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REPORT ON THE SUMMER SESSION OF THE COLLEGE BOUND PROGRAM,  
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THE COLLEGE BOUND PROGRAM WAS DESIGNED TO DEVELOP THE COLLEGE POTENTIAL OF DISADVANTAGED NINTH- AND 10TH-GRADE HIGH SCHOOL STUDENTS. BEFORE ENTERING THE PROGRAM, 1800 "ACADEMIC RISK" STUDENTS PARTICIPATED IN A SUMMER SESSION TO EASE THEIR TRANSITION FROM JUNIOR TO SENIOR HIGH SCHOOL. MOST OF THEM WERE ENTERING HIGH SCHOOL WITH READING SCORES AS MUCH AS TWO AND A HALF YEARS BELOW GRADE LEVEL. DURING THE SUMMER THEY WERE GIVEN A 3-HOUR DAILY SESSION OF INTENSIVE INSTRUCTION IN ENGLISH AND MATHEMATICS IN SMALL CLASSES AND WITH INDIVIDUAL HELP FROM COLLEGE STUDENT AIDES. COUNSELING SERVICES FOR STUDENTS AND THE USE OF FAMILY ASSISTANTS WERE ALSO FEATURES OF THE PROGRAM. THE RESULTS OF TESTS ADMINISTERED BEFORE AND AFTER THE SUMMER SESSION SHOWED THAT THE STUDENTS MADE A MEDIAN READING GAIN OF FOUR MONTHS AND AN AVERAGE ARITHMETIC COMPUTATION GAIN OF ALMOST TWO YEARS. HOWEVER IT IS FELT THAT THE ACHIEVEMENTS OF THE PROGRAM SHOULD BE JUDGED ONLY AFTER THREE OR FOUR YEARS OF STUDENT EXPOSURE DURING THE REGULAR ACADEMIC YEAR. THE REPORT DISCUSSES THE ATTITUDES OF THE STUDENTS AND THE ROLES OF THE TEACHERS, AIDES, AND SUPERVISORS IN THE PROGRAM, AND PROVIDES DESCRIPTIONS OF THE MATHEMATICS AND ENGLISH SYLLABUSES, THE LIBRARY PROGRAM, THE GUIDANCE SERVICES, AND THE FUNCTIONS OF THE FAMILY ASSISTANTS. (NH)

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**BOARD OF EDUCATION OF THE CITY OF NEW YORK**  
**COLLEGE BOUND PROGRAM**

**141 Livingston Street**  
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**REPORT ON THE SUMMER SESSION**  
**OF THE COLLEGE BOUND PROGRAM**

**July - August, 1967**

**Submitted by:**

**Henry T. Hillson**  
**Director, College Bound Program**

## INTRODUCTION

The College Bound Program has been established by the Board of Education of New York City in the most intensive and far reaching attempt yet made to help disadvantaged boys and girls prepare for admission into college. 3000 pupils in twenty-four high schools are now receiving special assistance to help them succeed in academic work. Each year, it is planned to have an additional 3000 pupils enter the program.

The students are drawn from the poverty areas of the city; 75% or more are below grade level in reading and arithmetic, some as much as three years. In the normal course of events, up to half of these young people would drop out of school. Of those finishing high school, relatively few would graduate with an academic diploma and still fewer would go on to college.

The program is a community one with each high school choosing the group from among those who would normally attend it. Six of the high schools with the greatest need are beginning with 200 pupils, the other eighteen with 100 each. Two-thirds of the pupils are in the ninth grade and will have four full years in the College Bound Program; the others are tenth grade students and will have three years.

The pupils in the program receive special help to aid them in their academic work. Classes in mathematics and foreign language have registers as small as 12 to 15; the maximum in other classes runs from 18 to 20. All pupils are scheduled for a double period of English each day. Each student receives individual and group guidance from a full time counselor assigned to work with not more than 100 pupils. Family assistants, representative of the community from which the pupils come, have been assigned to each school. They visit parents in their homes to explain the program and to help resolve problems that may hinder the pupils in their school work.

A major program of cultural enrichment has been planned for the pupils. They will attend concerts, go to theater and the ballet, take out-of-town trips and learn much of what New York City and its surroundings have to offer. At the end of the four year period, the students will have had a great variety of thoroughly worthwhile experiences.

