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ABSTRACT

The Edison Project, funded under Title VIII of the 1965 Elementary Secondary Education Act, has as its major objectives the reduction of the dropout rate, the increasing of the average daily attendance, the improvement of basic skills, and the development of career awareness. The project has been established as an annex to Edison High School, an all male, comprehensive high school which has the highest dropout rate in the school district. Gang tension, racial problems, failure, and a lack of interest in education have led to a discouraging school climate. The components of the program are: instructional (classroom activities, curriculum development, and home contacts), reading and mathematics (remediation and consultative services for teachers), career development (job exposure, experience, and training), and ancillary services (medical examinations, follow-up treatment, legal service). The project uses self-contained classroom at the high school level to personalize the educational experience. Through the coordination of the various components, subject area centered learning stations have been developed within the school, and work and community centered learning stations have been developed as outside learning stations. Three hundred thirty five students were enrolled in the project in September, 1973, 248 at the main project site and 87 at the Edison Component. (Author/JM)

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U.S. DEPARTMENT OF HEALTH
EDUCATION AND WELFARE
NATIONAL INSTITUTE OF
EDUCATION

EDISON PROJECT
FINAL EVALUATION REPORT -- YEAR THREE
1973-1974

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Office of Research and Evaluation

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August 1974

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EDISON PROJECT
FINAL EVALUATION REPORT - YEAR THREE

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EDISON PROJECT - ABSTRACT

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GRANT #OEG-0-71-3229 (281)

THE LOCALE: The Edison Project has been established as an annex to the Edison High School, an all male, comprehensive high school which has the highest dropout rate in the School District. Gang tension, racial problems, failure, and a lack of interest in education have led to a school climate which has been described as discouraging. The project has been located in "neutral turf" and is racially balanced. The community that is served is geographically extensive and encompasses people with low to moderate incomes. The white students are from stable neighborhoods, while many of the other students reside in changing neighborhoods.

THE PROGRAM: The Edison Project has as its major objectives the reduction of the dropout rate, the increasing of the average daily attendance, the improvement of basic skills, and the development of career awareness. The components that were established to meet these objectives were: instructional (classroom activities, curriculum development, and home contacts), reading and mathematics (remediation and consultative services for teachers), career development (job exposure, experience, and training), and ancillary services (medical examinations, follow-up treatment, legal service).

One of the Major differences that the project established was the use of self-contained classrooms at the high school level to personalize the educational experience. Through the coordination of the various components, subject area centered learning stations were developed within the school, and work and community centered learning stations were developed as outside learning stations. Three hundred and thirty five students were enrolled in the Project in September, 1973, two hundred and forty eight at the main project site and eighty seven at the Edison Component. The staff included a Project Manager, two assistants, twelve teachers, eleven para-professionals, one Math Specialist, two Reading Specialists, three Career Development Specialists, a counselor, and an evaluator.

SELECTED OUTCOMES: During the third year of operation the dropout rate was 25.2 percent. While this does not meet the twenty percent criterion, it compares favorably with the high school dropout rate which was 33.9 percent. Additionally because of dropout reporting delays caused by the strike of the previous year, the true dropout rate may be somewhat lower than reported. Average daily attendance was sixty

four percent for project students. This meets the revised project objective for attendance. Gains in achievement level averaged two months in reading and three months in math. The concept of outside learning stations has been successfully implemented and is becoming an important part of the instructional program. The Edison Component, an extension of the Edison Project within Edison High School, has performed favorably compared to the project as a whole. The one failure of the Edison Project was the lack of significant parental and community involvement.

SUMMARY OF MAJOR OUTCOMES

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1. The average daily attendance at the Edison Project was 64.0 percent for the 1973-74 school year as compared to the 62.6 percent rate at Edison High School and a 63.3 percent rate for the Edison Project during the previous year.
2. The dropout rate was 25.2 percent as compared to 33.9 percent for the high school.
3. A dropout prevention model, known as the Edison Component, has been established within Edison High School. Except for basic skills remediation and ancillary services the Edison Component performed favorably compared to the project as a whole.
4. Curriculum materials that can provide the nucleus of a curriculum program for the four major subject areas were developed by members of the project staff. The impetus for this was largely due to the in-service staff development program that took place during the 1973-74 school year.
5. The mechanism for developing and implementing outside learning stations has been established. Eleven outside learning stations were developed and sixty percent of the Edison Project student body participated in at least one learning station. The outside learning stations show promise for becoming the vehicle through which a coordinate interdisciplinary curriculum program can be developed.

6. Remediation programs in reading and mathematics were provided at the Fourth and Cleafield site to those students in the lowest fifth of the project distribution. The remaining students participated in a self-instructional reading program and a math program conducted at four levels. Virtually no remediation took place at the Edison Component. Achievement gains from the pretest-posttest administration of the Comprehensive Tests of Basic Skills were 2.5 months in reading and 3.3 months in mathematics for the two sites combined.
7. The degree of parental involvement in the project was much lower than the level specified in the proposal.
8. The operation of the career development program was more efficient and productive than in previous years of the project.
9. Medical, dental, psychological and legal services were provided through the Ancillary Services Component.

NARRATIVE DESCRIPTION - FINAL EVALUATION

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The operation of the Edison Project has been carefully described in previous documents (Edison Project, Final Evaluation Report - Year Two, 1972-73 and Edison Project Dropout Prevention Proposal, February 15, 1973) that are available from the project site. Organizational Structure and Work Breakdown charts for the program are provided in Appendix D.

The major development of the 1973-74 school year for the Edison Project was the infusion of an instructional program at Edison High School that is modeled after the Edison Project. The instructional program, known as the Edison Component, is composed of an instructional team of four teachers, one facilitator, one classroom paraprofessional, and one Community Resource person. The Edison Component began with 87 students on roll in September and ended in June with 102 students.

