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ABSTRACT

The City School District of Syracuse, New York devised an individualized instructional program which developed students who were creative, self-discoverers, problem-solvers, and capable of learning to learn. As a first step, a 1969 summer inservice workshop was held at which one or more administrators and two teachers from each of 13 schools were trained in the process of individualizing instruction through writing Learning Activity Packages (LAP). They developed skills in writing behavioral objectives, test items, diagnoses, etc., and then, in turn, trained over 300 staff members in their respective schools. Seventy LAPs were developed, and there were over 10,000 individual requests for their use at participating schools. Evaluation showed the workshops were effective means of training staff, that student academic achievement was better when LAPs were used, and that student and teacher attitudes toward LAPs were positive. Thirteen neighboring districts have since adopted the LAP method and information about the plan has been disseminated widely across the county. (PB)

CITY SCHOOL DISTRICT
Syracuse, New York
Individualized Instruction Unit

FINAL REPORT
Part II

DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

Elementary and Secondary Education Act
Title III

OEG8-067521-4681

CITY SCHOOL DISTRICT
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DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

Final Report
Part II

INTRODUCTION

Quality education and individualized instruction are alike in many ways with both being desired outcomes of education and very difficult to define. Most of our efforts in the past to accomplish these important outcomes have only paid lip service to "in group" words that sound good. This program has been developed to do something about this situation.

Through this project, a means of individualizing instruction has been developed. Planning for instruction, done by the staff, taking into account the variables of learning, such as interest, rate and style has been accomplished through this project.

GOAL

Considering the purpose of education to be to develop students who are creative, self discoverers, problem solvers, capable of learning how to learn, this program was established ... to serve this end.

FINDINGS

In recent years some progress has been made in providing more flexible buildings, involvement of teachers and administrators in decisions about class size, placement of students, etc. Teaming of teachers and differentiated staffing are making more effective use of staff. This program recognizes all of these factors and is designed to go beyond.

FINDINGS (continued)

Our findings in the development of this project over the past two years are that teachers and administrators can be trained in a process of individualizing instruction as evidenced by the over 300 teachers who have done so. In addition, curriculum materials can be constructed to be used as a means of individualizing instruction. The learning activity packages are proof that this has been done. Detailed explanations of these two points are found in the appropriate sections of this report.

STATEMENT OF PROBLEM

Educators have long been aware of the importance of individual differences in students. The newest member of any school staff soon becomes aware of individual differences which exist within the classroom. Teachers are continually trying to provide programs to accommodate these differences so that each child's unique potential is awakened and developed. The following questions are frequently asked: How can each child be reached? How can each child be motivated to learn all he is capable of learning? How can each child be given the personal attention he needs? The answer to these questions is to design experiences to meet each student's individual needs. The basis for the development of this project is to provide a functional instructional program which will provide these experiences.

In order to evaluate this program a clear understanding of the goal must be presented. The overall goal is to provide quality education through staff training for individualized instruction including in-service and curriculum construction.

The need to initiate an extensive training for individualized instruction is the result of synthesizing the ideas and thoughts of many local school personnel.

ATTACKING THE PROBLEM

A workshop was conducted for the administrators and teachers from thirteen elementary schools during July, 1969. Over forty staff members participated in this workshop. The training called for developing techniques and methods of individualizing instruction. Dr. Sidney P. Rollins, Dean, Division of Graduate Studies, Rhode Island College was the consultant for this workshop. Other consultants were used during the projects. During the workshop the principal and two teachers from each building were trained in a process of individualizing instruction through writing Learning Activity Packages. A case for individualizing instruction was carefully developed by Dr. Rollins. The participants were trained in skills of writing behavioral objectives, test items, diagnoses, rationales, etc.

The trained staff members were responsible during the 1969-1970 school year for training other staff members in their respective schools. Half day workshops were scheduled for this purpose. Over 300 teachers and administrators have been trained in the process of systematically planning for instruction as one means of individualizing instruction. As a result of our training, a number of Learning Activity Packages have been written. Over 10,000 student packages were used and evaluated.

