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ABSTRACT

The purposes of the project were: (1) to determine if equality of educational opportunity exists for students in grades K-6 in the Rhinelander, Wisconsin, school district; and (2) to develop a model for elementary school program evaluation. Learner achievement of instructional objectives was accepted as the basic indicator of equality of educational opportunity. The district goals of self concept and basic skills--the latter restricted to math, science, and reading--were selected as the areas in which learner achievement would be examined. Data describing teachers' preparation, teacher instructional preferences, and amoun't of time spent on the subject was collected, and a cost analysis per student by school for 1974-75 was done simultaneously. This hypothesis was tested: "There will be no significant differences with references to learners' perceptions of self concept and to learner achievement in mathematics, science, and reading (at specified grade levels) across Rhinelander Elementary Schools." The data essentially supports the position that equality of educational opportunity does exist in grades K-6 in Rhinelander schools. A model to assist in the evaluation of elementary school programs was developed and is appended. Additional values of the study included an increased awareness of objectives related to instructor goals and a reexamination of curricular and instructional objectives. In addition, the study developed an increased awareness of a need for continual cost analysis and an increased understanding of evaluation procedures. (RC)

RHINELANDER PUBLIC SCHOOLS, 328 FREDERICK STREET
RHINELANDER, WISCONSIN 54501

cover by T. Urban

ELEMENTARY SCHOOL EVALUATION

ELEMENTARY SCHOOL EVALUATION

(Title V, Part C, Public Law 89-10)

Joint School District #1,
City of Rhinelander et al
328 East Frederick Street
Rhinelander, Wis. 54501
Telephone (715) 362-3465

(A Model For Elementary School Evaluation)

ACKNOWLEDGMENTS

The study of elementary school evaluation in the public schools of Rhinelander, Wisconsin 54501, and described in this report was made possible by a grant from the United States Office of Education through the Department of Public Instruction, Madison, Wisconsin 53702. The study extended over a one-year period of time and involved equal educational opportunities for children (K-6) and development of a model for elementary school evaluation.

Special acknowledgment is given to Dr. John Whooley from the University of Wisconsin, Eau Claire. Without his sustained interest and assistance, this study would not have been as meaningful. Special thanks go to Dr. Don Schmalzreid from the University of Wisconsin, Eau Claire, for his splendid cooperation and support given to this study.

Special thanks are expressed to Dr. Dave Nuesse from the University of Wisconsin, Eau Claire, and Dr. Willian Coulson and Mr. Don Dailey from the University of Wisconsin, Superior.

Special appreciation and affection to Cedric Vig, District Administrator; Jean Nolte, Alan Lewis, and Gene Belmas, Elementary Principals; George Plamann, Curriculum Coordinator; Jane Jelinek, Reading Specialist; all the teachers who were involved in the study from the Rhinelander Public Schools; and Mary Reed who has typed, re-typed, and re-re-typed so patiently.

Joseph A. Obey
Elementary Consultant
Principal Investigator
Rhinelander Public Schools

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ABSTRACT

The purposes of the project were: 1) to determine if equality of educational opportunity exists for students in grades K-6 in the Rhinelander, Wisconsin, school district; and 2) to develop a model for elementary school program evaluation.

Learner achievement of instructional objectives was accepted as the basic indicator of equality of educational opportunity. The district goals (see Appendix A) of self concept and basic skills--the latter restricted to math, science, and reading--were selected as the areas in which learner achievement would be examined. Data describing teachers' preparation, teacher instructional preferences, and amount of time spent on the subject was collected, and a cost analysis per student by school for 1974-75 was done simultaneously.

Testing was as follows:

		Grades 2	4	6
Self Concept	N =	0	261	311
Mathematics	N =	267	0	311
Science	N =	251	251	289
Reading	N =	0	274	311

The hypothesis to be tested is stated:

"There will be no significant differences with references to learners' perceptions of self concept and to learner achievement in mathematics, science, and reading (at specified grade levels) across Rhinelander Elementary Schools."

Analysis of covariance was used to test for significant differences at the .05 level. Sex, socio-economic status, and IQ were covariates. Of 1210 different cells in the project, 41 were found to be significant. The data essentially supports the position that equality of educational opportunity does exist in grades K-6 in Rhinelander schools.

A model to assist in the evaluation of elementary school programs was developed. See Appendix B.

Additional values of the study included an increased awareness of objectives related to instructor goals and a re-examination of curricular and instructional objectives. In addition, the study developed an increased awareness of a need for continual cost analysis and an increased understanding of evaluation procedures.

It was recommended that the study be replicated for 1975-76 and expanded to other goals of the system as well as additional subject matter areas. It was also recommended that more energies be spent on criteria referenced instruction. The final recommendation was that the data be used for investigation of quality of instruction, inservice programs, cost control, building design, and staff deployment.

I. IDENTIFYING INFORMATION

A. ELEMENTARY SCHOOL EVALUATION: The primary objective of this project was to evaluate one of the district's principal goals: to provide all children in the K-6 component of the school district with equal educational opportunity. This project was done in Joint School District #1, City of Rhinelander et al, Rhinelander Public Schools, 328 East Frederick Street, Rhinelander, Wisconsin 54501, Telephone (715) 362-3465.