The original intent for the Edison Component was that it should replicate the Edison Project within Edison High School. It was soon discovered that replication was possible only for some of the project components (Career Development, Ancillary Services, and Community Resource), but not for the instructional component. The math and reading remediation service available at the main project site (Fourth and Clearfield) was not available due to the lack of full time math and reading specialists for the Edison Component. Also the curriculum structure for the subject area learning stations was dif-

ferent for the two sites. The one area where close to complete replication did take place was in the classroom math and reading basic skills curriculum.

By the end of the school year it was acknowledged by the Project Management that complete replication need not occur, and that both the Fourth and Clearfield site and Edison Component should learn from and share each other's curriculum and instructional efforts. The exact nature of the interaction between the Edison Component and the Fourth and Clearfield site is to be specified by process objectives. These objectives should be formulated by the beginning of the 1974-75 school year.

Since one of the major goals of the Edison Project has always been the infusion of a dropout prevention model within the parent school which will ultimately lead to a transformed high school program for a significant portion of the student body, the description and evaluation of the Edison Project will highlight those differences that do exist between the Edison Component and the Fourth and Clearfield site.

During the 1973-74 school year the Edison Project modified its curriculum plan from the preceding year. Formerly each teacher was required to implement instruction in all four major subject-matter areas. This year, teachers were responsible for implementing instruction only for the subject matter area for which they did planning. During the 1973

summer workshop and also during an in-service staff development workshop, enough curriculum materials in the form of learning packets were developed to provide the nucleus of a curriculum program for all four subject-matter areas. A breakdown by subject-matter area of the number of learning packets developed is provided in Table 1. Most of the learning packets were developed and used by the Fourth and Clearfield teachers. Edison Component teachers did not develop many learning packets. They did, however, develop an adequate amount of more traditional curriculum materials for all subject areas. These materials appeared at least as effective as the learning packets developed by the Fourth and Clearfield teachers.

TABLE 1:
LEARNING PACKETS DEVELOPED BY EDISON PROJECT STAFF*

SUBJECT AREA	SUMMER 1973	WINTER 1973-74	TOTAL
SCIENCE	4	11	15
MATH	6	10	16
SOCIAL STUDIES	1	20	21
LANGUAGE ARTS	35	25	60
CAREER DEVELOPMENT	1	5	6
TOTAL	47	71	118

*The amount of material in each packet varied with the developer and subject area. Hence the number of packets developed in a subject area is not necessarily indicative of the amount of material covered for that subject area.

One major problem that the project still hasn't

solved is the lack of significant parental and community involvement in the Edison Project. Community involvement was marginally achieved at the Advisory Board Meeting, but it was very seldom that a parent attended more than one meeting. In other possible areas (e.g. visiting or tutoring in classes, joining field trips) there was little or no involvement. What parental involvement there was occurred predominantly at the Edison Component, where parents were strongly urged to attend specific, "one shot" activities. No parental involvement of a continuous nature was maintained at either of the project sites. An attempt was made to reactivate the dormant parents council without success. During the 1974 Summer Workshop intensive staff development activities took place that attended to the problem of obtaining adequate community and parental involvement.

The Classroom Program

Two types of instruction, basic skills and traditional subject matter, continued to take place in the classroom. Basic skills instruction took place during the first half of the day. This portion of the day was divided into fifty-minute periods. During the first period the second floor teachers (Alpha Team) gave instruction in mathematics and the third floor teachers (Beta Team) gave instruction in reading and language arts. In the second period the instructional areas were reversed. During the reading period, remedial reading students received individual or group tutoring

in the reading lab, while the other students received instruction based around the individualized and self paced Barnell-Joft reading materials. During the mathematics period each teacher on the team was responsible for a particular level of instruction (General 1, General 2, intermediate, and advanced math) and students went to the appropriate teacher for their level of instruction. The math lab, at this time, serviced remedial and exceptionally advanced students, as well as seniors who wanted general equivalence diploma (G.E.D.) math credit for graduation. Each classroom teacher was able to consult with the math specialist for the development of instructional materials appropriate to the math level they were responsible for teaching.

The basic skills program at the Edison Component was generally the same as for Fourth and Clearfield. The main difference was that each Edison Component teacher scheduled his own reading and math times. Also remediation services were virtually non-existent.

The basic skills program was operated with little difficulty at both sites. Teachers at Fourth and Clearfield expressed satisfaction with the support and assistance provided by the Reading and Math Specialists. Two problems that should be attended to were the lack of structure and continuity in the part of the reading and language arts program that does not involve Barnell-Joft, and an expressed need by Edison Component teachers for more supportive services in math and reading.

The second half of the school day was devoted to instruction in the four main subject areas (science, math, social studies, and language arts). For each instructional team, which consisted of four teachers - one in each area, four subject area "learning stations" were established and each teacher was responsible for managing a learning station.

At the Fourth and Clearfield site students attended two learning stations a day for forty five minutes each. Students did not receive the same amount of instruction for each learning station. For example, more time was scheduled for the science learning station than for the language arts learning station since instruction in language arts was also receiving during the basic skills portion of the program. At the Edison Component students attended one learning station a day for ninety minutes and all subject areas received equal time.

The quality and adequacy of the subject area curriculum materials developed and utilized at the Fourth and Clearfield site was a step up from the preceding year. This was particularly so in science and social studies where many of the activities involved hands on involvement in such things as science experiments and exercises, map reading and structured field trips. Much use was made in all subjects of current newspaper and magazine articles that pertained to the topic being studied. These were included as part of the individualized learning packets which formed the core of the

subject area learning stations. A good portion of the learning packets were developed as a result of an in-service staff development and curriculum writing program that took place during the year. The continuation of curriculum development productivity that took place after this program ended suggests that a similar in-service program should occur again next year.

At the Edison Component less emphasis was placed on structuring the curriculum materials in the form of individualized learning packets. More traditional formats, such as teacher directed learning, working from workbooks and class assignments, were used. However, more use was made of audio visual aides and gaming activities. The above difference in instructional methodology should profitably be shared by both project sites to further upgrade and refine the curriculum output of the project. One possible way for this could be to modify the curriculum writing format to one that can include the more traditional teacher directed methods, as well as the individualized self paced methods that are primarily employed at the Fourth and Clearfield site.