A most important feature of the program is its affiliation with the New York College Bound Corporation, a group of forty colleges and universities in the metropolitan area. These institutions have banded together with the basic purpose of admitting the successful graduates of the program and arranging for their necessary financial support. Rev. Timothy S. Healy, S.J. Executive Vice President, Fordham University, is chairman and Richard L. Plaut, President, National Scholarship Service and Fund for Negro Students, is Executive Vice Chairman.

The College Bound Program was initiated by Mr. Jacob Landers, Assistant Superintendent, State and Federally Aided Programs. Mr. Henry T. Hillson, former principal of James Madison High School, is director. The program which will cost \$3,250,000 in its first year of operation, is funded under Title 1 of the Elementary and Secondary Education Act.

The summer session, which is reported here, represents the first step in introducing the College Bound Program to the boys and girls who will be in it.

## THE STUDENT BODY

The first summer session of the College Bound Program has been completed with some 1800 pupils attending. Although the summer work was planned as only part of a four year program, an evaluation has been conducted by the Bureau of Educational Research. Major findings are reported here; the full study is expected to be available at a later date.

The Stanford Achievement Tests in reading and arithmetic were used at the beginning and end of the session for purposes of diagnosis and measurement. The initial scores make clear, as anticipated, that the great majority of the pupils can be considered academic "risks". It is our hope, however, that the College Bound Program will have a favorable effect on many of this group.

Although all pupils in the program were entering the ninth or tenth years of high school, their median reading score at the start of the session was 7.4, one and a half to two and a half years below grade level. 75% of the pupils were below ninth grade level; 25% were below sixth grade.

In the arithmetic test, results were similar. The median for skill in computation was 7.1; for ability in handling concepts, 7.3. Half of the pupils were two or three years behind grade level in basic mathematical requirements; again, 75% were below ninth grade level and 25% were below sixth grade.

The summer session was the first high school experience for almost all of the pupils who attended it. It was planned as a way of easing the often difficult transition from elementary and junior high school to the senior high with its higher academic standards and greater demands. The program placed special emphasis on the skills and habits needed for successful academic work.

## ORGANIZATION OF THE PROGRAM

Pupils attended school on a three hour daily schedule for a seven week period. Many remained for a fourth hour for personal assistance or to use the library. They had intensive instruction in classes of 16 to 20 in mathematics and English. They had work in library skills and met with counselors individually for counseling aid and in groups for guidance in study and work habits. They were given the opportunity, through trips, to learn something of the cultural resources of New York City. They heard speakers from the fields of higher education and business discuss the opportunities in these fields.

The teachers, counselors and family assistants in the summer session were chosen, with few exceptions, from among the personnel who would be working in the College Bound Program during the regular school year. Wherever possible, pupils were programmed to be with the same teachers and counselors they would meet in the fall.

This was planned to make sure that pupils would meet with someone they knew who could offer a helping hand from the moment of arrival in high school. The arrangement also led to an early knowledge of pupil strengths and weaknesses so that program changes could be made in the fall and special assistance provided in the light of what had been learned during the summer.

Every class was allocated one or more college students as educational assistants to help provide individual instruction for the pupils and share in the various tasks. Family assistants were assigned who visited the homes of the pupils especially where problems were indicated. They established a relationship with family and community which will continue in many cases in the school years ahead.

In order to provide for the best possible instruction, supervisors were engaged to develop the curriculum in mathematics and English and work closely with the teachers and educational assistants. Supervision was also provided for the guidance counselors and family assistants.

### PUPIL ATTITUDES

The plans for the summer session were presented in May when the high schools arranged meetings for parents and the pupils who had been selected for the College Bound Program. Principals reported to us that the meetings, held at night, were the best attended, the most exciting and enthusiastic that the schools had seen in many years. When parents were told of the program, some said they had much more hope now that their children might succeed in school work.

Attendance at the summer session was the best evidence of this family concern and interest. Despite the lateness of the announcement, with plans for jobs and vacations already made, some 2100 pupils, nevertheless, began the summer session; better than 80% attended throughout. We are happy to report these figures for a program in which attendance was voluntary, with no stipend given to any pupil. Some of the pupils who had given up their vacation told us at the end of the session that they were, nevertheless, pleased because of what they had accomplished.

Despite their obvious scholastic deficiencies, most of the pupils were thoroughly conscientious. They paid attention in class, were responsive and did homework carefully even though knowing no school credit would be given. Their behavior was excellent; only one pupil was dropped because of misconduct.

