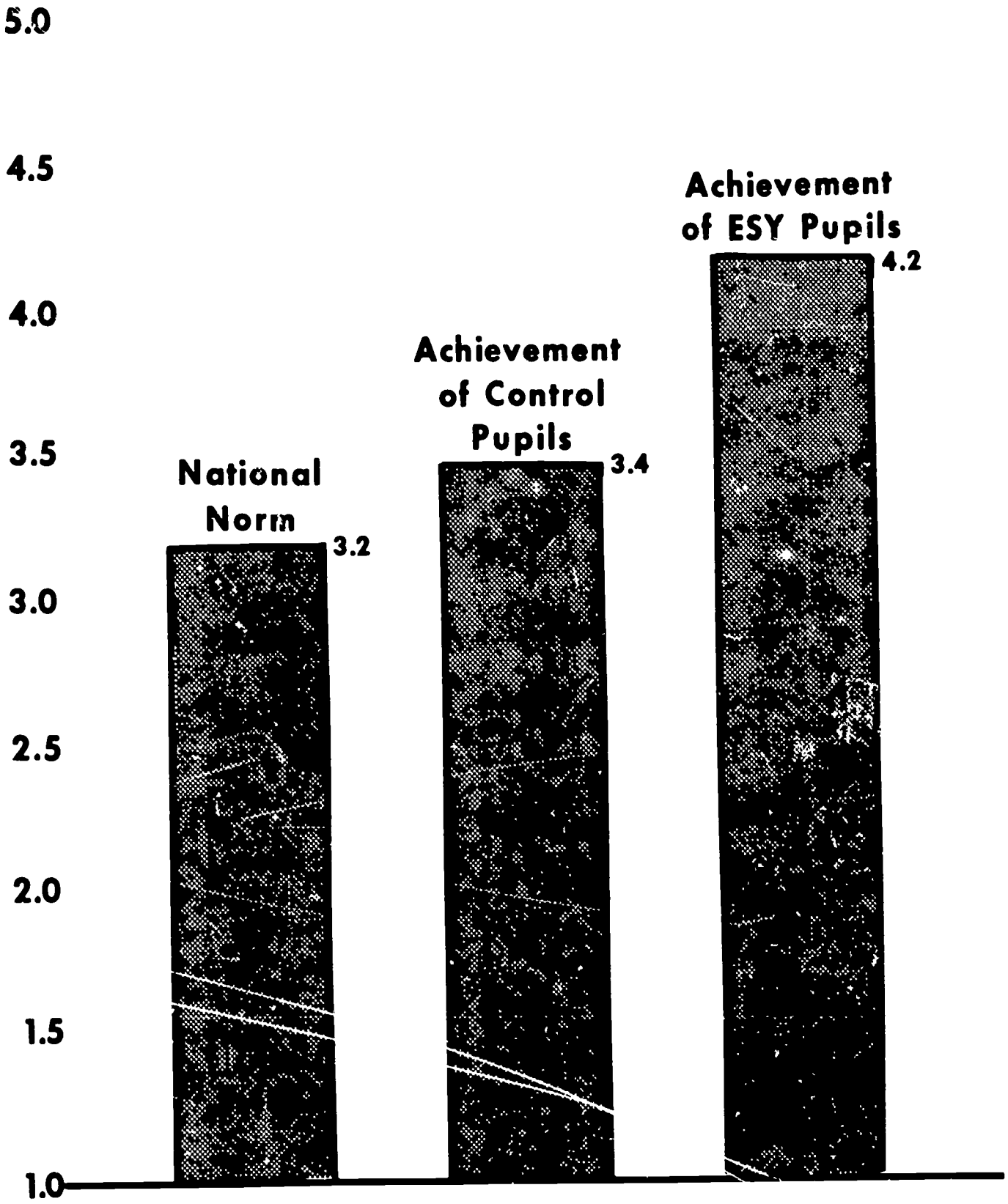
Reading Progress of Third Grade Students (November Metropolitan Reading Test). After 3.7 months of extra schooling the third grade ESY students showed a mean* gain of 6.5 months in reading comprehension and a 7.7 months gain in reading word knowledge over comparable students designated as the control group. The third grade ESY median* in reading comprehension was 8 months higher than that of the control group and one year above the national norm. The median for word knowledge was 6 months above the control and 9 months above the national norm.

Primary Grade Gain (May Metropolitan Achievement Test). The ESY primary grade grouping attained higher achievement levels than the control group on all seven Metropolitan Achievement Sub-tests. The mean gains ranged from 3.3 months in arithmetic problems to 6 months in reading and 9.8 months in spelling. These gains are considered especially significant since a July computer analysis of ability factors indicated that the ESY group had a slightly lower potential than the control group. This conclusion is partly supported by the fact that the control group seemed to progress faster from November to May than the experimental group.

*These mean and median gains were statistically significant at the 1 percent level which means they can not be attributed to chance.

FIGURE 2

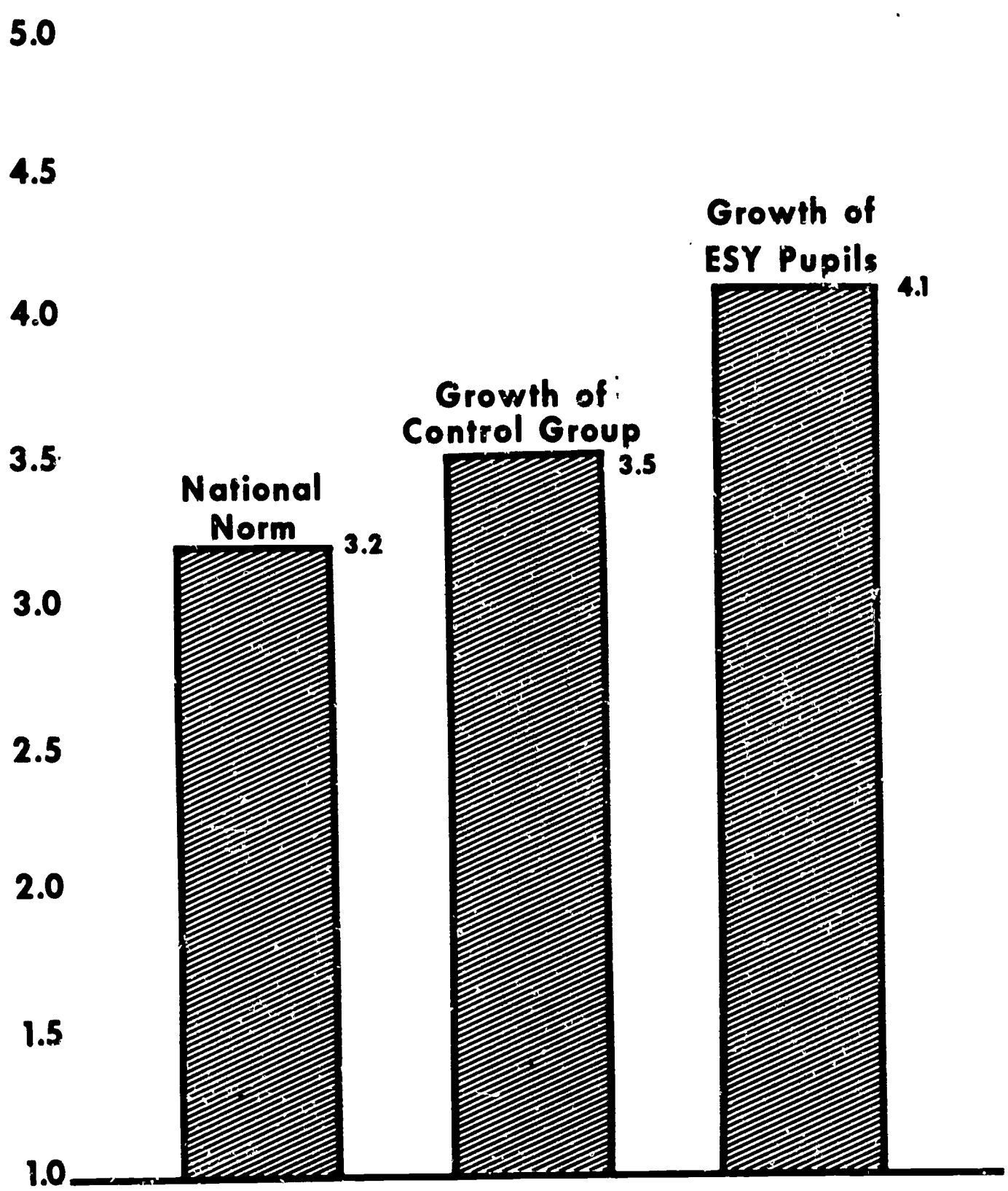
COMPARATIVE GROWTH IN READING ACHIEVEMENT OF ESY PUPILS AND THOSE IN A CONTROL GROUP



*Based on Metropolitan Achievement Tests administered in November to third grade pupils who have been in the pilot project 25 months.

FIGURE 3

COMPARATIVE GROWTH IN READING ACHIEVEMENT OF ESY PUPILS AND THOSE IN A CONTROL GROUP



*Based on Metropolitan Achievement Tests administered in November to third grade pupils who have been in the pilot project 25 months.

Achievement of Intermediate Grade Pupils, Gr.4,5,6. (May Metropolitan Achievement Test). The mean composite score for the 4th grade exceeded the control group by 4.2 months. In reading the ESY group exceeded the control by 3.1 months. The ESY 5th grade mean composite score exceeded that of the control group by 3.8 months while its reading score was 4.0 months ahead. The 6th grade students exceeded the control group by 2.8 months on the composite but showed a fraction of a month loss in reading. Statistically, the 6th grade gain and loss cannot be considered significant while the 4th and 5th grade gains were significant at the 5 percent level.

Academic Gains of Low, Average, and High Ability ESY Children.

Low Ability Gains. The third grade ESY November reading test mean was 7.1 months higher in reading comprehension and 7.3 months higher in word knowledge than that of the control group.

The third grade ESY May reading test mean was 10.2 months higher in word knowledge and 8.6 months higher in reading comprehension than that of the control group.

The third grade ESY May Metropolitan test mean average for five sub-tests other than reading was 7.4 months above that of the low ability control group mean.

The intermediate grade ESY May Metropolitan reading test mean average was 4.5 months above that of the average ability control group: 6.9 months for grade 4; 2.4 months for grade 5; and 4.4 months for grade 6.

Average Ability Gains. The third grade ESY November reading test mean was 5.5 months higher in word knowledge and 6.6 months higher in reading comprehension than that of the average ability control group mean.

The third grade ESY May reading test mean was only .8 months higher in word knowledge and .3 months higher in reading comprehension than that of the average ability control group.

The third grade ESY May Metropolitan mean test average for seven sub-tests was only .5 months higher than the the average ability control group with negative gains being made in word discrimination and arithmetic computation.

The intermediate grade ESY reading achievement test means were only slightly higher for the fourth and fifth grades, 1.7 and 1.8 respectively, while the sixth grade was 5.5 months lower than that of the average ability group mean.

High Ability Gains. The third grade ESY November reading test mean was 8.3 months higher in word knowledge and 3.0 months higher in reading comprehension than that of the high ability control group mean.

The third grade ESY May reading test mean was 5.7 months higher in word knowledge and 6.1 months higher in reading comprehension than that of the high ability control group mean.

The third grade ESY May achievement test composite mean gain in other than reading word knowledge and comprehension was 5 months higher than that of the high ability group mean.

The intermediate grade ESY reading achievement test means were higher than those of the high ability control group, 9.7 months in grade 4, 12.6 months in grade 5 and 7.3 months in grade 6.

Intermediate Grade Achievement--Iowa Test of Basic Skills. (Fall Testing, 1967). The mean achievement of all intermediate grade ESY children is higher than that of the mean achievement of comparable students on a district wide basis. The average mean 4th grade ESY achievement is 8.2 months higher than the district mean. The average mean 5th grade ESY achievement is 5.2 months higher than the district mean. The average mean 6th grade ESY achievement is 3.1 months higher than the district mean.

Statistical Analysis--General Observations. A computer analysis of the mental ability of the experimental and control groups gives a slight edge to the control group. While categorized as having a lower potential for learning the Extended School Year classes, with the exception of grade six, constantly showed higher academic gains than children in the control category. A study of class achievement made in terms of ability sub-divisions shows:

Slow learners made greater academic gains over the control group than average and high ability groups made in terms of their controls.

High ability children made greater academic gains over the control group than average ability groups, but less than that made by the low ability group over its control.

Academic gains made by average ability children were not significantly higher than those made by average ability control groups when gains were made. They were lower than those made by both the low and high ability groups over their respective control groups.

Parental Reactions. Parental responses to a questionnaire showed 88 percent would readily re-enroll their children in a similar program. Their major objections centered about school bussing practices. Few references were made to any conflict with parental vacations, however, 81 percent supported a change from a late August opening to an early August opening with schools closing in June instead of mid July.

Parents reportedly favored a four to five week vacation because children tend to get bored before the end of a lengthened 10-12 week summer vacation. Most parents enrolled children in the extended school year program to provide them with a better education. Parents rated the program strongest in reading and mathematics and weakest in art, physical education and social studies. An analysis of parental responses indicated a lack of awareness of experimental design goals and objectives.

CATO-MERIDIAN'S MODIFIED ELEMENTARY QUADRIMESTER EXTENDED SCHOOL YEAR PLAN

The School

Cato and Meridian are two small communities serving large rural areas about 20 to 25 miles west of Syracuse. The Cato-Meridian Central School, which houses all the children in grades K to 12, is a hub for many activities that bring people together for miles around.

Most elementary school classes are housed in a wing which isolates them from secondary school activities, but some intermediate grades meet in the main building, thus accentuating the interdependence of the elementary and secondary schools. Each school is responsible to its principal, but there is still a commonality of interests which makes it difficult to introduce an extended school year program to one set of pupils and teachers without doing the same to the others. Theoretically, the elementary school should be able to operate completely apart from the secondary school, but conflicts can develop when both schools share common facilities, custodians, buses and specialists.

Many future problems could have been avoided if one issue had been resolved differently at the outset. This was the school calendar. The most practical solution in a central school like Cato-Meridian would be to extend the school year for all pupils in the building. Since this was not done, a calendar should have been adopted which maintained a uniform vacation period during the school year.

The Cato-Meridian Design

Cato-Meridian's elementary school was organized in terms of a weighted school year. It was based upon combining a lengthened school year with a longer school day, thereby providing the equivalent of a 220 to 225 day school year.

The initial extended school year of 200 days was to have been lengthened to 212 days in order to provide four 53 day quadrimesters, but certain local factors helped to freeze it at the 200 day mark.

The elementary school day was increased 10 minutes for kindergarten, 20 minutes for grades five and six and 70 minutes for grades one to four. This average increase of 49 minutes when combined with the 15 day extension to the school year was theoretically sufficient to enable pupils to complete the equivalent of a year's work in three weighted quadrimesters.

While an elementary school doesn't need semesters, trimesters, or quadrimesters, the latter sub-division served as a guide or transfer point where inter-class leveling was desirable. During the experimental years a limited number of pupils were moved upwards or downwards at the end of a quadrimester in terms of readiness for new learning levels. Actually, no major scheduling problems developed.

With the adoption of the extended school year calendar, it was necessary to revise the nature of the curriculum time line. This made it

easier to restructure intermediate grade classes in terms of a nongraded pattern similar to the nongraded primary. To a point the teachers accepted the continuous progress concept, but some rigidity remained due to preservation of the self-contained classroom philosophy. This led to a movement of classes and groups more than it did of individual students. A pattern of inter-age or cross-grade grouping was adopted in the intermediate grades to reduce instructional ranges.

With true continuous progress the vacation issue can be resolved in any school by phasing in long absent pupils to class sections where they can find success. This was done for some Cato-Meridian children, but the policy was not generally known and therefore failed to meet needs of parents who would have preferred to take their vacations during the regular school year.

Basic Objectives

Cato-Meridian's school administrators had a desire to realize the following specific objectives through the extension of the school year.

Goal #1--to test the feasibility of combining a lengthened school year with a lengthened school day to obtain the equivalent of a weighted school year providing the equivalent of 220 to 225 days of instruction.

Goal #2--to improve the quality and quantity of education provided in grades K to 6.

Goal #3--to expand or broaden the curriculum for a segment of the school population.

Goal #4--to provide social contacts and educational experiences to students who would normally be summer isolates.

Goal #5--to minimize the loss referred to as the academic summer slump.

Goal #6--to test the feasibility of saving one year of a pupil's school life line in a seven year period

in order that he could use it more effectively at a later stage in his development.

Goal #7--to shorten the chronological years of schooling for average and above average learners to show how school districts may reduce enrollment, thereby releasing classroom space, classroom teachers and dollars.

Goal #8--to attract more highly qualified teachers through the inducement of an extra month's salary.

Goal #9--to take advantage of State Education Department specialists plus consultants from Syracuse University to build a more effective school system, especially with the advantage of extra learning and teaching time.

Goal #10--to extend nongraded concepts to higher educational levels.

General Findings

The Calendar

Failure to preserve a uniform school calendar between September and June for elementary and secondary school led to pupil, parent and teacher resistance. For example, lack of a common Easter vacation created a problem because pupils and teachers working in the same central school building did not enjoy a common vacation during the regular school year.

Achievement on Iowa Test of Basic Skills

The academic growth of children prior to the project (1961-1964) was compared with that of pupils in the experimental category (1964-1967) through the Iowa Test of Basic Skills.

The ESY group made its greatest gain in work study skills, i.e., map reading, reading of graphs and tables plus knowledge and use of reference materials. The gain was significant at the 1 percent level which means that the results could not have been attained through chance. Since the only known variable not controlled was the lengthened school year, the achievement in work study skills is attributed to the lengthened school year plan.

The experimental group (1964-1967) made larger academic gains than its control (1961-1964) on the total or composite of the Iowa Basic Tests. Statistically, the difference was not great, but it indicated a trend towards significance at the 10 percent level. The possibility of this achievement difference occuring by chance alone is only one out of ten times.

Progress on Stanford Achievement Tests

The Stanford Achievement Test was used to compare achievement of students having one year of lengthened school experience with students having no years. The experimental group exceeded its control but the differences are not considered statistical significant.

The Stanford Achievement Test was used to compare achievement of students having two years of lengthened school year experience with students having one year. Fifth grade experimental group achievement on the arithmetic computation sub-test was higher than the achievement of the 5th grade control group. This difference in achievement was considered statistically significant at the 1 percent level. The experimental group made a greater gain than the control group on the following sub-tests: word meaning, paragraph meaning, spelling, language and arithmetic concepts. Statistically, the gains were not high enough to be considered significant.

The Stanford Achievement Test was used to compare achievement of students having three years of lengthened school year experience with students having two years. The achievement of the experimental 6th grade group was higher than that of the control group on all sub-tests, namely, spelling, language, arithmetic computation and arithmetic concepts, but statistically the differences are not considered as significant gains.

The Progress of Experimental Students in Terms of High, Low or Average Ability (I.Q.)

Experimental and control groups were divided into sub-groups in order to show the impact of the extended school year in children classified as having high, average, or low ability.