Math and Reading Labs

This year the math and reading labs formed a significant part of the instructional program for project students at Fourth and Clearfield. The reading lab provided extensive individual remedial instruction for all students who needed it. In addition the Reading Specialists gave informal coun-

seling and training for the few students who had behavior problems, such as difficulty in interacting constructively with people, which interfered with the learning process. The informal, relaxed atmosphere of the reading lab may have encouraged some students, who might not otherwise have done so, to attend school.

The math lab provided instruction for both remedial and advanced students. All students who needed it received instruction and every student who was mathematically capable received instruction in G.E.D. math and/or advanced mathematical topics (i.e. algebra, geometry, trigonometry). Instruction in math lab consisted of a combination of individualized self paced learning and teacher directed group learning.

Remediation in math and reading was not available at the Edison Component to the level that it was at Fourth and Clearfield. A reading teacher from the Edison High School reading lab was assigned to the Component for one period per day, but this arrangement did not work out, probably because the teacher was not familiar with the Edison Project's prescriptive and individualized approach to remedial reading instruction. On some occasions there were mixups in scheduling between the reading teacher and the Edison Component. No remedial instruction in mathematics was available to Edison Component students. For next year, if a meaningful basic skills remediation program is to be provided for Edison Component students, then arrangements other than sending stu-

dents to teachers who are not associated, at least to some degree, with the Edison Project should be made.

Career Development

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The operation of the Career Development program was more efficient and productive this year than in previous years. Eleven outside learning stations have been developed in which over two thirds of the project students have been involved. Instruction in career awareness formed a greater part of this year's curriculum. In Work-X class, which met after school, fifteen students were given instruction in career awareness and job seeking techniques. In addition to the Work-X students, all other project students received periodic instruction in career awareness, usually when a career development specialist covered a classroom teacher who was involved in an outside learning station. Plans are being made for next year to integrate the outside learning stations and career awareness instruction into the daily classroom curriculum program, instead of the occasional affair that it was last year. The problems associated with the running of the work/stipend phase of the program, such as extensive time involvement by the staff on payroll problems and high turnover in jobs, have been cleared up and the time spent on its administration was utilized more efficiently. Thirty two percent of the entire project student body participated in the work/stipend program. Since this percentage is much lower than the project's average daily attendance, the effectiveness of the work/stipend program in encouraging school attendance may be questioned.

Ancillary Services

The figures for the number of project students receiving ancillary services may be found in Table 2. Ninety one students on the final active roll did not get initial physical examinations. Twenty three of these students were from Fourth and Clearfield and sixty eight were from the Edison Component. A major reason why so many students from the Edison Component did not receive physicals is that processing of Edison Component students was not scheduled until January, 1974, and beginning in April, 1974 the medical services available to the Project were cut back. These factors, coupled with the fact that this was the Edison Component's first year and many students were reluctant to travel to Episcopal Hospital and failed to attend school on the days they had appointments, resulted in the low number of students who received ancillary services at the Edison Component. At Fourth and Clearfield the students who did not receive initial physicals were those who enrolled in the project in March when medical services were cut back.

The Ancillary Services program was run very well at the Fourth and Clearfield site. The good rapport that existed between the **Ancillary Services assistant** and the students made for maximum usage of the services available.

TABLE 2

ANCILLARY SERVICES PROVIDED TO EDISON PROJECT STUDENTS

SEPTEMBER 1973 - MAY 1974

Month	Initial Physical	Follow-up Medical	Eye	Dental	Psycho- logical	Legal
September	3	0	0	0	0	1
October	7	2	5	2	0	0
November	9	2	2	5	—*	0
December	5	3	1	0	—*	0
January	14	8	3	4	—*	3
February	14	7	3	1	—*	2
March	5	5	2	9	0	0
April	6	3	1	6	0	0
May	13	4	7	27	2	0
Total	81	34	24	54	2	6

*From November to February a team of psychologists visited the Project weekly and conducted programs for teachers and students. For the students this consisted of group rap sessions in the classroom and individual counseling of those students who were recommended by the teacher.

Summary

For most of the project components the third year represented a **meaningful** improvement over the preceding two years. A model of the Edison Project was put into operation at Edison High School, which performed at a level equal to or better than the Fourth and Clearfield site on most of the overall project objectives. However certain significant but not critical deficiencies should be attended to for the following year. Steps should be taken to expand and improve the math and reading remediation services available to Edison Component students. A complete ancillary services program still has to be implemented for Edison Component students.

Working in conjunction with the school nurse could expedite this. Communication between the Edison Component and the Fourth and Clearfield site should be improved and specified by process objectives, particularly with regard to the instructional component. Finally, so that the original intent of the Edison Project as described in the first proposal (Drop-out Prevention Proposal, March 17, 1971) can be realized, the size of the Edison Component should be expanded.

In general the instructional component has been successful in developing a method whereby project staff can develop curriculum materials that meet the educational needs of the Project students. The in-service staff development program was largely responsible for this and should be continued for next year. Most of the problems that have plagued the career development component for the past two years have been attended to and solved. Primarily with the outside learning stations the beginning of a viable program for building skills and career awareness has been formed. Next year, more project students should be involved in outside learning stations than were this year. The work/stipend program is now running smoothly, however, the effect of this on school attendance should be looked at critically. Finally, the degree of parental involvement in the project still failed to reach the level specified in the proposal. Alternate ways of achieving this goal should be developed. Record keeping and feedback to teachers were not adequately performed by one

of the three community resource people. Administrative steps should be taken to correct this situation.

Some additional data have been supplied for those who may be interested in student attitudes and further analyses of student achievement. These may be found in

ppendix C. Also a description and case study evaluation of the outside learning stations is included as Appendix A.

Overall, the third year has been a justification for the past two years. The problems, obstacles and developmental growing pains for many of the program plans appear to have been overcome. The process by which this evolved should be carefully documented so that in the future similar programs may be implemented more painlessly in other schools.

ANALYSIS BY OBJECTIVES

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In this section, information will be supplied regarding the attainment of the Edison Project objectives for the 1973-74 school year. The objectives, which are referred here by number, are included as Appendix B. Where appropriate the results for certain objectives will be reported separately for the Edison Component and Fourth and Clearfield site in addition to analysing these objectives for the entire project.