It was evident that the pupils felt they had been given status by being in the program. They wanted to be considered different from other summer school pupils. One group suggested that "College Bound Program" book covers be given them for everyone to see. Some said it was the best chance they had had to really learn. They were particularly grateful for the personal help they were given whenever it was needed. Whatever the motivation, most of the pupils displayed a high degree of responsibility and concern throughout the session.

Some teachers and educational assistants went well beyond the call of duty in their work - remaining at the close of school to run extra-curricular activities or accompany pupils on trips. The warm relationships that developed between many of the pupils and the assistants were very gratifying. This may well have been one of the big reasons for the fine spirit of the pupils. Many of the assistants had a "Peace Corps" attitude and the pupils responded to their devotion and concern with very real affection.

## THE STAFF

While the use of college students as educational assistants was one of the strengths of the program, it also presented problems. Much of the difficulty, corrected in part as time went on, stemmed from some of the teachers not knowing how to make effective use of the assistants. It was also evident that a more thorough screening of the tutors was needed.

Despite this, one of the supervisors thus summed up their contribution: "On the whole, the tutors were a very valuable part of the program in English. They made it possible to reach more pupils individually where they needed remediation ---. They also made it possible for teachers to assign more compositions and have these compositions evaluated and improved. In many instances, eventually tutors were playing a role in the guidance aspect of a teacher's work, talking with pupils who were falling behind and encouraging them."

The teachers and supervisors of mathematics were even stronger in their praise. They felt that the individual help given by the tutors had been invaluable in the progress made by the pupils.

The supervisors were unstinting in their efforts to make the program a success. They drew up voluminous materials of instruction, prepared bulletins, made up special tests and, not least, used their cars to haul books from school to school across the city. Some evidence of the direct aid given to teachers is found in the supervisors' logs; for one supervisor, 69 classroom visits, each followed by a personal conference; for another, over 100 visits and conferences. All held departmental meetings as well as conferences with teachers in charge of each school. Counselors and family assistants received the same kind of help and attention from their supervisor.

It is worth noting that the intensive and continuing help given teachers by supervisors and the administrative staff was welcomed by the great majority rather than resented. It was evident that a feeling of common purpose existed and that supervision had as its only concern the improvement of instruction.

Although practically all teachers were licensed in the areas in which they taught, many were young and relatively inexperienced. Half the staff had taught five years or less; some had taught only a year or two; almost one-third had substitute licenses. They, and others, needed help in breaking away from traditional practices. They had to learn how to use large blocks of teaching time, how to utilize the services of educational assistants and work with pupils on an individual basis.

Despite these factors, the teachers, with few exceptions, did a fine job. They were very much concerned with the accomplishments of their pupils and worked hard to help them progress. They were enthusiastic about the program and devoted themselves to making it succeed. Teacher attendance during the session was excellent.

The response of parents was one of the most pleasing aspects of the program. The schools took many steps to enlist the support of parents. They held "Parents' Day" and welcomed visits to classes. They invited parents to join their children in listening to invited speakers. They held "graduation" exercises with parents in attendance.

We heard many favorable comments from parents about the effect of the program on their children. One mother told us that her son willingly gave up his vacation in August in order to finish the program. Another mother was delighted with her daughter's enthusiasm for the literature offered in the course for she had always been reluctant to read up to that time. A number of parents said that their children now felt much more sure of themselves in school work.

### EVALUATION RESULTS

By the end of the session, teachers and supervisors believed they had seen definite accomplishment. They felt that if the pupils could continue the progress they had made during the summer, the majority could succeed in academic work. There was evidence that learning was taking place and that pupils were gaining needed habits and skills. Visitors to classes came away with this same impression.

The results of the Stanford tests given in alternate form six weeks after the first ones were administered, showed some interesting changes. In reading, although no attempt at a remedial program had been made, there was a median gain of four school months for the entire group. This was more than double the normal expectancy for the six week period; 400 pupils showed a gain of one year or more.

In arithmetic, where a concentrated effort had been made to improve the ability of pupils to deal with computations and concepts, the change in the six week period was marked. The median gain for the first of these areas was one full year, for the second, seven-tenths of a year. Even in arithmetic application which was not stressed, the average gain was close to a half year.

Results were even more marked on examinations given by the supervisory staff which were based on the New York City Arithmetic Computation Test. In these examinations, which directly tested the work taken during the session, the average gain for the group was almost two years.

An encouraging outcome of the summer session was the improvement in the work of pupils at the bottom level. This was observed in the classroom and noted in the results of the Stanford Achievement tests.

