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IDENTIFIERS *Elementary Secondary Education Act Title III; ESEA Title III; Michigan; Sault Saint Marie

ABSTRACT

The Michigan Department of Education's 1971-72 Title III evaluation reports on the Elementary and Secondary Education Act (ESEA), Title I, Open Concept School program for Indian Education in the Sault Sainte Marie Area Public Schools. Of the 185 students in the school, 100 were of American Indian origin; approximately 1/2 were economically and educationally deprived; and 14% were rural. The program included students from 3 1/2 years old to 6th grade. The major goals were: to demonstrate the feasibility of an open concept neighborhood school for the education of Indian children; to create closer community-school relationships; to improve the performance of students in cognitive skills; to broaden student behavior in affective skill areas; and to increase student mastery of psychomotor skills. Part I gives statistical data by ESEA evaluation form; Part III, Evaluation Data, also uses reporting forms. Copies of the teacher performance rating scales, the teacher evaluation of the open concept, and a parent survey regarding open concept were also included. The technical supplement includes, both in narrative and tabular form, the research design, instrumentation, and results of testing with the four major instruments--the Test of Basic Experiences, the Stanford Achievement Test, the Otis-Lennon Test of Mental Ability, and the Purdue Psycho Motor Survey. (KM)

EVALUATION

OPEN CONCEPT SCHOOL FOR INDIAN EDUCATION

1971-72

SAULT STE. MARIE AREA PUBLIC SCHOOLS
SAULT STE. MARIE, MICHIGAN

Submitted by:

William A. Poppink
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Sault Ste. Marie Area Public Schools
Sault Ste. Marie, MI 49783

Contact Person:

Johann F. Ingold
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Sault Ste. Marie Area Public Schools
Sault Ste. Marie, MI 49783

MICHIGAN DEPARTMENT OF EDUCATION

ESEA TITLE III

Lansing, Michigan 48902

PART I

STATISTICAL DATA

GE-4392
8/72

Michigan Department of Education
General Education Services
ESEA TITLE III UNIT
Box 420 Lansing, Michigan 48902

PART I - STATISTICAL DATA

ESEA TITLE III STATISTICAL DATA

Elementary and Secondary Education Act of 1965 (P.L. 89-10)

THIS SPACE FOR STATE USE ONLY

BUDGET PERIOD	PROJECT PERIOD	PROJECT NUMBER	No. of LEA's Served
Beginning Date			
Ending Date	☐ 1st ☐ 2nd ☐ 3rd		

MAILING INSTRUCTIONS: Return the ORIGINAL (BLUE) copy and four WHITE copies not later than 90 days after the date of termination of the BUDGET PERIOD to the STATE address indicated above. Retain ONE copy.

SECTION A - PROJECT INFORMATION

	Legal Name	District Code No.	Telephone – Area Code/Local No.
EDUCATIONAL AGENCY	Sault Ste. Marie Area P/S	17-010-17-3-K-12	906/632-3379
	Address	**City**	**County** / **Zip Code**
	408 E. Spruce Street	Sault Ste. Marie	Chippewa / 49783

2. REASON FOR SUBMISSION OF THIS FORM (Check One Only)
   - A. [ ] Application for Initial Grant (First Budget Period)
   - B. [ ] Application for Second Budget Period
   - C. [ ] Application for Third Budget Period
   - D. [X] End of Budget Period Report

3. IN ALL CASES EXCEPT THE INITIAL GRANT, GIVE THE MICHIGAN DEPARTMENT OF EDUCATION ASSIGNED PROJECT NUMBER. 32-0721-1/3

4. EMPHASIS OF PROGRAM (Check One Only) [X] Experimental [ ] Demonstration

5. TYPE OF ACTIVITY (Check One Only)
   - A. [ ] Planning of Program
   - B. [X] Operation of Program

6. PROJECT TITLE (10 Words or Less) OPEN CONCEPT SCHOOL FOR INDIAN EDUCATION

7. PROJECT FOCUS (Check One Only)
   - A. [X] General Education
   - B. [ ] Handicapped
   - C. [ ] Guidance and Counseling

8. TITLE III BUDGET SUMMARY FOR PROJECT

STATE USE ONLY

	BEGINNING DATE Month	BEGINNING DATE Year	ENDING DATE Month	ENDING DATE Year	FUNDS REQUESTED	NEGOTIATED BUDGET
A. Application for Initial Grant (First Budget Period)						
B. Application for Second Budget Period						
C. Application for Third Budget Period						
D. Total Title III Funds						
E. End of Budget Report (Final)	July 1	1971	June 30	1972		

9. PROJECT DIRECTOR OR CONTACT PERSON

Name / Title	Address (Number, Street, City, State, Zip Code)	Phone Number Area Code
Johann F. Ingold Director of State and Federal Compensatory Programs	408 E. Spruce Street Sault Ste. Marie, MI 49783	906/632-7172

10.

Name of Person Authorized to Receive Grant & Title (Please Type)	Address (Number, Street, City, State, Zip Code)
William A. Poppink, Superintendent of Schools	408 E. Spruce St., Sault Ste. Marie, MI 49783

11.

Signature of Person Authorized to Receive Grant	Phone Number Area Code
[signature]	906/632-3379

SECTION B- PARTICIPANTS

1. NO. OF PARTICIPANTS

	SCHOOLS	STUDENTS			TEACHERS		OTHER	
		Elem.	Sec.	Adult	Elem.	Sec.	Prof.	Non-Prof.
a. DIRECT PARTICIPATION	*PUBLIC	185	-	-	9	-	2	7
	* NON-PUBLIC							
b. INDIRECT PARTICIPATION	*PUBLIC	0	24	64	45	11	39	27
	* NON-PUBLIC							

*Refer to Instructions.

2. TOTAL NUMBER AND PERCENTAGE OF STUDENTS DIRECTLY SERVED

	WHITE	NEGRO	ORIENTAL	LATIN AMERICAN	AMERICAN INDIAN	TOTAL
a. Number	85	0	0	0	100	185
b. Percentage	46%	0%	0%	0%	54%	100%

3. NUMBER AND PERCENTAGE OF RURAL/URBAN DISTRIBUTION OF STUDENTS BEING DIRECTLY SERVED BY PROJECTS

	RURAL [1]		STANDARD METROPOLITAN AREA [2]		OTHER URBAN [3]		TOTAL PARTICIPATION [4]
	FARM	NON-FARM	LOW-SOCIO-ECONOMIC	OTHER	LOW-SOCIO-ECON	OTHER	
a. Number of Participants being Directly Served		25			87	73	185
b. Percentage being Directly Served		14%			47%	39%	100%

1. RURAL means an outlying area of less than 2,500 inhabitants.
2. STANDARD METROPOLITAN AREA-LOW-SOCIO-ECONOMIC AREA means an area with low-socio-economic level within a city of 50,000 inhabitants or more.
3. OTHER URBAN means areas with less than 50,000 inhabitants but more than 2,500 inhabitants; this category includes suburbs.
4. The total percent distribution must total 100%.

SECTION C- APPLICANT SCHOOL DISTRICT INFORMATION

1. GENERAL INFORMATION

GENERAL INFORMATION	U.S. CONGRESSIONAL DISTRICT	MICHIGAN	
		Senate District	Rep. District
Applicant District	11th	37th	107th

2. DISTRICT AVERAGE PER PUPIL EXPENDITURE

	LOCAL	STATE	OTHER	TOTAL
A. BUDGETED FOR CURRENT FISCAL YEAR	267.86	624.69	36.22	928.77
B. ACTUAL PRECEDING FISCAL YEAR 19 71-72	231.86	552.26	43.36	827.48
C. SECOND ACTUAL PRECEDING FISCAL YEAR 19 70-71	261.43	477.50	29.99	768.92

3. APPLICANT SCHOOL DISTRICT ENROLLMENT

		GRADES							ADULT	OTHER	TOTALS
		PRE-K	K	1	2	3	4-6	7-12			
ENROLLMENT OF APPLICANT SCHOOL DISTRICT	Public*	13	281	422	362	362	1179	2547	63		5229
	Non-Public**										
PERSONS DIRECTLY SERVED BY PROJECTS LIVING IN APPLICANT DISTRICT	Public										
	Non-Public										

*DS-4061 DISTRICT SUMMARY: 1971 Fourth Friday Membership and Personnel Report
**DS-4325 Private & Parochial School Membership Report

SECTION D- COOPERATING SCHOOL DISTRICT INFORMATION DOES NOT APPLY

1. COOPERATING SCHOOL DISTRICTS (PUBLIC AND NON-PUBLIC)

		GRADES							ADULT	OTHER	TOTALS
		PRE-K	K	1	2	3	4-6	7-12			
ENROLLMENT OF COOPERATING SCHOOL DISTRICTS	Public*										
	Non-Public**										
PERSONS DIRECTLY SERVED BY PROJECTS OTHER THAN THOSE IN APPLICANT DISTRICT	Public										
	Non-Public										

*DS-4061 DISTRICT SUMMARY: 1971 Fourth Friday Membership and Personnel Report
**DS-4325 Private & Parochial School Membership Report

2. COOPERATING SCHOOL DISTRICTS (PUBLIC AND NON-PUBLIC)

TOTAL NUMBER OF COOPERATING SCHOOL DISTRICT DIRECTLY SERVED	U.S. CONGRESSIONAL DISTRICTS REPRESENTED (LIST DISTRICT(S) NUMBER)	STATE MICHIGAN REPRESENTATION (LIST THE NUMBER(S))	
		Senate	Rep.