Overall Project Objectives

1. Reduction of Dropout Rate - The dropout rate for this year was 24.2 percent. This is higher than the proposed figure. A possible reason for this higher figure as compared to the preceding year may be due to the teachers' strike of last year. Some students may have actually dropped out last year but the paperwork was not processed until this year. Consequently the dropout rate for last year should be somewhat higher and the dropout rate for this year should be somewhat lower than are indicated by the official records for each year. This possibility is supported by somewhat higher dropout rates this year for most schools in the system as compared to last year. A complete picture of entering and exiting students is provided in Table 3. The dropout rates for the two sites separately were 30.0 percent for Fourth and Clearfield and 15.2 percent for the Edison Component. First year project students had a dropout rate of 15.5 percent.

TABLE 3

ENTRY AND EXIT STATUS FOR THE EDISON PROJECT

1973-74

	Exit Status	ENTRY MONTH									
		SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE TOTALS
S E P T.	D	12									12
	T	29									29
O C T.	D	19									19
	T	4									4
N O V.	D	6									6
	T	3									3
D E C.	D	4		1							5
	T	1		0							1
J A N.	D	9	1		1						11
	T	0	1		0						1
F E B.	D	2	2		0						4
	T	1	0		1						2
M A R.	D	3		1							4
	T	2		1							3
A P R.	D	14	0			0					14
	T	6	3			2					11
M A Y	D	11		1	1						13
	T	0		0	0						0
J U N E	D	2									2
	G	54									54
	T	1									1
T O T A L S	D	83	3	2	2	0					90
	G	54									54
	T	47	4	1	1	1					54
COMPLETED PROGRAM		210	17	13	6	9	8	6	10	3	282

D=Official Dropout, T=Transfer, G=Graduated

2. Average Daily Attendance - The average mean daily attendance (ADA) for the Edison Project was 64 percent. This figure is higher than the ADA for Edison High School (62.6 percent). Therefore this objective was met for the entire project. For the Edison Component alone the ADA was 67.8 percent while the Fourth and Clearfield site had an ADA of 62 percent. None of the above figures for the Edison Project are significantly lower than the ADA for last year (63.3 percent).

3. Post High School Prospects for Seniors - Post high school plans were discussed with seniors during exit interviews conducted by the Career Development staff during the month of June. Of sixty two seniors twenty three have been given one post high school prospect and four have been given two prospects. Hence this objective was not met.

4. Reading and Mathematics Achievement - The gains in both reading and mathematics were below six months. The gains were 2.5 months in reading and 3.3 months in mathematics. If the two sites are looked at separately, then the only area where this objective was met is for the Edison Component in reading with gain of 6.5 months. Table 4 indicates the breakdown of achievement scores for the project from the administration of alternate forms of the Comprehensive Test of Basic Skills in September and June. Although various sample sizes are indicated throughout the tables, pretest - posttest gains were calculated with the sub-sample of students that

took both measures. The choice of CTBS levels was based on the same criteria as for the preceding years of the Edison Project.

TABLE 4

BASIC SKILLS ACHIEVEMENT IN READING AND MATHEMATICS IN
GRADE EQUIVALENT SCORES

		Pretest Level	N	Posttest Level	N	Gain	N
Entire Project	Reading	5.4	189	5.3	136	.25	84
	Math	5.5	173	5.5	136	.33	89
Fourth and Clearfield Site	Reading	5.5	132	5.1	80	.05	55
	Math	5.8	101	5.2	77	.28	46
Edison Component	Reading	5.1	57	5.7	56	.65	29
	Math	5.1	77	5.9	59	.39	43

5. Establishment of a Dropout Prevention Model Within

Edison - A dropout prevention program has been installed within Edison High School. With the exception of ancillary services and reading and math remediation, the Edison Component has provided services and instruction that are comparable to the main project site. One hundred six students completed the program.

6. Parent Organization - Despite ongoing attempts by the Community Resource people the Edison Project still does not have a viable parent organization. However, a

few parents have been involved in individual project functions, such as Advisory Board meetings and field trips. A high percentage were parents of Edison Component students.

7. Curriculum Procedure - The curriculum procedure of using Learning Packets has been successfully implemented. Using this procedure, teachers were able to develop teaching units that are readily replicable in other classes. At the Edison Component learning packets were not used as extensively, although other more traditional curriculum procedures were effectively employed.

8. One Year Curriculum Guide - This objective has not been met. While curriculum materials and experiences have been developed, they have not yet been organized into a workable package that can be exported to other secondary schools. It will probably be necessary for the Project to employ a special person who has expertise in this area to expedite this task.

9. Plans for the First Month's Classroom Program - This objective was met during the 1973 Summer Staff Development Program.

10. Operation of Four Subject Area Learning Stations - This objective was met. Each teaching team had four learning stations corresponding to the four major disciplines. At the Fourth and Clearfield site each learning station was centered around the use of learning packets, while at the Edison Component instructional methods in addition to learning packets

kets were used. A complete description of the learning stations can be found in the Narrative Description.

Performance Objectives - Reading

11. Placement in Self Instructional Reading Program -

Based on CBRS scores and previous work each student was placed in an appropriate level of the Reading Program within four weeks of his entrance into the Edison Project.

12. Collection of Language Arts Materials - Thirty

Language Arts learning packets were developed by the Project classroom teachers and specialist and shared during the bi-monthly Language Arts Staff Development meetings.

13. Specialists' Meeting With Teachers - The Read-

ing Specialist met with teachers on an as-needed basis. While this did not average one-half hour per teacher, most teachers at the Fourth and Clearfield site expressed satisfaction with the accessibility of the Reading Specialist for consultation during planning and implementation stages. Less time was spent meeting with Edison Component teachers, some of whom expressed a need for more meeting time with the Reading Specialist.

14. Staff Development - This objective was met at

the Fourth and Clearfield site where the Reading Specialist met with each team separately. All teachers felt that these services were beneficial. At the Edison Component some staff development did occur, but not enough to satisfy the objective.