To ascertain changes for these pupils in the six week period, the scores of 340 pupils who did most poorly on the initial test were compared with their final scores. These 340 pupils represented the bottom 25% of those who took both tests.

In reading, the gain for these pupils was seven school months, going from a median of 5.5 to 6.2. This gain for the bottom level pupils was better than the gain for any other group. Thus, the pupils who were most deficient had shown the greatest improvement. The next higher 25% showed a gain of not quite five school months when their scores were compared. This, too, was a greater gain than for the groups above them.

At the very bottom of the 1360 pupils who took both tests were 85 whose median score on the initial test was 5.0. On the final test, the median score for the same pupils was 5.4, a gain of four school months for the six weeks. It is worth noting again that no attempt at a remedial reading program was made during the summer session. The kind and quantity of reading that was required is described at the end of this report.

When initial and final scores for the bottom 340 pupils in the test on arithmetic computation were compared, even greater changes were shown. For the bottom 25%, there was a median gain of one full year; for the next higher group, also one year. Thus, for the entire 680 pupils in the bottom half, there was a median gain of one year.

Of the 340 pupils at the bottom level, 197 improved in arithmetic computation one full year or more; 246 gained six months or more. In the next higher group of 340 pupils, 182 gained one year or more and 269 gained six months or more. In total, 55% of the bottom half of the pupils improved one year or more and 75% gained six months or more. Changes were even greater in the New York City Arithmetic Computation Tests given in four of the schools which showed that of 389 pupils gaining 2 years or more, 64% were below seventh grade level on the initial test.

It has been characteristic of disadvantaged boys and girls that they show increasingly poorer results as they go on to the higher grades of school. The results of the summer session seem to indicate that this does not have to be so and that improvement under favorable conditions is possible for many pupils even when test scores show serious deficiencies.

The Bureau of Educational Research, which evaluated the summer program, included a survey of the views of the professional staff. The results indicated a strong belief in the value of the program and high regard for what the pupils had accomplished.

Using a scale of 1 to 5 to measure the faculty's attitude as to the effect of the program on students, the average rating given by the staff was 4.2 for scholastic achievement in both reading and mathematics. The average staff rating for students' attitudes toward learning was 4.3 and for their interest in higher education, 4.4.

The survey bore out the frequently expressed staff view of the conscientiousness and concern shown by the pupils during the session. The average rating for pupil cooperation in class and motivation for learning was 4.0, and for the extent to which homework answers were completed, 4.1.

The staff of teachers, counselors, librarians and supervisors was asked whether similar sessions should be held in the future. All 153 responded that there should be a continuation. 106 asked for "some" modifications, 28 had no suggestion for change, 19 asked for "extensive" modification.

The outcome of the summer session should not be taken as proof that a similar experience would show comparable results for any pupil seriously deficient in academic achievement. The majority of pupils in the College Bound Program were willing and able to learn and showed this through their effort and behavior. It must also be stressed that despite the gains of this bottom group, few are ready as yet to do acceptable high school academic work. Although there was a gain, these pupils are still several years below grade.



Even with the improved test scores and the positive reaction of the teaching staff, it should be emphasized that the success of the College Bound Program will have to be judged by accomplishment over a three or four year period and not by the results of a seven week session. For example, improvement in reading and arithmetic skills as a result of intensive work during the summer sometimes does not carry over into the regular school year. Gains shown in standardized test results have meaning only as they are translated into actual classroom performance; until Regents examinations are passed, academic diplomas are not granted. The summer session was a good first step, but it was a first step only. It is important only as it may contribute to a worth-while end result. Growth will have to continue in the years ahead if the program is to accomplish what we hope for it.

The situation in the high school will be very different from that of the summer. Although College Bound Pupils will have the benefit of small classes and personal counseling, they will no longer be the center of all attention. Teachers and supervisors will have a host of other duties and obligations and this group will be only one of many concerns. Nevertheless, we hope that the summer session will have prepared pupils better for the adjustment they will have to make.

x	x	x	x	x
x	x	x	x	x
x	x	x	x	x

In the following pages, the supervisory staff has provided a description of the work done in English, library use, mathematics and guidance:

## ENGLISH

The English syllabus for the summer College Bound Program was designed to aim at these goals:

1. To provide a rich reading experience with books whose content was likely to have inherent appeal for children of disadvantaged background. The hope was to stimulate interest in reading and create awareness of the values to be derived from books.
2. To provide intensive training in basic communication skills which experience shows these youngsters generally lack, especially in the area of written composition.
3. To establish a framework for instruction in which the youngsters would learn and establish basic work habits essential to success in academic work.