One Year vs. None. The children in each of the three ability groups high, low, and average exceeded the gains of their controls on the Stanford Achievement Reading sub-tests. Gains were not considered significant.

Two Years vs. One Year. The low ability experimental group made a greater gain than its control on the Stanford Achievement sub-test in paragraph meaning. This gain was considered significant at the 1 percent level. The low ability experimental students made a greater gain than the control students in reading for word meaning, language, arithmetic comprehension and arithmetic concepts. The differences in the comparative achievement were not significant.

The average and high ability experimental group exceeded the achievement of their controls on all sub-tests of the Stanford Achievement Tests. Statistically, however, the gains were not significant.

Three Years vs. Two Years. The low ability experimental group gained more than its control in reading for word meaning on the Stanford Achievement Test. This gain was beyond the 1 percent level and must be considered as a significant growth. The low ability group made greater gains than its control on all other sub-tests, but differences were not statistically significant.

The average ability experimental group made greater gains than its control in all sub-tests of the Stanford Achievement Test except for arithmetic concepts. Gains were not statistically significant.

The high ability experimental group made greater gains than its control on all Stanford Achievement Test sub-tests. Gains were not statistically significant.

Impact on Faculty or Staff

Teachers can obtain extra compensation for their involvement in an Extended School Year program, but it may not suffice in a low expenditure school district to attract and hold well-qualified teachers. This was evident in Cato-Meridian where teacher turnover for both elementary and secondary school teachers has been high.

Two-thirds of the teachers responding to a questionnaire indicated that the extra time was beneficial to the learning process because work could be covered in great depth. The curriculum could also be broadened or enriched.

Specific Observations

Academic gains are not large enough to support the thesis that the lengthening of an elementary school day improves student achievement. There was no evidence that extra time provided was earmarked for a specific purpose; the assumption has been made that much of it was wasted. There is evidence that the lengthening of the school day at the intermediate level contributed to an expansion of the science and foreign language programs, but measuring instruments were not available to show their impact upon areas normally tested, i.e., reading, arithmetic, etc.

Students in the experimental program made academic gains, but statistical analysis failed to reveal sufficient gains to uphold

the hypothesis that the Cato-Meridian Extended School Year Plan could ultimately reduce school costs.

Any extension of the school year calendar at the elementary school level create problems at the junior or senior high school levels. Steps should be taken early to avert conflicts when students reach these new educational levels.

The most significant gains were made in the lowest ability (I.Q.) groups. This supports the findings in other extended school year programs that slow learners or disadvantaged children benefit educationally when placed in a well-structured extended school year program.

Some opposition to the Cato-Meridian plan stemmed from poor publicity or a lack of good communication at the outset of the project.

Parental Reactions

A 1967 questionnaire to parents revealed the fact that two-thirds of the parents responding experessed satisfaction with their children's progress in school. A similar number reported positively that their children had no adjustment problems due to their involvement in the lengthened school year program. The lack of a uniform calendar in a central school was considered objectionable. A 1966 questionnaire showed 28 percent of the parents were not in favor of a longer school year.

Teacher Reactions

A survey of teacher reactions showed considerable negativism towards the program; however, it was not evident from the survey whether it was due to the lengthening of the school day, the school year or both.

An early report indicated some concern had been evinced by primary grade teachers to the impact of a lengthened school day upon young children. Since they are all bussed to an from school, the school day may be considered inordinately long for them.

SYOSSET'S MODIFIED SUMMER SCHOOL FOR JUNIOR HIGH SCHOOL STUDENTS

Syosset is a suburban district near the north shore of Long Island. About 1,700 of 8,900 pupils are enrolled in the senior high school and 2,300 in two junior high schools. Secondary school students are grouped homogeneously in academic courses such as English, mathematics, social studies, and science. Guidance counselors assign students to "tracks" on the basis of measured aptitude and ability, achievement and teacher recommendations.

Track I superior ability and achievement--10 percent
Track II average ability and achievement--75 percent
Track III below average ability and achievement--15 percent

Class size varies widely from track to track and from subject to subject. It averages 25 at the junior high and 23 at the senior high school. The teacher-pupil ratio, counting specialists, is 1 to 15.

Prior to the start of the Extended School Year project, Syosset operated a summer school for pupils who wanted to

1. makeup courses
2. improve grades, or
3. fit driver education into schedules.

Goals and Objectives

The purpose of the study was to examine the effects of a lengthened school year with a modified summer extension at the secondary school level.

Goal #1--to measure the effects of a modified summer school upon student achievement.

Goal #2--to measure the impact of a lengthened school year upon teachers, pupils, and the community.

Hypothesis to be Tested

That students attending a modified summer school session can complete in 3 years 3 or 4 summers a four year program of study.

That achievement of students attending the summer segment will be at least as great as those taking comparable courses in the regular school year.

That the number of summers and the number of hours of summer school will determine the amount of achievement.

The Nature of the Students in Experimental and Control Groups

The experimental section consisted of three distinct groups of students who upon completion of 7th grade returned in the summer of 1965 to take part in a modified summer school program, namely:-

a. Fast learners or academically gifted who conceivably could accelerate their secondary education by the addition of 3 summers to graduate in 5 years instead of 6.

b. Average academic students who could possibly accelerated after four modified summer sessions.

c. Average or above average I.Q. students who are not succeeding plus some true slow learners who would normally take 6 to 7 years to complete the 4 year high school course.

The control group contained the same sub-groups as the experimental section who were matched in terms of age, sex, I.Q., achievement test scores, teacher works and tracking recommendations. The pupils came from the same 7th grade class (1964-65) but it did not have the advantage of an Extended School Year program.

The comparison group containing the same matched sub-groups was one year ahead of the experimental section, but it did not have the advantage of an Extended School Year program.

The Nature of Syosset's Extended School Year Program

Syosset's extended school year program centered around a series of six week mofified summer school programs which offered full year, first

time courses to the two top level experimental sub-groups. In addition the students took half year or enrichment courses.

1. In 1965 the top group completed social studies 8 plus one-half of math 8.

2. In 1965 the average group completed social studies 8 plus an enrichment course.

3. In 1966 the pupils in the two top groups completed English 9 in a six week period. Enrichment courses filled up the pupil's day.

4. In 1967 the pupils in the two top groups completed earth science or math 10 and took additional remedial or enrichment subjects.

5. The study sponsored several elective or enrichment courses in addition to the full time courses such as the following:

a. Introduction to Laboratory Research	g. Physical Education
b. Personal Typing	h. Field Biology
c. Art	i. Sociology
d. Wonder of Mathematics	j. Shop Mathematics
e. Living Novel	k. Oil Painting
f. Music	l. World Films
	m. Musical Summer Stock

6. Students in the low achievement section did not follow fast learning pupil program. Instead of taking compacted courses they were given a third term to complete basic courses such as math 8, algebra, math 10, English 8 and general science. In addition these pupils took vocational or enrichment courses.

General Findings

Achievement of Average and Above Average Pupils. Upon completion of a six week, first time, full year course in 8th grade social studies, 9th grade English, 10th grade math and/or earth science, the experimental students took test which showed that they had learned as much or more than matched students taking equivalent courses in the regular school year.

ESY students who completed social studies 8 in one summer received an average grade equivalent score of 11.3 on the Stanford Achievement Test. This was higher than comparison groups mean score of 11.1 and the control groups 10.8 on the same test following completion of a similar course in the regular school year.

Students completing full time academic courses in the summer took the next sequence course with older students. They received equivalent or better grades than upper classmen. ESY students who took World History with older students received a median grade of 85 compared to the comparison groups' 83. ESY students who took English 10 with older students received median grade of 81 compared to the comparison groups' 80.

ESY students complete English 9 in one summer. There was no significant difference between their grades and comparison and control group grades. The ESY students went on to take English with older students. There was no significant difference in their grades and those given to the comparison and control groups.

Final grade averages of ESY students in English, mathematics, science and social studies, showed the experimental students were holding their own in terms of the comparison group. The ESY students had a median grade average of 83 and a mean grade average of 80 whereas the comparison group had a median grade average of 80 and a mean grade of 80. Students who failed to achieve a "C" in prerequisite courses were considered failures. A study of the student courses failed showed 75 failures for the experimental group compared to 82 for the comparison group.

Achievement of the Low Group. Syosset's low group cannot actually be described as a low ability group because it contained students with I.Q.'s ranging from 85 to 128.

Individual students in the low achieving category made satisfactory growth while others did not. Lack of progress for some students did not stem from lack of ability, but rather from personal problems and/or factors outside the school's control.

Special three term courses were prepared for the low group, but there is no evidence that the extra time was of much value to all students. This raises the question, "Were the basic needs and problems of individual students provided for in the techniques used by the teachers?" In this particular situation perhaps personal and remedial asistance were not fully provided for.

Attendance. The attendance of the experimental group was very good during the summer. Later studies were made in an attempt to see whether prolonged periods of schooling would adversely affect attendance during the regular school year. Surprisingly enough the volunteer group had an attendance record slightly better than the control or peer group and considerably better than the comparison or older group.

Educational Implications. The actual teaching program developed for the summer segment was as good as and in some respects superior to that found in the regular school year.

Team teaching techniques were used in summer programs which were not normally used in the regular school year.

Curriculum changes and new course materials developed under the study have been of value to the entire school.

Extended School Year students were placed in advanced level courses during the regular school year. They held their own academically and developed no emotional or social problems.

Comparative studies of teacher grades, Regents test scores and achievement test scores showed the experimental (ESY) students as high, if not higher, scores as students in the comparison and control groups. Since the intent of the study was to demonstrate that the experimental group could do as well, not necessarily exceed the achievement of those not in the ESY program, the objectives have been realized. (Differences in achievement on the part of one group or the other were never statistically significant.)

Depth of learning was not adversely affected by completion of regular academic courses in six weeks instead of ten months.

The partial segregation of ESY students through the summer of 1967 created a few social problems. Some students resented the attempt to isolate them. In September, 1967 all ESY students were merged or integrated into the entire student body. A follow up study in December revealed an absence of the earlier reported emotional and social problem.

Carnegie Units. A survery of Carnegie Units earned by the end of the third summer segment showed:

a. three-fourths of the experimental group could graduate one year earlier

b. one-fourth of the control could graduate early

c. about 10 percent of the comparison group could graduate earlier

Additional Carnegie Units may still be acquired by the experimental pupils in the fourth year, thus increasing the number of potential early graduates.

Acquisition of extra Carnegie Units due to involvement in the lengthened school year program is not a guarantee that the students will elect to graduate early.

Observations. Cost studies show full unit courses taught in the summer segment cost less than similar courses taught in the regular ten month program.

Time in itself may not be as important in a summer segment program as how the teacher and students use it.

The number of Extended School Year students taking part in the summer segment program might have been larger if there had been a broader academic course selection.

The completely voluntary nature of the study was detrimental to the implementation and results of the study.

Age should be one of the least important factors in the assignment of students to a unit or course of study.

A district with a pre-existing summer school can easily adapt itself to a school year extension.

Average and bright students can complete six years of secondary school work in five years with approximately the same level of achievement as other students.

Any study, experimental or innovative which includes acceleration, advancement or "ungraded" curriculum should adjust the curriculum to the student.

Final marks in all major subject areas would indicate that chronological age or academic acceleration did not adversely affect student achievement.

The study has stimulated re-examination of the existing secondary school curriculum and has aided articulation between the junior and senior high school.

The study has shown that flexible grouping of students by a team of imaginative teachers yields excellent results in a relatively brief period of time.

The negative attitude of some staff members to the "non-educational" objectives (extending the school year, early graduation, possible savings) has blocked acceptance of educational innovations accompanying the study. Some staff members see the study as separate, possible dangerous program unrelated to the ongoing program of education.

Student Reactions. Since the pupils in the low group were not given the opportunity to take part in the regular acceleration program they felt left out and a few were resentful.

Pupil interest decreased in the first year with the transfer of students to the high school earlier than had been intended. Many students would have remained in the program had the secondary school curriculum been moved to the junior high school.

During the first summer 59 students dropped out of the program compared to two in the second summer and three during the third summer. Some early dropouts returned to take part in special phases of the summer segment program in later years.

Students showed concern over teachers who let it be known that they did not believe in the ESY program or its basic goals. There was no evidence that teacher negativism interferred with student performance, but further study may be desirable.

Parental Reactions. In the first summer 80 percent of the parents responding felt their child had benefited educationally; 5 percent felt that their child had not benefited from the program. Only 13 percent of the parents felt that participation in the program had interfered with the child's summer.

Eighty percent of the parents reported a lack of negative developments. Seventy percent of the parents disliked the team teaching approach. They favored shorter lectures and more time with the base teacher.

In the second summer 35 out of 45 parents noted signs of positive growth and development over the summer; only 8 noted any negative developments. The most frequently mentioned problems encountered by student were heat (11), fatigue (6), and distractions (6).

HORNELL'S MODIFIED SUMMER SEGMENT FOR JUNIOR AND SENIOR HIGH SCHOOL STUDENTS

The School System

Hornell's six elementary schools, the junior high and the senior high schools are classified as city schools yet there is an element of suburbia present which creates a learning climate different from that customarily found in metropolitan cities. Since few children are transported all schools close for approximately an hour at noon. This practice creates some problems in the two secondary schools when it comes to introducing more flexible time schedules.

The school district does not have a disproportionate number of disadvantaged or racially imbalanced classes. The I.Q. average of 105 is close to the State norm. Hornell's slow learner generally functions at lower educational levels than slow learners in many suburban communities. However, they reach higher achievement levels than students classified as slow learners in rural areas or in big city slums.

One elementary school has adopted a pattern of nongradedness, but there is no evidence that this practice is being extended to other elementary or secondary schools. A new vocational training center enables Hornell High School students to obtain a practical education in fields formerly closed to them in a high school with only 960 students.

The Nature of Hornell's Extended School Year Program

In 1964 the Hornell Board of Education authorized the organization of the Modified Summer Segment program as one approach to the rescheduling of the school year. To avoid a conflict with a summer school offering extensive remedial or makeup courses, the new modified summer segment program was completely divorced from all remedial and makeup work. This led to the operation of three distinctly different summer school programs.

> The Modified Summer Segment session provided a wide variety of credit bearing junior or senior high school courses which had not been taken previously. Each full year course was completed in a seven week summer segment session. Students attended classes four hours daily for 35 days, then had two extra days for Regents Examinations.
>
> The secondary summer school provided a balanced sequence of remedial and makeup courses. Students could obtain credit for failure courses through attending classes for two hours daily over a six week period.
>
> The elementary summer segment has been a program in transition, moving from a remedial to a preventive and progressive program. Here studies of regression have been made along with new approaches to the teaching-learning process.

Keeping two secondary summer schools apart has not been easy. Repeatedly, students developed programs of study based upon long-range participation in the extended school year program to find that a low June report card or a failure on the June examinations made it necessary to take make-up courses instead of the new course which could ultimately help them to accelerate. This resulted in lower class enrollments in new subject fields than was predicted earlier in the regular school year.

Goals and Objectives

Hornell's goals and objectives for the Modified Summer Segment parallel or duplicate those listed for other plans. However, the realization of specific goals in this relatively simple extended school year design can set the stage for adoption of more complex and far reaching patterns of lengthened school year organization. For example, one objective calls for a demonstration that full year, first time courses can be successfully taught in seven weeks. Proving this is possible opens the door to compacting courses into other time blocks such as the 15 week trimester or the seven or eight week split trimester.

Goal #1--to develop secondary school organizational patterns demonstrating the feasibility of using a lengthened school year calendar to save space.

Goal #2--to ascertain whether learning continues as effectively in the summer as it does in other seasons.

Goal #3--to ascertain whether some subjects lend themselves more effectively than others to a modified summer segment program.

Goal #4--to discover the impact of the modified summer school upon potential dropouts.

Goal #5--to discover the impact of a modified summer school upon children's academic, social, emotional, and physical growth patterns.

Goal #6--to discover the impact of a modified summer school program upon teachers and teaching procedures.

Goal #7--to discover the impact of a modified summer school program upon regular school year operations.

Goal #8--to discover the impact of a modified summer school program upon the school administrator.

Goal #9--to discover the impact of a modified summer school program upon the community.

Goal #10--to compare the cost of teaching a pupil a single subject in a seven week period to regular school year costs.

Goal #11--to ascertain whether the modified summer school plan has a greater value to a selected group of pupils (slow, average, or fast learners).

Goal #12--to develop administrative patterns or teaching techniques which could lead to a better learning climate, i.e.,large group versus small group instruction.

Goal #13--to discover whether air conditioning is essential for learning.

Goal #14--to discover how the curriculum can be adapted to the new time schedules.

Goal #15--to discover whether a particular school calendar can be considered more effective than another.

Goal #16--to ascertain what happens to children who do not attend school during the summer, i.e., the forgetting lapse or summer regression.

General Findings

1. Educational Implications

Academic learning did not stop with the advent of summer. While students complained about heat and temperature, their average achievement in the summer segment program was equal to and sometimes higher than that of comparable students taking similar courses in the fall and spring terms.

Students who attended classes in air conditioned classrooms did not show significant differences in their achievement or growth patterns over those students who worked through a summer in non-air conditioned classrooms.

Modified summer segment programs clearly prove that fast, average, and slow learning students can complete first time, full year academic courses in less than the traditional 180 day school year.

A study of the mean student achievement indicates that learning is not harmed by the presentation of material or skills in new time blocks such as a compacted four hour day in a seven week session instead of a ten month school year.

2. Academic Achievement

Students in the Modified Summer Segment program were not expected to out-perform students completing courses in ten months. The objective was to demonstrate that they can do as well academically as other students do in the regular school year. This they did.

Modified summer segment students made as good, if not better, scores on teacher made tests as regular school year students.

Students in the Extended School Year program took regular and special Regents Examinations. A comparison of the June and August Regents Examination scores showed consistently high performance had been made by students taking the compacted seven week course.

[illegible]logy Examination scores obtained by [illegible] summers of 1965 and 1966 were compared with [illegible] obtained by 123 students who took Biology during the regular school year.

The mean performance of the summer segment students was 78.16 compared to the [illegible] performance of 70.42 for the regular students. A statistical analysis of the Biology Regents test results reports the mean score of the modified summer segment group was significant at the 1 percent level. These results cannot be attributed to chance.

Other Regents Examination comparisons showed the Extended School Year students did as well, if not better, than regular school year students.