Early during the 1969-1970 school year a number of concerns were expressed by the participants in the program. As a result, a conference was set up to assist teachers and administrators in developing a master plan for individualizing instruction in the Syracuse City Schools. This plan included clearly stated objectives with detailed descriptions of activities necessary to accomplish the objectives. A copy of the systematic plan is included for your information. (See appendix I)

ATTACKING THE PROBLEM (continued)

In addition to providing the long range plan for implementing individualized instruction in this City School District, it also involved over eighty parents, teachers, and administrators in developing the plan. As a result of the Systematic Plan Booklet, a writing team was hired to write Learning Activity Packages in primary reading and intermediate social studies. Copies of the packages developed are included for your information. (See appendix 2)

Over 70 Learning Activity Packages are included in a district bank. Teachers from participating schools order these for individual students. Requests for over 10,000 initial student packages have been ordered. The acceptance and use of materials available is evidence that the program has proven worthwhile to teachers. For each learning activity package used an evaluation was included. Information was requested from the teacher as well as each student. Pre and post test information has been collected for use in the final evaluation.

During September 1970, a workshop was conducted for the administrators from the participating schools designed after suggestions and recommendations supplied by this group during the spring of 1970. The primary focus was the administrators role in implementation.

ANALYZING THE DATA

The training of staff in a way of individualizing instruction using Learning Activity Packages will effect the quality of education in the Syracuse City School District.

We have copies of materials which teachers constructed as evidence that this objective has been accomplished. (Appendix 2)

Prior to our initial workshop for administrators and teachers we collected data on each participant. During the workshop and upon the

ANALYZING THE DATA (continued)

completion of the program, a number of attempts were made to collect information from the participants to determine the effectiveness of the program. Summaries of this material follows:

1. Instructional Objectives Preference List. In conjunction with the Vimcet material prepared by Eva L. Baker and W. James Pophan at U.C.L.A., we pre-tested and post-tested with the following results;

Pre-test		Post-test
45-95	Range	44-97
68	Mean	81
69	Median	79

2. On a locally prepared instrument dealing with arguments for and against writing behavioral objectives, the following results were noted. On the pre-test 26% answered as we wanted them to, while on the post-test dealing with the same area,69% responded as desired.

3. On a survey asking for reactions to the program consultants, over 90% of the participants felt the presentations were worthwhile. 70% indicated that the work sessions were worthwhile.

4. On a post-evaluation which was designed to determine if the individuals were able to choose from five descriptions of L.A.P.'s the one that best described a Learning Activity Package, all of the group responded correctly.

5. The quantity and quality of material produced is evidence that this objective was satisfactorily met.

This approach to individualizing instruction effects the students performance level and effects his attitude toward learning.

Design-IA

A control group of students was selected from schools not participating in the Learning Activity Package program to be matched with a like group who were taught by using learning packets. Standardized tests

ANALYZING THE DATA, Design-IA (continued)

administered during May were analyzed. The following results were noted:

Based on previous standardized test performance, matched control schools were selected from among the "NON-LAP" schools in the Syracuse City District. Standardized reading achievement test performance score distributions were compiled for first and second grade pupils in the schools shown in Table I below and analyzed by means of a chi square test.

Table I EXPERIMENTAL AND CONTROL SCHOOLS

Experimental "LAP" Schools	Control "Non-LAP" Schools
Bellevue	Porter
Huntington	Hughes
LeMoyne	Nichols
Meachem	Webster
McKinley	Jefferson
Powlesland	Salina
*Prescott	*Clinton

*Test data available for second grade students only

Score distributions and chi square values are reported in Appendix 6. The results for first grade show a slight, non-statistically significant, difference in favor of LAP schools. The results for grade 2, however, show highly significant differences (at the .001 level) in favor of LAP schools with 50% of the pupils in the LAP schools in this study performing above the national median as compared to only 30% of the pupils in matched "non-LAP" schools performing at that level.

Design I-B

A sample of 5th grade teachers currently involved with Learning Activity Packages were asked to devise a packet using a set of behavioral objectives dealing with ratios and proportions. A similar group of teachers not involved in the program were given the same set of objectives and to prepare a lesson around the objective using instructional methods of their own choosing.

The doctoral study used to compare the results did not contain the necessary information needed to do the analysis called for. As a result, we have omitted this from our research design.