I. AVERAGE PER PUPIL EXPENDITURE OF COOPERATING SCHOOL DISTRICTS

LEGAL NAME OF COOPERATING SCHOOL DISTRICT	AVERAGE PER PUPIL EXPENDITURE			
	Local	State	Other	TOTAL
1.				
2.				
3.				
4.				
5. DOES NOT APPLY				
6.				
7.				
8.				
9.				
10				
11.				
12.				
13.				
14.				
15.				

CERTIFICATION: I certify that the information submitted on this report is true and correct to the best of my knowledge.

Date 9/29/72

Superintendent or Authorized Official William A. Poppink (Signature)
Superintendent of Schools

Contact Person Johann F. Ingold Telephone 906/632-7172
Area Code/Local No.

MICHIGAN DEPARTMENT OF EDUCATION

ESEA TITLE III

Lansing, Michigan 48902

PART II

FINANCIAL DATA

This part has been removed

MICHIGAN DEPARTMENT OF EDUCATION

ESEA TITLE III

Lansing, Michigan 48902

PART III

EVALUATION DATA

GE-4499
7/72

Michigan Department of Education
General Education Services
ESEA, TITLE III PROGRAM
Box 420 Lansing, Michigan 48902

ESEA, TITLE III PROJECT EVALUATION REPORT

EDUCATIONAL AGENCY	Legal Name of School District	District Code No.	Telephone – Area Code Loc.. No.
	Sault Ste. Marie Area P/S	17-010-17-3-K-12	906/632-3379
	Address	City	Zip Code
	408 E. Spruce Street	Sault Ste. Marie	49783

MAILING INSTRUCTIONS: Return the **ORIGINAL (BLUE)** copy and four **WHITE** copies not later than 90 days after the date of termination of the **BUDGET PERIOD** to the **STATE** address indicated above. Retain **ONE** copy.

SECTION A: COMMUNITY CHARACTERISTICS (Answer in terms of where the target population lives.)

1. What has been the average population trend during the last three years in your community? (Check One Only)
   - [ ] a. Decreasing
   - [x] b. Stable
   - [ ] c. Increasing (1–5%)
   - [ ] d. Increasing (6–10%)
   - [ ] e. Increasing (more than 10%)

2. What has been the average unemployment rate during the last three years in your community? (Check One Only)
   - [ ] a. 0–1%
   - [ ] b. 2–5%
   - [ ] c. 6–8%
   - [ ] d. 9–11%
   - [x] e. More than 11%

3. What is the average income level in your community? (Check One Only)
   - [ ] a. 0–$5,000
   - [x] b. $5,001–$7,500
   - [ ] c. $7,501–$10,000
   - [ ] d. $10,001–$15,000
   - [ ] e. More than $15,000

4. What is the major occupation in your community? (Check One Only)
   - [ ] a. Small Business
   - [ ] b. Light Industry
   - [ ] c. Heavy Industry
   - [ ] d. Professional
   - [ ] e. Farming
   - [x] f. Other (describe) Government and Service Occupations - 30%; Clerical and Sales - 15%

SECTION B: SCHOOL CHARACTERISTICS

1. How many school buildings are there in your school district?

a. Elementary	9
b. Secondary	3

2. How many school buildings are there in the project?

a. Elementary	1
b. Secondary	0

3. The current enrollment trends over the last three years can best be characterized as. (Check One Only)
   - [ ] a. Decreasing
   - [ ] b. Stable
   - [ ] c. 1–3% Increase
   - [ ] d. 4–6% Increase
   - [ ] e. 7–10% Increase
   - [x] f. Over 10% Increase

4. The most recent millage request
   - [x] a. Passed
   - [ ] b. Failed

5. Has the school district recently suffered financial cutbacks?
   - [ ] a. Yes
   - [x] b. No

SECTION C: PROGRAM CHARACTERISTICS

1. The critical need which the project primarily focuses upon is: (Check One Only)
   - [ ] a. Basic Skills Development
   - [x] b. Alternative Instructional and Organizational Patterns
   - [ ] c. Career Development
   - [ ] d. Social Action
   - [ ] e. Special Education
   - [ ] f. Other (describe) _____

2. Was the need internally assesed?
   - [x] a. Yes
   - [ ] b. No

   If "YES", Check One or More of the following methods:
   - [ ] a. Individual Opinion
   - [x] b. Group Opinion
   - [ ] c. Survey
   - [x] d. Student Achievement Results
   - [ ] e. Other (describe) _____

   If "NO", Check One or More of the following methods:
   - [ ] a. Individual Opinion
   - [ ] b. Group Opinion
   - [ ] c. Survey
   - [ ] d. University Sponsored Study
   - [ ] e. Contracted Report
   - [ ] f. Other (describe) _____

3. Is the program a modification of a previously existing program?
   - [ ] a. Yes
   - [x] b. No

4. Who was primarily responsible for developing the IDEA for the program? (Check One Only)
   - [ ] a. Local Administration
   - [ ] b. ISD Administration
   - [x] c. Instructional Staff
   - [ ] d. Students
   - [ ] e. Community
   - [ ] f. Commercial Firm
   - [ ] g. University
   - [ ] h. Other (describe) _____

4. Was the program faced with unusual social or economic conditions?

[x] a. Yes
[ ] b. No

If "YES", please describe these conditions

The population to be served by the project represents four separate and distinct socio-economic groups which have values that are at times contradictory to each other. By far the largest group has a rural Indian origin; generally one finds low educational attainment, high incidence of family disruptions, and high dependency on welfare. A second group represents inhabitants of low cost housing areas; they are of mixed ethnic origin (some Indian), as a group they are generally a little better educated, and as a rule more aggressive in making demands. The third group is a rural segment living on Sugar Island; these people are of mixed European and some Indian ancestry, they are essentially rural in outlook and prefer a semi-isolate way of life. The fourth group is the smallest in numbers; these can be classified as white middle-class, they live on the fringe of the school attendance area, and despite the small number this has historically been the group that has had dialogue with school authorities. Their relative power position tends to be most severely affected by the new relationships created through the Title III project.

SECTION D: PARTICIPANTS

1. The major target population in this project is: **(Check One Only)**

- [x] a. Students
- [ ] b. Teachers
- [ ] c. Aides
- [ ] d. Administrators
- [ ] e. Parents
- [ ] f. Counselors
- [ ] g. Other (describe) _____

2. If the major target population is students, then indicate the average age.

YEARS	MONTHS
8	3

3. Indicate in the appropriate boxes, the number of participants who were in the project when it started, and the number in the program as of the end of the first year.

PARTICIPANTS	NUMBER OF PARTICIPANTS	
	Start of Program	End of Program
a. Students	185	181
b. Teachers	9	9
c. Aides	7	7
d. Administrators	1½	1½
e. Parents	9	16
f. Counselors	0	0
g. Project Staff (include Director)	10	10
h. Others	½	½

4 If participants left the program, did they leave because they were dissatisfied with the program?

- [ ] a. Yes
- [x] b. No

5. If the major target population is student, then indicate the grade level span represented in the program.

3½ years To 6th grade

6. Did the program serve significantly more boys than girls?

- [ ] a. Yes
- [x] b. No

7. What choice(s) best describes the participation of the target population: (Check Two if Appropriate)

- [ ] a. Voluntary
- [x] b Involuntary
- [ ] c. Random Selection
- [ ] d. Random Stratified Selection
- [x] e. Total Population
- [ ] f Other (describe) _____

8. Was the target population involved in any other special programs aimed at meeting similar critical needs?

- [x] a. Yes
- [ ] b. No

If "YES", describe the program.

Selected students were served by Title I components. Approximately twenty students received one-to-one tutorial assistance in basic reading skills and twenty-five students participated in a five week summer school experience which was patterned after the model of the open concept school. Selected students were also served by the Title I health consultant and by the Title I home-school agent. In both of these cases the service was based on individual needs and involved attempts to work with the parents through home visits. The total number of students receiving one or more of the services described above is estimated at seventy-three persons.

9 Discuss any other special characteristics which are necessary to describe the target population of the program.

One hundred of the one hundred and eighty-five students were of Indian ethnic origin and approximately half of the population is considered to be economically deprived, with the Indian children representing the bulk of those that are poor. Furthermore, their educational attainment as measured by standardized tests has been very low and much lower than the attainment in the district as a whole despite a number of efforts in previous years through compensatory programs.