Standardized tests were administered to all Extended School Year students in May following the completion of August [illegible]. Statistical analysis of ESY students performance was [illegible] with that of control students just finishing comparable courses. [illegible] statistics repeatedly show that Extended School Year students did as well, if not better, than control students.

a. Fifty-eight students who took the STEP tests ten months after completing Math 8 in a summer segment course showed a higher level of achievement had been reached than its control. The statistical analysis showed the gain was significant at the 1% level.

b. The achievement of ninety-nine E.S.Y. students who took mathematics as a first time, new subject was compared with that of 99 matched students taking similar math courses in the regular school year. Statistical analysis of the mean scores of the two groups showed the gain of the E.S.Y. students over the control group was significant at the 1% level.

c. The achievement of 604 E.S.Y. students from grades 8,9,10 11, and 12 was compared to that of a comparable or matched group of students taking the same courses in the regular school year. The E.S.Y. gain of 6.5 was compared to the 5.9 for the control. Statistically, the gain was not considered significant at the 1% level.

d. A comparison of mean scores of 61 E.S.Y. students who took Biology in the summer was compared to that of 123 matched students who took Biology in the regular school year. The E.S.Y. gain of 78.16 was compared to the 20.42 gain of the control. Statistically, the summer segment gain was considered significant at the 1% level.

e. Similar comparisons were made of the achievement of the experimental group and its controls in American History, World History, and Chemistry. The differences in achievement of the two groups was not significant at the 1% level. However, the results show that the achievement of the summer segment groups continues to be as high, if not higher than, that of the control groups taking comparable courses in the regular school year.

3. Impact Upon Students

Junior and senior high school students learn just as well, if not better when courses are taught in a short, compacted period of time as they do when taken over a ten month span.

Grade lines begin to disappear when students take advanced courses in the summer or fall terms. Chronological acceleration through a subject field places students into competition with upper classmen. No social, academic, or emotional conflicts were evident from the intermingling.

Special three term courses were instituted for slow achieving students in Mathematics. These three term

courses were responsible for a decrease in mathematics failures.

Some slow progressing, average students who otherwise would have been dropouts were able to graduate with completion of first time courses in the summer segment program.

4. Homework Implications

Through an equalization of time students received as much classroom instruction in seven weeks as comparable peermates receive in regular school year. Since E.S.Y. students achieved as well as students who had 180 school nights to complete homework assignments instead of 35 school nights, questions may be raised concerning the value of homework.

5. Impact on Teachers

Teachers received $840 to $1000 for their summer teaching. This was more than many of them could earn in a comparable period of time on the Southern Tier.

Performance in the classroom was not hampered by the fact that teachers had already completed a ten month teaching year.

An in-service training program for teachers is desirable if they are to work successfully for a four hour session instead of the traditional 40 to 45 minute period.

6. Specific Observations

A number of variables exist in a voluntary program which can limit the ultimate release of students and thereby the release of classroom space and dollars. Among these are:

a) pupil motives
b) substitution of makeup courses to meet immediate needs in place of a long-range goal
c) lack of a variety of new courses to meet academic and interest needs of some students
d) poor communication between school and community
e) a reluctance on the part of school administrators to introduce changes in the regular school year program.

Parent reactions to the summer segment program was favorable.

The accumulation of extra carnegie units through participation in a summer segment program is no guarantee that students will elect to graduate early.

Some students elected to use the summer segment program to lighten regular school year class loads.

The cost of offering full year courses in the summer is less than the cost when they are offered in the regular school year. Maintenance costs for the summer were not materially increased.

THE SCHOOL OF HUMAN RESOURCES SPECIAL EXTENDED SCHOOL YEAR PROGRAM FOR PHYSICALLY HANDICAPPED CHILDREN

The Nature of the School and Its Students

The Human Resources School* is one of three organizations that comprise the Human Resources Center, all of which are dedicated to helping physically handicapped individuals become independent, successful, productive and happy citizens. The Human Resources School is helping boys and girls make a start in life. Before coming to this special school most of the childrens' schooling had been limited to five hours of homebound instruction per week.

Approximately 125 students, ranging from Kindergarten children to 12th graders, are transported each day to and from school. During the school day the pupils move freely about the single story structure in their wheel chairs. Here they live and work in clean, light modern classrooms built for physical comfort as well as academic needs. The curriculum arts, social science, physical education, and other areas essential to their fullest development.

The Nature of the Summer Segment Program

While the boys and girls have normal intelligence, their limited prior school experience plus considerable absenteeism during fall, winter and spring sessions makes it difficult to complete work covered by average, non-handicapped children at designated grade levels. One of the objectives

*The Human Resources Schools receives some financial assistance from the State but it is not a public school. This limited the financial assistance it could receive from the State Education Department to support the evaluative phase of the Extended School Year program.

of the extended school year program has been to test the feasibility of using the rescheduled school year to provide successful learning experiences for physically handicapped children.

The summer segment program provided a seven week extension to the regular school year. During this period the school day was divided into an academic and recreational program. Students were in attendance between 10:00 A.M. and 4:00 P.M. Their formal classes were held between 10:00 A.M. and 1:00 P.M. On the junior and senior high school levels the latter time period was divided into three one hour periods with from 30 to 40 minutes devoted to instruction. The balance of each period was devoted to homework. Assignments were done in class to allow the pupils as much free time as possible when they returned home in the afternoon. After lunch the students participated in a recreational program to improve their physical fitness.

Most summer segment courses continued with the curriculum material or skills begun during the regular school year, however, some of the courses provided an introduction to the materials of the subsequent semester. The courses offered on the secondary school level were:

English 7 through 11
Social Studies 7 through 9 and 11
Math 7, 8 and Algebra
Introduction to Business and Typing

The elementary school program was conducted with an emphasis upon enrichment in Basic Skills areas as well as continual growth to higher learning levels. Several exciting field trips were made that the students will long remember.

Goals and Objectives

The following objectives are pertinent to the Human Resources Extended School Year Program.

1. To test the feasibility of extending the school year for physically handicapped children since many rehabilitation professionals contend that "disabled children cannot stand the pace."

2. To provide physically handicapped children with an opportunity to find success in academic programs.

3. To provide physically handicapped children with an opportunity to find success in terms of physical fitness.

4. To demonstrate that learning for physically h.. 'i-capped children does not stop with the onset of the summer season.

5. To measure the impact of a lengthened school year upon the health patterns of physically handicapped children.

Evaluation--Outcomes and Conclusions

Many rehabilitation professionals contend, that in general, physically handicapped persons must adhere to a less strenuous regimen of activities than nondisabled persons, and specifically that physically disabled students cannot "stand the pace."

Conclusion #1--the results of the extended school year program at the Human Resources School indicates that one cannot validly generalize about an entire category of people and that at least in one instance, that of a summer program for disabled children, the contention that children cannot take it must be considered false.

Conclusion #2--many teachers and parents have said that nondisabled children cannot take an extension of the school year. In view of the evidence that physically handicapped children can profit from involvement in an extension of the school year, one can conclude that all children, disadvantaged or nondisadvantaged can benefit from their involvement of a lengthened school program.

Pre-tests and post-tests were given at the beginning and end of the seven weeks summer segment. A statistical analysis of the data showed significant differences resulted in every academic area at the junior and senior high school.

Conclusion #3--physically handicapped children have no difficulty in learning during a summer extension of the regular school year.

Physically handicapped children will benefit academically from being involved in a well structured program especially where continuity of learning plus enrichment go hand in hand.

The children in the summer segment program performed better in some physical fitness building activities than they did in others. While growth is not as great as it was for the academic program, the conclusion can be made that

Conclusion #4--involvement in an active summer school program is not detrimental to disabled students' physical fitness. Actually, such programs can be considered beneficial.

The report of the Medical Directors stated that the summer program at Human Resources School offered the students a continuation of and the development of therapeutic activities and rehabilitation.

General Findings

Impact Upon Children--Children who attended classes during the summer and who actively participated in the program, showed evidence of their excellent well being and maintenance of their functional life on their return to school in the fall.

The extended school year program helped physically handicapped children acquire new levels of self-confidence.

In the summer extension boys and girls worked in a program based upon continuous progress.

Pupils who normally would have been unable to complete prescribed courses of study due to high absenteeism for operations and illness were able to finish them by August.

Pupils were able to take and pass August Regents Examinations who could not do so in June.

The physically handicapped children were able to make or continue social contacts which were not possible when they were isolated in their homes over the summer.

Students combined a three hour academic program with a recreational program which helped to strengthen their physical and academic growth. Field trips helped broaden their experiential background.

Evaluation--Pre-tests and post-tests were given in all major subject areas. Statistical analysis showed positive gains were made in all subject fields.

a. the educational gains were very significant in Social Studies 10 and Business Math at the .01 percent level.

b. the educational gains were highly significant in English 7, 8, 9 and 10 in Social Studies 8 and 9, and in Personal Typing at the .001 percent level.

c. there were gains in physical fitness and Earth Science but they were not considered significant below the .05 percent level.

Growth in academic areas between pre-test and post-test of 40 points in English 10, of 42 points in Social Studies and a 45 point mean increase in exam scores in Typing, point up the fact that physically handicapped boys and girls do benefit academically from being involved in a well-structured extended school year program combining continuity of learning and enrichment.

Elementary school children showed a mean growth of 2.8 months on the Stanford Reading Test and a mean improvement of 3.25 months in Arithmetic.

Junior high school students showed a mean increase of 10.3 months in Arithmetic on the Iowa Test of Basic Skills. This gain paralleled the mean gain of 8.0 months on the wide range achievement test in Arithmetic.

Physical fitness tests were given to measure student coordination, endurance and skill. In every case, mean improvement was registered for elementary and for high school pupils, but the gains were not all significant.

1. At the elementary level the gains for weight lifting were considered significant at the 1 percent level.

2. Improvement at the junior high level was considered significant at the 1 percent level in shuffleboard and pulley lifting.

3. In baseball throw the mean difference between pre- and post-tests was just shy of significance at the 5 percent level.

4. Gains were made at the senior high level in five out of six activities, however, significance was evident at the .01 percent level in only one area.

In terms of the total physical fitness the resulting gains must be considered significant in that they refute the contentions of some rehabilitation professionals who contend that physically handicapped children cannot stand the "pace."

The Health Factor--The school physician's comment about the program is significant:-

"The positive aspects of an extended summer school program, from a physician's point of view, are so great that I do not hesitate recommending that this should be standard operating procedure for any school for children with physical handicaps."

THE GREEN CHIMNEYS TWELVE MONTH PROGRAM

The Nature of the School and Its Program

Prior to 1967 the Green Chimneys School provided a strong academic program for ten months and then operated as a camp for two months. With the adoption of a new twelve month continuous progress program in 1967 the two operations have been combined to provide an extension of the academic program from 180 days to approximately 223 days.

Since the school is located on a 105 acre farm in the Berkshires, children acquire many enriching experiences throughout the year which are not provided in most schools. It is not unusual at the end of the academic day to find boys and girls working with horses in the corral. Other

children may be playing near the water, patting a deer, or riding their bicycles. In the summer these normal recreational activities are expanded to include a number of camp activities.

> The adjusted summer schedule provides three and one-half hours of academic activities. Art, music, and physical education are included in the afternoon summer camp cycle. This is followed by an hour of study plus evening activities so the children have a full day of structured and partially structured activities.

The Nature of the Children

Green Chimneys is a nonsecretarian, inter-racial, non-profit boarding and day school.* Pre-school children through eighth grade with varied backgrounds attend the school. While the school prefers to admit students who have a minimum I.Q. of 100, it accepts children who because of emotional and learning problems function at performance levels far below acceptable grade standards.

Many of the children in attendance are normal boys and girls who can benefit from being involved in a highly structured academic setting. In contrast to the presence of some highly gifted children with few problems the school strives to provide for the special needs of children who come from disruptive home settings, are academically retarded, or have emotional, neurological or perceptual problems. One-quarter are emotionally disturbed, one-quarter have problems due to brain damage, one-half may be considered in the average or gifted, non-handicapped category.

Tuition for many students is paid by local school districts because regular public school teachers have been unable to cope with the emotional

*The new program was started with consultant help from the State Education Department. All extra school year costs come from tuition fees with the exception of a small sum expended to evaluate the program.

or socially disturbed child in a normal classroom. Many of these children will remain at Green Chimneys until they complete the eighth grade. Some will go to preparatory schools, others to public schools and some return to foreign counterparts of our public and private schools. Whey they leave they are generally prepared to cope with the secondary school curriculum.

Underlying Educational Objectives

There were multiple objectives underlying the adoption of a twelve month calendar at the Green Chimneys School. Steps have been taken to evaluate as many of them as possible.

Objectives

1. To provide an exciting, flexible approach to education through a combined school and camp program extending through through twelve months.

2. To provide a series of uninterrupted sequential learning activities for all children.

3. To substitute a continuous academic and non-academic program of education for one which encouraged regression and loss of skill and knowledge over the summer.

4. To minimize the summer slump and the need for intensive review and reteaching for most of September.

5. To minimize the adjustment problems of all children at the end of summer, especially those of emotionally, socially, or physically disadvantaged boys and girls.

6. To minimize pressures customarily placed upon teachers and pupils through providing an ever expanding program of education to all children.*

7. To ascertain the effect of a year round program of school-camping education upon children's physical health.

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*One of the newest programs introduced in the 1966-67 summer term was a course in photography. It lead to the development of creativity and a new medium of expression. The new photography course will be continued throughout the school year for all children.

8. To ascertain the effect of a year round program of school-camping education upon children's social and emotional needs.

9. To ascertain the effects of the lengthened school year program upon discipline.

10. To demonstrate that an extended school year program provides successes for each child improving his feelings of self-esteem and resulting in a more adequate concept of self.

11. To test the academic values of such a program

    a. to demonstrate that gifted children can shorten their elementary years of schooling

    b. to demonstrate that the program can lead to a faster recovery for the academically retarded child. This in turn will shorten their years in the elementary school (grade K-8).

General Findings

Impact Upon Children. In the past emotionally disturbed children would regress emotionally when they went home for the summer. The new program tended to be a settling one for emotionally disturbed pupils who customarily went home in the summer. This is attributed to their need for a continuity of formal learning activities. The fact that academic pursuits were not interrupted made the adjustment to summer type camp experiences less frustrating.

Teachers and school administrators report a reduction in the social and behavior problems. There was a definite lack of emotional regression over the summer on the part of students who had not returned home. They attribute the ease of adjustment to the fall term to the extension of the previous school year.

The library was opened during the evening as well as during the day enabling boys and girls to use its resources intensively throughout the summer. Middle and upper grade pupils reported a feeling of accomplishment during a period when many of them would normally be marking or wasting time.

Newcomers who came to school for the first time in July were immediately phased into appropriate learning levels. They had no adjustment to make in September because they had engaged in programs of study quite unlike that encountered in the traditional summer school. Academically retarded children had an opportunity to make up for lost time.

Educational Implications. Academic teachers were able to build constructive learning activities around events and happenings in the summer which gave new meaning to the learning process. The new extended school year program insured the continuation of guidance counseling, health and nutrition activities. Academic learning and special interests were not interrupted. Teachers and specialists reported few discipline problems during the summer. This was attributed to the children's understanding of the meaning of school with its established rules and routines.

Health Factor. The school doctor who worked with the students during the months of July and August as well as during the regular school year was unable to find any evidence of injury to the health of the students involved in the full extended school year program. Medically, there were fewer problems. The medical staff and consulting specialists reported a more relaxed pattern of student life was evident at the start of the new September term than had been evident in prior years.

Observations. Parents had adequate warning about the impact of the lengthened school year upon their own vacation patterns and adjusted their plans accordingly. Few new staff members were required for the summer camping phase. It was possible to continue the employment of teachers who normally would have gone elsewhere for summer employment.

Staff Reactions. The administrators and teachers say: "The experience of the first year was not "good" but EXCELLENT."

An analysis of the reactions of the 15 teachers who worked with the children showed 86 percent were wholeheartedly in favor of the twelve month program; 100 percent reported the children seemed willing to learn; 93 percent reported a lack of resentment on the part of pupils because they had to go to school in the summer; 82 percent reported the children seemed to have healthier attitudes; there was a unanimous feeling that the children had not been fatigued; 82 percent reported that school opening was easier in the fall; 91 percent favored the continuation of the program; 82 percent said they would be willing to work in a full twelve month program.

Evaluation. The Green Chimneys program has not been in operation long enough to provide much statistical data, however, the following points may be made

a. A statistical analysis of the achievement tests administered to control and non-control students did show a language growth on the part of the experimental group was significant at the 5 percent level.

b. The experimental group showed gains were made which were higher than those made between pre-test and post-tests by the control group on the Stanford Achievement sub-tests for paragraph meaning, arithmetic applications. Statistically, the results were not significant at the 1 percent level.

c. Tests were used to measure behavior and attitude but the difference between the control and the experimental groups were not statistically significant.

CHAPTER III

CREATIVE EXTENDED SCHOOL YEAR DESIGNS*

Everyone likes economy but the extended school year to be permanent must be based upon the development of designs providing extra educational opportunities to all children. A description of extended school year plans not described previously follows. Some are not new, others use creative approaches to realize long range educational goals as well as economy or space utilization goals.

Since there are a variety of school organizational plans to choose from, districts can select that which is most appropriate to community interests or needs. The decision can be a critical one since some designs release space immediately while others will take several years to do so. The ultimate choice depends upon one's purpose or objectives.

The Staggered Four Quarter Plan is Not Recommended

In the past, several cities have adopted year-round programs of education, one of which is based upon a staggered four quarter plan. Recently, a variation called the 12-4 Plan has received considerable attention. Perhaps, one reason for their popularity lies in their ability to release space immediately.

While the Staggered Four Quarter Plan can be instituted readily, it has not lasted. The Superintendent of Schools in Nashville, in comment-

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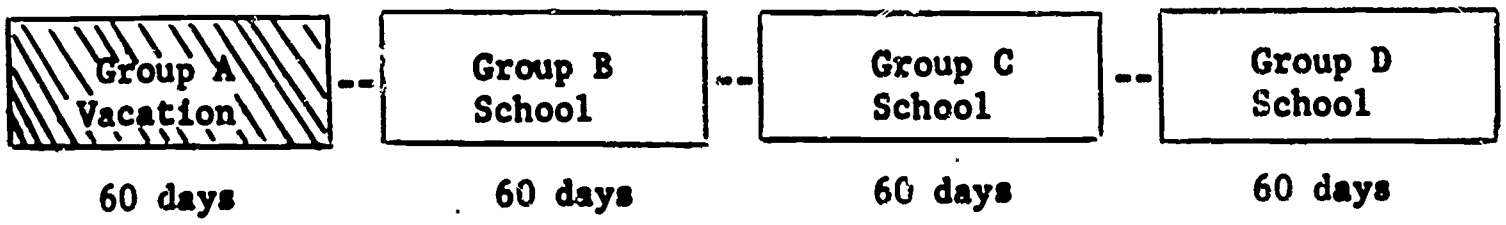
* Not fully tested. For additional information on the Continuous Progress Plan and the Modified Summer Segment, the reader is referred to "Extended School Year Designs," State Education Department publication.