15. Training of Paraprofessionals - The paraprofessionals were instructed in new techniques as they were needed. The situation was similar to that of an apprenticeship situation.

16. Provision of Remedial Reading Instruction - Approximately fifty students received reading remediation. Of these, students with reading levels between 1.5 and 2.0 received instruction for one hour daily on basic reading fundamentals and those with reading levels between 2.0 and 3.0 received reading remediation two hours per week. Thus, more time was provided for more students than the objective specified. This objective was not met for the Edison Component. An attempt was made to utilize a teacher from the Edison High School reading lab without success, probably due to this teacher's lack of familiarity with the Edison Project's goals.

Performance Objectives - Mathematics

17. Placement in Self Instructional Mathematics Program - Five levels of instruction (remedial, intermediate, general math 1, general math 2, and advanced math) were provided by the mathematics program. Student assignment was based on a diagnostic test that was administered at the beginning of the year. The remedial program was individualized and took place in the math lab, the others were group oriented and took place in the classrooms.

18. Specialists Meeting With Teachers - This objective was met. The same comments for objective #13 also apply to the Mathematics Specialist.

19. Staff Development - Same as objective #14.

20. Training of Paraprofessionals - Same as objective #15.

21. (a) Provision of Remedial Instruction - fifty two students received remedial instruction for one hour daily. This is over the number required to satisfy the objective.

(b) Provision of Enrichment Activities - Twelve students received enrichment activities from the math lab during the school year.

(c) Provision of High School Equivalency Mathematics Instruction - Twenty students received high school equivalency instruction during the school year. Of these one student took the G.E.D. test and passed.

(d) Instructional Procedures for Relating Mathematical Concepts to Out of School Situations - Maintaining data on this objective was found to be logistically difficult as no formal procedures or materials were developed. Hence no information is available with regard to the number of students who applied mathematical concepts learned in school to problems encountered out of school.

Career Development Objectives

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22. Outside Learning Stations - Eleven outside Learning Stations were established and operated. The breakdown according to area is: Business and Industry-4, Health-0, Legal-1, Socio-Political-2, Economic-1, Cultural-3. A case study evaluation of the outside Learning Stations appears as Appendix A.

23. Provision of Career Development Lessons - A set of packets was developed centered around the theme "The World of Work". These packets were used primarily for the Work-X class, which is a voluntary after school class of fifteen students who were instructed in career awareness and job seeking skills, but they were also used by the Career Development staff when they were working in conjunction with teachers who were using outside Learning Stations.

24. Job Training for Seniors - Fifteen seniors worked at jobs at which a skill could be acquired of which ten were school-industry cooperative jobs and five were jobs obtained through the work/stipend program. Inadequate record keeping by the Career Development Office made it difficult to determine if those students worked at their jobs long enough to be trained.

25. (a) Provision of Summer Jobs - Seventy five students worked at summer jobs provided through the work/stipend program. Of these thirty eight students continued in the same job they had during the school year, eighteen students took different jobs, and nineteen were students who had not worked during the school year.

(b) Placement of Students in BVR Trade Schools -

Five students were enrolled in BVR Trade Schools. The average daily attendance for these students was 60 percent.

26. (a) Student Awareness of Work/Stipend Opportunities - All work/stipend opportunities were announced in the Project Daily Gram. Students applied at the Career Development Office and were interviewed and assigned to jobs by the Career Development staff.

(b) Student Opportunity for Participation in Work/Stipend - Ninety-six Edison Project students participated in the work/stipend program. Of these forty-five were students from the Fourth and Clearfield site and forty-one were Edison Component students. Thus 24 percent of the Fourth and Clearfield students and 39 percent of the Edison Component students were involved in the work/stipend program. Thirty-two percent of the entire Project student body participated in the work/stipend program. If the percentages are computed based on the average daily attendance instead of the number of students on roll, then the percentages are respectively 36 percent, 68 percent, and 56 percent.

Community Resource Objectives

27. M liaison Between School and Community - Inadequate record keeping by one of the Community Resource People made it impossible to determine if this objective was met for the Fourth and Clearfield site. The objective was met for the other two Community Resource People.

28. Parents-Teachers Meetings - Ten parents participated in a meeting of parents and teachers that was held in April. This was less than five percent of the Project parents. Parent involvement remains one of the few project objectives that have never been met.

29. Organization of Parent Meetings by Community Resource People - No meetings took place. For next year the Community Resource people are going to try to organize a series of small cluster meetings in the community to meet this objective.

30. Follow-up on Students With High Absenteeism Rates - At Fourth and Clearfield site one Community Resource person effectively attended to this objective. Inadequate reporting by the other Community Resource person made it difficult to determine if this objective was completely met. At the Edison Component this objective was met.

Ancillary Services Objectives

31. Determination of Treatment Objectives - This objective was met.

32. Medical Examination for Students - Fifty-four students from the Fourth and Clearfield site and thirty-five Edison Component students received medicals this year. There were sixty-one new students this year at Fourth and Clearfield and one-hundred five entering students at the Edison Component. Therefore, essentially all regular attending students at

Fourth and Clearfield and one third of the regularly attending students at the Edison Component received medicals.

33. Provision of Follow-up Services - All students who received medicals obtained special follow-up services where required.

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APPENDIX A

CASE STUDY EVALUATION OF OUTSIDE LEARNING STATIONS

CASE STUDY EVALUATION OF EDISON PROJECT OUTSIDE
LEARNING STATION

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Rationale and Description of Outside Learning Stations

The outside learning stations focus on two of the Edison Project's overall goals, career awareness and community involvement in the educational process of the student. It was recognized by the Edison Project staff that only by directly exposing the students to career and community situations where skills and knowledge learned in school are used, will the above goals be realized. To this end the concept of the outside learning station was developed and implemented.