B. A federal grant (Title V, Part C, Public Law 89-10 was given to the Rhinelander Public Schools from HEW, Washington, D.C. through the Department of Public Instruction, Madison, Wisconsin 53702.

C. This report covers the period from May 1, 1974, through July 15, 1975. The official grant period was May 1, 1974, through April 30, 1975; however, the extensive nature of the project prolonged it until July.

D. The project was submitted to the Department of Public Instruction, Madison, Wisconsin, on February 22, 1974, by Cedric A. Vig, District Administrator.

II. BRIEF HISTORY AND GENERAL PURPOSES OF THE PROJECT

A. Legislation concerning Comprehensive Educational Planning and Evaluation (Title V, Part C, Public Law 89-10) HEW, Washington, D.C. was the enabling legislation and source of funding for the project.

B. District Administrator Cedric A. Vig was responsible for initiating the project as a result of a previous ESEA Title V Sec. 505, 1973-74. The various areas were represented by the implementers as listed below. Their responsibilities included determining data needed, sources (grades, persons) of data, instrumentation, costs, dates for administration of instruments, personnel to administer the instruments, scoring, and writing of sections relative to their specific area.

Outside Consultants for the project were retained.

General Consultants - Dr. John Whooley
UW-Eau Claire
- Dr. Don Schmalzreid
UW-Eau Claire

Math	- Dr. William Coulson UW-Superior
Science	- Mr. Don Dailty UW-Superior
Computer Analysis	- Dr. David Nuesse UW-Eau Claire

C. The purpose of this application was to request the funds of ESEA Title V, Part C to develop instrumentation and techniques to evaluate long and short range goals and priorities of Joint School District #1, City of Rhinelander et al. These had been determined by a previous ESEA Title V, Sec. 505 project during the 1973-74 school year.

After completion of the ESEA Title V project of 1973-74, it was obvious to the study committee that our most pressing needs in terms of equal educational opportunity lay in the K-6 schools. As a result the general focus of the project developed around two goals:

1. to provide all children in the K-6 component of the school district with equal educational opportunities.

2. development of a model for elementary school evaluation.

D. The 11 elementary schools are beiefly described below.

Cassian-Woodboro is a 4-room school of 6,576 square feet, built in 1956 on a 10 acre site. The building houses approximately 100 students (K-6) and is designed to accomodate 135 students. It is located 12-13 miles west of Rhinelander on Highway K.

Central is a 9-room school of 27,783 square feet, built in 1939 on a 9 acre site. The building houses approximately 200 students (K-6) and is designed to accommodate 190 students. It is located in the east-central part of the city.

Crescent is an 8-room school of 10,000 square feet built in 1961 on a 10 acre site. It houses approximately 167 children (1-6) and is designed to accommodate 205. It is located 2 miles southwest of the city on Boyce Drive.

Curran is an 8-room school of 16,871 square feet built in 1933 on a 1.8 acre site. It houses approximately 170 children (K-6) and is designed to hold 220 students. It is located in the southeast part of the city.

McCord is a 9-room school of 18,846 square feet built in 1900 on a 1.3 acre site. It houses approximately 153 children (K-6) with a design capable of housing 190 children. It is located in the northwest part of the city.

Newbold is a 7-room school of 17,782 square feet built in 1956 with an addition in 1967 on a 20 acre site. The building houses approximately 188 children (K-6) and is capable of accommodating 220 students. It is located 6 miles northwest of the city on Highway 47.

Pelican consists of 2 structures, 12 rooms, of 13,946 square feet built in 1951 with a 1956 addition on a 9 acre site. It houses approximately 292 students (1-5) and is capable of housing 330 students. It is located 2 miles east of the city on Highway 8.

Pine Lake is a 13-room school of 23,255 square feet built in stages 1952, 1957, 1963, and 1970 on an 11 acre site. It houses approximately 317 students (K-6) with a design capability of 355 students. It is 2 miles north of the city on River Road.

South Park is a 7-room school of 22,914 square feet built in 1952 on a 2.8 acre site. It houses approximately 185 children (K-6) with a prescribed capacity for 190. It is in the southwest section of the city.

Starks is a 2-room school of 3,115 square feet built in 1954 on a 2 acre site. It houses approximately 46 students (1-6) and has a design capacity of 55 students. It is 9 miles east of the city on Highway C.

West is a 10-room school of 24,660 square feet built in 1923 with a 1939 addition on a .7 acre site. It has approximately 242 students (K-6) plus special education with a capacity of 250. It is located on the west side of the city.

III. SPECIFIC PURPOSES

Consistent with the desire of providing equal educational opportunities for all students and using teacher and district goals from a previous Title V project, 2 broad goals were sought:

1. to determine if equal educational opportunities exist for all K-6 children in the Rhinelander, Wisconsin, Public Schools, and

2. to develop a model for evaluation for the K-6 schools.

In the evaluation of the model the following objectives were formed:

1. Define equality of educational opportunity.

2. Specify and justify the criterion (a) to be used to determine if equality of educational opportunity does exist.

3. Relative to the aforementioned definition and criterion (a), prepare a data-gathering master plan that specifies needed data, data sources, instruments, and/or procedures in addition to describing the data-gathering tasks to be done in terms of responsibility, resources, and time.

