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ABSTRACT

Social validity is an important factor to consider when assessing proposed social and educational programs. This study used survey data to investigate the reactions of both elementary students and teachers to the use of a formative evaluation system in reading. Specifically, this study examined students' knowledge about their performance, teachers' decisions regarding student programming, the use of assessment procedures, and teachers' general reactions to the usefulness of a direct and continuous measurement and evaluation system. Results indicated generally positive reactions toward the direct and continuous measurement and evaluation system: students were more aware of working toward a goal and were more optimistic about their progress, and teachers were better able to realistically judge their students' progress. Implications are discussed regarding teachers' suggestions for modification of the procedures. (Author)

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**CURRICULUM-BASED MEASUREMENT:
EFFECTS ON INSTRUCTION, TEACHER ESTIMATES OF
STUDENT PROGRESS, AND STUDENT KNOWLEDGE OF PERFORMANCE**

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Research Report No. 124

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July, 1983

Abstract

Social validity is an important factor to consider when assessing proposed social and educational programs. This study used survey data to investigate the reactions of both students and teachers to the use of a formative evaluation system in reading. Specifically, this study examined students' knowledge about their performance, teachers' decisions regarding student programming, the use of assessment procedures, and teachers' general reactions to the usefulness of a direct and continuous measurement and evaluation system. Results indicated generally positive reactions toward the direct and continuous measurement and evaluation system: students were more aware of working toward a goal and were more optimistic about their progress, and teachers were better able to realistically judge their students' progress. Implications are discussed regarding teachers' suggestions for modification of the procedures.

Curriculum-Based Measurement: Effects on Instruction,
Teacher Estimates of Student Progress, and
Student Knowledge of Performance

Within recent years, due to Public Law 94-142 and increased pressure for accountability in education, there has been increased interest in direct and frequent measurement of school behaviors. Recent evidence (Fuchs, 1981) suggests that when psychometric properties are compared, direct and frequent measurement systems have considerable advantage over conventional, summative measurement techniques. Moreover, a growing body of evidence (Jenkins, Mayhall, Peschka, & Townsend, 1974; Mirkin, Deno, Tindal, & Kuehnle, 1979; White & Haring, 1980) suggests that formative evaluation systems may be used to increase student motivation as well as to evaluate students' instructional programs. Direct and frequent measurement procedures provide feedback to both the student and teacher, allowing closer monitoring of academic progress.

To investigate the ways in which closer monitoring of progress affects instruction and knowledge of progress toward goals, survey data were obtained during a study of the effects of resource room teachers' use of a formative evaluation system on student achievement in reading (Fuchs, Deno, & Mirkin, 1982; Skiba, Sevcik, Wesson, King, & Deno, 1983). Repeated curriculum-based measurement and continuous evaluation procedures were used with experimental subjects in the study as an alternative to informal assessment methods. Specifically, this study addressed the following questions:

- (1) Does repeated, direct measurement and continuous evaluation affect students' knowledge about their own performance?

- (2) How is such measurement and evaluation useful and how does it differ from teachers' normal procedures?
- (3) What is the relation between direct and continuous measurement and evaluation and teachers' decisions about student progress, goals, and level of functioning?
- (4) How does the measurement system affect the assessment procedures by which teachers formulate their judgments concerning student progress?
- (5) What are teachers' reactions to the direct and continuous measurement and evaluation system?

Recent investigators have indicated that the assessment of a program should include not only objective data, but also subjective data, or consumer response. Consumer response, or "social validity," according to Wolf (1978), involves three aspects: the social significance of the goals, i.e., whether participants value what is being done; the social appropriateness of the procedures, i.e., whether the participants consider the treatment procedures acceptable; and the social importance of the effects, i.e., whether the participants or consumers are satisfied with the results. Survey data provide a useful method for judging whether a program is likely to be met with acceptance and incorporated into the field of education.

Method

Subjects

Subjects were students and special education teachers in four rural and suburban Minnesota school districts. There were 135 elementary-aged resource room students (109 male, 26 female), with an

age appropriate grade average of 3.8 (SD = 1.5). Approximately three-fourths of these students (96) were in the experimental group, with the remainder in the control group.

A total of 31 teachers participated in this study (26 female, 5 male). On the average, they had 1.9 years of experience teaching regular education and 8.8 years teaching special education. The greatest percentage of teachers (39%) had no experience teaching regular education; 23% had taught special education for one to three years.

