

R E P O R T R E S U M E S

ED 016 011

UD 005 147

A PLAN FOR FIELD TESTING R/I UNITS.

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WISCONSIN UNIV., MADISON

REPORT NUMBER WRDCCL-WF-4

PUB DATE FEB 67

CONTRACT OEC-5-10-154

EDRS PRICE MF-\$0.25 HC-\$1.80 43P.

DESCRIPTORS- \*EDUCATIONAL INNOVATION, \*RESEARCH AND INSTRUCTION UNITS, \*RESEARCH DESIGN, \*FIELD STUDIES, \*PROGRAM EVALUATION, EDUCATIONAL RESEARCH, SCHOOL ORGANIZATION, CHECK LISTS, QUESTIONNAIRES, PUBLIC SCHOOLS, TEACHER EVALUATION, WISCONSIN

THIS PAPER DISCUSSES THE FIELD TESTING OF RESEARCH AND INSTRUCTION UNITS IN OPERATION IN A NUMBER OF WISCONSIN SCHOOLS. THE UNIT IS A REORGANIZED SCHOOL STRUCTURE WHICH IS MADE UP OF A LEARNING SPECIALIST LEADER, TEACHERS, PARAPROFESSIONALS, AND STUDENTS. THE MAJOR AIMS OF THIS EDUCATIONAL INNOVATION ARE (1) TO DEVELOP AND MAINTAIN AN "EXEMPLARY INSTRUCTION PROGRAM" WITH INDIVIDUALIZED TEACHING AND INCREASED MOTIVATION, (2) TO CONTINUOUSLY IMPROVE THE PROGRAM "THROUGH INNOVATION, DEVELOPMENT, AND RESEARCH," AND (3) TO DIFFUSE EFFECTIVE PRACTICES WITHIN THE SCHOOL AND THROUGHOUT THE SYSTEM. THE PAPER CONTAINS A DISCUSSION OF THE KINDS OF DATA WHICH ARE NEEDED TO EVALUATE THE SCHEME, THE VARIOUS POSSIBLE FIELD TESTING DESIGNS, THE INSTRUMENTS, AND THE PERSONNEL. IT ALSO HAS DESCRIPTIONS OF RESEARCH EFFORTS IN FOUR SCHOOL SYSTEMS. AN APPENDIX CONTAINS SAMPLES OF OPINION SCALES, CHECKLISTS, AND QUESTIONNAIRES GIVEN TO THE STAFF AND STUDENTS. (NH)

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Working Paper No. 4

A PLAN FOR FIELD TESTING R & I UNITS



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February 1967

4741 500 DM

The project development reported herein was performed pursuant to a contract  
with the United States Office of Education, Department of Health, Education,  
and Welfare, under the provisions of the Cooperative Research Program.

Center No. C-03 / Contract OE 5-10-154

## PREFACE

The Research and Instruction Unit is a unique organization linking local schools of Wisconsin, the Wisconsin Research and Development Center for Cognitive Learning, and the State Department of Public Instruction. While many of the main components of team teaching are involved, the uniqueness of the R & I Unit is its research and development function. In addition to establishing a direct link between the local schools and the R & D Center, this uniqueness has provided: (a) the teacher of the unit highly rewarding experiences in research methodology and experimentation, individualization of instruction, and motivational procedures, and (b) the R & D Center with a natural setting for experimentation on motivation and individualization of instruction.

The first R & I Units came into existence the second semester 1965-66 in three school systems, as follows: Racine, nine elementary units; Madison, six elementary units; and Janesville, one elementary unit. During the current year 1966-67 forty-one elementary and twelve secondary units are in operation in Racine, Madison, Janesville, Milwaukee, Manitowoc, and West Bend.

How well does the R & I Unit enable schools to find solutions to the problems of individualizing instruction and in the development of exemplary instructional programs? Of what significance are these solutions to the educational community? It is recognized that no organizational plan can in itself guarantee instructional outcomes; rather, it offers opportunities for conducting and improving instruction. To succeed, any organization must be built upon sound foundations in curriculum and instructional method.

During the present year specially constructed and published instruments are being tried out to determine their efficacy in appraising the effectiveness of R & I Units in accomplishing their objectives through an examination of student and teacher responses. During the present year this field testing is being limited to the Elementary level in four of the six cooperating school systems. It is anticipated that a more extensive program will be undertaken during the 1967-68 school year following validation of instruments and procedures.

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## I. Purpose

Research and Instruction Units have three main functions which must be considered in a field testing program: (a) developing and maintaining an exemplary instructional program for children, especially in connection with individualizing instruction and improving motivation; (b) continuously improving that instructional program through innovation, development, and research; and (c) diffusing desirable practices within the school building and subsequently on a larger scale. It is in these areas that R & I Units also serve as laboratories in classroom learning and instruction for the local school systems and the R & D Center; this function must also be included in any evaluation. The development and maintenance of an exemplary instructional program requires that objectives of the school be clearly specified. In addition, (a) special objectives of a developmental program must be specified and (b) researchable questions must be asked which are appropriate for that Unit. Field testing of the R & I Unit, therefore, must take into account how well the instructional objectives are being achieved by the students of the Unit; how well the development, innovation, and diffusion functions are performed; and of what value they are. Thus of the three main functions of the R & I Units, the last two--improving the instructional program and diffusing desirable practices--are subsidiary to the first--developing and maintaining an exemplary instructional program. All three are necessarily objects of the field-testing program.

The broad strategy of the Center during this initial phase is simultaneously to evaluate the R & I Units in terms of these functions and also to conduct the program of research and development within the Units to generate a superior instructional program. Thus, there are two related but somewhat separate activities; namely, field testing or evaluating the R & I Unit concept throughout the cities of Wisconsin in which there are Units and also maintaining and improving the exemplary instructional program through research and development within each Unit. These two activities--within-Unit research and development, and evaluation of R & I Units--proceed concurrently and provide continuous feedback for improving the efficiency of the Units in accomplishing educational objectives. It is expected that a more complete field testing program will be done next year. Presently it is limited to the elementary level in the four cities discussed separately in later sections of this paper.