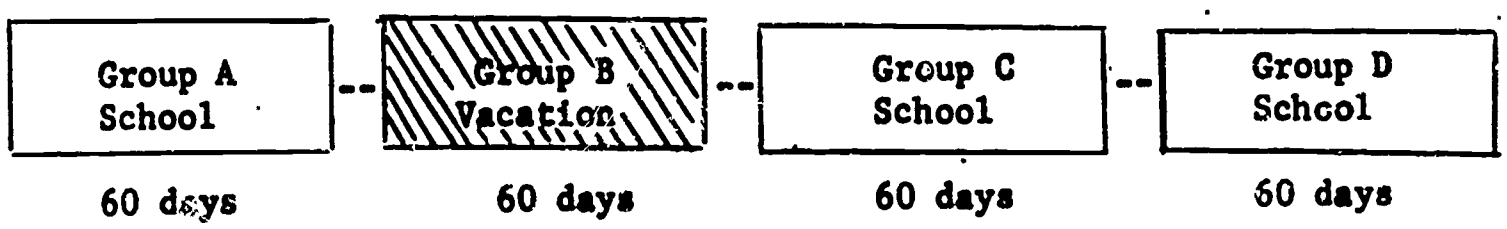
ing about the plan said, "We can build a good program of education with it, but one cannot cope with staggered vacations." This is perhaps one of the strongest arguments against it. Another lies in the fact that very small school districts find it difficult to apportion children to classes, grades, or sections during a given quarter to insure that acceptable pupil/class ratios will be maintained.

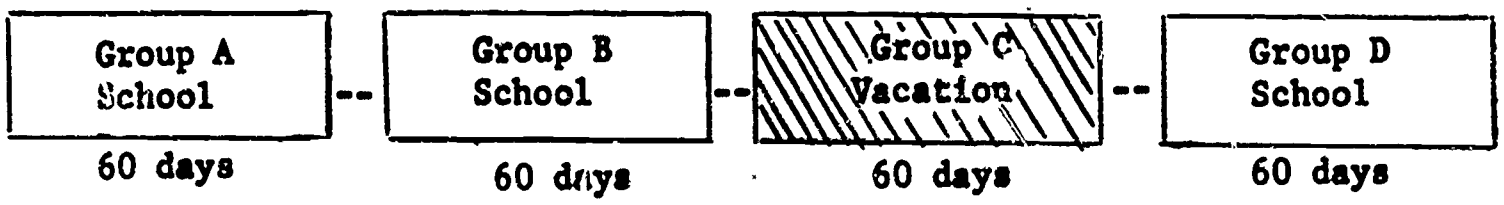
One variation has schools open twelve months a year with different groups of children on vacation during fall, winter, spring, or summer terms.

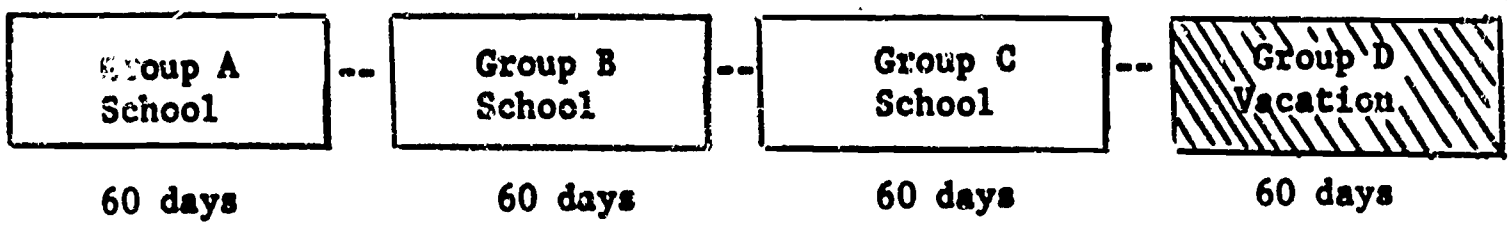
Figure 4

THE STAGGERED FOUR QUARTER PLAN









DESIGN I

THE DEVELOPMENT OF A TRIMESTER DESIGN FOR SECONDARY SCHOOLS

The State Education Department has developed an Extended School Year trimester plan which is somewhat different from those found in colleges and universities. The new plan incorporates a number of "E" terms into a design, thereby equalizing trimester enrollments and providing additional educational opportunity.

The Nature of a Recommended Trimester Program

Recommended trimester designs are based upon the division of a lengthened school year into three 68 to 72 day trimester segments.

Time Equalization--through an adjustment of time, class periods are equalized to provide the same amount of instructional time in a trimester as students receive in a semester. This enables average students to complete the equivalent of a year's course of study in two trimesters.

The Three Year Trimester--this design starts with four grades and reduces to three educational levels after the fourth trimester.

The Four Year Trimester--this design starts with five grades and reduces to four educational levels after the fourth trimester.

The Five Year Trimester--this design starts with six grades and reduces to five educational levels after the fourth trimester.

"E" Terms--a number of "E" or extra trimesters are built into the program to stabilize enrollment flow patterns and allow students to take extra courses, reduce class load, build a foundation in areas where they are weak, or engage in a work-school experience. Some courses may be offered as three term courses.

The three year design has 1 "E" term
The four year design has 2 "E" terms
The five year design has 3 "E" terms

"E" Periods--for each "E" term the student acquires a number of "E" periods. Thus, in a seven period day, the student has seven "E" periods to work with for a term. If he elects to take one extra course, he still has six extra or "E" periods.

Changing Enrollment Flow Patterns

During the first extended school year the school enrollment decreases in the third trimester due to the early graduation of the first twelfth grade class. The entry of a new class in the fourth trimester brings the enrollment back to normal. The acceleration of the second twelfth grade class and its graduation leads to a decreased enrollment in the fifth trimester. The reduction becomes permanent due to the introduction of the "E" term factor.

Figure 5 shows how a projected enrollment of 1800 based upon 300 students per grade reduces to 1500 students in trimester five. This change in the enrollment flow pattern releases classroom space and teachers.

Budgetary Implications

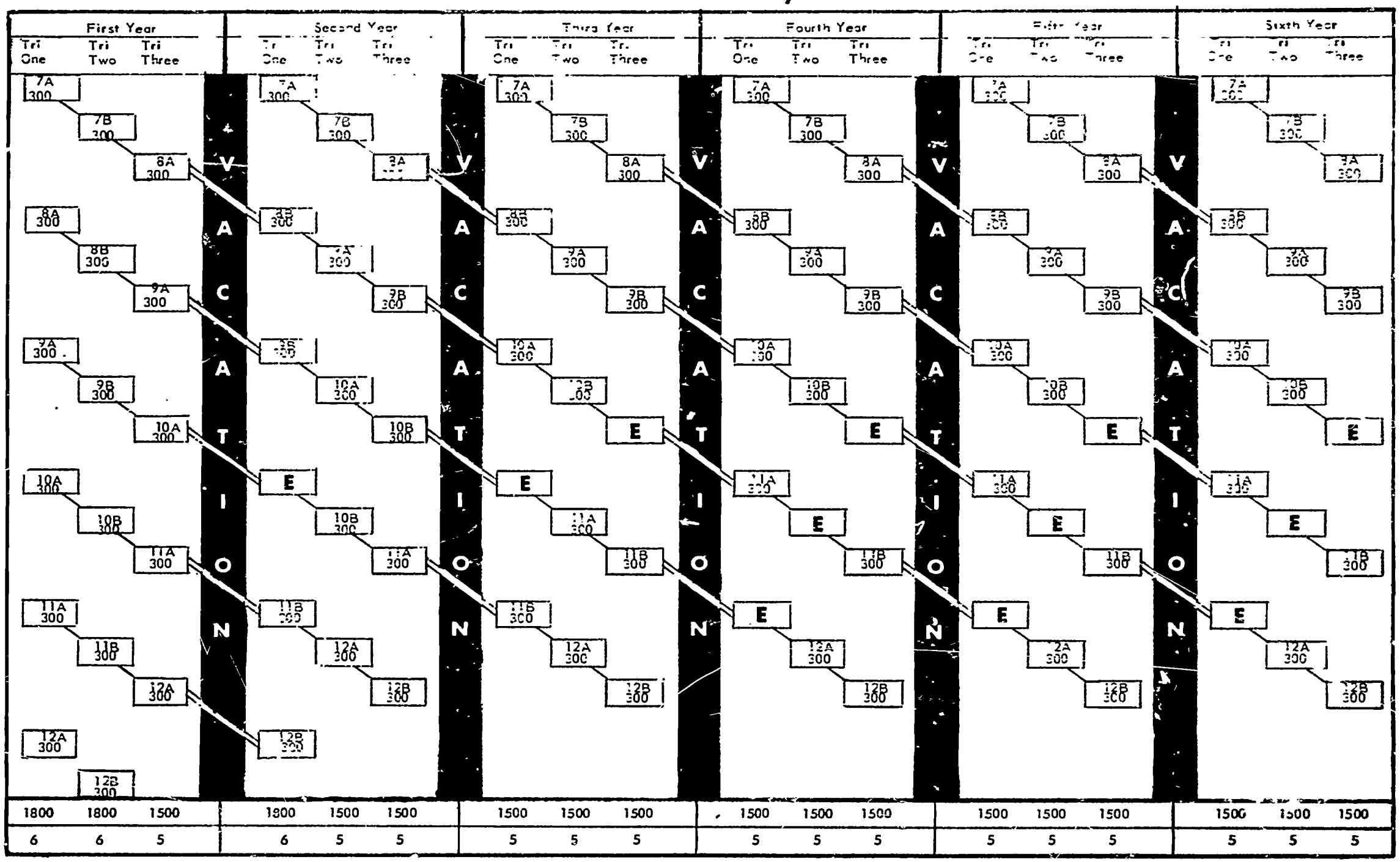
The release of pupils, teachers, and space at the end of the fourth trimester results in immediate dollar savings.

Adjustment Year Costs--a school district will incur additional expense during the first and second adjustment years when it compensates teachers for at least one extra month's service. These costs will vary in accordance with the number of grades involved, i.e., four, five, six or seven. These costs can be lowered with a potential release or some staff members at the end of trimester two. The extra cost for the second adjustment year is more than offset by the reduction of staff at the end of trimester four.

Savings After the Adjustment Years--with the reduction in enrollments becoming permanent in the fifth trimester, school districts can anticipate dollar savings in the second year if teacher-pupil ratios are not decreased. Field studies show greater savings are possible in subsequent years commensurate with the design adopted.

FIGURE 5

A Trimester Flow Pattern for a Secondary School - Grades 7 to 12



Additional savings may be shown if the adoption of the trimester plan eliminates the need to construct and operate a new school, i.e., debt service charges and operating costs become dollar savings.

Trimester Options

College trimester plans create enrollment problems where students are given the choice of attending either two or three trimesters a year. Pupil and teacher options are not feasible in a secondary school where mandatory attendance laws are based upon a 180 day school term. Again, State Aid formulas are generally based upon a fixed minimal length school year. All recommended plans require attendance in all three trimesters during a given year.

The Trimester Calendar

Normal holidays are observed, however, the ideal trimester calendar would change the winter and spring vacations to a break at the end of trimesters one and two. If tradition becomes a barrier, and a Christmas and Easter recess is necessary, the new trimester calendar should include a two day break at the end of trimesters one and two for schedule adjustments.

The school year should start in early August in New York State if Regents Examination dates are to coincide with those of schools operating on a ten month basis.

Scheduling

Multi-mester scheduling, be it for a trimester, quadrimester, or two semesters, poses problems to many high school principals. Department studies have demonstrated the feasibility of multi-mester computer scheduling. Thus, an entire school may be rescheduled at the end of a trimester or quadrimester or through refined pre-planning.

DESIGN II

THE MULTIPLE TRAILS EXTENDED SCHOOL YEAR PLAN

The Nature of the Multiple Trails Plan

The Multiple Trails Plan introduces a new concept of extended year schooling to attain economy or higher level achievement. Figure 7 shows four stages or variations of the plan which can be adopted with a rescheduling of the student's day and a longer school year.

The Educational Reserve Bank (Figure 6)

All variations start with Stage I which yields to the release of:

(a) learning time (pupil time)
(b) instructional time (teacher time)
(c) learning facilities (classroom space)

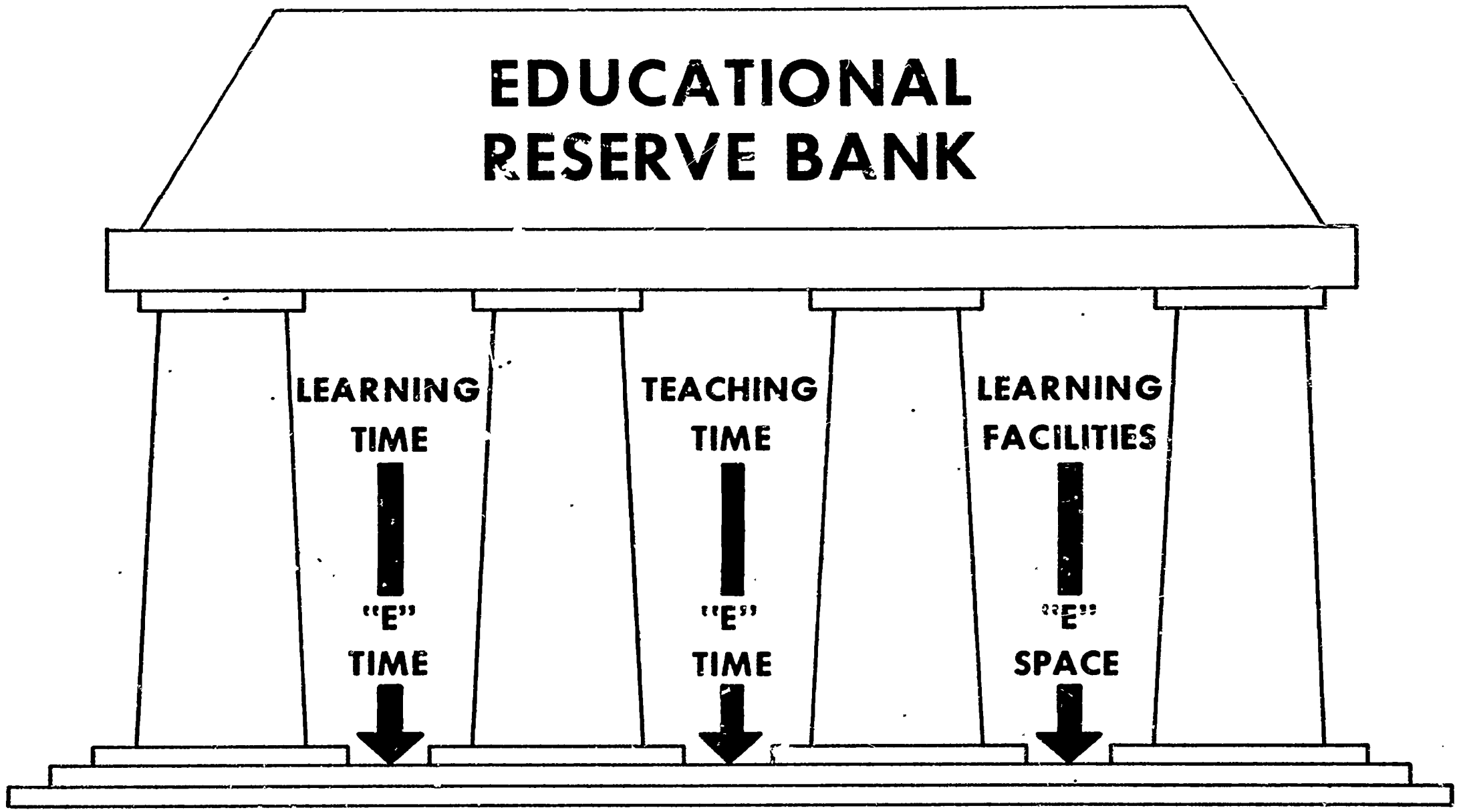
These assets of a hypothetical Educational Reserve Bank can be used to achieve immediate economy or to implement Stages II, III, or IV.

Other extended school year plans show a potential release of classroom space in proportion to the number of students enrolled in one grade or class. Such reduction will be far less than that provided in the Multiple Trails Plan which releases space in proportion to the number of available classrooms and the variation desired.

Stage I of the Multiple Trails Plan

Transition Stage I should always be considered as a base line or projected reference point because it shows how classroom space and teacher time become assets in the first year of operation. A school district can start with Stage I and remain with it indefinitely. Steps can be taken to introduce other stages shown in Figure 7.

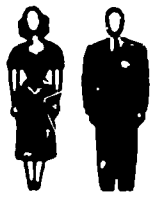
ADOPTION OF TRANSITION STAGE 1 OF THE MULTIPLE TRAILS PLANS LEADS TO THE CREATION OF THE EDUCATIONAL RESERVE BANK



THE ASSETS OF THIS BANK CAN BE USED TO:

1. PROVIDE ADDITIONAL EDUCATION

2. HELP MEET THE NEED FOR CLASSROOM TEACHERS



3. MINIMIZE THE NEED FOR ADDITIONAL NEW SCHOOL CONSTRUCTION

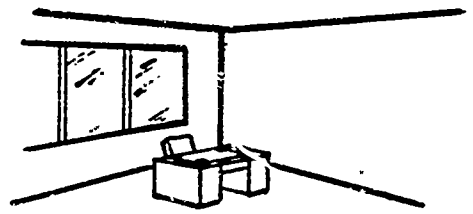
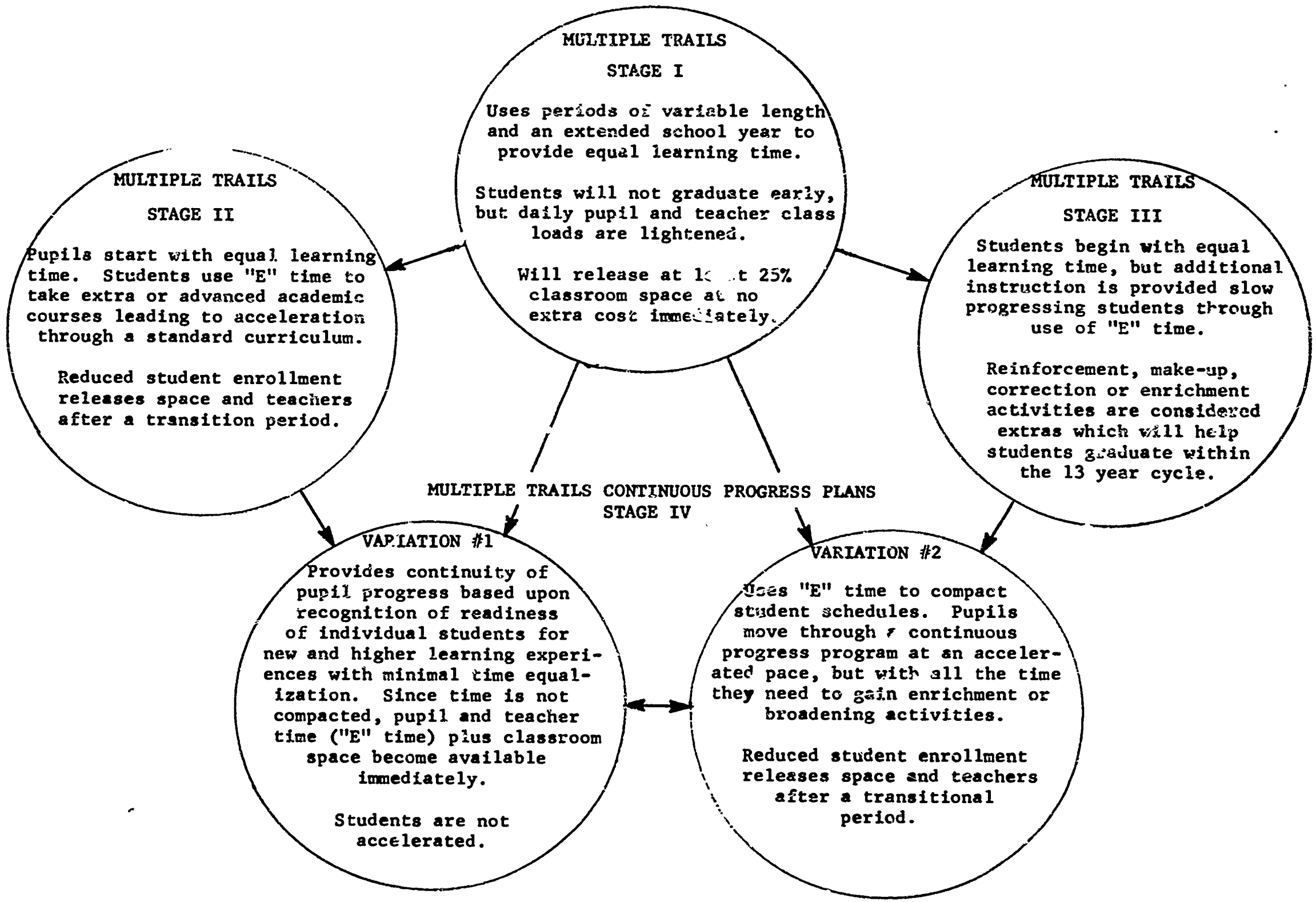


FIGURE 7

VARIATIONS OF THE MULTI-MODULAR MULTIPLE TRAILS EXTENDED SCHOOL YEAR PLAN



The Release of Pupil Time. In Stage I the current yearly instructional time per subject is spread over 42 weeks instead of 36 weeks, guaranteeing the same amount of learning time, but with fewer minutes of instruction per week. Time equalization is provided through a multi-modular pupil-teacher schedule which automatically releases "E" time or learning time. (See Figure 8.)