### THE READING PROGRAM

In the short span of seven weeks, the children were called on to do more reading than most pupils are required to do in six months of school work. At least four books, and in one case, five books, were studied in common; in addition, pupils were called on to read two additional books on their own and to investigate and read a number of current magazines.

All the books offered to the students for study were in paperback editions, and in all cases the youngsters knew these books would be theirs "for keeps."

### THE WRITTEN COMPOSITION

Teachers were offered an opportunity to develop specific skills in narrative and expository writing. Many classes wrote one composition each week, most often in conjunction with their study of literature. Each composition was carefully read by the teacher or his assistant and after its return was completely re-written by the student in the light of the instructor's suggestions; it was read again by the instructors and returned to the students. In effect then, pupils wrote at least twice each week.

The small size of classes, the availability of teacher assistants, and the double period of English meant that all students got individual help with their work. In addition, those pupils who needed more help were asked to stay after classes for further tutoring.

### OTHER AREAS OF INSTRUCTION

Considerable stress was laid on use of the dictionary in conjunction with work in vocabulary development. Each pupil was given a paper-back dictionary to be kept as his own. Lessons were offered in understanding and interpreting the information contained therein, and this learning was applied to comprehension and use of new words encountered in the reading pupils were doing. Each day's literature assignment included about half a dozen words which the youngsters looked up in the dictionary, determining their pronunciation and the single meaning that was most appropriate to the context in which they found the words.

All classes were called on to master a spelling list of commonly misspelled words. In conjunction with work in composition, either prior to writing or afterwards, when a need was indicated, lessons were given in punctuation, capitalization, and elements of English usage and grammar.

#### DEVELOPING STUDY AND WORK HABITS

Homework, either reading or writing, and sometimes both - was offered almost every day, although teachers were asked to be reasonable in their assignments. On the average, pupils were probably called on to do 30 to 45 minutes of homework each day. The responsiveness of the children in general was a source of gratified amazement to the staff. When students failed to do homework several times, they were referred to guidance personnel who, when the step seemed necessary, called the home or sent family assistants to visit the home.

Each pupil was required to keep an English notebook divided into sections - Vocabulary, Spelling, Punctuation, etc. These notebooks were inspected by the teachers or their assistants, who also checked on the accuracy of the notes which students copied in the classroom. The general effort was to instill in the youngsters a sense of the importance of careful, conscientious work habits.

#### SURVEY OF FOUR SCHOOLS ON USE OF TEXTS

<u>Text</u>	<u>Total No. of teachers definitely approving</u>	<u>No. disapproving</u>	<u>Mixed reactions</u>
Lilies of the Field	24	0	1
The Pearl	23	0	2
The Red Pony	7	3	10
Readings to Remember	14	0	6
Poetry I	16	0	3
Rebels and Regulars	11	0	5
Something Strange	2	1	2
Cry the Beloved Country	2	2	1
Tressler Workbook	14	0	10

#### RECOMMENDATION FOR FUTURE USE OF TEXTS

For next summer I would suggest the following regarding literature texts:

1. Most teachers felt they had to rush too much. Fewer books should be required.
2. The Red Pony, Something Strange, and Cry the Beloved Country should be omitted.
3. Instead of a general workbook like Tressler's, a workbook dealing specifically with problems of sentence structure should be purchased. In this connection, however, teachers should be cautioned not to spend excessive time on workbook exercises. There was a tendency in this direction manifested during the summer.
4. The inclusion of a play like The Miracle Worker would offer opportunity for creative dramatizing activity on the part of pupils.

5. The children liked many of the stories in Rebels and Regulars but the teachers felt that a similar book with a greater variety of materials would have more value. The teachers manual, despite faults, has much to commend it.

I would retain those books that teachers were overwhelmingly favorable to, perhaps substituting a short story book for the essay book, Readings to Remember, although the latter was generally well received. I strongly urge retaining the poetry text.

In general, teacher comments indicated that they liked the vast majority of the texts because pupils identified with the materials and were able to cope with them.

### The Over-All Program

There seemed to be unanimous agreement that such a specifically structured program as this was most helpful and valuable. The teachers expressed appreciation of the specificity of the content and its comprehensiveness, although they had reservations about the amount of material to be covered. The stress on composition met the single greatest need of the pupils.