Educational objectives such as the following are generally relevant in the schools in which R & I Units are located:

1. Every child should acquire mastery of the basic skills in the use of words and numbers.
2. Every child should acquire knowledge, attitudes, and skills in the natural sciences, the social sciences, the humanities, and the arts.

3. Every child should acquire the habits and attitudes associated with responsible citizenship.
4. Every child should acquire good health habits and an understanding of the conditions necessary for the maintenance of physical and emotional well-being.
5. Every child should develop creative abilities in one or more fields of endeavor.
6. Every child should understand the opportunities open to him for preparing himself for a productive life and should be enabled to take full advantage of these opportunities.
7. Every child should acquire a positive attitude toward school and educational processes.
8. Every child should acquire understanding and appreciation of persons of various social, cultural, and ethnic groups.
9. Every child should prepare for a world of rapid change and unforeseeable demands in which continuing education throughout his adult life should be a normal expectation.
10. Every child should acquire a good understanding of himself and an appreciation of his worthiness as a member of society.

## II. Data

In the field testing program, information early in the school year and late in the school year is needed in order to determine changes in achievements and other behaviors of students toward the accomplishment of these objectives. The following kinds of information are needed:

- A. Characteristics of the students at the time of entering the Unit.
- B. Characteristics of the instructional program, personnel, facilities, and equipment within the buildings housing the Units.
- C. Characteristics of the school system.
- D. Relevant conditions in the home and community related to the educational program.
- E. Characteristics of the students toward the end of the school year.

R & I Units in a school building and system may have marked effects upon its instructional staff, the building principal, and other teachers in the building. A field test should also take into account these factors of a more tangential nature, e.g., attitudes of other teachers toward innovation and changes.

In general, it appeared desirable to secure extensive information regarding students in the cognitive domain and lesser information in the affective domain. Academic ability or intelligence test scores and educational achievement test scores appeared to be fairly useful types of base line information in the cognitive domain. In the affective domain the child's attitude toward school and self appeared to be of high significance. It was concluded that no information regarding the psychomotor and health domains would be sought during the first year.

### III. Designs

Data of the kinds mentioned above allow a variety of strategies for evaluation of students in cognitive and affective domains. It became necessary for a committee from each system to choose from these strategies the one which was judged most appropriate for that system. Strategies that were considered and relevant discussion regarding desirability and limitations of specific designs are presented in this section.

Field testing activities may be of either an evaluative or a research orientation. The purely evaluative approach requires the careful and complete articulation of objectives and subsequent measurement to determine the extent to which these objectives have been accomplished. While not precluding such measurement, the research approach requires a comparison of the degree to which the objectives are achieved by the children being studied as contrasted with some similar children, or some other type of control. Both approaches require the use of some sort of experimental design.

One design which can be employed involves the comparison of the performance of students in an innovative program (the "treatment" group) with some absolute standard. Such a comparison can be made at both the beginning and the end\* of the program, or at the end only. In the former case, it becomes possible to state the amount of change with respect to the standard which the group has undergone during the program. Thus, if 10% of the students meet the standard at the beginning of the program and 90% at the end, there has been a significant improvement in the group during the period in which they were experiencing the program. If the later alternative is employed, and 90% of the students meet the standard at the end of the program, no judgment can be made of the improvement shown during the program. All that one can say is that at the conclusion of the program, 90% of the students experiencing it met the established standard. Obviously, then, when this approach is used both pre- and posttesting should be used.

Basically this is a program of evaluation, and it has several advantages. First, it requires a minimum of data-collection. Pretesting and posttesting with instruments or procedures which allow comparison of student performance with the standard are relatively easy to do. Secondly, the summary statistics--percentages--are easily calculated and readily interpreted to administrators and others whose familiarity with statistics is usually limited. Third, the problems of selecting appropriate groups for comparison, of trying to locate data from previous years, of selecting appropriate variables to control, etc. are all avoided. In terms of convenience and cost, then, this design fares well.

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\*Although the discussion is phrased in terms of the "end" of the program, it should be kept in mind that the evaluation can take place during the program at any point at which it seems desirable.



However, there are some rather serious problems involved in this approach. The most important of these problems is that there is not, after the data are collected and analyzed and the results reported, any basis for claiming that the methods employed resulted in the change which was found. True, it may be possible to point to the data and say, "See how well our students did. Obviously we have an excellent program here." But there is no guarantee that they would not have performed equally well, or perhaps even better, under some other program, even--in the extreme--under no program at all. A second problem to be faced when this design is employed is the selection of the absolute standard to be employed. This involves a far more detailed specification of the goals of the particular innovative practice than many persons are willing or able to make. In fact, there are instances when it is not possible to specify goals so directly and so unambiguously than standards can be established. It is conceivable that the standard might be set at a level which students would reach as a result of normal maturational processes (making the program look very effective indeed), or, at the other extreme, to set the standard so high that few or none of the students would reach it. These are very real hazards, indeed.

A second strategy for evaluation involves the comparison of the treatment group with some designated norm. As with the first strategy, this one can be used at both the beginning and the end of the program, or at the end only. In the latter case the same criticisms apply as were relevant to the preceding design. In the former situation, the amount of change in the treatment group from the beginning to the end of the program can be compared with the amount of change expected on the basis of the normative data. There are two methods of establishing the necessary norms.

The first of these methods, particularly appropriate if standardized tests are to be employed, is to use norms already established for the measuring instruments employed. In many cases, this approach may be satisfactory. However, there is usually little information available about the characteristics of the normative population, so that there is some uncertainty about just what kind of comparison is being made. This problem becomes particularly acute when the treatment group is exceptional in some way, such as coming from a socio-economically disadvantaged area, for which the norms on virtually all standardized tests are inappropriate.

The second method is to develop regional, local or otherwise specialized norms for the measuring instruments to be employed. For example, if the treatment group is composed primarily of students in a Title I program, the measures can be administered to a large sample of students in such programs and the results of this testing be used to establish appropriate norms. In order for this approach to be effective, normative data must be gathered at the same times as are the data on treatment groups. It is apparent that this task of developing appropriate norms may be greater than that of carrying out the field testing program, and thus may not represent a satisfactory solution.