An outside learning station is an intensive community and industry based program that exposes students to many different job options that are available to them, and to the various services from the city's health, legal, municipal and cultural organizations that they can utilize. The length of the program generally lasts for three to five school days. The educational program is jointly developed by Edison Project staff and personnel from the organization hosting the learning station. Prior to attending the outside learning station students are given preliminary lessons and activities in school that are related to what they will experience at the outside learning station. At the learning station itself students participate in a variety of activities ranging from on site observations to actually working at some of the jobs that are available at the learning station. Upon

returning to the school, follow-up lessons and activities are presented to the students.

During the 1973-74 year there was relatively little involvement of the classroom teachers in the planning and developmental stages of the outside learning stations. Consequently very little was done with respect to preliminary and follow-up lessons and activities. This situation should be corrected next year because all of the instructional staff who participated in the summer workshop visited at least two outside learning stations, and have developed curriculum based on these visitations.

Outside Learning Station Goals

Ideally each learning station should have the following attributes:

A. Career exposure:

1. Active observation of real life job activities;
2. Hands on experience (where applicable).

B. Educational experiences on site:

1. Academic education (i.e. doing a science experiment at a chemical company;
2. Skill exposure (i.e. learning how to key punch at a computer company).

C. Use of learning station experiences as a framework for developing interdisciplinary curriculum:

1. Teacher involvement in planning and implementation of the learning station;
2. Development of preliminary curriculum for each learning station;
3. Development of follow-up curriculum for each learning station.

In the past year, eleven learning stations were developed and implemented. Each learning station will now be described briefly and rated based on the above learning station goals:

1. IBM Three groups of students participated for three consecutive days each at the IBM learning station. Ten students were in each group. Five spent their time at the 1118 Market Street office and the other five were at 1700 Market Street. The first day was a general orientation session where students learned about corporations, computers, and the rules that all IBM employees must follow. The following two days each student was assigned to one of the following work areas for on site observation and learning: ac-

counts payable, instructional inventory, dispatch, supplies, mail room, maintenance, accounts receivable, keypunch, and machine room. Follow-up academic activities were developed and presented by the Career Development specialist. They included such things as preparing invoices, writing invoices, preparing statements of account, a reading exercise on computers, and a lesson on corporations. Student response to this learning station was very positive.

2. Federal Reserve Bank Two groups of 15 students each participated in this learning station for three consecutive days. Except for a tour of the non-restricted areas of the bank, most of the time was spent in a meeting room where students listened to various bank personnel speak on the different parts and functions of the Federal Reserve Bank. The area covered by these presentations were: check processing operations, bank training programs, employee benefits, bank examinations, and employment opportunities. Additionally project students observed a role play on proper and improper ways to apply for a job. Student reaction to this learning station was favorable,

however being confined to one room caused many students to become bored after the first day. A follow-up activity on check writing was developed.

3. Philadelphia Zoo Forty-five students divided into three groups of fifteen each participated in this learning station for three days per group during three consecutive weeks. On the first day students were conducted on a general tour of the zoo by the Superintendent of Animals and were shown his overall responsibilities for caring for animals. On the same day students met with the Curator of Reptiles and were taken behind the scenes at the Reptile House where they were shown how specific animal diets are prepared. The same thing was also done at the Bird House. On the second day representatives from the Business Personnel and Maintenance departments spoke to the students. Students later participated in a lesson presented by the zoo teacher. On the third day students took a monorail tour and toured the zoo on their own for individual observation and sketching. Follow-up activities included the development of a learning packet on zoo math and student examination and diag-

nosis of zoo cake to determine vitamin content.

4. Rohm and Haas The Rohm and Haas Chemical Company learning station was a three day program. Three different groups of fifteen students each took part. The first day was spent on a general tour of the plant. This included detailed observations of the various processes used for manufacturing chemicals. On the two remaining days students met with a representative of the personnel department and participated in a role playing exercise relating to applying for a job. Also one of the company scientists met with the group and described some of the experiments he was conducting. One entire day was spent at Rohm and Haas doing lab exercises that related to some chemical processes that are used to manufacture chemicals. These exercises were prepared by one of the Edison Project teachers. Students reaction to this learning station was fair. Most students felt they would not want to work at a chemical company because the jobs are too dirty and the plant has a bad odor.
5. Philadelphia Courts This learning station was a five day program which took place on three different weeks. A total of forty-five

students participated. Activities that students participated in were: (1) meetings with a courtroom judge, personnel department, the supervisor of court reporters, and a court interpreter; (2) observing trials at Family Court; (3) a tour of the Police Administration Building. Some groups were not able to participate in all of the above activities because of last minute changes in Court schedules. Also because of insufficient coordination a lot of time was spent waiting for speakers. This caused some boredom among the students. Student response to this learning station was favorable. Many of the students felt that they gained insight as to what their rights were and who they could see about criminal and civil problems or complaints that they may have. A follow-up learning packet was developed by one of the Project social studies teachers and given to all classroom teachers.

6. Philadelphia Federation of Teachers and Board of Education This was a two day learning station where one day was spent at the Philadelphia Federation of Teachers and the other day was with the Board of Education. Forty-five students divided into three groups parti-

cipated in this program. The purpose of this learning station was to show students how a union works and what it is from both labor and management perspectives. The day at Federation headquarters was spent in a meeting room where union officers explained their functions and answered questions on unions. At the Board of Education students met with the Director and Assistant Director of Labor Relations who conducted a role playing session on contract negotiating. Student response to this session was very enthusiastic. In general student reaction was more favorable to the Board of Education than the union because they were able to actively participate in a learning experience instead of just passively listening as happened at the Union. The learning station staff, Edison Project staff and students all felt that this learning station was valuable because most students will eventually become members of labor unions. A follow-up math unit involving the concepts of personnel deployment, salaries and teacher student ratios was developed.

7. Post Office One group of twenty-one students participated in this learning station which

lasted for one week (5 school days). The first day consisted of a general tour of the main Post Office facility at 30th Street where students observed the primary operating facets of the postal function. The second day was spent at the Post Office training center where students were put through representative training modules such as typing, basic math, reading, truck operation and other skill areas utilized by the post office. For the remaining three days the students were split into three groups of seven students each. Each group was assigned one of the three days, and on that day each student was assigned to an employee in one of the following areas: delivery and collections, postal source data, quality control, truck terminal and garage operations, and mailing requirements section. The students accompanied and observed the employees for the entire day. Most of the students felt that the second day was the most interesting, probably because the Post Office training center utilizes multi-media individualized teaching machines which the students enjoyed operating.