### Benefits for the Students

1. They learned how to perform homework assignments, in reading and in writing.
2. They learned how to keep a notebook and take tests and quizzes.
3. They had a rich reading experience in materials that appealed to them.
4. They had experience which seemed new to very many of them in interpreting character and behavior encountered in their reading. Many of the teachers commented on the fact that the children were often quick to answer questions on "What happened?" and "What did he do?" but very slow, at the start, to respond to questions like, "Why did he do so?" They were apparently unaccustomed to being called on to probe into why's and how's, but they grew in this regard. I think this was one of the greatest values of their work in literature.
5. The children learned how a writer develops a theme through his choice of characters and events; also how character is delineated through action, conversation, dress, etc. In short, they learned how to read fiction for more than plot. Likewise they learned how to read a poem, what the sources of its pleasure are; and they experienced also the values of other forms of literature - the essay, the magazine, etc.
6. The great stress on writing - especially on complete revision of first drafts after teacher evaluation - made pupils conscious of their needs in this regard and of the value to be derived from successful communication. The pupils really worked especially hard on revision; this was a gratifying thing to see.

7. In general, the pupils showed gains in these areas:

- a. Study habits and habits of work
- b. Enhanced ability to appreciate literature
- c. Awareness of writing disabilities and improvement in this regard
- d. Improved vocabularies and an interest in new words
- e. Ability to use the dictionary, especially to determine the meaning of a word applicable to a specific context
- f. Knowledge of the facilities of the library and of elementary research tools

#### THE LIBRARY PROGRAM

An important goal of the summer session was to acquaint pupils with high school library facilities and instill in them a desire to use the library and borrow books. A professional library teacher, usually from the permanent staff of the school, was in attendance every day. Purchases of paper-back books were made so that these would be available in addition to the books and magazines normally on hand.

In each school, usually in conjunction with assignments in the English classes, the pupils visited the library for formal instruction in library resources and techniques. The lessons were offered by the librarian in charge and served, in general, to introduce pupils to the offerings of the library, methods of using its resources efficiently, sources for simple research projects (in this case, a report on the life of some person the youngsters were genuinely interested in) and finally magazines and other periodicals currently available to the public.

The library was open to all students one-half hour before classes began and an hour after classes were finished. One of the most gratifying aspects of the program was the number of children who borrowed books, often taxing the resources of the single librarian in charge. The widespread loan of books immediately after the library lessons, testified to the success of the library instruction and to the quality of the librarians' contribution.

#### MATHEMATICS

The College Bound Program in mathematics for the summer session provided for two levels of instruction. A syllabus was provided for pupils entering 9th grade mathematics and one for pupils entering the 10th grade. The pupils were homogeneously grouped according to the scores they had received on the standardized tests administered in junior high school.

The syllabus for the 9th grade students was prepared with the realization that most students do not have a firm grasp of fractions, decimals, percents and their application to real life situations. They lack the understanding of the basic reasons why arithmetic processes work.

The concept of dividing or multiplying by powers of 10 which reappears in all work with decimals and percents was clarified. Emphasis was placed on developing the concept so that students became aware that this technique can be applied in many situations. Students usually think that each arithmetic problem requires a new method, a new teaching process and a challenge to the memory as to how to do the particular example.

Each teacher was given a copy of the syllabus which included detailed lesson plans. Each lesson contained challenging introductory examples and motivations and also included a development which stressed the mathematical concepts to be clarified and applied. The lesson plans included four programmed instruction units which were:

1. Introduction to fractions
2. Division of decimals
3. Ratio
4. Addition and subtraction of fractions

Each program contains about 70 frames with concepts built up through short frames of explanation. Many students are unaware of the fact that mathematics can be learned from reading as well as from a verbal explanation. Working with the programmed units enables them to develop the self-sufficiency which comes from independent work and success.

The text used for the pre-ninth year mathematics was the Amsco Preliminary Mathematics text which was used in conjunction with the programmed instruction and which provided drill material. The students were given the text at the end of the program.

The pre-10th year mathematics course of study for the College Bound Program was based upon several curriculum bulletins presently in use and contained only those topics whose mastery is deemed essential for success in tenth year Mathematics.

Material was provided for 35 school days including the days needed for review, short examinations and administering a standardized arithmetic test. Space was provided for the teacher to write specific comments and suggestions concerning the sequence of topics to be taught, the difficulties encountered in teaching this material, and suggestions for revision for the future.