A common practice in research is to establish control groups and to judge the effectiveness of a particular program by comparing students who

have undergone that program with those in the control group. In the context of field testing R & I Units, then, a third design is available. Administering measures early in the program and again later in the program to both treatment and control groups makes it possible to compare change in the treatment group with that in the control group and thus to make some judgment about the effectiveness of the program. Students in the control group will normally be students of similar characteristics enrolled in schools of similar characteristics to those of the treatment population. A crucial factor in this design is the identification of an appropriate control group. It is desirable that the decision to use this design be made before the program has been begun. Then, ideally, the unit of observation, be it student, classroom, or perhaps even school, is assigned randomly to either the treatment or the control condition. Unfortunately, in many programs this approach is impossible. However, it is possible to make decisions concerning (1) the relevant variables to be considered for equating groups, (2) the degree of agreement to be sought between the treatment group and the control group on these variables, and (3) statistical technique to be employed to handle the discrepancies which will inevitably arise between the two groups, and then to establish the control groups on some sort of a posteriori basis.

A fourth design involves comparing change in the groups in the program with projected or hypothesized change based on the past progress of members of the group. To take a hypothetical example, if children on the average in the R & I Unit have performed on an achievement battery as follows

Grade in School	3	4	5
Achievement Level	2.1	2.8	3.5

we would predict that at the end of grade six the group average would be about 4.2. If the program being employed does in fact "make a difference," the actual average would depart significantly from this value (hopefully in a positive direction).

This design takes advantage of available data and requires a minimum of new testing, entirely within the treatment group. From this standpoint, then, it is economical and relatively simple to carry out. However, one drawback to this approach is that even if the treatment group shows a significant improvement, there is no guarantee that this improvement would not have occurred even without the program.

One possible way to avoid this problem is to combine this design with the preceding one, and compare the deviation of the treatment group average from the projected average with the corresponding deviation of some control group from its predicted average. If this is done, the advantages of the two designs are combined, but so are their disadvantages.

A fifth design for field testing involves the development of predicted scores for students in the field testing program on criterion measures to be obtained at the conclusion of the program. By obtaining scores from a large number of students on a set of predictors--including aptitude measures,

measures of past achievement (where applicable), relevant socio-economic characteristics of the family, etc.--and the criterion measure, it would be possible to use multiple regression analysis to combine the scores from the predictors in such a way as to obtain the maximum possible correlation of predicted scores with the obtained criterion scores. This procedure leads to a predictive equation which can then be applied to students in the innovative program. If the participation in such a program has any effect, the predicted scores should consistently under- or overestimate the observed scores for this group. Again, the problem of determining the relevant variables must be faced, but with this design, in contrast to the preceding ones, some estimate ( $R^2$ ) is available concerning the adequacies of the chosen predictor variables. Another important advantage of this design over the preceding ones is that the problems of a posteriori matching are avoided. Important limitations include the assumption of a linear relationship between the predictors and criterion (although this assumption is usually adequate when dealing with educational data), and the assumption that the effects of different predictors on criterion scores are purely additive.

#### IV. Instruments

The efficiency of the R & I Units in accomplishing their three-fold purpose--namely (a) developing and maintaining a model or exemplary instructional program for children; (b) continuously improving that instructional program through innovation, development, and research; and (c) diffusing desirable practices within the school building and subsequently on a larger scale--will be determined through the use of a variety of published and locally-constructed instruments. An opinion scale which was prepared cooperatively by various school systems and the Research and Development Center for Learning and Re-Education is presented in Appendix A. This forty-item questionnaire deals with nine separate areas in which relevant information will be collected. Appendix B presents a classification of the opinion scale items into these nine categories as well as a brief description of each category. Appendix C is a facilities check list with an accompanying cover letter. The purpose of this checklist is to determine the adequacy of facilities, equipment, and supplies. Other instruments specific to a school system will be identified in later sections of this paper.

#### V. Personnel

In order to determine the appropriateness of the various alternatives outlined above for the various school systems, local committees comprised of representatives of each school system and the R and D Center were established. Because no comparisons among school systems were desired, each respective committee worked out a program for that particular school system. These committees were organized in the fall of 1966. Involved from the R and D Center are Dr. Herbert J. Klausmeier, Dr. Glenn E. Tagatz, Dr. James



L. Wardrop, Mrs. Barbara Kennedy, and Mrs. Doris Cook. Professor Klausmeier has assisted in organizing committees and developing the overall strategy and plans of evaluation. Dr. Tagatz and Dr. Wardrop have served on evaluation committees and are taking major responsibility for planning specific evaluation programs, including selection and development of instruments, etc; Mrs. Kennedy is serving as keeper of records; Mrs. Cook is correlating the activities within Units and field testing program. Responsible representatives from the various school systems are identified in following sections in which plans specific to each system are presented.

#### VI. Field Testing in Janesville Public Schools

In October, 1966, a working committee was formed composed of Mr. Robert Cook, Mr. Norman Graper, and Mr. Lewis Loofboro from the Janesville Public Schools and Mr. Glenn Tagatz and Mr. James Wardrop from the Research and Development Center to determine plans and procedures for field testing the effectiveness of R & I Units in the Janesville Public Schools.

This committee decided that the third of the designs--comparison with an appropriate control group--would be employed in Janesville for the examination of student achievement. The R & I Units, control groups, and appropriate grade levels are identified in Table 1. Two control schools were identified for the sixth-grade Unit at Adams School. The sixth grade at Roosevelt School is organized within a team-teaching framework, while that at Jefferson School is composed of traditional self-contained classrooms. It was decided that it would be worthwhile to compare the R & I Unit with both types of controls.

TABLE 1

Locations of R & I Units, Control Classes and Respective Grade Levels, Janesville

R & I Unit	Control	Level
Wilson School	Madison School	First
Adams School	Roosevelt School (Team-teaching) Jefferson School (Self-contained)	Sixth

The achievement testing program for the field testing is prescribed in Table 2. The pretest data were collected in the fall of 1966, and the posttests will be administered in April, 1967. Pretest data provide base line achievement scores which will be used as co-variates in the analysis as appropriate. Mr. Loofboro will provide this data to the Center.