8. WCAU Twelve students participated in this

learning station which took place on two days one week apart. On the first the students observed the "Morningside" show with Edie Huggins, after which Mrs. Huggins spoke with the students and answered questions for half an hour. Following this the students were given a very general tour of the NCAU facilities. The following week students again observed the Morningside show. After the show three speakers from programming, advertising, and production spoke to the students about their jobs, responsibilities and training required. Most students enjoyed this learning station but they were disappointed that they were not able to go behind the scenes more extensively in such areas as the newsroom, advertising and programming. Also more planning could have been done by the NCAU staff as two of the three speakers appeared to have been given inadequate warning that they would be addressing the group.

9. Free Library of Philadelphia This was a two day learning station that was repeated on three consecutive weeks for three different groups of students. A total of 41 students participated. On the first day students were con-

- ducted on an "underground" tour of the library which included such areas as the stacks, mail-room, acquisitions department, new book room, printing and duplicating room, carpentry shop, and the boiler and generator room. After the tour representatives from the personnel department spoke to the students about possible jobs in the library. The day ended in the newspaper room where students were given an opportunity to use the micro film readers. The second day was spent in the music and film rooms. In the music room the students were shown how to look up records in the card catalog and spent some time listening to a record of their choice. The students observed a film in the film room and afterward critiqued it in writing, using a format provided by the librarian. Both students and staff felt this learning station was valuable because it exposed students to services of the library that many people are unaware of. The library staff was very responsive to the needs of Edison Project students and appeared to have spent considerable time planning for this learning station.
10. Philadelphia International Airport This learning station occurred on two days one week

apart. Twenty students were involved. On the first day the group was taken to a conference room for a lecture and question and answer session with the Airport Manager and the Deputy Director of Commerce for Aviation where they discussed the various facets of airport operations. Following this the students were taken for a general tour of the airport complex. The second day was spent at one of the airport Fire Station where firemen demonstrated the functions of new fire equipment and allowed the students to try some of the operations. A preliminary vocabulary lesson was prepared to introduce students to some terms associated with airports.

11. Open oil This learning station took place once a month for three consecutive months. On the first two sessions only seven students from the Work-A class were involved. The final session, however, was expanded to include fifteen more students. The first day consisted of a general tour of the plant during which students were given an opportunity to ask questions of employees. During the second session students viewed heavy machinery operations in the refining process and toured

in oil. Then on the third day the students were shown how environmental conditions are created in testing chambers for determining oil responses in automobiles. Follow-up activities included classroom discussions and written compositions on impression received through the visits.

Summary Evaluation

The outside learning stations will now be discussed generally with respect to the three main goals of outside learning stations.

All outside learning stations had varying degrees of career exposure. The learning stations that were most outstanding in this aspect were IBM, and the Post Office. At each of these learning stations students were actively observing job activities as well as engaging in hands on experience. Both of these learning stations were the only ones where each group was divided into sub-groups, and each group received an extensive exposure to a specific work area instead of the entire group being equally exposed to all work areas. This may be a factor in insuring good career exposure for future learning stations. The learning stations for which career exposure was minimal were the Federal Reserve Bank and PFT/Board of Education. At each of these learning stations students spent most of the time in a meeting room while engaging in the learning station activities.

Outstanding learning stations with respect to educational experiences on site were the following: Philadelphia Zoo, John and Mary, IEP/Board of Education, Post Office, and Free Library of Philadelphia. The Post Office is probably the learning station with the most potential in this area, because of the very effective training and educational programs at the Post Office which students are able to feed into. At each of the above learning stations the planning and preparation of the learning station personnel was apparently greater than for the personnel of the other learning stations except for IBM. There were no learning stations that were lacking in educational experiences for the students. However, one or two, such as WCAU, could have made greater use of the facilities available than they did.

With respect to the third goal of learning stations there were only two stations where the learning station experiences were sufficiently utilized to develop Project curriculum. These were the Philadelphia Zoo and the Philadelphia Courts. Follow-up lessons were developed for some of the other stations, but they were generally implemented on a very limited basis at the project. The visitations of teachers to outside learning stations during the summer staff development workshop should help to correct this situation.

Overall the outside learning station experience was a success. The main factor for success on at least two of the three attributes appears to be significant involvement

of the learning station personnel in the planning stages. Fifty percent of the Wilson Project students had an opportunity to attend at least one learning station. Next year, now that the mechanism for developing and implementing outside learning stations has been established, participation in as many outside learning stations as possible should be equitably distributed to all project students.

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APPENDIX B

EDISON PROJECT OBJECTIVES 1973 - 1974

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Overall Project Objectives

1. To maintain a dropout rate of no more than twenty percent for Edison Project students.
2. To maintain an A.D.A. for Edison Project students that is equal to or greater than the A.D.A. for Edison High School.
3. Sixty percent of the students graduating from the Edison Project will be given at least two job prospects or plans for post-high school educational programs.
4. The average gain in reading and arithmetic achievement levels, as measured by the Comprehensive Test of Basic Skills, will be at least 6 months during each year attendance in the Edison Project.
5. To establish a dropout prevention model within Edison High School.
6. To utilize Community Resource People for organizing a parent organization that will be supportive of and involved in the Edison Project.
7. To finalize a curriculum procedure that make use of the educational and occupational needs of the Edison Project students.

Instructional Objectives

1. By the completion of the 1973-74 school year, curriculum materials and experience will have been developed and organized into a package that can serve as a one year guide for the educational activities of secondary students.

9. By the first day of the 1973-74 school year, plans will have been developed by the staff for at least the first month's classroom programs.

10. To establish and operate at least four learning stations corresponding to the four major disciplines by the end of the 1973-74 school year.