How students use released time depends upon the type of "holding" areas available and the objectives of the school board. "E" time is an asset which teachers and school administrators can capitalize upon to use innovative approaches to the learning process. The new schedule provides scheduling flexibility through instructional periods varying in length and frequency.

The time equalization process has an immediate impact upon the student's day. For example, a typical junior high school student may go from zero modules of free time to 21 seventeen minute modules of "E" time per week. His number of daily teacher contacts can be reduced from seven to four. Similarly, a college bound junior carrying six subjects with one lab has 31 classes a week. Under Stage I his daily contact is reduced from six or seven teachers to three or four. He has 31 free "E" time modules per week instead of 12 and only has 17 academic preparations per week compared to 29 under the regular school year.

The Release of Classroom Space. Numerous field studies comparing utilization before and after adoption of Stage I shows that the release of "E" space depends upon the number of periods classrooms are used per day and the length of the school day. Essentially, they show

(a) a 25 percent increase in space may be anticipated where classrooms are used eight periods a day,
(b) a 37½ percent increase in space may be obtained with a small adjustment in the length of the eight period day,
(c) a 29 percent increase may be anticipated where classroom are used seven periods a day.

Figure 9 illustrates how an art classroom currently used for eight classes per week can with adoption of Stage I be used to house 10 classes per week.

The Release of Teacher Time. Adoption of Stage I immediately changes the nature of a teacher's day and week. Field studies show that a typical teacher currently teaching 25 classes a

FIGURE 8

A DAILY PUPIL PROGRAM WITH A RESCHEDULING OF THE SCHOOL YEAR

PRESENT PUPIL SCHEDULE - COLLEGE PREPARATORY GRADE 11

MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1					
2	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11
3					
4					
5	AMERICAN HIST. I	AMERICAN HIST. I	AMERICAN HIST. I	AMERICAN HIST. I	AMERICAN HIST. I
6					
7					
8	MATH 11	MATH 11	MATH 11	MATH 11	MATH 11
9					
10					
11	FOR.LANG. III or IV	FOR.LANG. III or IV	FOR.LANG. III or IV	FOR.LANG. III or IV	FOR.LANG. III or IV
12					
13	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
14					
15	"E" TIME	"E" TIME	"E" TIME	"E" TIME	HEALTH
16					
17					
18					
19	PHYS.ED.	CHEMISTRY LAB	HEALTH	CHEMISTRY LAB	PHY.ED.
20					
21					
22	CHEMISTRY	CHEMISTRY	CHEMISTRY	CHEMISTRY	CHEMISTRY
23					
Subjects per day	5 + PE	6	6	6	6 + PE

No. of Free Modules per week 12

PROPOSED PUPIL SCHEDULE - TRANSITION #1

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
CHEMISTRY 11	"E" TIME	CHEMISTRY 11	FOR.LANG. III or IV	CHEMISTRY 11	8:30 - 8:47
					8:47 - 9:04
					9:04 - 9:21
					9:21 - 9:38
					9:38 - 9:55
FOR.LANG. III or IV	FOR.LANG. III or IV	MATH 11	MATH 11	MATH 11	9:55 - 10:12
					10:12 - 10:29
					10:29 - 10:46
					10:46 - 11:03
AMERICAN HIST. I	ENGLISH 11	AMERICAN HIST. I	ENGLISH 11	ENGLISH 11	11:03 - 11:20
					11:20 - 11:37
					11:37 - 11:54
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	11:54 - 12:11
					12:11 - 12:28
					12:28 - 12:45
PHYS.ED.	"E" TIME	PHYS.ED.	AMERICAN HIST. I	HEALTH	12:45 - 1:02
					1:02 - 1:19
					1:19 - 1:36
"E" TIME	CHEMISTRY 11	"E" TIME	"E" TIME	"E" TIME	1:36 - 1:53
					1:53 - 2:10
					2:10 - 2:27
					2:27 - 2:44
					2:44 - 3:01
3 + PE	3	3 + PE	4	4	

No. of Free Modules per week 31

FIGURE 9

COMPARATIVE USE OF EXPENSIVE CLASSROOM FACILITIES UNDER REGULAR AND EXTENDED SCHOOL YEAR PLANS

	CURRENT ROOM USAGE--45 MINUTE PERIODS					PROPOSED ROOM USAGE--TRANSITION # II--16 MINUTE MODULES					
MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
1	ART 7A	ART 7A	ART 7A	ART 7A	ART 7A	ART 7A	ART 7A	ART 7B	ART 7B	ART 7C	8:30 - 8:46
2											8:46 - 9:02
3											9:02 - 9:18
4	ART 7B	ART 7B	ART 7B	ART 7B	ART 7B						9:18 - 9:34
5											9:34 - 9:50
6											9:50 - 10:06
7	ART 7C	ART 7C	ART 7C	ART 7C	ART 7C	ART 8A	ART 8A	ART 8B	ART 8A	ART 8B	10:06 - 10:22
8											10:22 - 10:38
9											10:38 - 10:54
10	ART 7D	ART 7D	ART 7D	ART 7D	ART 7D						10:54 - 11:10
11											11:10 - 11:26
12						ART 7C	ART 7D	ART 7D	ART 8B	ART 7D	11:26 - 11:42
13	ART 8A	ART 8A	ART 8A	ART 8A	ART 8A						11:42 - 11:58
14											11:58 - 12:14
15											12:14 - 12:30
16	ART 8B	ART 8B	ART 8B	ART 8B	ART 8B		ART "B" 8C	ART "B" 8D	ART "B" 8D	ART "B" 8B	12:30 - 12:46
17											12:46 - 1:02
18						ART "B" 8C					1:02 - 1:18
19	ART 9A	ART 9A	ART 9A	ART 9A	ART 9A		ART 9B	ART 9B	ART 9B	ART "B" 8C	1:18 - 1:34
20											1:34 - 1:50
21											1:50 - 2:06
22	ART 9B	ART 9B	ART 9B	ART 9B	ART 9B	ART 9A	ART 9A	ART 9A	ART 9A	ART 9B	2:06 - 2:22
23											2:22 - 2:38
24											2:38 - 2:54
Subjects per day	8	8	8	8	8	4	5	5	5	4	

No. of Free Modules per week 0
No. of Classes per week 8

No. of Free Modules per week 0
No. of Classes per week 10

week plus 5 special assignments could immediately obtain a weekly schedule which reduces her pupil contacts to three classes per day and her weekly work load to 15 academic preparations. In addition, the time equalization process releases sufficient "E" time to provide 33 free modules per week instead of the current 15.

Stage II of the Multiple Trails Plan

"E' time is used in Stage II by average and fast learning students to take extra courses leading to acceleration. By taking additional new or higher level courses, students reduce their years of schooling. The selection of extra courses creates a drain upon the Educational Reserve Bank assests, but with the ultimate decrease in the school's enrollment due to acceleration, assests later are returned to the bank.

Since few school boards will willingly pay teachers an extra month's salary for the light teacher loads pictured in Stage I, teacher "E" time is used with Stage II to balance out their daily and weekly teaching loads. One approach which has been acceptable to several professional teacher organizations calls for the teaching of six classes over eleven months instead of five classes over ten months. One variation of this adjustment gives the teachers 18 preparations a week, a limited number of special assignments plus a guarantee of 22 free modules a week instead of the current 15.

Two popular simulated teacher schedules provide for compacting the six teaching assignments to provide the release of two full mornings or one entire day for special assignments, curriculum planning and development, field trips and conferences. In the former case teachers meet 2, 4, or 5 classes a day while in the latter case teachers carry 4 or 5 subjects for four days and are free the fifth day.

A TYPICAL TEACHER DAY WITH A RESCHEDULING OF THE SCHOOL YEAR

PRESENT TEACHER SCHEDULE

MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1					
2	SCIENCE 7A	SCIENCE 7A	SCIENCE 7A	SCIENCE 7A	SCIENCE 7A
3					
4	TEACHER ACTIVITY	FREE	TEACHER ACTIVITY	FREE	TEACHER ACTIVITY
5					
6					
7	SCIENCE 7B	SCIENCE 7B	SCIENCE 7B	SCIENCE 7B	SCIENCE 7B
8					
9					
10	SCIENCE 7C	SCIENCE 7C	SCIENCE 7C	SCIENCE 7C	SCIENCE 7C
11					
12					
13	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
14					
15	FREE	TEACHER ACTIVITY	FREE	TEACHER ACTIVITY	FREE
16					
17					
18	SCIENCE 8A	SCIENCE 8A	SCIENCE 8A	SCIENCE 8A	SCIENCE 8A
19					
20					
21	SCIENCE 8B	SCIENCE 8B	SCIENCE 8B	SCIENCE 8B	SCIENCE 8B
22					
23					
No. of Subjects per day	5	5	5	5	5

No. of Free Modules per week 15

PROPOSED TEACHER SCHEDULE - TRANSITION #1

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
SCIENCE 7A	SCIENCE 7A	SCIENCE 7A	SCIENCE 7B	SCIENCE 7B	8:30 - 8:47
					8:47 - 9:04
					9:04 - 9:21
					9:21 - 9:38
SCIENCE 7B	TEACHER ACTIVITY	SCIENCE 7C	TEACHER ACTIVITY	SCIENCE 7C	9:38 - 9:55
					9:55 - 10:12
					10:12 - 10:29
					10:29 - 10:46
	SCIENCE 7C	TEACHER ACTIVITY	SCIENCE 8B		10:46 - 11:03
					11:03 - 11:20
					11:20 - 11:37
					11:37 - 11:54
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	11:54 - 12:11
					12:11 - 12:28
					12:28 - 12:45
					12:45 - 1:02
					1:02 - 1:19
					1:19 - 1:36
					1:36 - 1:53
					1:53 - 2:10
SCIENCE 8A	SCIENCE 8A	SCIENCE 8B	SCIENCE 8A	SCIENCE 8B	2:10 - 2:27
					2:27 - 2:44
					2:44 - 3:01
3	3	3	3	3	

No. of Free Modules per Week 33

A MODIFIED TEACHER DAY WITH A RESCHEDULED SCHOOL YEAR

PROPOSED TEACHER SCHEDULE--TRANSITION #1

MODULE	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1	SCIENCE 7A	SCIENCE 7A	SCIENCE 7A	SCIENCE 7B	SCIENCE 7B
2					
3					
4					
5	SCIENCE 7B	TEACHER ACTIVITY	SCIENCE 7C	TEACHER ACTIVITY	SCIENCE 7C
6					
7					
8					
9		SCIENCE 7C	TEACHER ACTIVITY	SCIENCE 8B	
10					
11					
12					
13	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
14					
15					
16					
17					
18					
19					
20	SCIENCE 8A	SCIENCE 8A	SCIENCE 8B	SCIENCE 8A	SCIENCE 8B
21					
22					
23					
No. of Subjects per day	3	3	3	3	3

No. of Free Modules per week 33

PROPOSED TEACHER SCHEDULE--TRANSITION #2

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME
SCIENCE 7A	SCIENCE 7A	SCIENCE 7A	SCIENCE 7B	SCIENCE 7B	8:30 - 8:47
					8:47 - 9:04
					9:04 - 9:21
					9:21 - 9:38
SCIENCE 7B	TEACHER ACTIVITY	SCIENCE 7C	TEACHER ACTIVITY	SCIENCE 7C	9:38 - 9:55
					9:55 - 10:12
					10:12 - 10:29
					10:29 - 10:46
SCIENCE "E" 8C	SCIENCE 7C	SCIENCE "E" 8C	SCIENCE 8B	SCIENCE "E" 8C	10:46 - 11:03
					11:03 - 11:20
					11:20 - 11:37
					11:37 - 11:54
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	11:54 - 12:11
					12:11 - 12:28
					12:28 - 12:45
					12:45 - 1:02
		TEACHER ACTIVITY			1:02 - 1:19
					1:19 - 1:36
					1:36 - 1:53
SCIENCE 8A	SCIENCE 8A	SCIENCE 8B	SCIENCE 8A	SCIENCE 8B	1:53 - 2:10
					2:10 - 2:27
					2:27 - 2:44
					2:44 - 3:01
4	3	4	3	4	

No. of Free Modules per week 22

Stage III of the Multiple Trails Plan

"E" time is used to some extent in this Stage to provide a direct attack upon special student needs. Chronological acceleration is deferred to remediation and corrective assistance or programs providing enrichment or broadening experiences. Work experience programs, for example, become a possibility for academic as well as terminal students.

Assets released in Stage I are used with little expectation of immediate financial returns, however, if potential dropouts earn diplomas or if disadvantaged children acquire educational opportunities helping them become enlightened citizens, society will be amply repaid.

In Stage III teacher "E" time is diverted from the extra subject concept to that of increasing student learning time in a subject. Thus, slow learning students may meet classes more frequently or the number of modules per class can be increased vertically as well as horizontally to provide 15 or 18 modules of instruction per week through a full extended school year. Other teachers may use "E" time for special remediation, corrective teaching, small group activities or conferences.

Stage IV of the Multiple Trails Plan

Many innovative educators as well as those considering new approaches to the education of disadvantaged children are seriously considering adoption of secondary school continuous progress or nongraded programs. How many school districts would elect Stage IV is problematic since the design calls for a drastic change in secondary school philosophy and practice. Continuous progress will eliminate traditional grade barriers because students who complete one

phase of a designated trail or program of study merely proceed to higher learning levels. Stage IV combines the benefits of all other stages.

> The Non-compacted Version. Acceleration is not an objective, therefore, students work in a nongraded structure using minimal weekly time allocations similar to those provided in Stage I.
>
> The Compacted Continuous Progress Version. "E" time is deliberately used to increase the number of weekly modules of instruction to the point that students complete standard courses of a study in the equivalent of 6, 7, or 8 months. Extra "E" time is used to provide compacted teacher and pupil schedules, therefore the release of classroom space is deferred until the end of a transition period.

Vocational Implications

Field studies show that the Multiple Trails Plan can be used in a regular high school to provide expanded vocational opportunities. "E" time can be used to provide direct work experience or to encourage students to take vocational courses. When the Multiple Trails Plan concept is applied to Board of Cooperative Services Occupational Training Programs, the extension of the school year increases the availability of space in the training centers. Thus, more students can take part in vocational programs or more learning time can be provided for students who are normally hard pressed to meet minimal requirements in the regular school year.

When the Multiple Trails concept is included in both the receiving and sending schools, the flexibility of student schedules with new "E" time provisions helps provide adequate lunch or travel time or an opportunity to engage in after school activities.

Potential Impact Upon a School District

Several variations of the Multiple Trails Plan avoid the necessity of a long transition period before economics can be realized. They, also, eliminate student acceleration. If adopted, a school district can:

1. Release classroom space in proportion to the number of classrooms involved in the non-accelerated program. This release of space becomes an immediate asset.

2. Release teachers in proportion to the number of teachers not involved in the acceleration or new enrichment and remediation program.

3. Provide classroom space for students where increasing enrollments are creating a serious housing shortage.

4. Provide up to two extra class sections of courses which normally are limited to a maximum of eight in a given classroom.

5. Release classroom space to create special resource laboratories.

6. Release teachers to work on special committees, engage in planning or research, or provide special help to regular and disadvantaged students.

7. Provide extra learning time to students who cannot complete normal courses in traditional time allotments.

8. Reduce the cost of education to the taxpayers.

9. Reduce the number of pupil-teacher contacts per day.

10. Reduce the number of pupil or teacher preparations per week for a designated subject or series of subjects.

11. Expand vocational training programs.

12. Provide students with time to engage in self-directive activities, independent study, or a broadened program of study, enriched or accelerated.

To attain higher educational goals one may have to develop a more sophisticated look at current school operations. For example, scheduling problems can be resolved through the use of computer technology.

DESIGN III

GETTING ACQUAINTED WITH THE QUADRIMESTER PLAN

The quadrimester plan is based upon dividing the lengthened school year into four 52-53 day quadrimesters. Average or better than average students will complete normal course requirements in three of the four quadrimesters. Slower learning students may require the full four quadrimesters to complete a normal regular school year course of study. Those completing a course in three quadrimesters will be expected to start new courses in the next term.

> Note: This plan is not to be confused with staggered four quarter plans. The quadrimester design has all students attend class for the full four quadrimesters except where a split quadrimester is introduced. All students have a five week vacation in the summer.