TABLE 2  
Achievement Testing, Janesville

Level	Pretests	Posttests
First	Quick Test	Reading Test
	Metropolitan Readiness	(to be selected)
Sixth	Lorge-Thorndike	Stanford Achievement
	Stanford Achievement	

The teacher Opinion Scale will also be administered in April to teachers in the R & I Units and teachers of classes in the control schools.

The Facilities Checklist will be administered only to the R & I Units. It will be completed cooperatively by the respective building principal and learning specialist in each school.

#### VII. Field Testing in Madison Public Schools

Initial efforts regarding field testing of the R & I Unit concept in Madison were undertaken during September, 1966. At that time it was agreed that a working committee would be established. This working committee consisted of Mr. Koeppe, Mr. Seeman, Mr. Erpenbach and Mr. Jensen from the Madison Public School System and Mr. Wardrop and Mr. Tagatz from the R and D Center.

In subsequent meetings it was decided by this committee to use control groups for comparative purposes of student achievements as outlined earlier in this paper as the third design. In order to implement this design, control groups were identified for each of the R & I Units in the Madison Public Schools. These groups are specified in Table 3. Note that there will be no control group for the intermediate level R & I Unit at Huegel



School. The reason for this is that the Unit is operating in an ungraded program. There is no other ungraded intermediate program in the Madison Public Schools, so there is no appropriate control group available.

TABLE 3

Locations of R & I Units, Control Classes and Respective Grade Levels, Madison

R & I Unit	Control	Level
Franklin	Emerson	Kindergarten and Grade 1
Marquette	Franklin	Grade 6
Longfellow	Washington	Grade 1
Heugel*	Glendale	Primary

\* There will be no control for the intermediate group at Heugel.

Table 4 specifies the testing program to be used during the 1966-67 school year. These scores will be used as base line data for the field testing. Posttests for the various grades will be selected prior to middle April testing. The base line achievement scores will then be used as covariates as appropriate.

TABLE 4

Achievement Testing, Madison

Level	Pretests	Posttests
Kdg.	Peabody	Metropolitan Readiness
Grade 1	Clymer-Barrett Reading Readiness Test	(to be selected)
Grade 2	Gates-MacGinitie Primary Reading California Test of Mental Maturity Form 1	(to be selected)
Grade 3	Gates-MacGinitie Advanced Primary Reading STEP Writing, Social Studies, Essay	(to be selected)
Grade 6	STEP Science Iowa Test of Basic Skills	(to be selected)

The teacher Opinion Scale will also be administered in April to teachers in the R & I Units and teachers of classes in the control schools.

The Facilities Checklist will be administered only to the R & I Units. It will be completed cooperatively by the respective building principal and learning specialist in each school.

#### VIII. Field Testing in Milwaukee Public Schools

In September, 1966, a working committee was formed to develop a plan for field testing the R & I Unit concept in the Milwaukee Public Schools. This committee consisted of Miss Anne Kennard from the Milwaukee Public Schools and Dr. Tagatz and Dr. Wardrop from the Center. It was subsequently decided that the fifth of the designs outlined previously--developing regression equations on control samples and applying them to students in the R & I Units--would be used in Milwaukee for determining the effects of the R & I Unit on student achievement. In order to accomplish this, three schools were identified from which the control students were to be obtained. Table 5 specifies the locations and grade levels of the R & I Units and the control schools for each. The criteria for the selection of these controls included (1) population characteristics of the neighborhood, (2) comparability of groups with respect to mean IQ scores, and (3) comparability of mean achievement levels of the groups. These latter two judgments were based on data from last year's testing program.

TABLE 5

Locations of R & I Units, Control Classes and Respective Grade Levels, Milwaukee

R & I Unit	Controls	Level
Cass Street	Kagel Pierce Vieau	Primary and Grade 4
Holmes	LaFollette 12th Street 5th Street	Primary and Grade 4

In order to avoid imposing an additional burden of testing and record-keeping on the teachers involved in this field testing program, it was decided to use insofar as possible, the results of the existing testing program in the Milwaukee Public Schools. Table 6 specifies the tests to

be used during the 1966-67 school year. (Appropriate instruments for the collection of posttest achievement data at the primary level in the spring are yet to be selected.)

TABLE 6

## Achievement Testing, Milwaukee

Level	Pretests	Posttests
Primary	Pintner-Cunningham	(to be selected)
Grade Four	Lorge-Thorndike Iowa Test of Basic Skills	Iowa Test of Basic Skills: Reading Vocabulary; Reading Comprehension; Arithmetic Concepts; and Arithmetic Reasoning.

The teacher Opinion Scale will also be administered in April to teachers in the R & I Units and teachers of classes in the control schools.

The Facilities Checklist will be administered only to the R & I Units. It will be completed cooperatively by the respective building principal and learning specialist in each school.

#### IX. Field Testing in Racine Unified School District

Field testing in Racine was initially undertaken during October, 1966. At that time a working committee comprised of Mr. Harris Russell, Mr. Jim Beattie, and Mr. Earl Nelson from the school system and Mrs. Cook, Mr. Wardrop, and Mr. Tagatz from the Center was established.

It was subsequently decided that (1) a control group method, the third design discussed previously would be used with kindergarten and the ungraded primary Units and (2) regression analysis using equations developed on the control groups, the fifth of the designs, would be used with the remaining Units.

R & I Units, control groups and grade levels are identified in Table 7. Table 8 specifies the testing program which will be used during the 1966-1967 school year.

The teacher Opinion Scale will also be administered in April to teachers in the R & I Units and teachers of classes in the control schools.