4. Specify data analysis procedures.

5. Specify procedures to be used to evaluate the project.

6. Devise a reporting procedure to communicate the study to the public.

7. Develop a research design format.

Because of limitations of time, money, and manpower, the decision was made not to check out all students on all goals. As a result, only grades 2, 4, and 6 were involved in the study, and the areas of math, reading, science, and self concept were considered. In all areas, grade 6 was included because this is the termination grade for elementary schools, and it related to the purpose of determining equality of educational opportunity. Finance was also selected for a detailed study to make some determinations about cost and to begin the gathering of data relative to costs for future decisions about building, grade, and student costs.

IV. DESCRIPTION OF THE PROJECT

A. MATH

Grades 2 and 6 were selected because the math text series is split with Houghton-Mifflin K-2 and Laidlaw 3-6. The decision was made, therefore, to test grade 2, which is the end of the Houghton-Mifflin series and grade 6, which is the end of the Laidlaw series. Learner achievement with relation to instructional objectives constituted needed data.

A special ad hoc committee of teachers from grades 2, 4, and 6 met with the person responsible for implementation of the math testing. A search of available test materials was made, and after several committee meetings and committee discussions with all teachers of grades 2, 4, and 6, the Wisconsin Mathematics Test was selected because it best met data requirements, reliability and validity, difficulty level, and discrimination index criteria.

The Wisconsin Mathematics Tests (available from DPI) were used, and the scoring was done on the computer at University of Wisconsin-Eau Claire based on raw scores (RS). The tests were administered by the classroom teachers to the entire class, and directions were furnished with the tests. Testing was done during April of 1975. Scoring was done on a standard form for the computer at the UWEC.

Both grades required a minimum of two days for the testing. The grade 2 test was considered by many teachers to be too long for a single testing session for second graders. Grade 6 did not report this.

It is recommended to have the materials in the teachers' hands well in advance of the testing for previewing and inspection to insure that shortcomings in materials can be remedied prior to the start of testing sessions.

All students in grades 2 and 6 were tested. Teachers served as test administrators with guidance in the form of written directives and materials from the Wisconsin Mathematics Tests (DPI) and the central office.

E. READING

Grades 4 and 6 only were selected. A developmental reading program was given a high priority in a survey of needs by K-12 teachers in the spring of 1974. To initiate this program a sequence of reading skills was determined by K-6 teachers. Each grade is held responsible to teach specific skills.

Having previously identifed reading objectives for each grade level 1-6, the test sampling was drawn from that list of objectives.

Objectives from grades 1, 2, and 3 were used for the fourth grade test. The reading consultant matched district objectives with the list of objectives available from the SRA Mastery Series SOBAR Reading. The district objectives which most clearly matched those of SRA were selected first. Those less clearly matching were then selected until 40 matched objectives were obtained.

The same procedure was followed for the sixth grade test using selected primary (1, 2, 3) grade objectives and all of the objectives from grade 4 and 5. Criterion-referenced tests were developed by SRA using their Mastery Series SOBAR Reading based on the district's selection from the list of objectives as described above. Three test questions were chosen by SRA to evaluate the students' knowledge of each objective selected.

The selection of reading objectives, criterion-referenced tests, and related preparation took place over the winter of 1974-75.

On April 21 the fourth and sixth grade teachers participated in an inservice with all testing proceeding that week and completed by Friday, April 25. The test scores arrived during the first week in May and were given to our consultants for further analysis.

Scoring was done in 2 ways. Mastery of an objective to meet SRA standards meant that a student got 3 of 3 items correct for each objective. To meet mastery standards at the district level it was decided that 2 of 3 items correct on each objective was sufficient. This is shown on the reading table page 18 as M-SRA Mastery and L-Local (district) mastery.

There are 2 limitations that entered into decisions about the testing. First, cost limitations were a factor in testing only grades 4 and 6. Second, the list of objectives available from SRA for matching with district objectives was limited.

C. SELF CONCEPT

The committee recommended that all children in grades 4 and 6 be tested using a group administered test. The goals identified by the district staff, in the work referred to earlier, placed self concept as the first priority. For this reason it was included in the study.

The ad hoc committee of 8 teachers and 1 administrator investigated the instruments available on the market. Instruments available were best suited for grade 4 and higher. Problems of instrument validity, reliability, and emphasis (personality traits) were recognized.

The PIERS-HARRIS CHILDREN'S SELF CONCEPT SCALE was recommended by the ad hoc committee as the best suited instrument to meet project needs. The teaching staff administered the scale after receiving written administration directions. The children received test booklets and wrote on answer sheets developed by the committee with permission from the publisher. The same booklets were used by both grades. A proctor was present in the classroom to aid the teacher in administering the scale.

A person was hired to determine the raw score for each child. A problem encountered in the self concept project was in the area of student identification. By design the only information gathered at the time of test administration was the sex, grade, and school of the child. If this type of testing is done in the future, children will be identified by student number. The data that was collected was used as baseline data to develop district norms by sex. The teaching staff and students of grades 4 and 6 were used in the project.