SECTION E MAJOR PROJECT GOALS

1 Restate the major goals from your first year application for the first year of the project. Indicate by placing an "X" in the appropriate box the goals that were achieved.

- [X] 1 Demonstrate the feasibility of an open concept neighborhood school for the education of the Indian cultural minority.
- [X] 2. Create closer community-school relationships.
- [X] 3. Improve the performance of students in cognitive skills.
- [X] 4 Broaden student behavior in affective skill areas.
- [X] 5 Increase student mastery of psychomotor skills.
- [ ] 6.
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10.
- [ ] 11.
- [ ] 12.
- [ ] 13.
- [ ] 14.
- [ ] 15.
- [ ] 16.
- [ ] 17.
- [ ] 18.
- [ ] 19.
- [ ] 20
- [ ] 21.
- [ ] 22.
- [ ] 23.
- [ ] 24.
- [ ] 25.
- [ ] 26.
- [ ] 27.

objectives

2. Which percentage figure best describes the total number of performance/which were achieved in the first year of this program? (Check One Only)

- [ ] a. 0–25%
- [ ] b. 26–50%
- [ ] c. 51–75%
- [x] d. 76–90%
- [ ] e. 91–100%

3. Are you reporting on all of the program performance objectives in that section of this report dealing with findings? (Check One Only)

- [x] a. Yes
- [ ] b. No

If "NO", please explain why you have deleted some of the objectives.

SECTION F: DESIGN

1. Which of the following designs were used in the evaluation of this project? (Check All That Apply)

- [ ] a. Pretest-Postest (Experimental group only)
- [x] b. Pretest-Postest (Experimental and comparison groups)
- [ ] c. Postest (Experimental group only)
- [ ] d. Postest (Experimental and comparison groups)
- [ ] e. Other (describe) _____

2. What measures were applied to find out if the aims of the project were achieved? (Check All That Apply)

- [x] a. Questionnaire
- [x] b. Standardized Tests (group)
- [ ] c. Teacher Made Tests
- [x] d. Observations
- [ ] e. Diagnostic
- [x] f. Unobtrusive Measures
- [ ] g. Other (describe) _____

3. If observations were made, were the observers specially trained?

- [ ] a. Yes
- [ ] b. No

SECTION G: DATA ANALYSIS

1. STANDARDIZED TEST RESULTS

COLUMN INSTRUCTIONS:

COLUMN 1: Provide the name and form of the test used.
COLUMNS 2-3: Provide DAY, MONTH, and YEAR of pre- and post-test applications. If you cannot remember the exact dates, please estimate them as closely as possible.
COLUMN 4: Supply the grade level of the children tested. Remember, provide separate information for each grade level if possible
COLUMN 5: Provide the number of children tested.
COLUMN 6: Provide the LOWEST pretest score from all students for whom both pretest and posttest scores are available.
COLUMN 7: Provide the HIGHEST pretest score from all students for whom both pretest and posttest scores are available.
COLUMN 8: Provide an estimate of the average hours the children were involved in the project between PRE- and POST-TESTS.
COLUMNS 9-10: Provide the pre- and post-test averages in grade equivalent scores.
COLUMNS 11-12: Provide the difference between pre- and post-test averages.

TEST NAME AND FORM NUMBER	WHEN ADMINISTERED (Day, Month and Year)		GRADE	NUMBER OF STUDENTS	PRETEST SCORE		AVERAGE NUMBER OF HOURS CHILDREN INVOLVED IN PROJECT	PRE TEST AVG.	POST TEST AVG.	AMOUNT OF CHANGE	
	Pre	Post			Lowest	Highest				Gain	Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Otis Lennon, Form	9/28/71	5/2/72	1	26	61	114	656	85-89	90-94	5-9	
J			2	27	68	112	656	90-94	95-99	5-9	
			3	21	54	123	656	90-94	105-109	11-19	
			4	25	50	133	656	85-89	95-99	6-14	
			5	29	73	122	656	85-89	90-94	1-9	
			6	20	60	123	656	95-99	95-99	0-	4
* SEE ATTACHED PAGES FOR CONTINUATION OF STANDARDIZED TEST RESULTS											

2. NON-STANDARDIZED RESULTS (Cite results obtained from other measures. Please describe these other measures.)

1. The Teacher Performance Rating Scales

The Teacher Performance Rating Scales were constructed upon dimensions indigent to the open school, i.e. freedom to choose activities, ratio of pupil-teacher talk, method of teacher control. Scoring was accomplished by trained observers who engaged in practice sessions until satisfactory levels (85%) of intra and inter-rater reliabilities were achieved. Following several hours of direct observation, observers rate from 1-7 their impression of variation on each of 14 subscales. The results of these observations are given in Table I with mean subscale scores for 20 classes each at Finlayson and Garfield Schools compared.

(See Page 7-F for continuation)

* Unfortunately, the attached pages were dittoed, and unreproducible. They were therefore deleted.

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

TABLE I

MEAN RATINGS ON 14 SUBSCALES COMPARING FINLAYSON AND GARFIELD TEACHERS

Dimension	Total Scores and Mean Ratings Finlayson		Garfield	
	Total	$\bar{x}$	Total	$\bar{x}$
1. Ratio of teacher-pupil talk (mostly teacher to mostly pupil)	90	4.5	64	3.2*
2. Noise levels (loud to quiet)	58	2.9	84	4.2*
3. Flexible grouping (rigid to flexible)	121	6.0	59	2.9*
4. Pupil movement (much to little)	42	2.1	89	4.5*
5. Pupil autonomy (much to little)	45	2.3	109	5.5*
ITEMS 6-14 METHOD OF TEACHER CONTROL				
6. Verbal supportive (much to little)	70	3.5	78	3.9
7. Verbal neutral (much to little)	69	3.5	78	3.9
8. Verbal control (much to little)	109	5.5	89	4.5*
9. Non-verbal supportive (much to little)	67	3.4	90	4.5*
10. Non-verbal neutral (much to little)	109	5.5	111	5.6
11. Non-verbal control (much to little)	101	5.1	101	5.1
12. Physical contact supportive (much to little)	79	4.0	96	4.8*
13 Physical contact neutral (much to little)	97	4.9	100	5.0
14. Physical contact control (much to little)	135	6.8	133	6.7

* Statistically significant differences in ratings.

2. Teacher Evaluation of the Open-Concept Plan (Questionnaire)

TABLE II

TEACHER EVALUATION OF THE OPEN-CONCEPT PLAN

Check (✓) indicating whether no, sometimes or always best indicates your feelings about the following questions. The evaluation is on a continuum line ranging from no to always.

Part I	No	Sometimes	Always	N/A
1. Do you like being an open-concept teacher?	0	2	16	
2. Do you think that the open-concept program has been effective at Finlayson?	0	11	5	2

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

TABLE II (Continued)

TEACHER EVALUATION OF THE OPEN-CONCEPT PLAN

		No	Sometimes	Always	N/A
3.	Do you have enough supplies and equipment to individualize instruction?	5	9	4	
4.	Do you prefer multi-age groups to single age grouping?	0	6	11	1
5.	Do you feel more contact has been made with the home since you have been an open-concept teacher?	5	5	3	3
6.	Do you believe that students favor the open-concept program?	0	14	4	
7.	From your observation, can most students work independently?	3	12	3	
8.	From your records as a supportive teacher, are most of your students displaying responsibility for their own learning?	1	5	2	10
9.	Do you like the reporting to parents through parent-teacher conferences?	0	2	10	6
10.	Do you feel that you are more aware of individual differences in students since becoming an open-concept teacher?	1	5	10	2
11.	Do you believe open-concept is here to stay?	0	6	12	
12.	Have you been able to make better use of your professional skills due to your placement in an open-concept plan?	1	3	10	4
13.	Do you favor the team approach at Finlayson?	0	1	15	2
14.	Do you believe that the staff meetings provide a useful function for better understanding of children and program?	1	6	11	
15.	Do you feel that the entire educational program has improved because of the open-concept program?	0	5	10	3
16.	Have you noticed an attitudinal change in your supportive group?	0	7	5	6
17.	Has your supportive children's behavior changed for the better since September?	0	6	5	6
18.	Is the academic climate more stimulating in open-concept?	0	6	11	1
19.	Do you feel that your fellow staff members favor the open-concept program?	0	6	11	1

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

3. Laboratory Referrals (Attendance Data)

TABLE III

LABORATORY REFERRALS

Month	Math	Science	Reading	*Reward
October	157	34	195	
November	180	172	353	
December	69	157	151	195
January	85	216	97	201
February	151	438	73	51
March	110	270	35	31
April 14th	48	180	30	28
Totals	800	1,467	934	506

* Games and Puzzles, etc.
Numbers dropped as lab is only open for general referral in a.m.