TABLE 7

Locations of R & I Units, Control Classes and Respective  
Grade Levels, Racine

R & I Units	Control(s)	Level
Franklin	Stephen Bull (Giese) Stephen Bull	Kindergarten Grade 2
Giese	Roosevelt Roosevelt	Grade 3 Grade 4
Howell	Winslow Stephen Bull	Grade 2 Grade 5
Stephen Bull	Howell Howell	Primary (nongraded) Grade 3
Winslow	Franklin	Grade 5

TABLE 8

Achievement Testing, Racine

Level	Pretests	Posttests
Kindergarten	Quick Test	Readiness test (to be identified by Earl Nelson)
Grade 1	Quick Test Kuhlmann-Anderson Lee Clark Readiness	Achievement Test to be identified
Grade 2	Kuhlmann-Anderson Stanford, Primary I	Stanford (Alt. Form)
Grade 3	Kuhlmann-Anderson	Stanford, Primary II
Grade 4	Kuhlmann-Anderson Stanford, Intermediate I	Stanford (Alt. Form)
Grade 5	Kuhlmann-Anderson Stanford, Intermediate I	Stanford (Alt. Form)

The Facilities Checklist will be administered only to the R & I Units. It will be completed cooperatively by the respective building principal and learning specialist in each school.

It has been further proposed that the Pupil Questionnaire developed by ETS be administered on a trial basis at Racine during the present year. It seems this would be especially appropriate for those Units and controls where predictive equations would be developed, as some of this material might demonstrate a high value in such prediction. A copy of the Pupil Questionnaire is included in this paper as Appendix D. The identification of other significant predictors of achievement may allow subsequent modification of the instructional program to make it more truly exemplary for children it is to serve. It may also identify areas requiring more detailed evaluation or research.



APPENDIX A  
OPINION SCALE

Please check the items that apply to you.

Teaching level and/or position

Primary teacher                       Intermediate teacher  
 Junior high teacher                       Secondary teacher  
 Building principal

Teachers: Are you in an R & I Unit?                       Yes                       No  
 If yes, are you the learning specialist?                       Yes                       No

Building principals: Are there any R & I Units in your school?

Yes                       No  
 If yes, how many?

Teaching experience (teachers only):

first year                       2-4 years                       5-7 years                       8-10 years  
 more than 10 years

In this school district:

first year                       2-4 years                       5-7 years                       8-10  
 more than 10 years

In this building:

first year                       2-4 years                       5-7 years                       8-10 years  
 more than 10 years

Teaching arrangement:

self-contained classroom                       R & I Unit                       Team teaching  
 Other (specify)

Part I For each of the following activities, estimate the amount of your time devoted to each.

1. Designing a model instructional program for your children. \_\_\_\_\_%
2. Developing new materials, methods, etc. \_\_\_\_\_%
3. Engaging in innovative activities (trying out, as contrasted with developing, new materials, methods, student groupings, etc.). \_\_\_\_\_%
4. Planning and executing research or evaluation projects. \_\_\_\_\_%
5. Discussing the results and/or implications. \_\_\_\_\_%

Part II Indicate how valuable you consider each of the following activities to be:

	a. To You	b. To Children	c. To School System
6. Designing a model instructional program.			
Had or will have high value.	_____	_____	_____
Had or will have little value.	_____	_____	_____
Had or will have no value.	_____	_____	_____
	a. To You	b. To Children	c. To School System
7. Developing new materials, methods, etc.			
Had or will have high value.	_____	_____	_____
Had or will have little value.	_____	_____	_____
Had or will have no value.	_____	_____	_____

	a. To You	b. To Children	c. To School System
8. Engaging in innovative activities.			
Had or will have high value.	_____	_____	_____
Had or will have little value.	_____	_____	_____
Had or will have no value.	_____	_____	_____

	a. To You	b. To Children	c. To School System
9. Planning, executing, or discussing research.			
Had or will have high value	_____	_____	_____
Had or will have little value	_____	_____	_____
Had or will have no value.	_____	_____	_____

**Part III** For each of the following questions, select the alternative which best applies to you.

10. In your perception, how did the conduct of students in class(es) this year compare with other classes in similar neighborhoods?

- \_\_\_\_\_ Students were much better behaved than in other classes.
- \_\_\_\_\_ Students were a little better behaved than in other classes.
- \_\_\_\_\_ Student conduct was about the same as in other classes.
- \_\_\_\_\_ Student behavior was a little worse than in other classes.
- \_\_\_\_\_ Student behavior was much worse than in other classes.

Are you satisfied with the behavior of the students you taught this year?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

11. In comparison with classes in similar neighborhoods, how well do you think your students this year performed ( in terms of achievement)?

\_\_\_\_\_ Better than in other classes.  
 \_\_\_\_\_ About the same as in other classes.  
 \_\_\_\_\_ Worse than in other classes.

Are you satisfied with the achievement of your students this year?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

12. Considering motivation as reflected in a student's attitude toward himself as a learner, how would you rate the motivation of the students you taught this year as compared to other classes in similar neighborhoods?

\_\_\_\_\_ Better than in other classes.  
 \_\_\_\_\_ About the same as in other classes.  
 \_\_\_\_\_ Worse than in other classes.

Are you satisfied with the motivation of your students this year?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

13. On an average what percentage of your teaching day was spent working with the following arrangements of students?

\_\_\_\_\_ % Individuals.  
 \_\_\_\_\_ % 2 - 10.  
 \_\_\_\_\_ % 11 - 20.  
 \_\_\_\_\_ % 20 - 35.  
 \_\_\_\_\_ % Multiple - class groups.

- b. What percentage of your teaching day do you think could best be spent working with these different groupings of students?

- \_\_\_\_\_ % Individuals.
- \_\_\_\_\_ % 2 - 10.
- \_\_\_\_\_ % 11 - 20.
- \_\_\_\_\_ % 20 - 35.
- \_\_\_\_\_ % Multiple-class groups.
14. Pupil attitudes in your room during the current year were:
- \_\_\_\_\_ Excellent.
- \_\_\_\_\_ Generally better than the building average.
- \_\_\_\_\_ About average for pupils in our school.
- \_\_\_\_\_ Generally less desirable than the building average.
- \_\_\_\_\_ Poor.
15. Academic performance of pupils in your room during the current year was:
- \_\_\_\_\_ Excellent.
- \_\_\_\_\_ Generally better than the building average.
- \_\_\_\_\_ About average for pupils in our school.
- \_\_\_\_\_ Generally less desirable than the building average.
- \_\_\_\_\_ Poor.
16. In your opinion, was the self-image of every child in your room improved during the current year?
- \_\_\_\_\_ Yes                      \_\_\_\_\_ No
17. Do you think teachers benefit from working with other teachers in a team approach?
- \_\_\_\_\_ Yes                      \_\_\_\_\_ No.