D. SCIENCE (AAAS)

Grades 2, 4, and 6 were selected for testing in this area. AAAS was chosen because it is a system-wide program, the curriculum is defined for each grade level, it has a process method of teaching, and the system had been using it for a number of years. Tests were based on instructional objectives for each grade level from the science curriculum guide.

With guidance from the science consultant from UW-Superior, the science testing program was developed relatively independent of actual teacher input from any ad hoc committee.

Grades 2 and 4 were tested 1 week and grade 6 the following week. The time devoted to each part of the test depended on objectives being tested. The test for each objective was taken by at least 2 children. Most tests were approximately 10-15 minutes in length. In sixth grade, tests were approximately 20-30 minutes. Kits containing the necessary materials were furnished by UW-Superior, and both manipulative and written tests were used. Tests were administered on a one-to-one basis in grades 2 and 4 with examiners reading questions and students using manipulative materials. The grade 6 test was in written form, and reading assistance was given when necessary. UW-Superior scored the tests, and data received was raw score.

All students in grades 2, 4, and 6 were tested. Examiners were Mr. Don Dailey, instructors, and graduate students from UW-Superior. UW-Superior personnel were selected to do testing because of the University's long association with and known expertise in AAAS.

E. FINANCE

A study was made of each school's costs for the 1974-75 school year. These data were developed on per building and per pupil costs based on the following categories: supplies, textbooks, audio-visual, library books, library periodicals, instructional equipment, physical education supplies, maintencance, school secretary, classroom aides and miscellaneous play equipment, janitors, teachers, and principals. An operational cost analysis for a single year was done to determine how much was spent per pupil in the categories in each of the eleven elementary schools. See Appendix C.

The persons responsible for handling the financial portion of the study, the district bookkeeper and her aide, and a person who was hired part time for this specific purpose implemented this part of the study.

The finance co-chairpersons developed a form specifying the various categories of data needed by school. Ideally, the cost analysis study should have gone back 2 or 3 years, but because of time and funding constraints it was not feasible for this study. It will continue into the future. There was no student or teacher involvement in this part of the study.

F. TEACHER INPUT

Teachers were asked to indicate their education, majors/minors, and subjects preferred by rank order. Teachers were also asked to rank order areas they preferred to teach in and list the number of minutes they spent on each area and rank order them.

All of the elementary teachers were required to do this on the form which is shown in Appendix D. If data was missing the teachers were contacted personally to insure that every section was completed.

Because of limitations of time, money, and research design, this data has not presently been analyzed. It is felt, however, that this data will be of value in examining and providing for quality of instruction in the Rhinelander, Wisconsin, Public Schools.

V. EVALUATION METHODOLOGY

The evaluation methodology described below is separated on the basis of Goals 1 and 2 respectively.

Section 1. details the evaluation methodology employed in the study relative to goal number 1. The information collected, the analysis procedures employed, and the responsible personnel are detailed under the categories of math, reading, self concept, science, and population descriptors. Data collecting procedures and responsible personnel are also listed for finance and teacher input. Analysis procedures were not employed for the latter categories.

Section 2. describes the summative procedures used to evaluate the project.

A. MATH

The Wisconsin Mathematics Test developed by the Department of Public Instruction was used to evaluate this area. On April 15 and 16, 1975, the formal testing was administered by the classroom teachers throughout the district for grades 2 and 6. Raw score data was collected.

Students of grade 2 (N=267) and grade 6 (N=311) were tested across all schools. An Analysis of Covariance with multiple covariates was used. The independent variables IQ, Sex, and Social Economics Status (SES) were statistically removed from the data. The null hypotheses of no difference between

schools by grade was tested with reference to the dependent variable, math achievement. The F ratio was used to statistically measure for any overall differences between groups at the .05 level. The Duncan test was used for pairwise comparisons in grade 2, but the Newman Kuels test was used in grade 6.

B. READING

Reading was evaluated at the fourth and sixth grade level with the custom designed SRA-SOBAR reading criterion referenced test. The test items were based on instructional objectives. The classroom teachers administered the test in a formal setting on April 22 and 23, 1975. The data collected were raw scores with 3/3 correct meaning Mastery of the instructional objective by SRA standards and 2/3 correct for Local mastery.

The testing was done across schools with fourth grade (N=274) and sixth grade (N=311). An Analysis of Covariance with multiple covariates was used. Sex, IQ, and SES were statistically removed from the data. The null hypotheses of no difference between schools by grade was tested with reference to the dependent variable, reading achievement. The F ratio was used to measure any overall differences at the .05 level. The Newman-Kuels was used at both grade levels for pairwise comparison.

C. SELF CONCEPT

The Piers-Harris Children's Self Concept Scale was used in a group setting to gather data on the district's goal, self concept. Teachers administered the scale in a formal group setting on April 7 and 8, 1975. Data collected were raw scores by sex, grade, and building.

The testing was done across schools for fourth grade (N=261) and sixth grade (N=311). Data in this area were gathered and recorded only in terms of the sex of the child, grade, and the school attended. The null hypotheses of no difference between schools by grade was tested with reference to the dependent variable, self concept. An Analysis of Covariance with multiple covariance was used with sex and IQ statistically removed from the data.

The F ratio was used to measure any overall differences at the .05 level. The Newman-Kuels pairwise comparison test was used for both fourth and sixth grade data.