The main units of the course are: Solution Sets for linear equations, formulas (related to geometry), the development of the number system, using numbers to measure length, area, etc.), coordinate geometry, graphs of linear systems, ratio and proportion, and trigonometry of the right triangle. The last two topics included lessons using programmed instruction prepared for each pupil in the program. In many classes a programmed instruction unit on ratio and proportion was used to prepare the pupils for the unit on measurement of the angle.

We found that use of programmed instruction units in the classroom had the following values:

1. Short frames made the concepts understandable.
2. Repetition made the concepts clearly seen to be universal in application.
3. Diagrams using the number line with small divisions and geometric figures were easily inspected and analyzed.
4. Students were not afraid to respond.
5. Students proceeded at their own rate.

If a group of students in the class needed remedial work in arithmetic, the teacher usually spent 15 to 20 minutes of the period reviewing the particular arithmetic skill before proceeding to the algebra and geometry of the lesson. The college tutors in the program assisted the pupils on an individual basis during the second part of the hour and a half period.

The textbook used was "Ninth Year Mathematics" published by Amsco. This was given to each student in the program. The teachers were encouraged to prepare rexographed material as needed to motivate the work, etc. Frequent tests or short quizzes were given to evaluate the instruction and determine which topics must be reviewed.

In developing this course, we were guided by four basic assumptions:

1. It is sound practice to integrate the important concepts of geometry the pupils will need in Tenth Year Mathematics with the usual material in algebra and arithmetic.
2. The mathematics presented should include material with a contemporary point of view. The postulational approach, modern terminology such as set, number system, structure, etc. should be emphasized.
3. A major purpose of this program is to help the student understand the basic ideas of algebra and apply them to geometric situations. These include the following: perimeter, area, similar polygons, coordinate geometry, properties of geometric figures and deductive reasoning.
4. This program should also provide intensive individual instruction to develop the mathematical skills and understandings necessary for the pupils to succeed in Tenth Year Mathematics.

#### PURPOSE OF STRUCTURED PROGRAM

The summer session was planned with scholastic accomplishment as its most important purpose. The efforts of the entire staff were directed toward this goal. Courses of study and materials were prepared in advance of the sessions; books were ordered to fill the particular needs of the program. Homogeneous grouping of pupils for instructional purposes was arranged.

Because of the nature of the student body and the shortness of the session, lessons and approaches were carefully worked out so that no teacher was at a loss as to what to do. The less experienced teachers, in particular, benefited greatly. The risk of possible strait-jacketing some teachers had to be balanced against the great gain for the majority. Teachers who were creative, however, still had scope for their talents.

## GUIDANCE

The counselors used a combination of group guidance and individual interviews in working with the youngsters. They were encouraged to experiment with various approaches to the group guidance lessons. As a result, there were variations. One counselor divided his group in half so that he saw only ten students at a time. In this way, he was able to establish a more informal atmosphere where the youngsters felt free to discuss their feelings about the program and the individual problems they encountered in studying. He felt that his groups developed a cohesiveness which enabled the students to help each other.

The counselor from --High School supplemented her lessons with discussions conducted by three successful --High School graduates pertaining to college and careers. The many questions asked by the youngsters made her feel that these discussions were of great value. Many other counselors used the educational assistants as resource people who also talked to the students about what to expect in high school and what it's like to attend college. Several counselors supplemented the material contained in the textbook with mimeographed study guides and worksheets for planning an effective study schedule. Others, in an attempt to obtain some significant biographical data, asked the students to write short autobiographical sketches in their English classes. Each student was given a copy of Success in High School by Abraham Lass, for class and home use.

Each counselor interviewed every student individually at least once, and filled out an anecdotal report for him containing his standardized test scores, a description of the home contacts, overall impressions, and any referral which took place. In addition to these routine interviews, counselors asked teachers and educational assistants to refer to them pupils who appeared in need of more intensive guidance services.

Although it is difficult to measure the effects of a six week guidance program, certain positive aspects of the guidance counselors' work were apparent. Because the counselor was able to see each student individually in a relaxed atmosphere, the youngsters became aware of the counselor as a person with whom they could discuss their problems. Those counselors who encountered students who expressed resentment at being forced to give up part of their summer vacation were able to help them view the experience in a more constructive light.

The background information obtained and the early identification of youngsters in need of more routine help will enable the counselors to work more effectively in the fall. The value of the group guidance lessons varied to a great extent. However, most of the students responded positively to some aspects of this program.