18. Do you think various groupings during the day improve:
- a. social interaction among students. \_\_\_\_\_ Yes \_\_\_\_\_ No
- b. academic performance of individuals. \_\_\_\_\_ Yes \_\_\_\_\_ No
19. Were you exposed to new teaching methods during the current year?
- \_\_\_\_\_ Yes \_\_\_\_\_ No
20. To what extent did you utilize the services of your central staff (school nurse, consultant staff, librarians, school psychologist, pupil personnel worker, etc.)?
- \_\_\_\_\_ Used consultant and service staff markedly.
- \_\_\_\_\_ Used consultant and service staff somewhat.
- \_\_\_\_\_ Used consultant and service staff only rarely.
21. Answer ONLY Part A or Part B of this question. DO NOT answer both!
- (A) If you think your current teaching situation is good, what three things do you like the best about it?
- What three things do you like the least about it?
- (B) If you think your current teaching situation is NOT good, what three things do you like the least about it?
- What three things do you like the best about it?
22. To what extent did you feel the students in your class(es) were able to respond to the various groups that were created for instruction?
- \_\_\_\_\_ Students responded to various groups immediately.
- \_\_\_\_\_ Students responded to various groups on a limited basis.

- \_\_\_\_\_ Students made no response to various groups.
- \_\_\_\_\_ Student response to groups was somewhat difficult.
- \_\_\_\_\_ Student response to groups was troublesome.
23. To what extent has your involvement in research projects resulted in changes in your instructional practices?
- \_\_\_\_\_ Research caused many instructional practices to change.
- \_\_\_\_\_ Research caused some instructional practices to change.
- \_\_\_\_\_ Research caused no change.
- \_\_\_\_\_ Research verified existing instructional practices.
- \_\_\_\_\_ Research was inconclusive and time consuming.
24. To what extent were you successful in initiating new procedures and innovations during the current year?
- \_\_\_\_\_ Opportunities for new procedures and innovations were markedly increased.
- \_\_\_\_\_ Opportunities for new procedures and innovations were somewhat increased.
- \_\_\_\_\_ No change.
- \_\_\_\_\_ Opportunities for new procedures and innovations were somewhat less.
- \_\_\_\_\_ Opportunities for new procedures and innovations were markedly less.
25. How do you value consultant help from outside the school system?
- \_\_\_\_\_ I value the help very much.
- \_\_\_\_\_ I value the help more than I disvalue it.
- \_\_\_\_\_ I neither value nor disvalue the help.
- \_\_\_\_\_ I disvalue the help more than I like it.
- \_\_\_\_\_ I disvalue it very much.
- \_\_\_\_\_ I received no help from outside the school system.

26. To what extent did the attitudes of your students toward learning change during the current year?
- Attitude toward learning became markedly better.
- Attitude toward learning became somewhat better.
- No change.
- Attitude toward learning became somewhat poorer.
- Attitude toward learning became markedly poorer.
27. Do you think the students benefit through working with different teachers during the day?
- Yes  No
28. Does better instruction result from team planning?
- Yes  No
29. Flexibility of the individual classroom unit has been both advocated and criticized. Indicate which of the following is most true about your present teaching situation:
- It is too flexible.
- It is neither too flexible nor too inflexible.
- It is too inflexible.
30. If given a free choice of teaching situations in your area, would you want to remain in your present position?
- I would like to continue in my present position.
- I would change positions if offered a "promotion."
- I would prefer the same classroom situation, but a different position (role) in that situation.
- I am dissatisfied with my present position, and would like a different one.
31. Based upon your prior experiences, how well do you feel you are getting along with your fellow workers?

- I feel that I am getting along about as well as in the past.
- I feel that I am getting along better than I usually do.
- I feel that I am getting along worse than I usually do.
- Undecided.
32. Of the following, which statement most accurately reflects your feelings about your recent professional growth?
- Greater than normal.
- About normal.
- Less than normal.
33. Evaluate in relation to other instruction in your school the quality of instruction in the unit in which you are involved.
- Superior to other instructional units.
- Above the average of other instructional units.
- About the same as other instructional units.
- Below the average of other instructional units.
- Inferior to other instructional units.
34. Estimate in relation to other instruction in your community generally the quality of instruction in the unit in which you are involved.
- Superior to other instructional units.
- Above the average of other instructional units.
- About the same as other instructional units.
- Below the average of other instructional units.
- Inferior to other instructional units.

35. How satisfied are you with the total instructional program for your students you employed during the current year?
- Very satisfied.
  - Somewhat more satisfied than not.
  - Not particularly satisfied, but not dissatisfied either.
  - Somewhat dissatisfied.
  - Very dissatisfied.
36. How would you rate the quality of instructional materials you used during the current year?
- Superior.
  - Good, but could have been better.
  - Acceptable, but not really satisfactory.
  - Inadequate -- definitely in need of improvement.
37. What kinds of opportunities do you feel were available to you during the current year to try out new methods, materials, or other approaches in your teaching situation?
- Many opportunities to try out new things.
  - Several opportunities to try out new things.
  - Few opportunities to try out new things.
  - No opportunities to try out new things.
38. To what extent did you utilize these opportunities during the current year?
- Used whenever they arose.
  - Used most of the time.
  - Used only occasionally.
  - Didn't use at all.
  - Had no opportunities.



39. In comparison with previous years, how well do you feel you got to know the individual students in your class(es)?

- Better than in previous years.
- About as well as in previous years.
- Not as well as in previous years.
- Not applicable -- first year as teacher.

40. To what extent do you feel you were successful in diagnosing learning difficulties of each student in your charge?

- Very successful.
- Somewhat successful.
- Unsuccessful.