D. SCIENCE

A learner achievement test based on instructional objectives from AAAS Science was used to gather data on April 28 and 29 and May 5 and 9, 1975. The test was developed from randomly selected objectives from the second, fourth, and sixth grade AAAS Science curriculum. Raw score data were collected.

The testing was done across schools for second (N=251), fourth (N= 251), and sixth (N=289). The null hypotheses of no difference between schools by grade was tested with reference to the dependent variable, science achievement. An Analysis of Covariance with multiple covariates was used with Sex, IQ and SES statistically removed from the data. The F ratio was used to measure any overall differences at the .05 level. The Newman-Kuels pairwise comparison test was used for second and sixth grade data. In fourth grade science the Duncan test was used in place of the Newman-Kuels method.

E. FINANCE

A locally developed format was used to gather data for the cost analysis. This activity was completed during April and May of 1975. Data were gathered and presented as cost per building and cost per pupil for the 1974-75 school year only. The data were gathered by an individual hired specifically to locate this information.

Data were gathered for all 11 elementary schools in all the areas where information was available. The exceptions were in audio-visual (1), school maintenance (2), school and district paid classroom aides (7), and schools where the operational patterns differ such as 2 IGE schools. Although the data was gathered no tests of significance were run because of time and money limitations and to the limited data gathering--one year.

F. TEACHER INPUT

A locally developed format was used to gather teacher input. This activity was completed during May, 1974. Data was gathered by requiring each teacher to fill out the form completel,. There were no exceptions to the data collecting effort.

No tests of significance were run on this data because of time and money limitations. Future evaluation and planning will likely use this information.

SECTION 1.

SUMMARY TABLE

Area	Instrument	Gr. and N	Stat. Test	Sign. Level
A-MATH	Wis. Math Test	2-(N=267)	F ratio, Duncan	.05
		6-(N=311)	F ratio, Newman-Kuels	.05
B-READING	SRA-Mastery Series SOBAR Reading	4-(N=274)	F ratio, Newman-Kuels	.05
		6-(N=311)	F ratio, Newman-Kuels	.05
C-SELF CONCEPT	PIERS-HARRIS Children's Self Concept Scale	4-(N=261)	F ratio, Newman-Kuels	.05
		6-(N=311)	F ratio, Newman-Kuels	.05
D-SCIENCE	UW-Superior AAAS-Science Rhinelander Project	2-(N=251)	F ratio, Newman-Kuels	.05
		4-(N=251)	F ratio, Duncan	.05
		6-(N=289)	F ratio, Newman-Kuels	.05

SECTION 2.

This section describes the summative activities and procedures used to evaluate the project. The model for elementary school evaluation was generated in 4 stages and in such a way that it could evaluate all 4 stages of the model. The evaluation plan will give the reader an idea of the kinds of changes which were generated by the internal evaluation.

Internal evaluation was aided by the development and use of the format below that included a brief definition of the stage, a decision to retain or change a decision made by the group, suggestions for change, and unusual action. Each researcher went over the evaluating plan independently of the others, and then a consensus session was conducted.

EVALUATING PLAN

The purpose of this instrument is to determine your perception of the merit/worth of the decisions made in the defining, planning, implementing and evaluating stages.

The X's in the Retain column indicate that the internal evaluators saw no need to change this portion.

	Indicate by (+) whether you would change/retain a decision		If change indicated a. Why b. What change is suggested	Unusual Action/ Procedures
	Retain	Change		
Stage 1 - DEFINING				
A. Problem	X			
B. Sub-Problems	X			
(1)				
(2)				
(3)				
(4)				
C. Definition of Terms	X			
(1)				
(2)				
D. Roles and Functions	X			
(1)				
(2)				

	Indicate by (+) whether you would change/retain a decision		If change indicated a. Why b. What change is suggested	Unusual Action/ Proced- ures
	Retain	Change		
E. Context Description	X			
(1)				
(2)				
(3)				
(4)				
(5)				
Stage 2 - PLANNING				
A. Purpose	X			
B. Goal	X			
C. Objectives	X			
(1)				
(2)				
(3)				
(4)				
(5)				
D. Regarding Obj. a	X			
(1)				
(2)				
E. Regarding Obj. b	X			
(1)				
(2)				
(a)				
(b)				
(3)				
F. Regarding Obj. c	X			
G. Regarding Obj. d	X			
H. Regarding Obj. e				
(1)				
(a)				
(b)				
I. Regarding Obj. f				
(1)				
(2)				
(3)				
J. Regarding Obj. g				

	Indicate by (+) whether you would change/retain a decision		If change indicated a. Why b. What change is suggested	Unusual Action/ Procedures
	Retain	Change		
Stage 3 - IMPLEMENTATION				
A. Areas (Math, Reading, Science, etc)		Math X	Sample math obj/more items per obj. 2/3 for local mastery	
(1) Instruments				
(2) Implementor				
(3) Cost				
(4) Administration Dates		Math X	Test earlier/ test sessions too long	
(5) Test Administrators		Science X	Train locals (tchr., aides, vol. to test) 6th gr. test (1 to 1) same as gr. 2 & 4	
(6) Scoring				
(7) Data		X all	Present data in better form	
		Self Concept X	Gather data for each individual	
Stage 4 - EVALUATING				
A. Evaluation				
(1) Internal				
(2) External (DPI)				
(3) Decision-Making				
B. Process				
(1) How?				
(2) By?				
(3) For?				