The Quadrimester Calendar

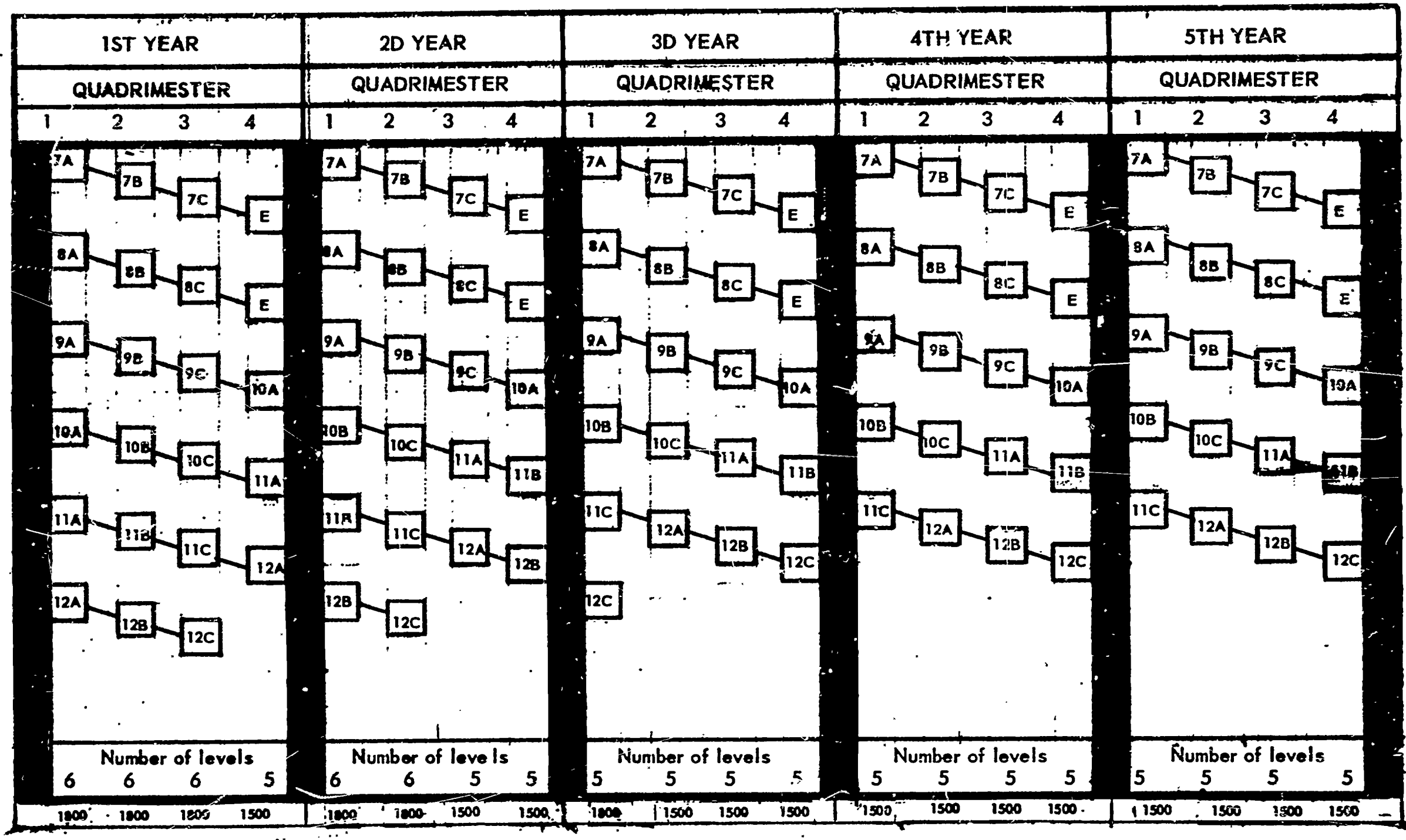
Ideally, the quadrimester calendar provides a full week recess at the end of the first, second, and third quadrimesters. If adjustments are necessary vacation periods may remain as they are under the regular school year calendar, but one or two days may be required at the end of quadrimesters one, two and three for school reorganization purposes. All teachers and students should be guaranteed at least one full month of vacation at the end of the summer plus recognized holidays or recess breaks during the year. An early August opening will facilitate the administration of Regents Examinations in June.

"E" Terms

The "E" term is used in the quadrimester much the same as it is in the trimester, however, this design provides one less "E" term.

FIGURE 10

Student Flow Pattern in a Five Year Quadrimester Plan



The three year design has no "E" terms
The four year design has 1 "E" term
The five year design has 2 "E" terms

"E" Periods

The number of "E" periods is related to the number of "E" terms and not the length of the school day. Thus, a student working in the five year quadrimester has 2 "E" terms or 14 "E" periods with a seven period day.

Time Equalization

With three quadrimesters to complete a course of study, a much shorter time equalization factor is required than is needed for a trimester. For example, a 40 minute period may be increased by six minutes for a quadrimester whereas a trimester would require a period adjustment of 8 to 12 minutes. Recommended class periods may range from 49 to 53 minutes.

Changing Enrollment Flow Patterns

Enrollment flow patterns fluctuate in the first two adjustment years, but stabilize in the third year due to the introduction of the "E" term factor. Enrollments are permanently reduced at the end of the ninth quadrimester, thus a release of classroom space and teachers is possible.

Figure 10 shows enrollment changes which can occur during the adjustment years in quadrimesters 4, 7, and 8. Here a potential enrollment of 1800 students reduces to 1500 with the start of quadrimester 10.

If space and economy are motivating factors, a school board may find the Multiple Trails Plan or Trimester Designs more attractive due to the shorter adjustment period.

Adjustment Year Costs

An increase in the current expense budget can be expected for the first adjustment year equal to approximately 2.0 percent for the three year quadrimester and 3 percent for the five year quadrimester.

If teaching staff size is adjusted at the end of quadrimester 6, the four year quadrimester budget can approach the break even point and a small savings can accrue to the school district with the three year quadrimester. The five year quadrimester costs will be somewhat higher than regular school year costs in the second adjustment year due to the involvement of more teachers.

Savings in Current Expense After the Adjustment Period

The true picture of savings does not appear until the fourth extended school year since the high enrollment in quadrimester 9 requires extra teacher compensation for this one term of the third year. With some pre-planning and acceleration of students scheduled to graduate at this point the enrollment reduction can be moved back to quadrimester 6, thus reducing adjustment year two salary costs and increasing the savings in current and operating expenses for both the second and third Extended School Years.

An Elementary School Quadrimester Design

Elementary schools can operate effectively without semesters, trimesters, or quadrimesters. However, teachers and school administrators find the quadrimester design provides them with guideposts and possible transfer points.

Time equalization in a secondary school is achieved through an adjustment in the length of class periods. Generally, this can be done without

lengthening the school day. Since the elementary school is not rigidly segmented, time adjustments are not easily made without increasing the length of the day. When this is done steps should be taken to insure that the additional time is not dissipated or lost through faulty planning of teacher and student time. The "E" terms with adoption of a continuous progress philosophy will minimize the need to introduce a longer school day.

The inclusion of extra "E" terms in the schedules of the initial 4th, 5th and 6th grade classes is recommended in lieu of a major adjustment in the length of the school day. However, this could defer the permanent stabilization of flow patterns until the 11th or 12th quadrimesters.

DESIGN IV

A COMPOSITE--THE EXTENDED K TO 12 PLAN

The initial mandate to the State Education Department called for a study demonstrating the feasibility of saving one to two years of a 13 year cycle. The Extended K to 12 Plan calls for a partial modification of this objective by specifically limiting the savings to a maximum one year reduction of the child's school life line. With this plan the 13 year cycle is reduced to a 12 year cycle. (See Figure 11.)

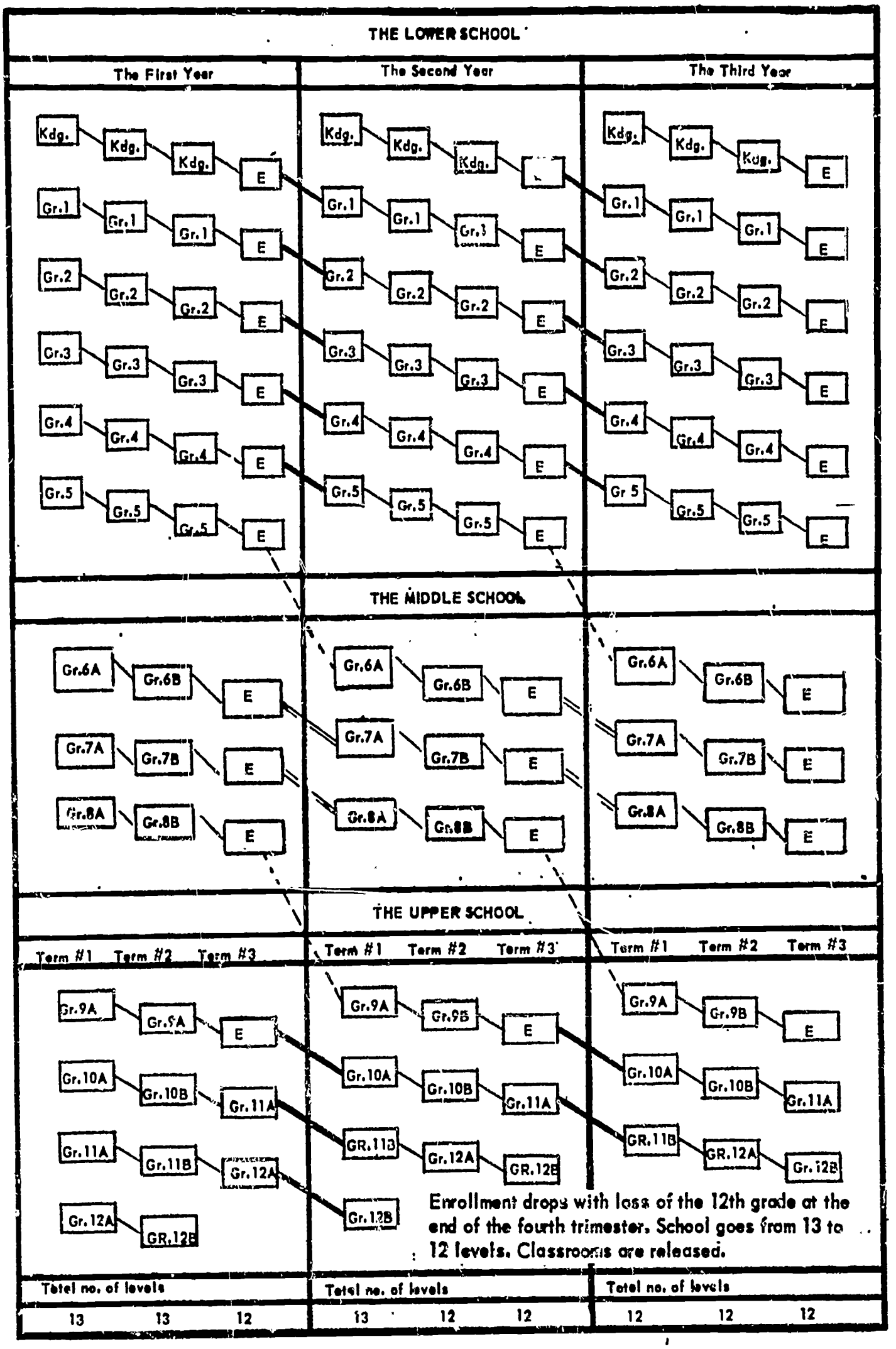
> Recommendation: An entire school system may be placed on an extended school year calendar with the understanding that extra time will be used in the elementary school to broaden and enrich the curriculum with chronological age acceleration being limited to the upper secondary school levels, beginning at grade 6 or 7 or 8 or 9.

The Nature of the Extended K to 12 Plan

Assumption. The Extended K to 12 Plan is based on the premise that all children can benefit from an organizational pattern which guarantees them more educational opportunities with little, if any, extra cost to the

FIGURE 11

STUDENT FLOW PATTERN IN AN EXTENDED K to 12 PROGRAM SAVING ONE YEAR OUT OF THIRTEEN
Variation #5. The Use of A Middle School Organizational Plan



community. All the pupils in a given school system engage in activities which are continuous in nature for eleven months of the year.

The Extended K to 12 Plan may begin with the adoption of any one of several secondary school extended school year plans such as the trimester, quadrimester, or modified summer segment. Once these programs have become self-sustaining, additional classes or grades may be included in the lengthened school year program until all elementary and secondary school classes have adopted an extended school year program. Since elementary school children do not need to work in a segmented school year, the pattern of organization at lower grade levels will not be the same as that introduced at upper grade levels.

Originally, the K to 12 Plan was based upon the reduction of a 13 year cycle to a 12 year cycle through providing children with 12 extended years of schooling. With the introduction of the Multiple Trails concept the Extended K to 12 Plan can still release classroom space and teachers, but it need not depend upon student acceleration to achieve desired goals.

The Extended K to 12 Plan Can Lead to a New Program Based Upon Continuous Progress

The Extended K to 12 Plan introduces children to a new educational time line, the 210 day school year. While lower grade acceleration will no longer be a prime objective, a measure of acceleration will still be possible for a large segment of the elementary school population. The entire elementary school curriculum can be broadened and enriched to minimize a rapid vertical growth in achievement, but the end result will be a forward movement up the educational ladder. To be effective, elementary teachers should think in terms of true continuous progress.

This concept could be extended to the secondary school with or without the adoption of any other extended school year plan such as those described earlier. With true continuous programs based upon an extended school year, the acceleration could start gradually with the kindergarten and first grade. It would continue through the primary, intermediate and upper grades until it culminates with the absorption of one chronological year of schooling.

Advantages of the Extended K to 12 Plan

The Extended K to 12 Plan requires all pupils to attend school for 12 to 13 lengthened school years. If acceleration is included in the design adopted; 3, 4, or 5 years of the child's educational life line would be used to achieve a reduction in student enrollments and subsequent economies in space, teachers, or dollars. This will enable students to engage in a broader program of studies for 7, 8, or 9 years.

If a non-accelerating plan is adopted, the "E" time will be extended through all grade levels. In this case school boards will realize economies through the early release of space and teachers in each grade level where a multi-modular scheduling pattern is used.

All pupils can derive educational benefits from the extra year or more of education attainable, but the advantage to a potential dropout is especially noteworthy. He can be at least one step or grade higher when he reaches a legal leaving age. Young men and women ordinarily classified as dropouts can graduate under the new program. For instance, a boy who starts kindergarten at age 5 can obtain 275 to 330 extra days of schooling by the time he is 16 years old. Should he elect to leave school early, he could be one to one and one-half years further advanced academically.

CHAPTER IV

OBSERVATIONS REGARDING THE EXTENSION OF THE SCHOOL YEAR

Many changes in recent years facilitate the rescheduling of the school year. Advances in computer technology permit the reorganization of secondary schools through the development of flexible schedules which make possible variable length periods and instructional units. Growing recognition that positive steps must be taken to improve the educational backgrounds of disadvantaged children through a form of extended school year programming is evident in the millions of dollars in Federal spending to provide summer instruction.

It was not the intent of the 1963 Diefendorf Committee to promote innovation as such; however, changes are inevitable if a school district adopts an eleven month school year. The 180 day school year is a guideline for teacher, parents, children, and school administrators. By eliminating the traditional 180 day school calendar, educators can repackage the old curriculum in terms of a 210 day school year or use their ingenuity to build innovative patterns of education.

This chapter presents elements for consideration in reorganizing schools on the basis of an extended school year.

Introducing the Concept of An Extended School Year

Interest in an extended school year plan may be generated by a principal, a superintendent or a school board member. Before an extended school year plan can be instituted the following sequential developments typically occur:

1. The school administrator obtains information about an extended school year through personal research or a call to the State Education Department for assistance.

2. A series of meetings is held with principals, supervisors and other top echelon staff members to study the proposed extended year designs.

3. The extended school year concept is introduced to the board of education in a memorandum or oral presentation. This leads to the presentation of plans to the board of education in a long, informative closed session.

4. Because of the design complexity, additional meetings are held before the school board decides to table the idea or have it studied further.

5. Others become involved:

   a. Local newspaper reporters are kept informed. They may be asked to avoid headlining a decision to study an extended year plan. If a story is to be given, it is essential that someone who thoroughly understands the extended school year concept translate the information to the reporter. This can result in a good news story which will generally avoid reference to the staggered four quarter plan or some other designs which arouse emotional resistance.

   b. Teachers are informed about the intent and staff meetings explore the implications of recommended extended school year designs.

6. A research or planning committee examines the feasibility of adopting and extended school year in one or more local schools.

7. Local teacher organization or teachers' union representatives meet with school administrators to explore the salary issue.

8. Informative or exploratory meetings are held with parent groups. (Some local PTA groups have introduced the concept of the Extended School Year to the parents as a whole before school officials were ready to explore the idea as individuals or with the board of education.)

9. A cost study is made to determine the impact of an extended school year plan upon the local school budget.

10. The school board, based upon what it hears from school administrators, teachers, and parents, votes to table the idea of extending the school year or gives approval to reorganize the schools in terms of a specific extended school year plan.

11. With the school board's support, school officials are free to enter the planning stage.

Several months will elapse between the introduction of the concept and the decision to adopt or reject an extended school year plan.

The Selection of a Suitable Design

The decision to adopt a lengthened school year calendar sounds simple, but much more is involved than adding days to the calendar. The selection of a suitable design or pattern of school organization is a critical one. Educational leaders continually must keep in mind the need to combine educational features with economy objectives if they want public support.

> Any extended school year design based entirely on economy objectives will be hard to sell and if adopted will have a short life.

This is one reason for the inclusion of "E" terms, "E" periods, or "E" time in recommended extended school year designs. The "E" may be defined as "extra learning time" or "educational time." Work with educators in New York City and in many school systems where there is a desperate need for additional educational opportunity has encountered three types of reactions to the "E" factor.

1. A group of teachers and principals basically are afraid of innovation or change.

    a. Some individuals resist modular scheduling because passing patterns change during the day, i.e., pupils may move individually or collectively at other than the end of a standard 40 or 45 minute period.

    b. Some individuals resist school organizational plans based upon the use of multi-mesters because they cannot cope with rescheduling problems.

c. Some individuals resist programs which do not rigidly structure the pupil's day. Freedom of movement or a nonstructured period of time becomes a threat to administrators who cannot cope with discipline problems.

2. Some teachers and principals are excited by the prospect of changes which can be made with the adoption of certain programs. This group is interested in innovative approaches to the teaching and learning process.

3. A third group of teachers and principals are cautious but open-minded. This group, with in-service training, can accept innovative schedules or new teaching techniques. They ask for help so they can understand.

In selecting an extended school year design it is imperative that consideration be given to the staff objectives as well as those of the school board. If the staff is interested in innovation, a continuous progress or nongraded pattern of extended school year organization may be more appealing than a modified summer school. The trimester or quadrimester will appeal to cautious groups because grade or subject lines are preserved. Here the objection, if any, may consist of an administrative concern about scheduling. A shortage of classroom space and a lack of money may be primary reasons for adopting a lengthened school year plan.

Potential Dollar Savings Will Depend Upon the Nature of the Extended School Year Design That Is Adopted

Exploratory cost studies for large cities, small cities and suburban or rural communities have shown when and how classroom space, teachers, or dollars can be released through adoption of a specific extended school year plan. If release of classroom space is the motivating force, special attention should be given to the following factors:

a. The length of the transition period between the start of the program and the onset of new enrollment flow patterns.

b. The number of classes or grades involved in the new program.

c. The size of the class in the highest grade level.

d. The normal rate of student progress through a regular school year program.

e. The number of classrooms available.

f. The educational philosophy of the school.

g. Teacher-pupil ratios and teaching loads.

h. The length of the school day and the length of class periods.

Each plan has basic ground rules which must be followed if desired goals are to be realized. The school which wants extra space immediately should adopt Stage I of the Multiple Trails Plan. If, however, it elects the modified summer school plan because it does not deviate markedly from the regular school organization pattern; the school system may have to wait three, four, or five years before any appreciable number of classrooms can be assigned to the Educational Reserve Bank.