APPENDIX B  
CLASSIFICATION OF OPINION SCALE ITEMS  
ACCORDING TO AREAS OF MEASUREMENT

I. Function of Units	<u>Items</u>	<u>% of Items</u>
A. Instructional Function	1, 6, 23, 28, 33-36	20.0
B. Research Function	4, 5, 9, 23	10.0
C. Development Function	2, 7, 37, 38	10.0
D. Innovation Function	3, 8, 24, 37, 38	12.5
II. Effects of Units		
A. On Teachers	17, 19, 21, 29-32, 39, 40	22.5
B. On Students	10-12, 14-16, 18, 22, 26, 27	25.0
C. On Instructional Practices	13, 23, 28	7.5
III. Miscellaneous		
A. Utilization of Resource Persons	20, 25	5.0
B. Familiarity with Individual Students	16*, 39*, 40*	7.5

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\* These items are also classified elsewhere.

- I-A. Instructional function - There are two parts to this category. The first deals with the time invested in and the perceived value of designing a model instructional program. The second concerns factors influencing instruction, the judged quality of instruction, and teacher satisfaction with the instructional program.
- I-B. Research function - In addition to asking about the influence of research on instructional practices, items in this category deal with the amount of time spent in and the perceived value of research activities.
- I-C. Development function - Questions are raised about two aspects of this function: the amount of time spent in and the perceived value of development activities, and the availability and utilization of opportunities to participate in them.

- I-D. Innovation function - Questions like those asked in (I-C) above are included here.
- II-A. Effects of Unit on teachers - The two types of items in this category deal with teacher satisfaction on the one hand and teacher growth on the other.
- II-B. Effects of Unit on students - How the classroom situation affects pupil behavior, achievements, attitudes, self-image, and peer-group relations are questions asked of the teachers in this category.
- II-C. Effects of Unit on instructional practices - This category contains items about the influence of factors as diverse as student groupings, research, and team planning on instruction.
- III-A. Utilization of resource persons - How much use is made of central staff personnel and consultants from outside the school system?
- III-B. Knowledge of individual students - Questions are raised here about how well teachers came to know individual students in their classes. For example, could they adequately diagnose the learning difficulties of an individual student?

## APPENDIX C

RESEARCH AND DEVELOPMENT CENTER  
FOR LEARNING AND RE-EDUCATION  
THE UNIVERSITY OF WISCONSIN

1404 REGENT STREET  
MADISON, WISCONSIN 53706  
PHONE 262-4901 / AREA 608

(Unit Leader)  
(Individual Address)

Dear \_\_\_\_\_:

The purpose of this checklist is to help evaluate the operation of the R & I Units. Your responses will be examined by your central staff and by the R & D Center in an attempt to determine the adequacy of facilities, equipment, and supplies to accomplish objectives of R & I Units.

The completion of this checklist is to be a cooperative activity between building principals and Unit leaders. It is important that you reach agreement regarding each response before returning the checklist to the R & D Center in the enclosed envelope.

We thank you in advance for your timely reply.

Sincerely yours,

---

GT  
Enclosure

Name of School \_\_\_\_\_

Level of R & I Unit \_\_\_\_\_

Number of personnel in addition to the unit leader:

- 1. Teachers \_\_\_\_\_
- 2. Teacher aides \_\_\_\_\_
- 3. Interns \_\_\_\_\_
- 4. Children \_\_\_\_\_
- 5. Other (specify) \_\_\_\_\_

1. Check the characteristics of the facility utilized by the unit:

	YES	NO
a) There is a station or room for each certified member of the unit (one can be smaller than a regular classroom).	_____	_____
b) The rooms are on the same floor and are adjacent to each other or nearly so.	_____	_____
c) All the pupils can simultaneously meet in one or two of the rooms.	_____	_____
d) The typical daily pattern is for the pupils to meet in more than one room.	_____	_____
e) The typical daily pattern is for the teachers each to be in more than one room.	_____	_____
f) The typical daily pattern is for the teacher to teach more than one group.	_____	_____



2. Check the availability and quality of the following instructional equipment and materials in the R & I Units:

	Easily Available		Of High Quality	
	YES	NO	YES	NO
a) 35 mm. projector and appropriate films	_____	_____	_____	_____
b) 16 mm. projector and appropriate films	_____	_____	_____	_____
c) Tape recorder	_____	_____	_____	_____
d) Record player and appropriate records	_____	_____	_____	_____
e) Overhead projector	_____	_____	_____	_____
f) Textbook and other printed materials	_____	_____	_____	_____
g) Other instructional materials	_____	_____	_____	_____
h) Supplies for teacher	_____	_____	_____	_____
i) Listening kits	_____	_____	_____	_____
j) Study carrels or other facilities for individual study	_____	_____	_____	_____

3. Check the average number of times per month during regular school hours that the following person or persons meet with the unit leader alone, or with the unit leader and the other members of the unit, to discuss or plan the various elements of the unit:

	With Unit Leader alone			With Unit Leader and other members of the unit		
	0 - 4	5 - 10	11 +	0 - 4	5 - 10	11 +
Building principal	_____	_____	_____	_____	_____	_____
Central staff personnel	_____	_____	_____	_____	_____	_____
R & D Center personnel	_____	_____	_____	_____	_____	_____
Parents of children	_____	_____	_____	_____	_____	_____
Others	_____	_____	_____	_____	_____	_____
Teachers in the unit	_____	_____	_____	Not relevant		

## 4. Check the procedures used for determining membership in the unit:

a) Initiative for the formation of the unit came from	Central Staff	Building Principal	Teacher
b) The teacher was given an option regarding participation in the R & I Unit	YES _____	NO _____	
c) In my judgment the R & I Unit staff desires to continue in an R & I Unit	YES _____	NO _____	

## APPENDIX D

Name: \_\_\_\_\_  
 (Print) Last First Middle

Grade: \_\_\_\_\_  
 Sex (Circle one)  
 M F

School: \_\_\_\_\_  
 Teacher's Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_  
 Month Day Year

Today's Date: \_\_\_\_\_

PUPIL QUESTIONNAIRE\*

## Form AA

Here are some questions about you and your ideas. There is no time limit so you don't need to hurry. Be sure to read each question carefully before you answer it. You may ask for help if you do not understand a question. You should read all the answer choices given for each question before choosing the one you agree with most.