4. Types of Learning Centers (Attendance Data)

See Table IV on following page.

TABLE IV

TYPES OF LEARNING CENTERS AT FINLAYSON SCHOOL

Learning Center	Instructor	Average Daily Attendance	Total Enrollment
Math Center	Poppink/Green	100	148
Distar Math I	Williamson	10	15
Distar Math II	Hillock	10	15
Special Math - Primary	Student Teachers	40	20
Special Math - Later	Student Teachers	22	45
Science	Williamson/Nason	55	148
Social Studies	Williamson/Nason	155	148
Language Arts	Huff/Hillock	100	148
Alpha	Thompson	41	52
Distar Language I	Hillock	11	15
Distar Language II	Williamson	12	15
Distar Reading I	Hillock	15	30
Distar Reading I	Williamson	12	15
Distar Reading II	Hillock	10	15
SRA Reading	Poppink	25	70
Barnell Loft Reading	Huff	6	24
Title I Reading	Hank	9	19
Advanced Reading	Baker	10	20
World of Work:			
Carpentry	Pine	20	20
Mechanics	Pine	9	9
Newspaper	Poppink	6	20
Sewing	Hillock	20	30
4-H	Hillock	20	30
Library	Chope/Baker	92	184
Special Tutoring	Aides	8	15
Special Lab Help	Chope/Pingatore/Boult	15	25
Physical Education	Mattson	170	184
Art	Beedy	150	184
Music:			
Vocal	Drumheller	125	184
Instrumental	Drumheller	15	15
Guitar	Drumheller	7	7
Math-Science Laboratory	Chope/Pingatore/Boult	55	184

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

5. Parents Survey Questionnaire

PARENTS SURVEY REGARDING OPEN-CONCEPT

Your child has been in the open-concept program at Finlayson for a little over one semester. We would like to know your feelings about the program and how well your child has learned in this new program at Finlayson.

Please check (✓) whether yes or no best expresses your feelings.

	Yes	No	Undecided or No Answer
1. Has your child shown a greater interest in school this year?	63%	28%	9%
2. Are you satisfied with your child's achievement as explained through parent-teacher conferences?	69%	19%	12%
3. Do you feel that your child is learning more in our open-concept program than in the traditional program?	46%	42%	12%
4. Have your own feelings about school changed due to your child's performance in open-concept?	42%	49%	9%
5. Do you prefer traditional education to open-concept?	53%	38%	9%
6. Have your interests in the program increased?	40%	49%	11%
7. Have your friends and neighbors indicated a preference for the open-concept program?	30%	60%	10%
8. Do you feel that there is enough school work for your child?	56%	35%	9%
9. Do you feel that there is more contact with the home since your child has been in the program?	44%	47%	9%
10. Have you noticed a difference in your child's attitude toward school?	75%	14%	11%
11. If your answer is yes to number 10, is the difference favorable?	46%	33%	21%
12. Do you feel that you have received sufficient information about the open-concept program?	77%	19%	4%
13. Did you attend parent-teacher conferences?	74%	26%	-
14. Have you attended PTA meetings?	56%	42%	2%
15. Would you like to ask a question about the program or your child's progress? All questions will be answered by the Finlayson Staff.	28%	37%	35%

Question: _____

_____

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

6. Parent-Teacher Conferences (Attendance Data)

See Table V on following page.

7. PreSchool Attainment Levels in Auditory, Visual and Senses Skills

TABLE VI

NUMBERS OF PRE/KINDERGARTEN AT ATTAINMENT LEVEL
IN AUDITORY, VISUAL, AND SENSES SKILLS

Percentage Level	Number of Students at % Level in Auditory Skills	Number of Students at % Level in Visual Skills	Number of Students at % Level in Touch, Smell, & Taste Skills
100	20	3	14
90	6	11	9
80	2	13	4
70	4	4	7
60	2	2	1
50	0	1	0
40	1	0	0
30	0	1	0
20	0	0	0
10	0	0	0
Totals	35	35	35

TABLE V

PARENT-TEACHER CONFERENCES

1971 - 72									1970 - 71						
October			January			April			November			April			
No. Students	No. Parents	%	No. Students	No. Parents	%	No. Students	No. Parents	%	No. Students	No. Parents	%	No. Students	No. Parents	%	Teacher or Grade
39	31	79%	36	26	72%	35	33	94%	23	17	73%	25	22	88%	Pre - Kindergarten
21	19	90%	22	18	81%	23	20	87%	31	27	87%	29	26	89%	Hillock (72) or 1st grade (71)
24	22	92%	23	19	82%	22	22	100%	14	12	85%	14	14	100%	Williamson (72) or 2nd grade (71)
24	20	83%	24	18	75%	24	18	85%	23	21	91%	23	23	100%	Green (72) or 3rd grade (71)
25	20	80%	27	20	74%	27	24	89%	29	29	100%	26	23	88%	Nason (72) or 4th grade (71)
25	22	88%	27	20	74%	27	22	82%	24	18	75%	23	19	82%	Huff (72) or 5th grade (71)
25	20	80%	26	18	77%	27	22	82%	30	23	76%	28	23	82%	Poppink (72) or 6th grade (71)
183	154	84%	185	139	75%	185	161	87%	174	147	84%	168	150	89%	Totals

SECTION G: DATA ANALYSIS
2. NON-STANDARDIZED RESULTS

8. Test of Self-Perception

TABLE VII

RESULTS OF FINLAYSON SCHOOL SMILING FACE TEST

How you feel about:	Positive	Neutral	Negative
1. Coming to this school	92	35	14
2. What you do at this school	92	38	11
3. Eating breakfast at school	107	21	13
4. Myself as a student	90	39	12
5. My supportive room teacher	115	15	11
6. My other teachers	97	31	13
7. My friends at school	120	17	4
8. Science at school	92	35	13
9. Reading at school	83	44	14
10. Math at school	81	40	19
11. The "Lab"	121	14	5
12. Social Studies	67	47	27
13. Language	72	43	26
14. Gym	108	18	13
15. Music	111	24	5
16. Art	110	25	5
17. Movies at school	103	19	17
18. Getting to choose what I do	109	21	11
19. Moving around a lot	97	29	14
20. Kids who break rules	13	19	107
21. How much I have learned this year	101	21	19
22. Being at this school next year	86	18	36
23. Myself last year	79	33	28
24. Myself now	97	23	20

SECTION G: DATA ANALYSIS
2. NCN-STANDARDIZED RESULTS

9. Teacher Observation of Student's Ability to Make Decisions

The teachers were also asked to assess the growth of the students in their ability to make decisions. The results of this compilation are as follows:

Negative Growth	0
No Growth	1
Average Growth	87
Above Average Growth	74

10. Absenteeism: 1971-72 compared to 1970-71

Month	No. Absent	1970-71 Enrollment	No. of Days	%	Month	No. Absent	1971-72 Enrollment	No. of Days	%
September	90	174	20	.03%	September	83	183	18	.02%
October	166	174	21	.04%	October	130	183	20	.04%
November	369	176	19	.11%	November	324	181	20	.09%
December	259	178	17	.08%	December	204	181	17	.06%
January	297	178	19	.05%	January	426	177	20	.12%
February	226	167	20	.06%	February	239	187	21	.06%
March	414	169	22	.12%	March	227	187	21	.06%
April	216	169	19	.07%	April	138	185	15	.05%
May	192	168	20	.06%	May	234	184	22	.05%
June	35	168	3	.07%	June	35	181	6	.03%
Totals	2264	1721	180			2040	1829	180	

2 Was any statistical analysis of the data undertaken?

[X] a. Yes
[ ] b. No

3 If analysis was undertaken, which of the following was used? (Check All That Apply)

a. Chi Square
XX b. T-Test
c. Analysis of Variance
d. Analysis of Covariance
e. Pearson Product-Moment Correlation
f. Other (describe) _____

SECTION H FINDINGS

1. Please indicate below, the findings with regard to this project.

a. Flexible student management practices are a feasible alternative.

b. Alternate staffing patterns are possible and workable.

c. Early childhood education is a successful practice.

d. Individualized instruction through the use of a laboratory is a successful practice.

e. Learning centers are successful as an educational tool.

f. Work contracts were not successful as a procedure.

g. Increased parental understanding of educational objectives results in more cooperation and also more dissension.

h. Better staff-parent relationships result from more frequent contacts.

i. Preschool children can successfully be taught to improve discrimination in auditory, visual and sense skills.

j. Student performance in language arts can be improved through open education.

k. Student performance in math concepts can be improved through open education.

l. Student performance in social science can be improved through open education.

m. Student perceptions about the world of work were not significantly changed.

n. Student understanding of science concepts can be improved through open education.

o. Student ability to make decisions can be improved through open education.

p. Student self-perception can be improved through open education.

q. Student ability to find creative solutions was not formally assessed.

r. Student mastery of gross muscle control and dexterity can be improved through programming.

s.

t.

u.

v.

w.

x.