Internal evaluation was to be done by the primary consultants and district employees who were instrumental in the development of the project. They each received blank copies of the evaluation form and completed it in isolation.

Then these evaluators met as a single unit and refined the evaluation data into a single report whi- is indicated herein.

External evaluation will come from the DPI in Madison. That office will apply the criteria as defined in the VC application with regard to the study as presented here and whether or not the grant recipients have in fact met the criteria.

Decision-making is at the heart of the evaluation plan. It is with regard to the use of the data gathered, computed, analyzed, and reported that decisions regarding next step(s) will be made.

VI. BUDGET

County and District Number: 43-4781
Joint District #1, City of
Rhinelander et al

Report for period ending 30 June 1975.
Title VC
Approved Budget $9000.00

Amount of Grant	$ 9,000.00
Encumbered Total	10,544.86
Balance	- 1,544.86
Balance from LVEC Fund	+ 1,544.86
Final Balance	.00

VII. RESULTS

Table and Figures

Section 1.

A. MATH TABLE

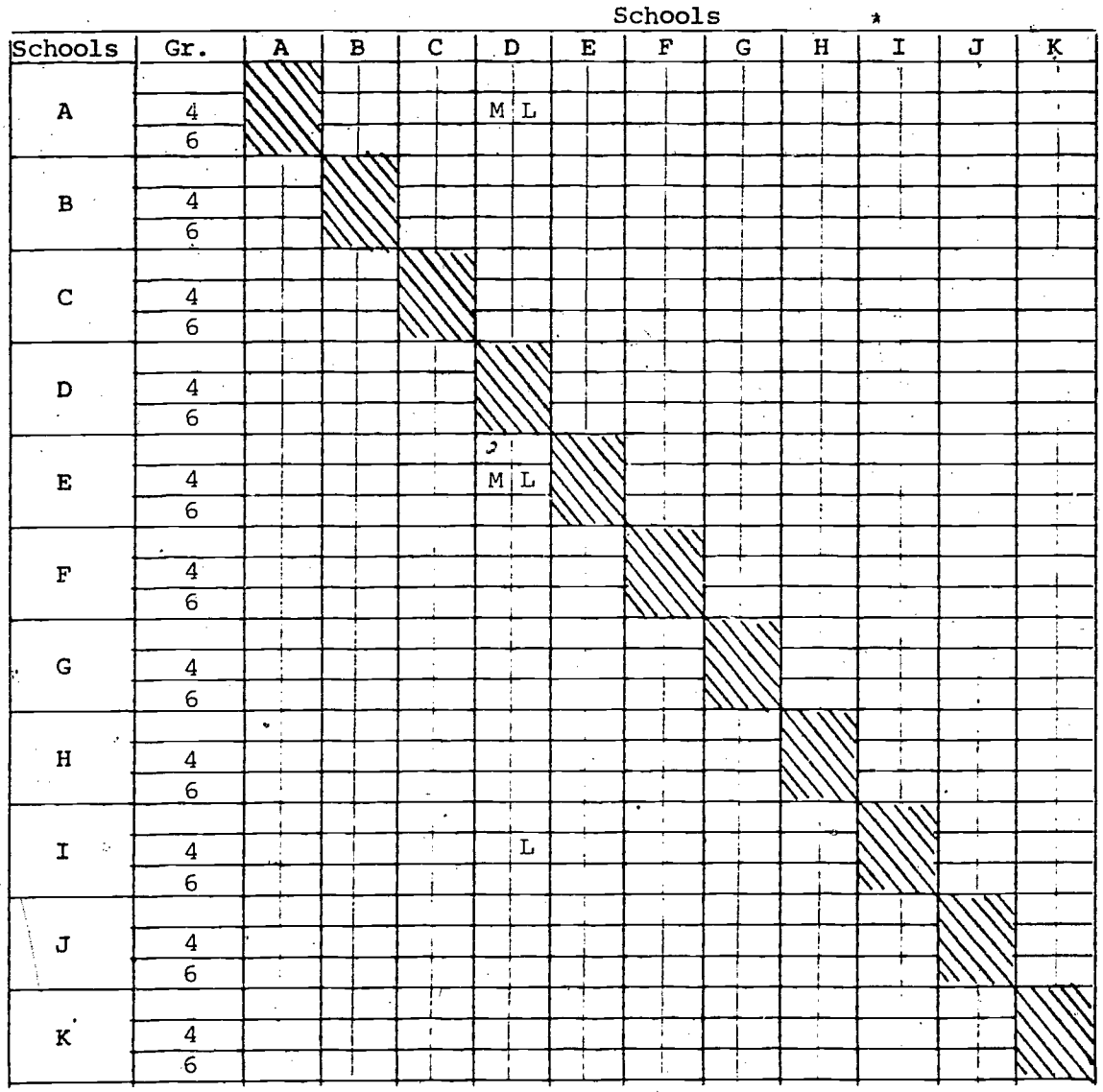
Schools	Gr.	Schools A	B	C	D	E	F	G	H	I	J	K
A	2											
	6											
B	2											
	6											
C	2											
	6											
D	2											
	6											
E	2											
	6				*							
F	2	*										
	6				*							
G	2	*	*			*			*	*		*
	6											
H	2											
	6											
I	2											
	6											
J	2											
	6	*	*	*	*	*	*	*	*	*		*
K	2											
	6	*	*	*	*				*	*		

* = Indicates statistical significance at the .05 level.

e.g. At second grade level school G's math achievement is significantly higher than schools A, B, E, H, I, and K.