Your scores and what you say on these tests will not be shown to your teachers; they will not affect your school marks in any way. In answering questions please tell us what you really feel and think.

In this questionnaire you should mark your answers on the booklet itself.

Here is an example:

How old were you on your last birthday?

- A. I was 8 years old or younger.
- B. I was 9 years old.
- C. I was 10 years old.
- D. I was 11 years old.
- E. I was 12 years old or older.

Go ahead and circle one of the letters above, A, B, C, D, or E, that is correct for you.

Remember, for each question you should circle one of the letters in front of the answer that correctly describes you, or seems most nearly correct. Please circle just one letter for each question.

WAIT FOR THE SIGNAL TO BEGIN.

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1. How far did your father go in school?  
(Guess if you have some idea.)
  - A. Did not finish high school
  - B. Finished high school
  - C. Went to college after high school but did not finish
  - D. Finished college
  - E. Went to graduate school after college
  - F. Finished graduate school
  - G. Don't know
  
2. How far did your mother go in school?  
(Guess if you have some idea.)
  - A. Did not finish high school
  - B. Finished high school
  - C. Went to college after high school but did not finish
  - D. Finished college
  - E. Went to graduate school after college
  - F. Finished graduate school
  - G. Don't know

The next questions are about things your family may own, or you have in your home. Circle ...

- A. If your family does not have it.
- B. If your family does have it.

3. Automobile

- A. No
- B. Yes

4. Telephone

- A. No
- B. Yes

5. Vacation cottage

- A. No
- B. Yes

6. Piano

- A. No
- B. Yes

## 7. Automatic dishwasher

- A. No  
B. Yes

## 8. What does your father do?

Circle the name of the job that is most like what your father does. If you can't find the name of your father's job, don't circle any name but go to the blank lines and fill those in.

If your mother is supporting the family by her work, mark the name that most nearly describes her job. If your father and mother both work, circle or describe both of their jobs.

Miner, janitor, factory worker, laborer

Lawyer, doctor, engineer, scientist

Taxi driver, truck driver, gas station attendant

Nurse, minister, accountant

Real estate salesman, insurance salesman

Barber, fireman, policeman, beauty operator

Optometrist, bank clerk, postal clerk

Factory foreman, carpenter, plumber, electrician, bookkeeper

If you can't find a name like your father's (or mother's) job in the list, write what your father (or mother) does in the blank below. If you don't know, write Don't know in the blank.

Description: \_\_\_\_\_  
\_\_\_\_\_



9. How important is it to you to do your homework well?
- A. I think doing good homework is not at all important.
  - B. I think doing good homework is important but not as important as other things.
  - C. I think doing good homework has about the same importance as other things.
  - D. I think doing good homework is more important than most things.
  - E. I think doing good homework is more important than anything else.

For each of the following questions, think about yourself as compared with other persons in your classroom.

10. How are you at being neat and orderly?

- A. I am better than most others.
- B. I am about the same as most others.
- C. I am not as good as most others.

How sure do you feel your answer is right? (Circle one letter.)

- A. I am sure.
- B. I am not very sure
- C. I have not thought about it before and I don't know.

11. How are you at making good friends easily?

- A. I am better than most others.
- B. I am about the same as most others.
- C. I am not as good as most others.

How sure do you feel your answer is right? (Circle one letter.)

- A. I am sure.
- B. I am not very sure.
- C. I have not thought about it before and I don't know.

12. How are you at leading a group and getting others to follow you?

- A. I am better than most others.
- B. I am about the same as most others.
- C. I am not as good as most others.

How sure do you feel you are right about your answer?

- A. I am sure.
- B. I am not very sure.
- C. I have not thought about it before and I don't know.

13. How are you at writing a report for the class?

- A. I am better than most others.
- B. I am about the same as most others.
- C. I am not as good as most others.

How sure do you feel you are right about your answer?

- A. I am sure.
- B. I am not very sure.
- C. I have not thought about it before and I don't know.

14. How are you at being pleasant and agreeable to others?

- A. I am better than most others.
- B. I am about the same as most others.
- C. I am not as good as most others.

How sure do you feel you are right about your answer?

- A. I am sure.
- B. I am not very sure.
- C. I have not thought about it before and I don't know.

15. Playing games or sports after school with your friends.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

16. Going on a school field trip.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

17. Keeping a class notebook in good order.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

18. Reciting or reporting before the class.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

19. Doing class problems or drills.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

20. Reading a book on a subject you know little or nothing about.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

21. Doing things with your friends on weekends.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

## 22. Beginning a new subject in class.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

## 23. Writing a paper on an assigned subject.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

## 24. Taking a written examination or quiz.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

## 25. Using the public library.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

## 26. Watching TV or listening to the radio.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

27. Discussing your schoolwork with a friend.

- A. I never enjoy it.
- B. I seldom enjoy it.
- C. I enjoy it about half of the time.
- D. I enjoy it most of the time.
- E. I always enjoy it.
- F. I almost never do it and I can't say how I feel.

28. Talking with your teacher about your ideas.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

29. Being the leader of a group in your class.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.

30. Going to a movie or a show.

- A. I always enjoy it.
- B. I enjoy it most of the time.
- C. I enjoy it about half of the time.
- D. I seldom enjoy it.
- E. I never enjoy it.
- F. I almost never do it and I can't say how I feel.



What do you think are some of the best things about you as a person? Are some of these "best things" about you different when you are out of school than when you are in school?

31. Now please write down some reasons why you think teachers and pupils like you in school. Write them on the lines below. (Please number them 1, 2, etc. You don't need to fill up all the lines. You may write more than one reason on a line if you number each reason.)

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32. Now, on the lines below, please write down some reasons why people such as parents, friends, and neighbors, like you when you are outside of school.

Please number them 1, 2, etc. You don't need to fill up all the lines. You may write more than one reason on a line if you number each reason. You may use a reason again if it is as true of you outside of school as it is inside of school.

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