ANALYZING THE DATA (continued)

Question 2

Design 2 The pre and post-test built into each Learning Activity Package were analyzed to determine the degree to which students evidenced mastery of the various skills or concepts reflected by the behavioral objectives. This data was analyzed and the findings are as follows:

The scoring of some fourteen Learning Activity Packages as effected by different class groups was subjected to the scrutiny of the t test. These were randomly selected from within the guidelines of providing sufficient variety and reliability coverage in reference to group size, subject area and level. The degree of significance, thus revealed through this pre and post testing, ranges from a high .01 factor to an indication of no significance. Further investigation has suggested that many factors could possibly enter into the non significant ratings. In that this was a learning of process year for teachers and youngsters alike, lack of experience with this new approach to learning seems to add to a degree of invalidity in the judging of the effectiveness of the process. In some cases, the Learning Activity Package was not applicable either because of inappropriate content or due to a lack of a particular subject need on the part of the student. In many cases, due to pre knowledge caused by pre learning in or outside of school the high scoring pre-test results left an inconsequential area for the measurement of improvement. A complete summary of the t test is found in Appendix 3.

Question 3

Design 3 Each student was asked to respond to a questionnaire designed to elicit the students general attitude toward learning via learning packages

ANALYZING THE DATA, Design 3 (continued)

A summary of this data follows:

Student evaluation sheets accompanied each lap. Once completed these were used along with other guidelines in the ongoing revisal of each individual Learning Activity Package. Within this evaluation sheet the students responded to questions concerning pages they liked and those they didn't like. Reasons for these responses were also sought. Most reasons were positive and based on such terms as "fun," "interesting," "informative," "readable," "enjoyable," etc. In response to questions student's reaction toward the Learning Activity Package as a method of learning, it was indicated in better than 95% of the responses that they not only liked using the Learning Activity Package method, but preferred it to all others.

Question 4

Design 4 Each teacher completed a short questionnaire to assess the degree to which they view Learning Activity Packages as effective.

A summary follows:

- One means of evaluating the effectiveness of using Learning Activity Packages as perceived by teachers was to have each teacher complete an evaluation for each package used. In response to the question, "Were the goals worthwhile?", all responses were positive. The second question: "Did the students have trouble understanding any of the directions?" The majority responded no to this question. The third question asked was: "Did the activities hold the students' interest?" All responses were positive.

- Teachers reported that when Learning Activity Packages were used, students were excited, enjoyed what they were doing, were interested in their work, highly motivated and were looking forward to using another Learning Activity Package.

ANALYZING THE DATA, Design 4 (continued)

- Teachers indicated that after trying one Learning Activity Package they looked forward to using another. The enthusiasm experienced by the students carried over to the teacher. The suggested ideas caused many students to go in depth. The use of Learning Activity Packages highlighted the need for children to become responsible for checking their own work, recording progress and selecting activities on their own. One teacher reported that the ideology of the program was excellent.

Negative

Teachers had concerns about getting started using Learning Activity Packages. Since a LAP is a different approach, it is understood why this would happen. Learning Activity Packages were viewed as an end in themselves rather than a means to an end.

Teachers expressed concern about the format and the established LAP bank. This included the use of a prescription sheet, time delay from pretest to receipt of material, pre-test to general, need to be more attractive, etc.

Other comments fall under organizational and the established system such as: 1. Films and filmstrips not being available when needed. 2. Pages missing. 3. Time required to complete. 4. Tapes not clear. Steps have been taken to correct these difficulties.

Assessment for this program is made on the basis of:

1. The number of teachers, principals, and schools who participated in the training. Over 20 administrators with over 30 teachers from 13 elementary schools were trained in a means of individualizing instruction during the initial phase of this program.

ANALYZING THE DATA, Design 4 (continued)

2. The effectiveness of the training in terms of subsequent planning and implementation at individual schools. The principal-teacher resource teams planned training sessions in their respective schools. Half a day workshops were scheduled for this purpose. All schools continued through this second phase with two dropping out at the end and two new schools being picked up.
3. The impact on various schools is measured by the willingness to continue with the installation of individualized instruction during the following (1970-71) school year. The low attrition rate and the fact that over 300 teachers were trained in the process of planning for instruction, along with the requests for over 10,000 initial student packets, is evidence that there was acceptance and use of the idea.