Experimental group. The treatment of the experimental group students is described in Procedures to Develop and Monitor Progress on IEP Goals (Mirkin, Deno, Fuchs, Wesson, Tindal, Marston, & Kuehnle, 1981). Briefly, teachers of the experimental group students first wrote curriculum-based IEP goals and objectives in the area of reading. Following this, teachers developed curriculum-based measurement systems to match specific goals and objectives. Then, at least three times weekly, they were to measure students and utilize those data to determine when to change the instructional programs to increase the probability that students would achieve their goals. Additional details on the procedures used with this group may be found in Wesson, Skiba, Sevcik, King, Tindal, Mirkin, and Deno (1983).

Control group. Typical classroom procedures were followed with students in the control group. Teachers used their own informal observation system and traditional evaluation procedures to make instructional decisions.

Materials

End-of-year student interview. A four-item interview survey was designed to assess students' knowledge about (a) their reading progress, (b) their reading goals, and (c) the likelihood that they would attain their reading goals during the current academic year. Two additional items required interviewers to assess the accuracy of student responses against the student's reading graphs and records. (See Appendix A.)

End-of-year special teacher survey. The survey asked teachers to rate and describe how the experimental procedures were different from their normal evaluation procedures and how the experimental procedures were useful. Then the survey required teachers to indicate whether, and if so, how they would use these procedures during the subsequent academic year. (See Appendix B.)

Quarterly teacher survey. A six-item teacher survey was designed for the study. On this survey, teachers (a) described student progress, goals, and level of functioning in reading during the academic year, and (b) checked the assessment procedures by which they made their judgments concerning student progress. (See Appendix C.)

Procedure

Each special education teacher in the study was sent three surveys with stamped return envelopes. The first one, the Quarterly Teacher Survey, was sent in April with the request to fill out and return one per student in the study. This same survey was sent again in late May with the same request. In May, each teacher was also sent the End-of-Year Special Teacher Survey, which was to be completed for each target student and returned.

In addition, upon completion of the school year (May, 1982), each of the 31 special education teachers was sent End-of-Year Student Interviews with stamped return envelopes for those students participating in the study. The teachers were requested to interview the students, fill in their answers, and then assess the accuracy of the students' responses.

Results

End-of-Year Student Interview

Students were asked what kind of progress they made in reading during the year. A t test revealed no significant difference between experimental and control groups ($t = 1.74$, $p < .084$), although the experimental students responded somewhat more positively than the control students. Table 1 shows the means and standard deviations of the two groups, as well as the actual rating scale used in the responses.

 Insert Table 1 about here

Over half (62.4%) of the experimental students were able to tell the interviewer their reading goal for the year; half of the control students were able to tell their goal. Regarding the accuracy of these responses, the interviewers indicated that 34.4% of the experimental students and 40.5% of the control students correctly stated their reading goal. For 92% of the experimental students and 91% of the control students who responded inaccurately, the reasons for their responses being considered inaccurate were that they were

either incomplete, incorrect, or not stated at all. As Table 2 shows, failure to state any goal was found to characterize a greater percentage of control students than experimental students; incomplete or incorrect statements of goals characterized a greater percentage of experimental students' inaccurately-stated goals.

Insert Table 2 about here

When students were asked whether they would meet their reading goals this year, results of the experimental and control group were similar; 54.8% of the experimental students and 51.4% of the control students said yes, 31.2% of the experimental students and 35.1% of the control students said no, and the remainder of the students responded with a maybe, or they had no response. Regarding the accuracy of these responses, interviewers stated that 56.3% of the experimental students and 59.5% of the control students correctly indicated whether they would meet their reading goals. For the responses that were inaccurately indicated, interviewers were asked to state what was wrong. As Table 4 shows, responses included students over- and under-estimating their success, students not knowing their goals or understanding what they meant, and teachers not able to tell whether the goals would be met because student progress was erratic.

Insert Table 3 about here

Following this, the students were asked how they knew whether they were going to meet their goals. While 24.6% of the experimental

students based this knowledge on their graphed data, none of the control subjects did. Also, more control students than experimental students did not know on what they had based their answer. Table 4 displays the percentages of students' responses.