2. Which of the above findings are based upon data which is statistically significant? (Please list by the appropriate letters in Item 1. above.)

c, i, j, k, l, n, r

3. Can any of the findings in Item 1. above be generalized?

☒ a. Yes

☐ b. No

If "YES", indicate by letter which ones.

c, d, e, r

SECTION I: RECOMMENDATIONS FOR IMPROVEMENT

1. PROJECT IMPROVEMENT

What recommendations for project improvement can be based upon your findings? (i.e. What are you going to do differently in year number two?)

An effort will be made to improve the following aspects of the program during the second year.

(1) Community involvement: especially the relationship with the ethnic groups. This will be done through the addition of one parent-teacher conference, enlargement of the Advisory Council and more frequent Advisory Council meetings.

(2) Develop a more challenging program for older children: especially in the affective area (self-discipline). An effort will be made to use the homeroom for more frequent counseling and to structure programs for individual students in the teacher-student conferences.

(3) Improve the career education curriculum: An effort will be made to build in career education in all of the major curricular areas. In addition, special career related learning stations will be established throughout the year.

(4) Establish closer cooperation between staff members: The staff will make an effort to plan the educational activities through a team structure. An attempt will also be made to balance out individual assignments and teamwork will be emphasized within the learning areas.

2. MICHIGAN DEPARTMENT OF EDUCATION

What recommendations can be made to the Michigan Department of Education as a result of your findings? (i.e., Project should be replicated in the southeast area of the State at a rural district or project should be expanded in terms of budget.)

The Department could assist in dissemination activities by suggesting specific methods of dissemination and by giving technical help in layout and graphics.

It is also recommended that the State Department consider supporting a replication of the program in a different setting such as innercity.

REPLICATION

A. At this point in time, what component(s) of this project can and should be replicated by other school districts?

The following components can be replicated:

(1) PreSchool

(2) Open Classroom

(3) The Laboratory-Library Operation

B. What costs could be eliminated if the entire project were to be replicated by another district?

(1) One teacher and one aide could be eliminated and still run an acceptable program.

(2) Given adequate space, the cost of the movable classroom could be eliminated.

(3) With fewer demands for dissemination, evaluation and special accounting, the position of the Director could be eliminated.

C. What costs are essential for starting-up the project?

(1) Salary cost for additional aides.

(2) Costs of additional materials and visual aid equipment.

(3) Increased cost of student supplies such as paper, crayons, paints.

SECTION J: INFORMAL EVALUATIVE RESPONSE

Please use this opportunity, if you so desire, to express any feelings, reactions, concerns, etc. with regard to your project which you feel need to be stated.

Several improvements cannot be specifically documented but are apparent to observers who have known the situation before the start of the project; among them are: (1) children enjoy school more; (2) by and large the parents have a more wholesome relationship to the school, they tend to come to school more freely and they are less reluctant to express themselves; (3) the incidence of valdalism at school has been reduced; (4) the amount of fighting among the children has diminished considerably.

Some of the problems and concerns that have surfaced during last year's operation are: (1) it was difficult to find substitutes that could function in the open school environment; (2) a tendency developed to refer slow learners and problem learners to Finlayson School by other principals. This developed to quite an extent when children formerly in special education had to be placed in the regular classroom.

Observer(s):_____ School:_____

Date:_____ Teacher:_____

Pupil Grade Level:_____

THE TEACHER PERFORMANCE RATING SCALES

Dr. Gil Mazer
Mr. Paul Mestancik

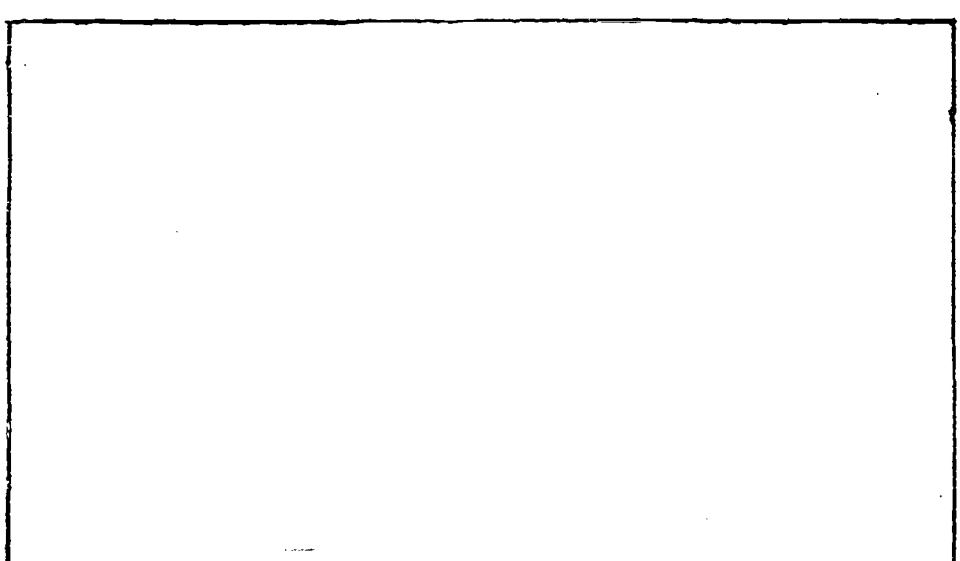
Introduction:

The Teacher Performance Rating Scales consists of subscales which are designed to systematically describe teacher and pupil performance on several dimensions which are considered significant to pupil learning and the establishment of a particular type of classroom climate. The scales should be useful both in providing feedback to teachers and for comparing classroom environments.

Directions:

The observer should wait for a full hour before filling out rating scales and use separate TPRS's for each hour of observations. The observer should also comment on his ratings to help provide an accurate "image" of the classroom environment. He should begin with a rough sketch of physical arrangements including usual placement of teacher and pupil desks, learning centers, etc.

Sketch Here



Subscale 1

Average ratio of teacher-pupil talk

(Circle one number)

Mostly teacher talk						Mostly pupil talk
1	2	3	4	5	6	7

Comment:

Subscale 2

Average classroom noise levels (pupil noise)

(Circle one number)

Loud						Quiet
1	2	3	4	5	6	7

Comment:

Subscale 3

Flexibility of grouping arrangement:

(Circle one number)

Rigid grouping (little variety)						Flexible grouping (much variety)
1	2	3	4	5	6	7

Comment:

Subscale 4

Extent of pupil movement within the classroom

(Circle one number)

Much pupil movement						Little pupil movement
1	2	3	4	5	6	7

Comment:

Subscale 5

Extent student may choose learning activity (pupil autonomy vs. teacher direction)

(Circle one number)

1	2	3	4	5	6	7

Comment:

Subscales 6 - 14

TEACHER STRATEGIES

Indicate Extent Teacher Uses the Following Behaviors:

A. VERBAL BEHAVIORS

6. Verbal Supportive--"That's a very good job." "You are such a lovely girl." "My, but your work is so neat."

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

7. Verbal Neutral--"Laura and Tom, let's open our books to page 34." "May, your pencil is on the floor." "Hal, do you have milk money today?"

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

8. Verbal Control--"Lou, sit on that chair and shut up!" "Curt, get up off that floor!" "Mary and Laura, quit your talking!"

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

B. NON-VERBAL BEHAVIORS:

9. Non-Verbal Supportive--Teacher nods her head at Rose. Teacher smiles at Liza. Teacher claps when Laura completes her problem at board.

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

10. Non-Verbal Neutral--Teacher indicates with her arms that she wants Lilly and Shirley to move farther apart in the circle. Teacher motions to Joe and Tom that they should try to snap their fingers to stay in beat with the music.

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

11. Non-Verbal Control--Teacher frowns at Lena. Teacher shakes finger at Amy to quit tapping her pencil. Teacher motions with hand for Rose not to come to her desk.

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

C. PHYSICAL CONTACT BEHAVIORS

12. Physical Contact Supportive--Teacher hugs Laura. Teacher places her arm around Mary as she talks to her. Teacher holds Trish's hand as she takes out a splinter.

(Circle one number)

Much						Little
1	2	3	4	5	6	7

Comment:

13. Physical Contact Neutral--Teacher touches head of Nick as she walks past. Teacher leads Rema to new place on the circle.

(Circle one number)

1 2 3 4 5 6 7

Comment:

14. Physical Contact Control--Teacher strikes Lou with stick. Teacher pushes Curt down in his chair. Teacher pushes Hal and Doug to the floor.

(Circle one number)

1 2 3 4 5 6 7

Comment:

TEACHER EVALUATION OF THE OPEN-CONCEPT PLAN

Name of Teacher: _____

Check (✓) indicating whether no, sometimes or always best indicates your feelings about the following questions. The evaluation is on a continuum line ranging from no to always.