CONCLUSIONS AND RECOMMENATIONS

The development of staff as a means of improving education through individualizing instruction is possible. Materials can be constructed by teachers which will aid them in individualizing their instructional program. In the original proposal entitled Designing a Campus Plan for Quality Education, the staff training aspect was only one component within the total program. The original proposal was amended so the instructional portion of the project was allowed to be initiated and continue for the final two years of the program.

An outstanding example of improved communication between districts can be evidenced by the development of a cooperative program for the summer of 1970 by ECCO.

CONCLUSIONS AND RECOMMENDATIONS (continued)

As a result of the interest expressed by other school districts in the immediate area, the Regional Title III Office, Educational and Cultural Center Serving Onondaga and Oswego Counties (ECCO) established a summer workshop. Teachers from a number of area school districts participated. A list of the L.A.P.'s which were written is included for your information. (Appendix 4) The staff trained during the summer agreed to help others with in-service training in their own school districts. Consultants from our program were available so that a common thread runs through the development of these projects.

The development of this program was a result of a survey conducted by ECCO in which school districts indicated a desire to know more about ways of individualizing instruction. The program was labeled Staff Development. Over one hundred educators from thirteen area school districts participated in training in the development of instructional materials (Learning Activity Packages) as a means of individualizing instruction.

Drs. James Smith and John Readling were consultants to this program, both of whom worked very closely with the Syracuse L.A.P. program. One phase of the program dealt with training leadership people who acted as group leaders in the program, and are now available as resource people in the area.

Evaluation at the end of the sessions showed a high degree of enthusiasm on the part of the participants.

A report of the program is included in the Annual Report 1969-70 made by ECCO.

As well as this regional dissemination, state and school districts across the country have requested and been supplied with information regarding the Learning Activity Package approach to learning.

CONCLUSIONS AND RECOMMENDATIONS (continued)

Over 80 requests were made during the first year of the program with 30 during the second year.

A plan is now being developed whereby the philosophy of the program will be incorporated into the instruction program within the District.

With the termination of supporting funds, the Learning Activity Package program in the City School District will require that a plan is devised to continue the development of the program in participating schools. Also, a plan has been devised to include other schools wishing to become involved in the program. It became the Central Offices responsibility to see that this instructional approach is effectively integrated into the on-going program.

One of the first steps was to determine the reaction of teachers and administrators to the effects this program has had on them. Separate meetings were held with representatives from these two groups to discuss the pros and cons and to make recommendations for the future.

The results of these two meetings are summarized (in Appendix 5). The second step was to develop a Curriculum bulletin to be distributed to all elementary teachers. This bulletin discusses individualized instruction, identifies the districts goals, the reason for concern, the role of the teacher, principal and Central Office staff. A procedure for getting started is outlined along with available resources. At this time, the bulletin is in the process of being printed. Copies will be available in early September.

APPENDIX - 3

CENTRAL FARMING REGION

#	Pre	Post	Diff
1.	17	22	+5
2.	13	21	+8
3.	21	21	+7
4.	17	28	+11
5.	20	28	+8
6.	21	27	+6
7.	14	24	+10
8.	23	26	+3
9.	21	27	+6
10.	18	24	+6
11.	14	25	+11
12.	17	23	+6
13.	19	20	+1
14.	18	26	+8
15.	20	28	+8
16.	15	23	+8
17.	20	20	0
18.	14	19	+5
19.	14	20	+6
20.	20	26	+6
21.	16	21	+5

$N = 21$ $\quad \Sigma d = 134$ $\quad \bar{d} = 6.38$

$(\Sigma d)^2 = 17,956$ $\quad \Sigma d^2 = 1012$

$$Sd = \sqrt{\frac{21(1012) - 17956}{20}} = \sqrt{164.8} = 12.8$$

$$t = \frac{(6.38)(4.6)}{12.8} = 2.264$$

Significant at .01 level

SWITZERLAND

#	Pre	Post	Diff
1.	16	25	+9
2.	16	23	+7
3.	12	20	+8
4.	17	25	+8
5.	13	21	+8
6.	13	24	+9
7.	15	25	+10
8.	12	16	+4
9.	14	24	+10
10.	14	19	+5
11.	12	22	+10
12.	15	18	+3
13.	16	21	+5
14.	10	20	+10
15.	17	23	+6
16.	16	25	+9
17.	19	25	+6
18.	12	24	+12
19.	16	20	+4
20.	16	22	+6
21.	14	26	+12
22.	17	24	+7
23.	15	20	+5
24.	19	26	+7
25.	13	21	+8
26.	12	11	-1
27.	11	17	+6
28.	11	13	+2