Initially, many of the pupils were scared and lacking in self confidence. They were rather overwhelmed at being chosen for the program and unsure of their ability to handle the work. While these feelings could not be dispelled entirely in seven weeks, the counselors indicated that many students seemed more sure of themselves as a result of attending the summer session. Teachers and educational assistants reported numerous cases of students who had been extremely diffident in class beginning to participate more freely. Students, themselves, told the counselors that they were less afraid to offer an answer or approach a teacher with an individual question.

Most of the counselors reported that the students responded favorably to the program. They said the majority of youngsters expressed a sense of satisfaction with their accomplishments despite the resentment some of them felt initially at being pressured by their parents into attending school during the summer. They were enthusiastic about the books they read, and were particularly pleased by the gain they felt they made in mathematics. Many of them said the extra help they received from the educational assistants was extremely valuable. They also were very happy to have met and made friends with students who would be attending the same high school to which they were going.



## USE OF FAMILY ASSISTANTS

The family assistants chosen for the program were largely women from the local communities whose knowledge of the problems faced by people in their area enhanced their effectiveness in bridging the gap between school and home. The sense of commitment and resourcefulness shown by some in securing help for those who needed it, aided considerably in changing the attitude of parents toward contact with the school.

It is difficult to separate the work of the family assistants from that of the guidance counselors as they worked closely together. The family assistants' major role was to see as many parents as possible in order to acquaint them with the goals and purposes of the program, to answer their questions, and to initiate a good relationship between the school and the home. However, they gave priority to those families where the counselor felt the youngster's behavior may have reflected a difficult home situation.

Initially, they made every effort to contact the parents of students who had signed up for the summer program but who did not appear. In this way, they were able to clarify misunderstandings and involve youngsters in the summer session who would not have participated. Subsequently, they visited the homes of students whose attendance was irregular in an effort to determine the reason for their absence. Where they felt there was an emotional problem or that the family situation was a factor in the youngster's staying away from school, they notified the counselor and together they worked out ways to try to alleviate the situation.

While the family assistants worked four hours a day, they scheduled their visits to suit the convenience of the parents. They either called to make an appointment before each visit or sent a card asking the parent to indicate what time would be most convenient for him. The family assistants reported to the schools on an average of twice a week. They set up their visiting schedule in the early part of the week, and reviewed their findings with the counselor at the end of the week. They made out an anecdotal report for each home visit which included the reason for the visit, the results and their recommendations.

There is no question that the family assistants, as a whole, were effective in bridging the gap between the school and the home. Almost universally, they were welcomed by the parents and listened to with great attentiveness. They felt the parents were more relaxed in their own homes and spoke more freely than they would be able to do in the formal school setting. They also believed that the fact that students saw a school representative welcomed in their homes was reflected in a more cooperative attitude on their part.

In addition to interpreting the program for the parents, family assistants helped them obtain services essential to their health and well being. In several instances, family assistants who found families living in sub-standard housing helped them file applications for City Housing or for an investigation of the flagrant building violations. In a few cases, the family worker was instrumental in obtaining increased welfare benefits for those families who were in need of supplementary help. In other instances, the family workers were able to expedite medicaid services and obtain glasses and other medical services for students who needed this attention.

Besides all this, some family assistants showed resourcefulness in obtaining part time jobs for students where they discovered economic hardship. In most instances, the counselor and family assistant worked together to achieve these results. However, for the most part of the counselor would not have become aware of the need for assistance had there been no home visit. Furthermore, the mobility of the family assistant made it possible for her to expedite these services personally rather than have to depend on the telephone.

We feel that the family assistant will play a very worth-while role in resolving problems that might hinder the academic achievement of boys and girls in the program in the years ahead.

x	x	x	x	x
x	x	x	x	x

To summarize, what were the factors that made possible whatever we were able to accomplish in the summer session?

In the first instance, boys and girls who were willing to learn had a chance to do so without their work being interfered with by unruly students. Each summer school was limited to a total of 200 or 300 pupils so that a personal relationship became possible. Classes were small and teachers, with their assistants, were able to give pupils individual attention.

The supervisory and administrative staffs were devoted to the program and were available to offer aid whenever it was needed. With few exceptions, the teaching and counseling staff were concerned about the boys and girls and eager to do a good job. Not least, the family assistants were able to gain needed home cooperation.

An orientation session, attended by the professional staff prior to the summer session, helped get the program off to a good start.

The summer program has involved considerable work and cost but we think the efforts have been justified. We have seen improvement in the work of disadvantaged boys and girls and we feel that the help given them will play a significant part in the final outcome.

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