25 cells of a possible 220 cells show statistical significance.

B. READING TABLE



M = SRA Mastery 3/3

L = Local Mastery 2/3

e.g. At fourth grade level school E's reading achievement is significantly higher than school D in both SRA and Local Mastery at the fourth grade level.

5 cells of a possible 440 cells show statistical significance.

C. SELF CONCEPT TABLE

		Schools										
Schools	Gr.	A	B	C	D	E	F	G	H	I	J	K
A	4											
	6			*								
B	4											
	6											
C	4											
	6											
D	4											
	6											
E	4											
	6			*								
F	4											
	6											
G	4											
	6											
H	4											
	6											
I	4											
	6			*								
J	4											
	6											
K	4											
	6											

* = Indicates statistical significance at the .05 level.

e.g. At sixth grade level school A's self concept is significantly higher than school C.

3 cells of a possible 220 cells show statistical significance.

D. SCIENCE TABLE

Schools	Gr.	A	B	C	D	E	F	G	H	I	J	K
		Schools										
A	2											
	4										*	*
	6											
B	2											
	4										*	*
	6											
C	2											
	4											
	6											
D	2											
	4										*	*
	6											
E	2											
	4											
	6											
F	2											
	4											
	6											
G	2											
	4											
	6											
H	2											
	4										*	*
	6											
I	2											
	4											
	6											
J	2											
	4											
	6											
K	2											
	4											
	6											

* = Indicates statistical significance at the .05 level.

e.g. At fourth grade level schools A, B, C, and H's science achievement are significantly higher than schools J and K.

8 cells out of a possible 330 cells show statistical significance.

REVIEW OF THE TABLES

A. MATH

Differences at the second grade level were significant in the following cells. School F and School A; School G and Schools A, B, E, H, I, and K.

Differences at the sixth grade level were significant in the following cells. Schools E and School D; School F and School D; School J and all other elementary schools; School K and Schools A, B, C, D, H, and I.

B. READING

Differences at the fourth grade level were significant in the following cells. School A and School D on SRA and Local Mastery; School E and School D on SRA and Local Mastery; School I and School D on Local Mastery only.

C. SELF CONCEPT

Differences at the sixth grade level were significant in the following cells. School A and School C; School E and School C; School I and School C.

D. SCIENCE (AAAS)

Differences at the fourth grade level were significant in the following cells. School A and Schools J and K; School B and Schools J and K; School D and Schools J and K; School H and School J and K.

In the total analysis of the 4 areas 41 cells of 1210 cells show statistically significant differences.

Using learner achievements as the essential criterion of equality of educational opportunity, the data supports the position that equal educational opportunity does in fact exist in the Rhinelander Public Schools.

VIII. DISCUSSION

Early in the project the decision was made to determine whether equality of educational opportunity exists in the Rhinelander Public Schools. Learner achievement was accepted as the best indicator of equality of educational opportunity, and such achievement should be examined in relation to the district's goals for elementary education. As a result achievement in the math, reading, and science areas and self concept were chosen as the dependent variables.

If the decision had been made to search for sameness in the elementary schools, the entire projects would have been changed. The areas under investigation for sameness would have centered on site and plant, staff, materials, programs, pupil services, and budget.

From a philosophical point of view it seemed reasonable that educational decisions should be made on the basis of data collected and analyzed via a well-conceived evaluation model inclusive of a good research design. From an administrative point of view this allows decisions based on data, not hunches.

The project led the district into considerations such as quality of instruction, inservice programs, school operations, and building uniformity for further investigation. The capability exists with the present data to develop new and additional projects as the district sees the need(s). Having carded all data for each child in each area, if it is decided to request new or additional data, it is only necessary to send the cards and new data to UW-Eau Claire, and in a few days the requested information is back.

With significant differences in only 41 cells of 1210 cells there is support for the position that equal educational opportunity does exist. However, limited sampling on limited goals in a limited time does not provide any conclusive evidence. The gathering of data must be done over time.

IX. SUMMARY

Based on the notion that equality of educational opportunity is best determined by learner achievement of desired instructional goals/objectives, the very limited data collected in the study support the position that such equality does exist for students in grades K-6 in the Rhinelander, Wisconsin, school district.

Constraints on the project in terms of time, money, and personnel, and feasibility in school programming resulted in a limited sampling of the goals determined important by the district's teachers; namely, self concept and basic skills, the latter restricted to math, reading, and science for students in selected grades. Attention was given to selection of valid data-gathering devices, and thus every effort was made to assure content validity in the subject-matter tests.