$N = 28$ $\quad \Sigma d = 195$ $\quad \bar{d} = 6.964$

$(\Sigma d)^2 = 38{,}025$ $\quad \Sigma d^2 = 1599$

$$Sd = \sqrt{\frac{28(1599)-38025}{27}} = \sqrt{72.2} = 8.5$$

$$t = \frac{(6.964)(\sqrt{28})}{8.5} = 4.342$$

Significant at .01 level

GULF COAST

#	Pre	Post	Diff
1.	20	37	+17
2.	17	26	+9
3.	28	40	+12
4.	15	32	+17
5.	16	25	+9
6.	22	39	+17
7.	26	35	+9
8.	22	37	+15
9.	17	31	+14
10.	25	36	+11
11.	22	30	+8
12.	18	37	+19
13.	17	34	+17
14.	26	42	+16
15.	23	34	+11
16.	29	42	+13
17.	18	28	+10
18.	21	30	+9
19.	31	38	+7
20.	28	43	+15
21.	30	42	+12
22.	25	36	+11
23.	24	39	+15
24.	28	37	+9
25.	17	33	+16
26.	19	27	+8
27.	31	43	+12

$N = 27$ $\quad \Sigma d = 338$ $\quad \bar{d} = 12.518$

$(\Sigma d)^2 = 114,244$ $\quad \Sigma d^2 = 4,546$

$$Sd = \sqrt{\frac{27(4,546)-114,244}{26}} = \sqrt{326.8} = 18.1$$

$$t = \frac{(12.518)(\sqrt{27})}{18.1} = 3.59$$

Significant at .01 level

JUNGLE

#	Pre	Post	Diff
1.	13	20	+7
2.	19	23	+4
3.	16	22	+6
4.	16	23	+7
5.	19	23	+4
6.	17	21	+4
7.	15	23	+8
8.	17	23	+6
9.	18	23	+5
10.	17	23	+6
11.	16	23	+7
12.	16	23	+7
13.	16	18	+2
14.	17	23	+6
15.	15	23	+8
16.	18	21	+3
17.	16	20	+4
18.	14	19	+5
19.	19	23	+4
20.	15	23	+8

$N = 20 \qquad \Sigma d = 111 \qquad (\Sigma d)^2 = 12{,}321$

$\Sigma d^2 = 675 \qquad d = 5.55$

$$Sd = \sqrt{\frac{20(675) - 12321}{19}} = \sqrt{62.05} = 7.9$$

$$t = \frac{(5.55)\ (\sqrt{20})}{7.9} = 3.161$$

Significant at .01 level

TWO BIG MISTAKES

#	Pre	Post	Diff
1.	11	17	+6
2.	10	14	+4
3.	10	17	+7
4.	8	11	+3
5.	13	21	+8
6.	0	11	+11
7.	13	22	+9

$N = 7$ $\quad \Sigma d = 48$ $\quad \bar{d} = 6.857$

$(\Sigma d)^2 = 2304$ $\quad \Sigma d^2 = 376$

$$Sd = \frac{\sqrt{7(376)-2304}}{6} = \sqrt{54.66} = 7.4$$

$$t = \frac{(6.857)\sqrt{7}}{7.4} = 2.446$$

Significant at .025 level

LATITUDE & LONGITUDE

#	Pre	Post	Diff
1.	19	30	+11
2.	18	24	+6
3.	26	30	+4
4.	19	31	+12
5.	29	27	-2
6.	19	27	+8
7.	25	30	+5
8.	23	27	+4
9.	18	30	+12
10.	15	27	+12
11.	26	33	+7
12.	24	28	+4
13.	19	24	+5
14.	18	29	+11
15.	15	20	+5
16.	11	19	+8
17.	26	31	+5
18.	0	9	+9
19.	28	33	+5
20.	11	18	+7
21.	27	35	+8