Again, if financial economy is imperative, a gradual approach may be taken. A limited number of grades or classes may be introduced to the new program in the first adjustment year. Additional classes or grades are added when the new program begins to be self-supporting. For example:

> A large school district may need to use extra instructional time in the primary and intermediate grades to strengthen oral and written language needs of disadvantaged children. Here, the Extended K-12 plan may be just what is needed to help the children overcome the handicap of a poor environment. If the school board is to support such a program, it should start with a secondary school extended school year plan which will release space and teachers in the shortest possible period of time: Multiple Trails Plan, Stage I or the trimester or quadrimester plans. When this occurs, the elementary school children can be brought into the lengthened school year pattern.

Figure 12 shows the length of the adjustment period associated with different extended school year organizational plans.

FIGURE 12

LENGTH OF THE ADJUSTMENT PERIOD LEADING TO A RELEASE OF TEACHERS AND CLASSROOMS

Nature of the Design	Variation	Length of Adjustment or Transition Period
The Elementary Continuous Progress Plan	Gr. K-6	Six years for average children, less for bright children
	Gr. 1-6	Five years
The Modified Summer School Plan	Gr. 7-12	Five years
	Gr. 8-12	Four years
	Gr. 9-12	Three years
The Trimester Plan	All	One and one-third years
The Quadrimester Plan	All	Two and one-quarter years
The Multiple Trails Plan	Stage I	Immediately or none
	Stage II	
	Gr. 6-12	Six years
	Gr. 7-12	Five years
	Gr. 8-12	Four years
	Gr. 9-12	Three years
	Stage III	Depends upon nature of student and his needs
	Stage IV	Five to six years Four to five years Three to four years

Educators will find Stage I of the Multiple Trails Plan has an appeal because a lengthy transition period is not necessary before the resources: teacher time, pupil time, and learning space can be deposited in the Educational Reserve Bank. If one or more assets are not necessary at the outset, educators may elect to build their hopes or aspirations upon adoption of a different variation of the extended school year design, i.e., innovative districts may want to use savings to pay the costs of in-service

training, travel, and curriculum revision necessary to institute a nongraded extended school year program at the secondary school level.

Mandatory vs. Voluntary Programs

School boards want to know at the outset how much they can save after a transition period. The answer to the question often depends upon whether the design under consideration is mandatory or voluntary.

1. Mandatory programs will give a predictable base upon which to start; however, there will still be a number of intangible obstacles to overcome. For example:

   a. A suburban community with a low dropout rate may release space commensurate with the number of students in one graduating grade or class with the trimester or quadrimester plans. With the Multiple Trails it may release 25 to 37½ percent of its classroom space with Stage I. Less space is released if Stage III is essential to provide more education to slow progressing students.

   b. An urban or a rural area with a very high dropout or a mobile population may divert savings to provide children with extra education.

2. Voluntary programs should release space commensurate with the number of students electing to take part in the new program over a number of years. Thus, repeated attendance of half of the students in a moderately sized school could release half of the space expected.

Sometimes a partial voluntary program will increase the number of students taking part in the new program. The introduction of a new and exciting course of study in the summer segment may induce pupils to attend who would otherwise elect to remain at home.

In a large school district a single school can be operated entirely on a voluntary basis. If the school offers a well-balanced program of activities and has good teachers, space and staff may be released in the same proportion as that of a mandatory program in any comparable sized school. Here the partial voluntary aspect of the program will provide a fairly reliable predictive base upon which to calculate costs or savings.

Economy vs. Quality Education

"Economy is Not a Bad Word." The fact that legislators asked the New York State Education Department to discover ways in which classroom teachers and school plants can be used more effectively does not mean that they want an inferior brand of education. What they are asking for is a way to release resources or their equivalent in dollars in order to:

a. meet the rising cost of education
b. provide a higher quality of education
c. help support the demand for post high school education
d. help support the demand for pre-school education.

Economy and Quality Can Be Partners. A suburb faced with a rapid population increase will need many new school buildings. A large city school system may have to relocate schools or replace obsolete and unsafe buildings. Adoption of an extended school year plan could provide the equivalent of a 25 percent increase in school plant facilities without any new buildings. If more space is needed, the public can be asked to provide funds for smaller school construction projects under the extended school year concept achieving considered economy without the adoption of an inferior brand of education.

Each year thousands of teachers search diligently for summer jobs, expecially young men who are buying their first house. They cannot afford the luxury of a ten to fourteen week vacation so they become waiters in summer resorts, counselors in camps, drive trucks; sell encyclopedias, automobiles, seeds, or groceries; a few individuals may work in the local factory. These are individuals who waste their professional talents doing something far removed from what they are trained to do. Meanwhile, millions of boys and girls walk the streets aimlessly in the summer months because the school doors are closed. Without teachers to guide and help them over

academic and non-academic hurdles, proficiency in basic skills decline, knowledge is lost and new work study patterns established which are in conflict with those introduced between September and June at a cost of $800 to $1000 per annum per pupil.

After a short vacation many boys and girls are ready to go back to school, but if the school is closed, the students drift aimlessly. Here one finds a loss of human talent because many of the individual pupils have something to offer each other. For primary grade children the early return to school could become the difference between success or failure during their most formative learning years. It is shortsighted economy to keep these children from their teachers during the summer.

Extending the School Year for All Children in a School District

If acceleration of the elementary school children is considered of paramount importance, the impact of a changing enrollment flow pattern must be considered.

1. The secondary school must be prepared to educate a potentially younger group of children.

2. The secondary school must be prepared to cope with a bulge or double enrollment at the 7th grade level. This can create housing problems for several years unless a parallel rescheduling of the school year takes place which frees secondary school classrooms.

3. Curriculum changes must be made.

4. Administrative procedures must be made flexible.

When economy or the need for space is given a priority, the rescheduling of the school year should begin in the secondary school. This program could be limited to grades 9 to 12. However, there are educational features in several recommended extended school year plans which warrant the inclusion

of 7th and 8th graders. If a middle school has been adopted, pupils in grade 6 and even grade 5 may be linked to the secondary school.

If economy is not a primary objective, the rescheduling of the school year concept should be considered at the primary and intermediate levels for its educational features. The extended school year plan can start with grades 9 to 12, be modified to take in the 7th and 8th grades and ultimately, pupils in grades K through 6.

When a school district has a large segment of the population operating at a low functional level, the extended school year should be considered as a must for all pupils between grades K to 12. Ideally a district-wide extended school year would provide richer and more effective learning for younger students and savings in student, staff and facilities for older students.

Number

CHAPTER V

CONCLUSIONS REGARDING THE RESCHEDULING OF THE SCHOOL YEAR

The following conclusions are based upon a four year study of the feasibility of rescheduling the school year in terms of a lengthened school calendar.

Understanding

The biggest obstacle to the adoption of recommended extended school year designs is that of understanding. All too often the public is asked to react to the concept of year round schooling without having had the opportunity to find out what is involved in the proposal.

> Parents, teachers, school officials and board members should be given a chance to react after they know what is involved and not before.

Recommended Extended School Year Plans

The Multiple Trails Plan. Numerous field studies show that the adoption of a multi-modular schedule based upon time equalization in terms of a lengthened school year can release classroom space and teachers immediately.

a. Some variations of this plan use the acceleration concept, but others do no rely upon student acceleration to achieve educational or economy goals.

b. The potential economic advantages inherent in this plan exceed those of any other known extended school year plan.[1]

The Trimester Plan. The trimester plan is recommended after the Multiple Trails Plan because it releases classroom space in one and one-third years and includes a number of "E" terms which can be used to further educational objectives.

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[1]But it has yet to be tested in actual practice.

The split trimester which can be instituted as an intermediate step can be more effective than the modified summer segment since it has a shorter transition period and incorporates a number of "E" or extra terms.

The Secondary Quadrimester Plan. This plan which releases space in 2 1/4 years has been received favorably in several other states because it requires fewer adjustments than the trimester and quadrimester.

> The modified summer segment has set the stage for adoption of a quadrimester or at least a split quadrimester.

The Elementary Quadrimester Program. A school year of 210 to 212 days is essential to really test the effectiveness of this design. The attempt made to create a weighted school year through combining a lengthened school day with a slightly longer school year did not lead to realization of desired goals since the extra time was not structured in terms of the total pupil day. With nongradedness or continuous progress, the quadrimesters become transfer points which involve the reassignment of few pupils or teachers.

The Elementary Continuous Progress Plan. The ability to provide continuity of learning in terms of new educational time lines supports the thesis that the elementary curriculum can be repackaged and taught in less than a 7-year cycle. Primary children apparently make greater academic gains than intermediate grade students. The continuous progress plan lends itself to a voluntary involvement of students.

The Modified Summer Segment. School administrators generally favor this approach because they believe it is less disruptive of ongoing regular school year programs. Up to a point this is true, but a well-structured summer segment program or one which encourages students to take half year courses will immediately bring about changes in the regular school year program.

The modified summer segment has clearly demonstrated that boys and girls can learn as well in a compacted six or seven week period as they do when courses are spread over ten months.

a. The modified summer segment programs will release little space unless steps are taken to eliminate the completely voluntary aspects of the program.

b. Teaching procedures used in summer segment classes are as effective as those used in the regular school year, however, inservice training programs are essential if all teachers are to restructure teaching plans in terms of 2, 3, or 4 hour blocks of time with a single class.

The modified summer segment can set the stage for more refined extended school year plans such as the trimester and quadrimester.

Educational Implications for Children

Children in an extended school year can obtain more education within an extended school year than they can in a regular school year.

> Studies have shown that boys and girls taking part in extended school year programs make greater academic gains than comparable peermates who remain at home, travel, go to camp, or spend their time at the lake or seashore.

The research clearly demonstrates that learning does not cease with the onset of the summer season.

> Comparative studies of student achievement have repeatedly shown that the work done in the summer extensions of the school year is as good, if not better than that which is done in the regular schoolyear.

Extended school year programs have had a positive effect upon the social needs of boys and girls. Many students have maintained friendships or made new social contacts in the summer months. For many students the school is a socializing institution.

Emotionally disturbed children have found the continuity of educational experiences through a lengthened school year leads to fewer frustrations. They have to make fewer adjustments in terms of peermates, teachers, and curriculum.

Boys and girls can readily adjust to new learning time blocks and teaching techniques, but orientation or preplanning activities should precede the introduction of significant changes.

Research clearly demonstrates that childrens' health is not impaired by involvement in extended school year programs. The recent studies support similar findings in the earlier studies in Newark and Nashville.

a. Physically handicapped children in one new program are reportedly in better health after taking part in a lengthened school year program than comparable peermates who did not have this advantage.

b. Normal children had better attendance records in summer periods than they did in the regular school year.

Disadvantaged Children

Educationally disadvantaged children are found in rural communities, small towns and cities and on Indian reservations. The introduction of an elementary extended school year program in any such areas will show educational advantages outweigh immediate economy advantages.

a. The extension of the school year can help stem summer regression.

b. The students can receive more education in their more formative years.

The extension of some secondary school courses over three terms seems to benefit many slow learning students. When offered in an extended school year program they helped reduce the number of failures.

The Potential Dropout

Elementary and secondary school extended school year programs can help potential dropouts reach higher rungs on the educational ladder. This will be reflected in an increase in high school graduates and a reduction in the number of dropouts.

Teacher Implications

Teaching efficiency is not impaired by an extension of the school year. This is supported by the achievement of students taught by teachers who had worked through the equivalent of an eleven month school year.

Inservice Training. All teachers should be oriented to the goals of the extended school year plan and the steps taken to implement it. Some teachers need to be involved in an intensive inservice training program before they can (1) adapt themselves to the new use of time involving: a lengthened school year, compacted class periods, mixed length time blocks, and (2) accept new teaching procedures or techniques based upon: team teaching, team learning, individualized teaching, cross grade or age grouping, nongradedness, continuous progress, programmed learning.

Employment Conditions. Teachers should be employed to work through a full lengthened school year to provide maximum continuity of learning experiences. Some modifications in employment practices may be made to negate any loss where teachers cannot or will not work through a full 11 month school year. Some teachers may be employed for 5, 6, 7, or more months in order to obtain competent teachers who are not in a position to work a full year. Multiple teachers may be employed to fill a single position. Salary schedules should be based upon an eleven month school year; however, some additional compensation adjustment may be made where all teachers in a school district are not involved in the extended school year.

Teacher Acceptance

Women teachers tend to resist adoption of extended school year plans more than men teachers. It is easier to obtain support for a secondary school extended school year plan than for the extended elementary school plan due to the large number of men teachers at the junior and senior high school level.

Lengthened Elementary School Day

The research does not support an extension of the elementary school day. There is no evidence that a lengthened school day will perceptibly increase the rate or amount of academic learning if it is not used for a specific purpose. In a non-structured lengthened school day the extra time is easily lost or dissipated. Any lengthened school day would be based upon an analysis of the actual pupil day and not merely the teachers day.

Integration

Integration problems problems could be reduced to a large extent through adoption of recommended extended school year plans, especially where facilities are in short supply.

Vacations

Flexible scheduling and continuous progress facilitate the release of students from school if and when parent vacations do not coincide with school vacations. With the development of a non-agrarian society, with the advent of air conditioning plus faster methods of transportation and communications, there is no need to close schools for two or more months.

Weather

Students may complain about heat and humidity, but their ability to learn is not diminished by the fact that they may be uncomfortable in July or August. Due to the ranges in temperature, humidity and rainfall in various parts of the State at different periods in the year, it is no longer possible to justify a single and uniform summer vacation for all schools.

Evaluation

Some intangible goals do not lend themselves readily to evaluation. More refined evaluative instruments are necessary if one wants to measure such areas as leadership, critical thinking, and attitudinal changes. Testing instruments are not sufficiently refined to evaluate some features of regular and extended school year programs. Further study is needed to measure (1) the impact of a rescheduled school year upon children with different levels of ability; (2) the value of enrichment activities; and (3) the impact of continuous progress programs (since graded standardized achievement tests become ineffective measuring instruments as schools move towards nongradedness.)

Acceleration

The Rescheduling of the School Year plans envisioned for New York State were originally conceived of as programs leading to chronological acceleration due to an extension of the school year. Due to the emotionalism attached to the acceleration concept, future extended school year plans should de-emphasize this feature. This can be done through stressing a maximum acceleration of one year in a 13 year cycle or approving legislation calling for an extension of the school year which will enable school districts

to reschedule their secondary schools in terms of the multi-modular approach used in one or more versions of the Multiple Trails Plan. Several versions of this plan can release space immediately without accelerating students chronologically.

General Observations

There is a reluctance in many school districts to do anything which will, in effect, "rock the boat." It is easier in some school districts to sell a school expansion program on the thesis that most of the cost will be borne by the State than it is to institute an extended school year program which could ultimately involve a reorganization of the school and its curriculum.

Teacher bias and a lack of awareness of the educational implications of Extended School Year Designs have been barriers to the adoption of lengthened school year programs.

Occupation training programs can be improved and expanded if either the sending or receiving schools (Boards of Cooperative Services) adopt lengthened school year plans.

Educational Implications--Learning on the Basis of Ability

Fast learning students continue to grow academically but their gains in comparison to their controls is relatively less than gains made by slow learning students working through an extended school year program. Slow learning pupils with the advantage of the extra time provided in extended school year programs made greater gains over their controls than fast and average learning students. Average learning students show educational gains over comparable peermates not in a lengthened school year program, but their total growth is less than that made over slow learning and fast learning students.

Educational Costs

Extended school year plans based upon the acceleration of students will not release space or teachers immediately. This results in a temporary increase in school costs since salaries must be paid for an extra month's service on the part of the teachers, administrators, and other employees.

> Enrollment changes at the end of the adjustment period will reduce school operation costs if teacher-pupil and class-pupil ratios are stabilized.

Extended School Year plans based upon a non-acceleration of students can release space without the transition period, therefore savings can accrue to the school district in the first year, however, some pre-planning money may be necessary before such innovative rescheduling plans can become operative.

The studies have shown that the cost of educating children in the summer segment programs has been lower than the cost of providing similar education in the regular school year.

Maintenance costs have not been materially increased in schools operating through July or August.

Savings in debt service and operational costs should be considered when extended school year costs or savings are calculated.

Educational costs are reduced because fewer classroom teachers are required in most recommended lengthened school year programs. This staff reduction will ultimately produce additional savings since it partially eliminates the need for the employment of many substandard or poorly qualified teachers.

CHAPTER VI

RECOMMENDATIONS FOR A RESCHEDULING OF THE SCHOOL YEAR

Rescheduling a school year to realize economy and educational goals involves consideration of many elements beyond a mere calendar revision. This chapter outlines a number of major problems and presents recommendations to help resolve them. The recommendations are classified according to the agency which has major responsibility for action.

A. Legislation

Four recommendations for legislative action set the stage for extending the school year.

The Adoption of an Extended School Year

From time to time school board members have expressed a desire to institute a permanent extended school year program to attain local economy or educational objectives. In some instances the contemplated changes would be too drastic to undertake without a guarantee that the new program would be more than a three or four year experimental program. Before using the Extended School Year concept to obtain desired classroom space, a school board needs assurance that it is within its authority to mandate a 210 day school year.

Several states have recently changed state regulations or educational laws authorizing school boards to operate public schools in terms of an eleven or twelve month basis. Illinois is a case in point.

> Recommendation #1--Permissive Legislation
> Enabling legislation should be passed authorizing local school boards to adopt a lengthened school year program which is more than experimental. The educational law

would enable school boards to mandate attendance beyond ten months. It should be understood that all rules and regulations regarding school requirements, contracts and employment practices followed in the present ten month school year would be extended through the new school year.

The Maturity Issue

One objection to the adoption of extended school year designs centers around the maturity issue. Many parents and teachers are afraid that boys and girls will be pushed through school so fast that they will be unable to cope with college life or the world of work.

Studies show that the average kindergarten child will be 5 years and 3 months old when he starts school. Normally, he would take 13 years to complete his schooling, therefore, he would be 18 years and 3 months when he is ready for college or the world of work, saving one year would make high school graduates 17 years and 3 months on the average.

In 1964 a special study was made for the State Education Department by Nelson Associates to ascertain:

Q. What would happen if applicants for college admission from extended school year programs were 17-3 chronologically instead of 18-3?

A. 1. The survey indicated that chronological age is not an obstacle to college admission if applicants meet normal college entrance standards.

2. 99.1 percent of the responses indicated that 17 year old boys will have equal or better chances of being accepted.

3. 97.8 percent of the responses indicated that 17 year old girls will have equal or better chances of being accepted.

Since 1964 the college picture has been changed by the increasing number of community colleges and special post-high school vocational programs. An individual may attend a nearby college thus allowing the home to maintain a measure of supervision over the younger high school graduate.

Research studies show today's youth are more mature in many ways than comparable age peermates of 30 to 40 years ago.