PART I	No	Sometimes	Always
1. Do you like being an open-concept teacher?			
2. Do you think that the open-concept program has been effective at Finlayson?			
3. Do you have enough supplies and equipment to individualize instruction?			
4. Do you prefer multi-age groups to single age grouping?			
5. Do you feel more contact has been made with the home since you have been an open-concept teacher?			
6. Do you believe that students favor the open-concept program?			
7. From your observation, can most students work independently?			
8. From your records as a supportive teacher, are most of your students displaying responsibility for their own learning?			
9. Do you like the reporting to parents through parent-teacher conferences?			
10. Do you feel that you are more aware of individual differences in students since becoming an open-concept teacher?			
11. Do you believe open-concept is here to stay?			
12. Have you been able to make better use of your professional skills due to your placement in an open-concept plan?			
13. Do you favor the team approach at Finlayson?			
14. Do you believe that the staff meetings provide a useful function for better understanding of children and program?			

	No	Sometimes	Always
15. Do you feel that the entire educational program has improved because of the open-concept program?			
16. Have you noticed an attitudinal change in your supportive group?			
17. Has your supportive children's behavior changed for the better since September?			
18. Is the academic climate more stimulating in open-concept?			
19. Do you feel that your fellow staff members favor the open-concept program?			

PART II

Please give me your assessment of the children's growth in the cognitive domain (your supportive group).

	Negative	No Growth	Average Growth	Above Average Growth
Number of Students:	____	____	____	____

PART III

Please give me your assessment of growth achieved by Indian children.

	Negative	No Growth	Average Growth	Above Average Growth
Number of Students:	____	____	____	____

PART IV

Please give me your assessment of growth in the affective (attitudes).

	Negative	No Growth	Average Growth	Above Average Growth
Number of Students:	____	____	____	____

PARENTS SURVEY REGARDING OPEN-CONCEPT

Name of Parent: _____ Date: _____

Name of Student: _____

Your child has been in the open-concept program at Finlayson for a little over one semester. We would like to know your feelings about the program and how well your child has learned in this new program at Finlayson.

Please check (✓) whether yes or no best expresses your feelings.

	YES	NO
1. Has your child shown a greater interest in school this year?	___	___
2. Are you satisfied with your child's achievement as explained through parent/teacher conferences?	___	___
3. Do you feel that your child is learning more in our open-concept program than in the traditional program?	___	___
4. Have your own feelings about school changed due to your child's performance in open-concept?	___	___
5. Do you prefer traditional education to open-concept?	___	___
6. Have your interests in the program increased?	___	___
7. Have your friends and neighbors indicated a preference for the open-concept program?	___	___
8. Do you feel that there is enough school work for your child?	___	___
9. Do you feel that there is more contact with the home since your child has been in the program?	___	___
10. Have you noticed a difference in your child's attitude toward school?	___	___
11. If your answer is yes to number 10, is the difference favorable?	___	___
12. Do you feel that you have received sufficient information about the open-concept program?	___	___
13. Did you attend parent/teacher conferences?	___	___
14. Have you attended PTA meetings?	___	___
15. Would you like to ask a question about the program or your child's progress? All questions will be answered by the Finlayson Staff:	___	___

Question: _____

_____

_____

_____

SECTION K: PROJECT EVALUATION DOCUMENTS

Attach one (1) copy of any evaluation material (including locally developed instruments) available during the first year of operation by your staff or your contracted evaluator. (Please list below all attachments)

Attached documents:

(1) The Teacher Performance Rating Scales

(2) Teacher Evaluation of the Open-Concept Plan (Questionnaire)

(3) Parents Survey Regarding Open-Concept (Questionnaire)

(4) Test of Self-Perception (Smiling Face Test) (dittoed - rumored for nonreproducibility)

Research
DSOE
Sault Ste Marie

TECHNICAL SUPPLEMENT

OPEN CONCEPT SCHOOL FOR INDIAN EDUCATION

I Research Design

The concern of the evaluation of the Open Concept Program was the total development of the students engaged in the program: cognitive, social and perceptual motor.

Instrumentation was used which yielded measures of growth and development on all major dimensions. A straight forward prepost, comparison group design was employed so that gains recorded by Finlaysen students could be compared, not only with prior achievement but also with students engaged in a traditional educational program.

The research design may be represented as follows:

Finlaysen Students	Test 1	$\xrightarrow{\text{open school}}$	Test 2	compare differences.
Garfield Students	Test 1	$\xrightarrow{\text{traditional school}}$	Test 2	

At the outset, it should be recognized that the research design employed is quasi--rather than truly experimental, since it was not possible to use randomization procedures. Nevertheless, the use of a comparison group, in this instance, students at Garfield School, is to be preferred to a totally inadequate pre-post comparison which is so common in education.

Pre-tests were administered [redacted] about October 1, 1971, and post tests about May 1. Thus the experimental period was about seven months in duration. All testing was conducted in a regular classroom context.

II Instrumentation

Cognitive achievement and development were measured by the administration of three group tests, two of which have received wide acceptance among educators and a third which has come into use more recently. The Stanford Achievement

Test (SAT) which was selected as the measure of scholastic achievement, is one of several highly regarded and well-tested achievement tests which have excellent psychometric properties. Norms for the SAT are usually flexible and comprehensive and interpretation of results is facilitated by the provision of convenient grade-level equivalent scores.

Reliability indicies are high and range into the 90's and while the test may be subject to some cultural bias, it certainly is a standard in its field.

Depending upon the form used, the SAT yields measures of achievement in as many as ten curricular areas which encompass reading and language skills, number skills and social science and physical science information.

The Tests of Basic Experience (TOBE) was administered among the pre-school children to measure gains in mental development and general achievement in three basic curricular areas; math, science and social studies. The TOBE appears one of the only two group tests of achievement and/or scholastic ability for children under 8 years of age. It is a diagnostic tool for the teacher as well as a measure of mental growth. Results of testing with the TOBE are subject to error characteristic of group tests with young children.

The Otis-Lennon Mental Ability Tests are another group of easily administered and interpreted instruments with commendable psychometric properties. A revision of the older Otis Alpha and Beta I Q tests; these I Q tests offer an adequate index of mental development and are useful in estimating likely achievement in academic subjects. As in other tests of their type, cultural bias is difficult to control. Items place heavy emphasis upon verbal and numerical skills.

Nevertheless, the Otis -Lennon Tests are undoubtedly as valuable as any of their type and acceptable for general use.

In addition to the tests above, the Purdue-Psycho-Motor Survey was employed

to measure psycho and perceptual development among pupils. This series of subtests is also a standard in its field, having first been published in 1966 and widely used since its publication. The survey has received favorable reviews; however, scoring requires considerable subjectivity and the tests may be criticized from this aspect.

As a measure of social development, a revision of the TMR Performance Profile was used. Items on these rating scales are highly specific and comparatively operational. Subjectivity in scoring the TMR seems minimal for scales of this type. Two major components of the TMR were stressed: social behavior and communication skills which incorporate several separate dimensions of social behavior and personality.

A summary of the major testing programs is presented below.

A. Cognitive Development - Pre-school, October and March: Test of Basic Experience, Schools: Finlayson and Garfield, Grades 1-6, October and May, Otis-Lennon Mental Ability.

B. Cognitive Achievement - Grades 1-6, October and May, Stanford Achievement Tests, Schools: Finlayson and Garfield.

C. Perceptual Motor Skills - All grades, October and May Purdue Perceptual Motor Survey, Schools: Finlayson and Garfield.

D. Social Behavior - Grades 1-6, May only, TMR Performance Profile, Schools: Finlayson and Garfield.

III. Results:

Results of testing with the four major instruments, i.e., the Test of Basic Experiences, the Stanford Achievement Test, the Otis-Lennon Test of Mental Ability and the Purdue Psycho Motor Survey, in that order.

Three sections of tables are provided. These are respectively concerned with: (1) pre-post changes in test scores recorded by Finlayson's students, (2) a comparison of gains between Finlayson's students and Garfield students and (3) a section of tables dealing with a performance of Indian pupils attending Finlayson school. Table I, as indicated in the Title, presents pre-post score differences recorded by 31 students enrolled in pre-school and kindergarten programs at Finlayson school. It will be noted that there are striking differences in raw scores on each section of the test of Basic Experiences, indicating that pre-school students nearly doubled their raw score output as measured by this particular instrument. T-tests applied to this data show that gains on each section surpassed the .01 level of significance. Table II presents these results in the form of stanines and percentiles which were extrapolated from norms provided in the Examiner's Manual for the Test of Basic Experiences. According to the manual, the norms are based on performances of 10,000 students enrolled in kindergartens throughout the nation. It will be noted that Finlayson's students scored at or below average ranges on all pre-tests. However, post-test scores placed students in the pre-school programs in the 7th, 8th and 9th stanines on all sub tests and in percentile ranges above 90. These most certainly are dramatic changes considering that the relatively short duration of exposure to the program between pre and post testing.