$N = 21 \qquad \Sigma d = 146 \qquad \bar{d} = 6.952$

$(\Sigma d)^2 = 21{,}316 \qquad \Sigma d^2 = 1258$

$$Sd = \sqrt{\frac{21(1258) - 21{,}213}{20}} = \sqrt{255.1} = 15.97$$

$$t = \frac{6.952}{15{,}57} = 1.993$$

Significant at .05 level

DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

WASHINGTON & OREGON

#	Pre	Post	Diff
1.	32	38	+6
2.	36	40	+4
3.	26	40	+14
4.	25	35	+10
5.	32	27	-5
6.	32	38	+6
7.	27	35	+8
8.	33	40	+7
9.	21	26	+5
10.	29	39	+10
11.	30	25	-5
12.	27	35	+8
13.	22	29	+7
14.	26	37	+11
15.	27	40	+13
16.	25	32	+7
17.	20	34	+14
18.	20	28	+8
19.	24	42	+18
20.	25	34	+9
21.	29	36	+5
22.	32	40	+8
23.	31	37	+6
24.	26	38	+12
25.	18	16	-2
26.	28	43	+15
27.	30	38	+8
28.	27	32	+5
29.	26	38	+12
30.	25	43	+18
31.	29	33	+4
32.	33	43	+10
33.	24	37	+13

$N = 33$ $\quad \Sigma d = 269$ $\quad \bar{d} = 8.151$

$(\Sigma d)^2 = 72{,}361$ $\quad \Sigma d^2 = 3129$

$$Sd = \sqrt{\frac{33(3129) - 72{,}361}{32}} = \sqrt{965.5} = 31$$

$$t = \frac{(8.151)(\sqrt{33})}{32} = 1.509$$

Significant at .08 level

A RHYME A DAY

#	Pre	Post	Diff
1.	22	31	+9
2.	23	28	+5
3.	29	29	0
4.	27	29	+2
5.	101	117	+16
6.	132	132	0

$N = 6$ $\quad \Sigma d = 32$ $\quad \bar{d} = 5.333$

$(\Sigma d)^2 = 1024$ $\quad \Sigma d^2 = 366$

$$Sd = \sqrt{\frac{6(366)-1024}{5}} = \sqrt{234.4} = 15.3$$

$$t = \frac{5.333(2.45)}{15.3} = .853$$

Not significant

OUR NATIONAL ANTHEM

#	Pre	Post	Diff
1.	19	22	+3
2.	21	22	+1
3.	8	11	+3
4.	18	19	+1
5.	22	22	0
6.	22	22	0
7.	22	22	0
8.	18	22	+4
9.	21	19	-2
10.	21	22	+1
11.	15	19	+4
12.	10	17	+7
13.	19	18	-1
14.	17	22	+5
15.	9	18	+9
16.	22	22	0
17.	15	15	0
18.	14	15	+1
19.	18	19	+1
20.	13	22	+9
21.	20	22	+2
22.	18	10	-8

$N = 22 \qquad \Sigma d = 41 \qquad \bar{d} = 1.863$

$(\Sigma d)^2 = 1681 \qquad \Sigma d^2 = 364$

$$Sd = \sqrt{\frac{22(364) - 1681}{21}} = \sqrt{301.3} = 17.3$$

$$t = \frac{(1.863)\ (4.7)}{17.3} = 5.06$$

Not significant

MAKING PLURALS BY ADDING S TO THE NOUN

#	Pre	Post	Diff
1.	54	53	-1
2.	51	54	+3
3.	54	54	0
4.	47	54	+7
5.	54	54	0

$N = 5$ $\quad \Sigma d = 9$ $\quad \bar{d} = 1.8$

$(\Sigma d)^2 = 81$ $\quad \Sigma d^2 = 59$

$$Sd = \sqrt{\frac{5(59) - 81}{8}} = \sqrt{26.75} = 5.17$$

$$t = \frac{(1.8)\left(\sqrt{5}\right)}{5.17} = .776$$

Not significant

CANADA

#	Pre	Post	Diff
1.	28	27	-1
2.	35	39	+4
3.	29	31	+2
4.	27	35	+8
5.	19	22	+3
6.	21	35	+14
7.	26	33	+6
8.	30	37	+7
9.	31	32	+1
10.	31	34	+3
11.	29	38	+9
12.	29	37	+8
13.	31	31	0
14.	19	29	+10
15.	22	21	-1
16.	19	14	-5
17.	20	33	+13
18.	29	37	+8
19.	24	29	+5
20.	24	31	+7
21.	27	23	-4
22.	26	30	+4
23.	23	36	+13
24.	31	33	+2
25.	26	32	+6