Reading Objectives

11. To place each child in a self-instructional program at a level that reflects his reading ability. Such placement will be made within four weeks of the completion of intake procedures.

12. To collect from each teacher a copy of all language arts material they have developed. This material will be shared by all staff members.

13. The Reading Specialist will meet with each teacher during planning and implementation stages for at least one-half hour each week.

14. To coordinate and conduct four bi-monthly staff development sessions on methodology and management of reading instruction.

15. To conduct ongoing training sessions in reading for paraprofessionals.

16. To provide remedial reading instruction for those students whose reading achievement places them in the lowest fifth of the project distribution. Each of these students

Math Objectives

17. To place each student in a self instructional program that reflect his mathematics ability. Such placements shall be made within 4 weeks of the completion of intake procedures.

18. The Math Specialist will meet with each teacher during planning and implementation stages for at least one-half hour each week.

19. To coordinate and conduct four bi-monthly staff development sessions on methodology and management of mathematics instruction.

20. To conduct ongoing training sessions for paraprofessionals.

21. (a) Students who place in the lowest fifth of the project distribution on mathematics achievement will be scheduled daily for remedial mathematics instruction in the Math Lab.

(b) The Math Lab will provide enrichment activities for those students who complete the required units in their Math classes.

(c) The Math Lab will provide the areas of mathematics necessary for high school equivalency and make them available for the more advanced math students for at least two extra periods of math a week.

(d) The Math Lab will provide specific instructional procedures for students to relate and apply mathematical concepts learned in school to situations

or problems encountered by the student out of school.

Career Development Objectives

22. To establish and operate at least five outside learning stations in the following areas: Business and Industry, Health, Legal, Socio-Political, Economic, and Cultural.

23. The Career Development staff will provide Career Development oriented lessons for the learning packets.

24. The Career Development Coordinator will locate at least ten realistic job openings which provide training for seniors.

25. (a) The Career Development Coordinator will provide summer job and supervision for all Project students who elect to work.

(b) The Career Development Coordinator will continue placement of Project students in BVR Trade schools.

26. (a) All students will be made aware of work/stipend opportunities by the Career Development staff.

(b) The Career Development Staff will provide for all Project students the opportunity to participate in the Work/Stipend Program.

Community Resource and Parent Involvement Objectives

27. Community Resource Aides will serve as liaison between the school and community by contacting a parent of guardian of each student at least once every two months.

28. The Project Director will inform the parents of the purpose and the progress of their children by having teachers meet with the parents of their students at least once during half of the school year.

29. Each Community Resource Aide will carry out two meetings of Edison Project, parents of the students that each aide is assigned. Such meetings will be used to inform parents of Project activities and to encourage their participation in the Project.

30. The Community Resource Aides will contact the homes of each student who has a high absenteeism rate to determine the cause of the low attendance.

Ancillary Services Objectives

31. Treatment objective will be determined for individual students by the professionals providing service to them.

32. All students will receive medical examinations upon entry into the program.

33. All students requiring special follow-up services outside of the Project will be referred to those services by the client-specific assistant.

APPENDIX C

SUPPLEMENTAL DATA

1. Student Questionnaire (Attitudinal) Alternative Program Office
2. Teacher Questionnaire - Edison Project
3. Achievement Gains Partitioned by Pretest Level
3. Summary of Achievement Gains According to Student Absence

ANALYSIS OF STUDENT QUESTIONNAIRE RESPONSES

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The Alternative Program Student Questionnaire, which was administered to Project students in May, covers four general areas: (1) general attitude toward school, (2) attitude toward teachers, (3) attitude toward organization of the school (e.g. classroom organization and structure, availability of supplies) and (4) student interest in schoolwork. Students responded to each question on a five point scale from strongly agree (+2) to strongly disagree (-2). The average student response for each category as summarized below is indicative of a slightly positive student attitude.

Category	1	2	3	4
Average student response	0.078	0.336	0.156	0.167

ANALYSIS OF TEACHER QUESTIONNAIRE RESPONSES

The Alternative Programs Teacher Questionnaire was administered to project teachers. Scoring was the same as for the student questionnaire. The general areas covered were (1) general satisfaction with curriculum and instruction, (2) teacher perception of student selection and attitude, (3) availability of supportive services, (4) physical plant and location of school, (5) working relationship with other

school personnel, and (6) record keeping and other non-instructional responsibilities. The average teacher response for each category is summarized below:

Category.	1	2	3	4	5	6
Average Teacher Response	1.312	0.438	0.653	0.375	0.375	0.812

This indicates a fairly strong satisfaction with the curriculum and instructional program and a positive acceptance of the record keeping and other non-instructional responsibilities that are expected of project teachers. All other categories are indicative of an overall positive attitude among the teachers toward the project.

CHIEF MEASUREMENT GAINS (LOSSES) IN BASIC SKILLS PARTITIONED BY
PRETEST LEVEL

Pretest Level		Less Than 3.0	3.1 - 5.0	More Than 5.0
Entire Project	Reading	1.07	0.07	0.06
	Sample Size	16	33	35
	Mathematics	0.44	0.33	0.26
	Sample Size	5	37	49
Fourth	Reading	1.0	-0.01	-0.34
	Sample Size	10	25	20
Clear-field	Math	0.05	0.18	0.29
	Sample Size	2	21	24
Edison	Reading	1.20	0.25	0.59
	Sample Size	6	8	15
Component	Math	2.16	0.49	0.19
	Sample Size	3	16	25

Summary of Achievement Gains According to Student Absence

Number of Days Absent 1973-74	<u>Reading</u>		<u>Arithmetic</u>	
	Mean Gain In Grade Equivalents	N	Mean Gain In Grade Equivalents	N
0-25	0.28	36	0.70	30
26-50	0.46	32	0.42	35
51-75	0.31	10	0.18	16
76-100	0.15	2	-1.20	3
101-125	-	-	-0.10	1
126-150	-0.50	1	0.60	1

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APPENDIX D

ORGANIZATIONAL STRUCTURE AND WORK BREAKDOWN CHARTS

ORGANIZATIONAL CHART OF THE EDISON PROJECT

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