Stanford Achievement Tests

The results of Stanford Achievement Tests pre and post testing are presented in Table III and IV. These results are concerned with the programs of students in grades 1-6 who participated in the open concept school program

and for whom test results were obtained. It will be noted from inspection of Table III that students made significant progress in measured achievement on all ten sections of the Stanford Achievement Test. Greatest gains seem to have been recorded from sections dealing with mathematical applications and in the development of vocabulary. These results are more readily interpreted however, if one will inspect Table IV which reports the same results in grade level equivalents. On most sub-tests, pupils participating in the program seem to have gained or acquired information which is approximately equivalent to the number of months they were exposed to the open concept program. That is approximately 6 months in the equivalent advancement. This figure is exceeded in the science area and in practical mathematics where gains of seven months grade level equivalent were reported. In view of the fact that many of the children enrolled in the program have not been making normal progress prior their participation in the open concept school, these results appear quite satisfactory.

Otis-Lennon Tests

Progress in Otis Lennon Scores are presented in Table V with raw scores and deviation IQ's recorded as suggested. In the Table, there was considerable improvement in the performance on the Otis on the part of children participating in the open concept school. The nearly 10 point difference in raw scores represents, of course, a rather substantial improvement in direct output. These raw scores are reflected in change in deviation IQ's from an average of 90.1 which tops the dull normal range of intelligence to a 95.7 which is well into the normal range. These data

would suggest children made significant progress in the development of scholastic aptitude during the several months that they were exposed to the open concept school. Of course, the fact that the statistical regression phenomenon might have accounted for some of the results should be considered when making an interpretation of these favorable findings.

Purdue Survey

Table VI reports post testing on the Purdue Psycho Motor Survey. Striking and significant advances in perception motor ability may be seen in the data presented in Table VI. Particularly large gains were noted in the test of body balance, perceptual motor skills and form perception, only on the body image sub-test did participants fail to record statistically significant gains. The reliability of this data, of course, are questionable since scoring is somewhat subjective. However, the magnitude of the changes indicate that the program was conducive to rather accelerated psycho motor development.

Differences in gain scores: Finlayson vs. Garfield schools.

Table VII through XI presents data which compares gains made by open school students when compared to those enrolled at Garfield school in a traditional program. In other words, tests of significance are applied to pre-post test differences for children enrolled at the Finlayson school as opposed to children enrolled in the Garfield school.

Table VII presents the data for the Tobe Test. The results of comparisons of gain scores reflect the earlier findings that Finlayson students made rather remarkable progress on all four sub-tests included for study.

In each instance, that is in math, science, social studies and language, the gains made by Finlayson open concept school children was significantly greater than those recorded by children at Garfield school. These differences in favor of the Finlayson students extended well beyond the .01 confidence level of significance. It may be noted in the total column that the gains recorded by Finlayson students were nearly double those of Garfield school students. Once again the striking effect of the open concept school program on pre-school children is indicated.

The results in favor of Finlayson school students on the Test of Basic Experiences is not repeated on a comparison of gain scores for the Stanford Achievement test. These results are presented in Table VIII. It will be noted from inspection of the table that results vary. In several instances there were no significant differences in gain scores reported. Garfield students showed significantly higher gains that Finlayson students in four subject matter areas on raw scores of the Stanford Achievement tests. The area of science seems to be the single exception where Finlayson students exceeded Garfield students in raw score gains.

Two types of information can be gained from Table IX. First one can observe the number of months (in tenths of a year) in which students gained an achievement. Second, these gains are compared between both Finlayson and Garfield students. It will be noted that students in both programs achieved at a satisfactory rate. One would anticipate approximately six to seven tenths of a year gain in performance. Garfield students seem to have done exceptionally well in language skills such as spelling, word study as well as in mathematics concepts and application. More than one full school year's gain in achievement can be seen in the math computation area for these Garfield pupils. Finlayson students also performed at a satisfactory rate. Highest gains were recorded in the science area where nearly a school years' dif-

ference in achievement was recorded. In math applications, math concepts and in spelling the differences in achievement met expectations. In word meaning skills, however, progress was relatively slow. This would suggest the need for greater concentration in development of the vocabulary skills of Finlayson students. The t-tests applied to the data showed that several of the differences are significant statistically when the figures are converted to months as has been done. In summary, both groups made some substantially satisfactory progress in achievement during the year with Garfield students doing exceptionally well and Finlayson students making progress which is quite satisfactory and consistent with scholastic ability as indicated on the Otis.

Table X shows both raw score gains and gains in deviation IQ points for both Finlayson and Garfield students. Here again the remarkable progress of both groups is evident. Average mental age gains were nearly one full year for both groups during the seven months of the testing interim. In IQ points this represented a gain of almost 6 for Finlayson students and a little more than 4 for Garfield students. One would suspect that being engaged in a study of this type certainly motivated both students and teachers to excell in their efforts to promote student development and achievement. These IQ point gains for both groups are indeed both unusual and an unanticipated favorable consequence of participation in the evaluation program. One is led to speculate that experiments of this type may extract the best efforts on the part of both teachers and pupils and maximize achievement.

Table XI shows differences in gain scores on the Four Purdue psycho motor survey tests as well as for a total score. It will be noted that for all tests except for form perception, Finlayson students exceeded Garfield

students in psycho motor development. This included tests of body balance, body image, perceptual motor skills and in total performance. In terms of form perception which is closer to a cognate of skills, both groups seemed to gain at about an equal rate. The scores reported are raw scores and somewhat difficult to interpret. In any event, it would appear that Finlayson students progressed rather rapidly in tests of perceptual motor skill and body balance. Since their initial performance on these tests were quite satisfactory, a greater use of facilities promoting psycho motors skills and physical development is indicated.

Social Behavior

In an effort to measure changes in social behavior and communication skills, ratings on the TMR Performance Profile were employed. The performance profile was modified so that only those dimensions of behavior which were regarded as significant to the present study were used. Two major sections of the TMR rating scales included ratings of such personality dimensions as dependability, leadership ability, acceptability to others, participation in groups such as cooperation in group activity, response to classroom parties, behavior during group decisions and such were employed in rating the children. Other aspects of social behavior which were rated included ratings of social amenities, that is table manners, method which a youngster greets others, his general courtesies and so on.

A second major section of the TMR which was employed was the communications section. This yielded information concerned with such things as conversational ability, the use of gestures, eye contact, care for books, spelling of name, listening skills and general language activities and language skills.

It is apparent that since the teacher provided the ratings for the TMR, that this section of the evaluation is most subjective and subject to error.

Table XII presents the results of T-tests, preparing readings for Finlayson and Garfield school students. It will be noted that both in the social behavior and communications skills categories that Finlayson students received higher ratings. The resulting T's approach levels of significance of 5%. Actually on two tail test of significance the probabilities for chance differences are .09, .17, and .18. If a one tail test were used, that is, if one were predicting the Finlayson pupils would be rated higher that Garfield pupils, then these differences in rated social behavior would reach the 5%level in favor of Finlayson students. One would suspect that the more favorable ratings given to Finlayson students probably resulted as much from the affection of the teachers for their pupils as they did objective or measured differences.

Performance of Indian Students

There was special interest in the performance of Indian pupils engaged in the open concept school. Tables XIII-XVII compare the gains made by Indian students to those made by non-Indian students who attend the special program. Table XIII, for example compared gains made by Indians with gains made by non-Indians on the Test of Basic Experiences. Inspection of the Table reveals that both Indians and non-Indians made substantial gains which were quite similar. Only in the social studies area did the non-Indians exceed Indians in improved performance at a significant level. In the area of science it would be noted Indians out performed non-Indians with regard to pre-post testscore differences.

Raw score pre-post differences on the Stanford Achievement Test reveal similar comparability in improved performance in such subject matters as word meaning, paragraph meaning, spelling, math applications and science. Gains made by Indian students surpassed those of their non-Indian classmates. However, not to a statistically significant extent. The only significant differences in gain scores which may be quoted is in the math concept category in which non-Indians out performed Indians in pre-post score gains.

Table XV reports gain scores in months (tenths of the year). It is immediately evident that Indians and non-Indians did not differ remarkedly in growth with regard to grade level scores, both groups apparently making satisfactory progress. There are no significant differences to report on this Table. It may be noted however, that in the science area, Indians show well over a years growth while non-Indians developed nearly as well. The need for training in vocabulary is again seen in the word meaning category in which both groups failed to progress as they did in other subject matter areas.

Similar growth between Indians and non-Indians is seen in Table XVI, which reports changes in mental ages and deviation IQ's. It will be noted that in terms of these developmental indices provided by the Otis-Lennon growth in mental age exceeded normal expectations for both Indians and non-Indians with non-Indians showing slightly better development. A little differential growth was also evident in deviation IQ's where Indians and non-Indians both showed improved IQ scores. Once again there is in these point totals, evidence of accelerated development which can be attributed to participation in the program.