$N = 25$ $\quad \Sigma d = 122$ $\quad \bar{d} = 4.880$

$(\Sigma d)^2 = 14{,}884$ $\quad \Sigma d^2 = 992$

$$Sd = \sqrt{\frac{25(992) - 14{,}884}{24}} = \sqrt{413.1} = 20.3$$

$$t = \frac{\sqrt{4.88(25)}}{20.3} = 1.201$$

Not significant

NAT LOVE, NEGRO COWBOY

#	Pre	Post	Diff
1.	7	8	+1
2.	5	6	+1
3.	7	7	0
4.	6	6	0
5.	6	7	+1
6.	0	7	+7
7.	7	8	+1
8.	6	9	+3
9.	7	7	0
10.	6	9	+3
11.	6	8	+2
12.	5	9	+4
13.	8	8	0
14.	5	7	+2
15.	7	7	0
16.	4	5	+1
17.	8	8	0
18.	5	8	+3
19.	7	8	+1
20.	6	7	+1
21.	7	8	+1
22.	6	4	-2
23.	6	7	+1
24.	7	6	-1
25.	7	8	+1

$N = 25$ $\quad \Sigma d = 35$ $\quad \bar{d} = 1.4$

$(\Sigma d)^2 = 1225$ $\quad \Sigma d^2 = 123$

$$Sd = \frac{\sqrt{25(123)-1225}}{24} = \sqrt{77.083} = 8.78$$

$$t = \frac{1.4(\sqrt{25})}{8.78} = .797$$

Not significant

HONOR ROLL OF PIONEERS

#	Pre	Post	Diff
1.	21	33	+12
2.	29	34	+5
3.	15	35	+20
4.	33	35	+2
5.	33	34	+1
6.	29	34	+5
7.	29	34	+5
8.	36	36	0
9.	27	35	+8
10.	32	37	+5
11.	29	34	+5
12.	26	36	+10
13.	31	34	+3
14.	33	35	+2
15.	31	30	-1
16.	36	36	0
17.	34	37	+3

$N = 17$ $\quad \Sigma d = 85$ $\quad \bar{d} = 5$

$(\Sigma d)^2 = 7225$ $\quad \Sigma d^2 = 861$

$$Sd = \sqrt{\frac{17(861)-7225}{17}} = \sqrt{436} = 20.9$$

$$t = \frac{5(\sqrt{17})}{20.9} = .985$$

Not significant

WHY, WHAT, WHO WHEN, WHERE

#	Pre	Post	Diff
1.	21	31	+10
2.	23	31	+8
3.	24	31	+7
4.	25	31	+6
5.	25	31	+6
6.	26	29	+3
7.	29	30	+1
8.	30	30	0
9.	30	31	+1
10.	30	31	+1
11.	30	31	+1
12.	29	31	+2

$N = 12$ $\quad \Sigma d = 46$ $\quad \bar{d} = 3.833$

$(\Sigma d)^2 = 2116$ $\quad \Sigma d^2 = 302$

$$Sd = \sqrt{\frac{(12)(302)-(2116)}{11}} = \sqrt{137.09} = 11.7$$

$$t = \frac{3.833}{\frac{11.7}{\sqrt{12}}} = \frac{3.833(3.46)}{11.7} = 1.113$$

Not significant

APPENDIX - 4

The following are the LAP topics developed through ECCO's workshop.