Physical Maturity

Today's 16, 17 and 18 year old youths are often more mature physically than their counterparts of a generation ago. (American men today are 4 to 14 pounds heavier and 2 inches taller than their fathers.) It is repeatedly illustrated in new records established each year by athletes who exhibit new levels of strength, speed, and endurance. Physical maturity, as such, will not be perceptibly changed by deferring completion of secondary school until the individual is chronologically one year older.

Academic Maturity

Modern high school students are successfully working with materials and concepts formerly introduced and taught at college levels. Elementary school children have demonstrated their ability to understand materials and principles formerly reserved for junior and senior high school pupils.

Studies have shown that high school graduates with a good academic background have no difficulty with college level course work taken at 17 instead of 18.

Sexual Maturity

Studies show that the average girl or boy reaches puberty one year earlier today than his counterpart of 30 to 40 years ago. This raises questions about the desirability of continually increasing the number of years of schooling and delaying post-high school occupational training for a large segment of our population.

Maturity and Years of Schooling

If time spent in school is a maturation factor, extended school year graduates should be more mature because they will obtain 2,520 non-weighted extra days of instruction in 12 lengthened school years, compared to 2,340 in 13 regular school years. Time in school, not number of years in school, may be considered a part of the maturation process, but time in itself may be less important than the nature and quality of the individual's school experiences. Many high school students reach a maturity plateau which they cannot leave until they can acquire new educational experiences. Remaining another year in high school may be far less stimulating than going on to a technical school, a community college, or other institution of higher learning.

Recommendation #2--Reducing the Years of Schooling to 11 is Not Recommended

Legislation calling for a rescheduling of the school year in terms of acceleration should limit the potential reduction of years of schooling to one year.[1]

Financial Support for the Extension of the School Year Through a Modification of State Aid Formula

School boards would be more favorably inclined to the rescheduling of the school year concept if permissive legislation were coupled with some guarantee that they would not lose money by the potential reduction in school enrollments as a feature of an extended school year program.

One approach to this problem lies in the direction of modifying State Aid formulas on the basis of a lengthened school year. For example, Extended School Year programs can be funded by increasing WADA by .0055 for each day in excess of 180 providing that the new school year exceeds 204 days and

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[1] Education Law, Sec. 3602-a, par. 16.

and not more than 212 actual days of schooling. During the installation and transitional years a modification of the long range funding plan would enable a school district to meet special reorganization and planning costs through an extra compensatory grant. Furthermore, the sharing formula now does not take care of extra days since its base is average daily attendance.

> Recommendation #3--An Adjusted State Aid Formula
> For a year in which a school district begins to operate an approved program the weighted average daily attendance (WADA) of the pupils involved in the program would be increased by 1.1 percent for each day in excess of 180 days the schools are in session providing the schools are in session in excess of 204 days. The weighted average daily attendance thus adjusted would be used in computing aid under Section 3602 except that the weighted average daily attendance before such adjustment would be used to determine resident weighted average as provided in Section 3602, subdivision 2, paragraphs E and F, and subdivision 3. For the fourth and subsequent years of operation of the program the WADA of the pupils involved would be increased by .55 percent instead of 1.1 percent.

Alternate Recommendation

An alternate approach calls for an increase in WADA per day above 180 days:

a. .01 (or 1 percent) for the first year of extended school year operation
b. .009 for the second year
c. .008 for the third year
d. .007 for the fourth year
e. .0055 for the fifth year

School districts would be eligible for special aid upon submission of evidence that the extension of the school year would be more than a mere addition of a summer school. Extended School Year Plans should guarantee a continuity of educational experiences for all children. The new programs could provide enrichment, but the activities must be completely integrated into an ongoing school year program and would not be considered as extra activities provided to a few students for a few weeks of the year.

Planning and Reorganization Activities

Preparing to enter an extended school year program requires a great deal of planning by school board, staff and community groups. Curricula are revised in agreement with new time schedules. In-service education of teachers and administrators ensures more efficient installation.

> **Recommendation #4--Reimbursement of Planning and Reorganization Costs**
> State and/or Federal funds should be made available to school districts instituting and approved extended school year program to help defray the extra costs of planning and reorganizing their schools. The guaranteed reimbursement would cover extra expenses, other than capital, incurred during the planning period.

B. State Leadership

The role of the State Education Department is to establish regulations and guidelines, to work closely with school districts and to ensure efficient communication among schools adopting an extended school year. Three recommendations, expressly related to the changed school calendar, supplement the normal responsibilities of the Department.

Regents Examinations

New school calendars can create problems when courses do not terminate close to the dates when Regents Examinations are scheduled to be administered. Therefore, any increase in the number of extended school year programs would lead to the need for an adjustment of Regents Examinations schedules. An extended school year which begins in August and ends in June reduces the problem.

> **Recommendation #5--Regents Examination Schedules**
> Careful consideration should be given to the problem of Regents Examinations. Any widespread adoption of secondary school Extended School Year Plans can necessitate changes such as the preparation of more Secure examinations. This will be especially true where course endings do not coincide with normal Regents Examination dates.

Articulation of High Schools and Colleges

The problem of high school and college articulation focuses upon the number of college inputs and the number of high school outputs. The Nelson Report showed a willingness of many colleges and universities to change admission dates or revise calendars.

1. 43 percent of New York State's public higher education institutions would change admission dates.

2. 50 percent indicated a readiness to revise calendars.

A survey of high school principals revealed an awareness of the need for increasing the output, but most of them were relatively inflexible about releasing students eligible for college admission at other than the fall term. When asked specifically what new approach should be made to facilitate the articulation of high school and college:-

1. 29 percent of the principals, public and private, favored summer school programs which would lead to acceleration, i.e., Syosset and Hornell plans.

2. 27 percent advocated a rescheduling of the school year, i.e., trimester or quadrimester.

3. 25 percent favored the development of individualized student programs, i.e., the continuous progress, nongraded approach.

Recommendation #6--Coordination with Higher Education
A task force representing colleges, universities, high schools, business and parent organizations, should be formed which will survey the availability of college openings at other than fall entry and ways of facilitating the movement of students from high school to college at new transfer points.

Recommendation #7--Student College Financial Assistance
Special grants may be awarded students electing to break with tradition by entering college at mid-year or other entry points than the traditional fall term.

C. Local Action

The greatest change occurs at the local level. Community and staff participation, in-service education, curriculum revision, facile and efficient scheduling and new kinds of counselling are needed.

Elements Considered With the Adoption of Some Lengthened School Year Plans

Some approaches to the lengthened school year require few internal administrative or teaching changes whereas others require numerous modifications, especially in curriculum and/or teaching methodology. At the outset, these changes may be minor, but if the programs are to be successful, steps must be taken to insure continuity of learning. For example, the adoption of a Continuous Progress Extended School Year Plan at the elementary school level may not disturb junior or senior high school teachers at the outset since they are not directly involved in a lengthened school year program. However, ultimately someone will have to answer questions like the following:

Q. Will children entering 7th grade with the advantage of 180 to 210 days of schooling be the same as students not exposed to the new educational time line?

Q. What curriculum adjustments will secondary school teachers make if chronological age acceleration leads to entrance of an entire class that is one year younger?

Q. What adjustment will secondary school teachers make if the elementary school keeps its children for a full seven years, but in doing so, has them complete the equivalent of the 7th grade curriculum before sending them to junior high school?

Q. Can a school system institute an extended school year program based upon acceptance of the true concept of continuous progress for slow, average, and fast learning students without have it accepted and practiced at all school levels,i.e., a primary, intermediate, middle school, junior high school or senior high school?

A mere extension of the educational year from 180 to 210 days will not do much to improve the student body image. What is critical is how teachers use time. Questions may be raised about teaching procedures, the suitability of teaching materials, methods of grouping children, working procedures and curriculum sequences.

The following list show areas studied in school districts which have been exploring the feasibility of extending the school year. It is a long list, but it does indicate that answers to some of the issues raised may not be found until long after the start of a program. In some instances, the local school officials will make mistakes. In such cases the staff must be prepared to make adjustments.

AREAS FOR CONSIDERATION DURING THE PLANNING STAGES

1. The nature of the extended school year plan under consideration

2. The nature of the calendar to be adopted
   a. Length of school year
   b. Vacation periods during the year
   c. July vs August vacations

3. Potential impact of the new design upon other school units
   a. Philosophy
   b. Curriculum
   c. Space needs

4. Approaches necessary to the development of a unified school system

5. Teaching techniques which may be more effective with the adoption of specific extended school year plans

6. Administrative adjustments necessary to implement an extended school year program

7. Teaching materials or equipment needed with the adoption of new educational time lines, i.e., lengthened class period, lengthened school year, shortened term

8. In-service training for the teacher

9. In-service or retraining activities for the students

10. Grouping techniques
    a. Homogeneous grouping
    b. Sub-grouping within a heterogeneous framework
    c. Large group instruction
    d. Interage grouping
    e. Nongraded classes
    f. Team learning
    g. Block scheduling

11. The meaning of continuous progress, if used

12. Length of learning period
    a. Length of the school day
    b. Length of the instructional year
       Subdivisions: term, semester, quadrimester, trimester, or summer segment
    c. Modular vs nonmodular periods

13. Reporting procedures

14. Evaluation techniques to be followed
    a. Tests to be used
    b. Reporting rpocedures

15. Vacation policies with the adoption of an extended school year calendar
    a. Pupil
    b. Teacher

16. The pupil failure problem
    a. Provisions for make-up work in the regular school year
    b. The need for summer make-up session

17. Phasing problems or individualizing student schedules
    a. During the year with mandatory attendance
    b. With the summer extension being left to the option of pupils and parents

18. Compensation to be given teachers for an extra month's service
    a. Adjustment in teacher load or assignments

19. Curriculum adjustments or changes which may be desired
    a. Grade requirements based upon stated objectives
    b. Diagnostic approaches to learning
    c. The use of resource units

20. Special staffing needs
    a. The need of a special coordinator
    b. The role of key staff members

21. Class size
    a. Before adoption of an extended school year plan
    b. The role of key staff members

22. Regents Examinations

23. The role of consultants
    a. State
    b. Outside specialists

24. Publicity

25. Community relationships

26. Impact upon different types of students especially slow progressing children

27. Project Costs
    a. Planning costs
    b. Operational costs

28. Scheduling problems
    a. Hand scheduling
    b. Computer scheduling

Recommendation #8--Local Planning Committee
A planning or steering committee should be formed that can establish guidelines basic to the adoption of an extended school year program in a given school or school district.

The Nature of the School Calendar

There is no logical reason for closing schools in July and August. An agrarian economy at the start of the 20th century had needs which no longer exist in today's industrial world. The days of the nostalgic bare-foot boy wending his way to the old swimming hole are gone for children destined to live out a major part of their lives in the 21st century. As megalopolis grows and grows, a modern generation of children have little to do in their free time in the summer. For many of them school is a second home. It is a social institution as well as a learning center. In fact, attendance in school during the summer is becoming the "in thing to do" for large segments of our school age population.

Lengthened school year calendars are recommended which provide extended vacations at periods most propitious to the residents of a community or geographic area. This is especially true on the national scene where local temperatures reach their high point in May, June, September or October.

> Recommendation #9--Local Variation of School Calendar
> School calendars should be based upon local needs and interests. Some lengthened school year calendars may provide July vacations, some August vacations, and in certain resort or agricultural areas, June or September vacations.

An extended school year calendar may not be feasible for an entire school district. If this is true, it is recommended that regular holidays along with winter and spring vacations be preserved intact for all students.

> Recommendation #10--Preservation of Local Winter and Spring Vacation
> The school calendar for the period between September and June should have certain common elements for all pupils in a school system. Recognition should be given to regular local, state or national holidays. In addition, all pupils should continue to enjoy the same length winter and spring vacations. They should not be broken to accommodate the desires of vested interests.

The Camping Issue

Some opponents of a longer school year contend that children will be deprived of desirable camping experiences. At present only 5 percent to 7 percent of all children go to camp during the summer. The number could be multiplied many times over if lengthened school year programs incorporated school camping experiences based upon spring and fall or even year round use of camps.

The Office of Economic Opportunity once expressed interest in sending disadvantaged children to summer camps. Since there is a limited number of available camps in July or August, this approach to the problem of the hot summer idleness had to be dropped. Public and private camping interests are

willing to help provide camp facilities at other than the summer season. Therefore, it is possible to extend the school year by opening schools in July and August with purposeful related camp experiences provided in the spring or fall. Such programs can provide continuity of learning with a motivating force that is badly needed by disadvantaged and advantaged children alike.

> Recommendation #11--Extended School Year Camping Experience
>
> Serious consideration should be given to the educational values of a combined lengthened school year program and a camp experience for intermediate, junior high and senior high school pupils. In such programs attention should be given to the expanded use of public and private camps in the spring, fall and winter seasons as well as the summer.

More Schooling for the Disadvantaged

Pilot extended school year programs have demonstrated that slow learners often show greater academic gains than average learners. Consideration should be given to making such programs available to disadvantaged children. It will give them more education and will speed their progress through school. Since they have a deficiency in learning experiences when they enter kindergarten, they have more to learn in school than average children. They also exhibit a slow rate of progress. Given the advantage of extra learning time annually and a well-structured program of education it is possible to save one or more years of their educational life line.

> Recommendation #12--Extended School Year Programs Are Advocated for Disadvantaged Children
>
> The concept of Rescheduling the School Year in terms of an Extended School Year should be given a priority as one approach to providing a better education for disadvantaged children.

CHAPTER VII

A SUMMARY OF THE RESCHEDULING OF THE SCHOOL YEAR PROJECT

In 1963 the New York State Education Department took steps to test the feasibility of rescheduling the school year in terms of lengthened school year. The study has excited the imagination of educators, school board members, legislators, and other groups in virtually every state in the country.[1] The Legislative Report describes, in brief, several Extended School Year Designs which have been created to help attain the goals of economy and increased educational opportunity. It supplements earlier publications and presents specific findings, conclusions, and recommendations which may become the basis for new Lengthened School Year Programs. Some of them are based upon a review of earlier research, field studies conducted in several large cities and numerous smaller school districts in the State, and experiments conducted in Commack, Syosset, Hornell, Cato-Meridian, Green Chimneys and the School of Human Resources.

Findings and Conclusions

1. Academic learning does not stop with the onset of the summer season.

2. Students can learn proportionately more in a lengthened school year than comparable students whose education is limited to the regular school year.

3. Involvement in an active summer program is not detrimental to children's health.

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[1]Approximately 60 school systems in other states are reportedly seriou ly contemplating the institution of an extended school year program. In recent months the project coordinator has worked closely with 22 New York State School Districts which have shown considerable interest in one or more lengthened school year plans.

4. Physically handicapped and emotionally disturbed children can benefit from recommended ESY programs.

5. Slow progressing students in experimental programs made greater educational gains over their controls than high ability and average learning students over their controls.

6. Research, current and past, show ESY programs as helping decrease the number of school dropouts.

7. All children, but especially disadvantaged children, can benefit from their involvement in recommended ESY programs.

8. Full year courses can be successfully mastered in compacted six or seven week periods.

9. The modified summer segment can set the stage for more refined ESY programs such as the trimester and quadrimester plans.

10. Some ESY programs can start on a voluntary basis, but at some sacrifice of the economy objective.

11. ESY research does not support the lengthening of an elementary school day to achieve desired economy or educational goals.

12. Computer scheduling can facilitate the administration of ESY programs calling for multiple time modules or multimester scheduling.

13. ESY designs have been developed which can reduce school costs, if and when educators accept economy as a goal. However, it is doubtful that much support for most lengthened school year programs will be found unless specific educational objectives are combined with objectives of fiscal economy.

14. Acceleration in terms of years of schooling is a possibility with ESY programs, but readiness to leave school early is no guarantee that students will take advantage of their higher academic standing to do so.

15. Extended school year plans must be taken out of the temporary or short range experimental category.

16. Parents and educators need to understand the nature of specific ESY plans before they can react intelligently to the lengthened school year concept.

17. Students, parents, and teachers involved in an ESY program have for the most part reacted affirmatively to the ESY experiment.

18. ESY programs can help stem summer regression in learning.

19. Teacher efficiency is not impaired by the involvement of teachers in ESY programs.

20. Teachers should be employed to work through a full lengthened school year to provide maximum continuity of learning. Employment practices should be modified to negate any loss when individual teachers cannot or will not work through a full eleven month school year.

21. In-service training programs are needed to help pupils and teachers work through new time blocks or under new teaching and learning conditions.

22. Field studies show that secondary school classroom space can become available immediately with the adoption of Stage I of the Multiple Trails Plan.

23. The trimester plan can become self-sustaining after a transition year. "E" terms can provide new educational advantages to all types of students.

24. Educators who consider adopting ESY programs must understand the objectives and then must be prepared to accept changes in regular school year operations.

25. ESY programs may have their greatest success where comparable programs are instituted in an area, region, or county to minimize the problem of creating islands or isolates.

26. Parochial and private schools can benefit from ESY programs releasing space or dollars. Therefore, public school officials should work to coordinate their plans with those responsible for operating the non-public schools.

Legislative Recommendations

Enabling legislation, permanent and non-experimental, should be passed authorizing school districts to institute and operate ESY programs.

Legislation calling for a rescheduling of the school year in terms of the acceleration concept should not stress any reduction in the years of schooling beyond one year.

School districts operating approved ESY programs should receive additional State aid for each day of WADA in excess of 180 days.

Funds should be made available to defray planning and organizational costs.

Monetary grants should be awarded students electing to enter college at other than the traditional fall term.

The concept of rescheduling the school year in terms of an eleven month school year should be given priority as one approach to providing a more effective program of education for all disadvantaged children.

Recommendations Calling for State Leadership

Additional secure regents examinations should be developed if ESY programs are expanded.

A task force should be instituted to facilitate the movement of students from high school to college at other than the traditional fall term.

Research on the ESY program should be continued, but on a prototye basis involving complete administrative units.

An effective ESY public information and relations program should be instituted.

School districts should be required to explore the possibility of increasing space utilization through ESY programs before new school construction projects are approved. (Consideration should be given to the impact of decreased birth rates in recent years.)

Further experimentation with computer scheduling based upon the "Freezing the Deck Concept" should be encouraged.

Help should be provided to local school districts in curriculum modification and the development of new and improved instructional methods, teaching aids, and new patterns of school organization.

Standardized evaluative techniques should be used to measure achievement of students in ESY programs and the realization of ESY objectives or goals.

Continued comparative studies should be made of regular and extended school year costs.

Recommendations Based Upon Local Action

Planning committees should help formulate guidelines basic to the adoption of approved ESY programs.

School districts should be free to adopt lengthened school year calendars which provide vacations based upon local needs and interests.

Schools adopting an ESY program at one school level should try to preserve uniform holiday and vacation patterns for both ESY and non-ESY students.

School camping experience should be combined with ESY programs based upon utilizing camp facilities in the fall and spring, as well as summer.

Large cities should adopt ESY programs as a whole or in sub-districts if the advantages of economy or increased educational opportunity are to be realized.

Computer technology should be used to facilitate the administration of ESY programs and the implementation of more effective instructional programs.

Innovative approaches to the education of all children, especially the disadvantaged, should be considered in addition to the increase in learning time.

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Additional copies of this report or further information may be obtained by writing to:

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