Selection of the instrument to measure self concept was confounded by the problems of validity and reliability of such instruments and the absence of well-defined curricular objectives related to the goal. For those reasons, the data collected were not coded individually, were treated essentially as base line information, and were analyzed only on the basis of sex and grade group. The committee charged with the selection of the instrument concerned itself with validity and reliability, and after much searching selected the test that appeared to be best for the situation.

Given the limited sampling described above, the most significant weakness in the project was the failure to write a research proposal that addressed itself to the specifics of data gathering. This problem is dealt with in the recommendations given below.

When the decision was made to check on equality of educational opportunity, essentially in terms of learner achievement of objectives/goals, the problem of bias in goal selection surfaced. The committee recognized the problem and selected the sampling areas in terms of perceived importance, feasibility, and constraints as indicated above. It is recognized that before a formal, definitive statement can be made about the equality of educational opportunity, there will have to be much data analysis across a more extensive sampling of the district's goals.

RECOMMENDATIONS

1. Analyze teacher input base for such as inservice and staff deployment.

2. Completely develop a code for the contents of computer data cards.

3. Data card system be used as storage for future studies.

4. Data on self concept be coded by individual, on the assumptions of defined curriculum and valid instrumentation.

5. More time given to instrumentation--development or selection.

6. Greater emphasis on criterion-referenced instrumentation.

7. Use of data as a basis for investigation of such as the following: quality of instruction, in-service programs, cost control, building design, staff deployment.

8. Replicate the study in 1975-76.

9. Extend the study to other goals and students.

10. Staff inservice relative to evaluation techniques.

11. Maximum involvement of instructional staff in evaluation programs to enhance program offerings.

12. Yearly cost analysis to provide per pupil cost by school across districts.

13. Use by teacher of data collected from his(her) classroom to modify instruction.

14. Sample math objectives and have several items per objective, rather than one item for all(each) objectives.

15. Respect other obligations of teachers, students, and administrators, when conducting an evaluation study.

Appendix A

CRITERIA RELATED TO ELEMENTARY SCHOOLS

(Program Goals)

THESE ARE THE 5 GOALS THAT HAVE BEEN SELECTED BY THE K-6 TEACHERS AS RECEIVING TOP PRIORITY IN THEIR WORK.

1. Self Concept ---

   To develop a positive self concept and appreciation of one's worthiness as a member of society.

2. Basic Skills ---

   To attain knowledge and experience in the areas of natural sciences, social sciences, humanities, and the arts.

3. Skills To Use Knowledge ---

   To develop the perceptive skills for creative, constructive, and critical thinking, problem solving, and evaluation.

4. Human Relationships ---

   To recognize the worth of every person and to develop skills in personal-social adjustment and human relationships.

5. Health ---

   To develop good health habits and an understanding of the conditions necessary for maintaining physical and emotional well being.

Appendix B

ELEMENTARY SCHOOL EVALUATION MODEL

OVERVIEW

There are four stages in this model. Each stage is characterized by a goal(s) with associated tasks and decision-making. Summarily:

Stages	Goals
1) DEFINING	1) Clear statements of the problem, sub-problem, terms, roles, and context.
2) PLANNING	2a) Statements of project purposes, goals, and objectives.
	2b) Statement of means to the achievement of ends.
	2c) Statement of procedures to evaluate the project.
3) IMPLEMENTING	3) Carrying out of planning. This involves both maintenance and modification of planning decisions related to 2b and 2c above.
4) EVALUATING	4a) A determination of the merit and/or worth of defining, planning, and implementing decisions.
	4b) The processing of data for decision-making regarding the next step.

Appendix C

FINANCE

1974-75

Expenditure Category	Cassian	Central	Crescent	Curran	McCord	Newbold	Pelican	Pine Lake	South Park	Starks	West
Instruction											
1. Principals											
2. Teachers											
3. Aides-R											
4. Title One											
5. Secretarial											
6. Supplies											
7. Textbooks											
8. Library Books											
9. Periodicals											
10. Audio-Visual											
11. Travel											
12. Inservice											
Transportation											
13. General											
14. Extra-Curricular											
Operation											
15. Janitor Salary											
16. Janitor Supplies											
17. Heat											
18. Water/Sewer											
19. Electricity											
20. Telephone											
21. Travel											
22. Snow Plow											
Repair											
23. Building											
24. Site											
25. Equipment											
26. Food Service											
27. Capital Outlay Equipment											
Total Cost											
Average Membership											

Appendix D

TEACHER INPUT

1. DEGREES B.S._____ M.S._____
(school) (school)
Major(s)_____ Minor(s)_____

2. Rank order the subjects 1 to 5 as you prefer to teach them (1 being the most preferred, 5 being the least preferred).

Arithmetic_____
Reading _____
Science _____
Social St._____
English _____
Spelling _____

3. In what area(s) do you feel best prepared to teach? ___
_____

How many credits do you have in this area? _____

4. In what area(s) do you feel least prepared to teach? ___
_____

How many credits do you have in this area? _____

5. Rank order the special areas as you prefer to teach them 1-3.

Art _____
Music _____
Phy Ed _____

6. Rank order the grades as you prefer to teach them 1-7, 1 being most preferred, 7 being least preferred.

Grade K _____
1 _____
2 _____
3 _____
4 _____
5 _____
6 _____

Name _____