Topic	Grade Level
1. Colors	Kndg.
2. Math	1st
3. Sets	1st
4. Sounds are all around us	1st
5. Insects	2nd
6. Plants live and Grow	2nd
7. Math Consists	3rd
8. Math	3rd
9. Writing Sentences	3rd
10. Beginning to use the Dictionary	Primary
11. Famous Americans	4th
12. Limited Resources of Peoples and Regions	4th
13. Using the Dictionary	5th
14. Outlining	5th
15. Study Skills for Grades 4-6	4th-6th
16. Machines in Motion	6th
17. Knowledge of Use of Sentences	6th
18. Heredity and Environment	6th
19. Development of Civilization in River Valleys of Mid-East	6th

Topic	Grade Level
20. Factors Causing Climate	6th
21. Ideas and Tools for New Products	6th-8th
22. Newspaper Skills	6th-8th
23. Trees Comprise the Highest form of Plant	7th
24. Reading for Fun	7th
25. Music Reading I	7th
26. Purposes of Language	7th
27. Molecules in Action	7th
28. The Short Story	7th-8th
29. Parts of a Short Story	7th-8th
30. Causes of the Civil War	7th-8th
31. Interdependance of Living Things	7th-8th
32. U.S. Constitution	8th
33. Poetic Technique	8th
34. Expansion	8th
35. Poetry	8th
36. Westward Expansion	8th
37. Novel as Literary Topic	9th
38. China: Reaction to Western Influence (1823-1911)	9th
39. Weather & Climate	9th
40. Poetry I	9th
41. Mythology	9th
42. Exponents and Logrithms	Secondary
43. Measurement and Motion	Secondary

Topic	Grade Level
44. The Medieval Period in Eng. Lit.	11th
45. Measurement and Vectors	Secondary
46. MacBeth	12th
47. The Study of Life	10th
48. Variables and Open Sentences	Secondary
49. Basic Skills Level 4	Secondary
50. Contemporary Moral Problems	Secondary
51. Latin I	Secondary
52. Sets-Numbers	Secondary
53. Solving Equations with One Unknown	Secondary
54. Bookkeeping Cycle	Secondary
55, Reasoning: Language & Logic	11th
56. Periodic Table	Secondary
57. Typing Skills	Secondary
58. Entire Course	12th
59. Beginning of Civilization	Secondary
60. Measurement & Math in Physics	
61. Government and Politics	Secondary
62. Introducing American Lit.	10th
63. The Negro's Quest for Civil Rights	11th
64. Mathematical Systems	Secondary
65. Gas Laws	Secondary
66. Identifying the Simple Sentence	Secondary
67. The Anglo-Saxon Period	11th

DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

The following school districts were involved in this program:

Jordan - Elbridge	Tully
North Syracuse	Liverpool
Fayetteville-Manlius	Oswego
Westhill	Altmar Parish - Williamstown
Lafayette	City Diocese

DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

Appendix - 5

The discussion by teachers covered the following topics:

1. Motivation - interest and needs.
2. Continuous progress.
3. Individual differences.
4. Positive attitude (Student-Parent) toward school and learning.
5. Changing role of the teacher.
6. Student responsibility.
7. Flexibility.
8. Community involvement.

The administrators covered topics which were different than the teachers and included:

1. Grouping.
2. Teaming.
3. Lack of staff training.
4. Available resources for staff development.
5. District goal. Building goals.
6. Principal's role.

DESIGNING A CAMPUS PLAN FOR QUALITY EDUCATION

APPENDIX - 6

READING ACHIEVEMENT
Experimental and Control Group Differences*1

a. READING ACHIEVEMENT - GRADE 1
T.O.B.E. LANGUAGE - MAY 1971

NATIONAL PERCENTILE SCORE RANGE	PERCENT OF PUPILS TESTED	
	EXPERIM. GROUP	CONTROL GROUP
Above 50th Percentile	71.8	67.4
23-50th Percentile	19.0	21.3
11-22nd Percentile	5.8	8.4
10th Percentile and below	3.4	2.9
NUMBER TESTED	531	371

CHI SQUARE = 3.2978
NO SIGNIF. DIFFERENCE

b. READING ACHIEVEMENT - GRADE 2
METROPOLITAN ACHIEVEMENT TEST - MAY 1971

NATIONAL PERCENTILE SCORE RANGE	PERCENT OF PUPILS TESTED	
	EXPERIM. GROUP	CONTROL GROUP
Above 50th Percentile	53.7	30.8
23-50th Percentile	24.9	38.1
11-22nd Percentile	9.9	13.1
10th Percentile and below	11.5	17.9
NUMBER TESTED	497	396

CHI SQUARE = 47.5044
SIGNIF. AT THE .001 LEVEL

*1 The experimental and Control group each consist of 6 schools for grade 1 and 7 schools for grade 2.