Table XVI compares Indians and non-Indians on the Purdue Psycho Motor Survey Test. It will be noted again that there was a little differential in gains between Indians and non-Indians. Both groups developing satisfactorily, in all probability, in excess of normal expectations.

Additional results are presented in the appendixes. The interested reader may wish to refer to the appendix for Tables in which data is analyzed by grade level and Otis IQ scores.

Summary:

The outstanding gain in cognitive development recorded by pre-school students on the Test of Basic Experiences, emerges as the single, most cogent feature of the total evaluative program.

One can only speculate about the factors which accounted for accelerated growth recorded by these pupils. A number of features of this program such as diagnostic and prescriptive teaching, children working at their particular ability levels with free access to learning experiences and the effects of being observed in an evaulation study may have accounted for some of the observed differences. An additional and perhaps cogent factor which should be considered is the increased intermingling of pupils of different ages and abilities. Prior research has shown that children can and do teach other children. The Open Concept School offers increased opportunity for this tutorial effect to occur.

Praise should be extended to Garfield students and teachers for their outstanding record of achievement as measured by the Stanford Tests. In the case of formal learning and in the acquisition of factual data, the traditional teaching approach seemed at least as, if not more effective, than the less formally structured open concept school in some instances. Here again the effects of being selected for a research study cannot be controlled

satisfactorily without severely manipulating both programs and may have contributed to the results.

Indian children seem to be benefiting from the open concept program in the same manner as other pupils. A need to improve verbal production is indicated for both Indians and non-Indians.

In summary the results of the initial open school experiences are encouraging and there is considerable evidence to support the program's continuation.

Table 1 - Finlayson School Pre vs Post TOBE

Test N = 31

	MATH	SCIENCE	SOCIAL STUDIES	LANGUAGE	TOTAL
Pre	12.5	14.2	12.2	13.0	51.8
Post	21.8	23.1	20.8	22.2	87.8
T	-9.98**	-9.78**	-8.52**	-9.19**	-10.62**

**Significant beyond .01 level

Table II - Finlayson School Pre vs. Post TOBE

Stanines & Percentiles

	MATH		SCIENCE		SOCIAL STUDIES		LANGUAGE	
	STA	PC	STA	PC	STA	PC	STA	PC
Pre	4	38%	5	50%	5	47%	5	42%
Post	7	90%	8	93%	8	90%	9	97%

Table III - Finlayson School Pre vs Post Stanford Achievement Test

Raw Scores - N = 138, DF 274

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Pre	15.9	20.0	13.0	30.4	35.5	18.3	16.0	18.3	19.4	23.8
Post	19.6	26.0	16.4	35.1	42.0	22.5	20.2	27.5	22.4	29.5
T	-3.65**	-3.05**	-2.31*	-2.79**	-2.36*	-2.91**	-3.10**	-4.65**	-2.55*	-2.49*

*Significant > .05;

**Significant > .01

Table IV - Finlayson School Pre vs Post Stanford Achievement Test

Grade level scores, N = 138, DF 274

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Pre	3.02	2.70	2.57	2.81	2.53	3.42	3.61	2.94	3.60	4.24
Post	3.30	3.20	3.18	3.30	3.03	3.85	4.33	3.60	4.10	5.16
T	-1.29*	-2.19*	-2.64**	-2.16*	-2.87**	-2.75**	-3.25**	-2.43*	-2.54*	-2.89*

*Significant > .05;

**Significant > .01

Table V - Finlayson School Pre vs Post Otis Lennon Test

N = 31, 135

	Raw Scores Mental Ability	Direction I.Q.
Pre	30.4	90.1
Post	40.0	95.7
T	-5.21**	-3.16**

**Significant > .01

Table VI - Finlayson School Pre vs Post Purdue Test

N = 166

	Body Balance	Body Image	Perceptual Motor Skills	Form Perception	Total
Pre	13.1	13.8	16.9	4.16	47.0
Post	14.8	14.5	20.6	5.21	5.46
T	-7.81**	-1.65	-5.30**	-8.70**	-6.36**

**Significant > .01 level

Table VII

Differences or Gain Scores - Finlayson School vs Garfield

TOBE Test N = 31, 22

Df - 51

	MATH	SCIENCE	SOCIAL STUDIES	LANGUAGE	TOTAL
Finlayson	9.23	8.90	8.68	9.23	35.97
Garfield	3.96	5.73	4.78	5.46	19.46
T	5.39**	3.42**	3.13**	3.44**	5.85**

**Significant at .01 level

Table VIII

Difference or Gain Scores - Stanford Achievement Test

Finlayson vs Garfield Schools N = 225, 122

Raw Scores Df - 345

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Finlayson	3.66	5.56	3.42	4.63	6.53	4.16	4.22	9.21	3.01	5.78
Garfield	5.10	5.37	5.83	8.35	7.83	12.17	5.36	11.53	3.10	1.53
T	-2.22*	.21 NS	-3.60**	-4.23**	-1.27 NS	-8.26**	-1.18 NS	-1.58 NS	-.14 NS	3.06**

*Significant at .05 level;

**Significant at .01 level

Table IX

Differences or Gain Scores - Stanford Achievement Test

Finlayson vs Garfield Schools

Grade Scores (in months) N = 92, 135 Df = 122

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Finlayson	2.78	5.04	6.06	4.94	5.01	4.23	7.26	6.54	5.88	9.12
Garfield	6.84	5.67	9.57	9.10	7.36	12.79	9.73	9.87	7.16	6.93
T (for months)	-4.81**	-.66 NS	-4.40**	-4.04**	-2.66**	-8.49**	-2.15*	-3.03**	-1.07 NS	.97 NS

*Significant at .05 level;

**Significant at .01 level

Table X

Difference or Gain Scores - Finlayson vs Garfield Schools

Otis Lennon N = 31, 22 Df - 51

	Mental Ability	Deviation I.Q.
Finlayson	.95	5.66
Garfield	.10	4.41
T	-.82 NS	.61 NS

**Significant at .01 level

Table XI

Differences or Gain Scores - Finlayson vs Garfield Schools

Purdue Test N = 166, 98 Df - 262

	Body Balance	Body Image	Perceptual Motor Skills	Form Perception	Total
Finlayson	1.66	.73	3.73	1.05	7.64
Garfield	.63	.55	.41	1.14	2.50
T	5.20**	.31	6.54**	-.58	7.56**

**Significant at>.01 level

Table XII

T-Tests For T.M.R. Performance Profile

Finlayson vs. Garfield Schools

	Social Behavior	Communication Skills	Total
T	1.70	.94	1.36
PROB	.09	.17	.18

Table XIII

Finlayson School Indians vs. Non Indians

TOBE Test

	MATH	SCIENCE	SOCIAL STUDIES	LANGUAGE	TOTAL
Indians	8.95	9.38	7.43	8.62	34.29
Non Indians	9.80	7.90	11.3	10.5	39.50
T	-.64 NS	1.07 NS	-2.83**	-1.11 NS	-1.23

**Significant at .05 level;

Table XIV

Finlayson School Indians vs Non Indians

Stanford Achievement Test Raw Scores N = 72, 66

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Indians	3.99	6.64	3.53	4.30	5.61	3.11	2.11	10.51	2.90	6.48
Non-Indians	3.32	4.48	3.30	5.00	7.53	5.22	6.33	7.83	3.13	5.15
T	.58 NS	1.57 NS	.22 NS	-.51 NS	-1.16 NS	-1.68 NS	-2.41*	1.35 NS	-.27 NS	.48 NS

*Significant > .05 level

Table XV

Gain Scores - Finlayson School Indians vs. Non-Indians

Stanford Achievement Test - Grades Scores N = 72, 66

	Word Meaning	Paragraph Meaning	Spelling	Word Study Skills	Language	Math Comp	Math Concept	Math Applic.	Social Studies	Science
Indians	3.25	5.65	5.59	4.58	3.86	3.65	5.98	7.55	5.50	13.81
Non-Indians	2.27	4.38	6.58	5.24	6.33	4.80	8.54	5.46	6.26	9.43
T (for months)	.90 NS	.89 NS	-.74 NS	-.42 NS	-1.79 NS	-.90 NS	-1.70 NS	1.30 NS	-.48 NS	136 NS

Table XVI

Gain Scores - Finlayson School Indians vs. Non-Indians

Otis Lennon N = 21, 10 Df - 133

	Mental Ability	Deviation I.Q.
Indians	.89	4.53
Non Indians	1.03	6.98
T	-.99 NS	-1.38 NS

Table XVII

Finlayson School Indians vs. Non-Indians

Purdue N = 72, 62

Df - 164

	Body Balance	Body Image	Perceptual Motor Skill	Form Perception	Total
Indians	1.54	.67	3.58	.97	7.53
Non Indians	1.80	.80	3.91	1.15	7.79
T	-1.13 NS	-.15 NS	-.53 NS	-.97 NS	-.30 NS