 Insert Table 4 about here

End-of-Year Special Teacher Survey

Teachers were asked how different the continuous evaluation procedures were from their normal procedures for evaluating student progress. Slightly over half (51.6%) of the teachers indicated they were different or very different, and 48.4% of them indicated they were somewhat or very much the same. When asked in what ways the continuous evaluation procedures differed from the teachers' normal procedures for evaluating student progress, 154 responses were offered; these were compiled into 24 different types of responses. Table 5 displays the 10 most frequently given responses. The majority of the teachers indicated that there were more frequent evaluations and that the graphs showed continuous progress when utilizing continuous evaluation procedures.

 Insert Table 5 about here

Teachers were asked to rate the usefulness of the continuous evaluation procedures for several purposes. Table 6 displays the percentages of teachers' rankings for each purpose. The greatest

percentage of teachers ranked the continuous evaluation procedures as "very helpful" for deciding when to change students' programs, measuring progress toward the goals, and communicating evaluation information to students.

Insert Table 6 about here

When asked to rank order three purposes for which the continuous evaluation procedures were most useful, the majority of the teachers listed "measuring progress toward the goals" as first and second most useful purposes, and "communicating evaluation information to students" as the third most useful purpose. Table 7 displays the percentages of teacher rankings.

Insert Table 7 about here

When teachers were asked how time consuming the continuous evaluation procedures were, 63% indicated they were not very time consuming, 6% said they were not at all time consuming, 27% said they were time consuming, and 4% said they were very time consuming. When asked whether they would use the procedures next year, 59.6% said "yes," 10.1% said "no," and 30.3% said "maybe." In addition, 52.5% of those indicating that they would use the procedures next fall listed no modifications. Modifications listed by the remaining teachers included time-saving tips, measuring less frequently, increasing student involvement in measurement procedures, including a

comprehension measure, and regulating the readability difficulty in the reading passages. Regarding the academic areas in which teachers would use the procedures, teachers most frequently named all of the following four areas: reading, spelling, written expression, and math. The next most cited area was "reading," followed by "reading and written expression."

Quarterly Teacher Survey

Teachers were asked whether students were making sufficient progress in reading so that they would meet the annual goal. Table 8 displays the percentages of responses for both the experimental and control groups, in both April and May. As one can see, the initial "yes" response of the control group in April dropped considerably in May. A much smaller drop was observed for the experimental group.

Insert Table 8 about here

When asked whether they had changed the reading goal for the student within the past two months, 34.4% of the teachers of experimental students and 15.2% of the teachers of the control students said "yes" in April. In May, 24.5% of the experimental group, and 15.8% of the control group had changed the student's goal. Teachers then were asked whether the student's current reading program was successful. As one can see in Table 9, the pattern of responses between experimental and control groups across time changes. The initial optimism of the teachers of the control students decreased from April to May, reflecting increasing uncertainty as to the success of the reading program.

Insert Table 9 about here

Teachers also were asked to write a statement describing the student's current level of functioning. In April, the experimental group wrote a higher percentage of precise statements (83.5%) than the control group (80.6%). Also, the control group was higher in uncertainty (11.1%) than the experimental group (5.2%). In May the results were opposite those obtained in April; more of the control group teachers (86.8%) than experimental group teachers (78.1%) wrote precise statements of students' current levels of functioning, and more experimental group teachers (12.5%) were uncertain of this level than control group teachers (7.9%).

Students' progress was characterized by teachers on a 1 to 5 scale ranging from poor to excellent. A t test revealed no significant difference between experimental and control groups (April: t = .48, p \leq .633; May: t = .78, p \leq .439). Table 10 shows the means and standard deviations of the two groups, as well as the descriptions used in the responses.

Insert Table 10 about here

Teachers then were asked to indicate the type(s) of information they used to answer the above question, from a list of 15 items. Table 11 shows, for each item, the percentages of teachers who indicated that they used this type of information. The experimental

group relied on direct and frequent measurement considerably more than the control group, whereas the control group relied on basal text mastery tests and teacher-made tests/oral quizzes more than the experimental group.

Insert Table 11 about here

When asked to circle the one type of information relied on most, the vast majority of the experimental group circled "criterion-referenced measures," whereas the majority of the control group circled "basal text mastery tests." This occurred on both the April and May surveys.

Discussion

The purpose of this study was to determine relationships between the utilization of direct measurement and continuous evaluation procedures and students' knowledge about their performance, teachers' decisions about student progress, and assessment procedures used to formulate judgments of student progress. In addition, this study sought to determine how useful such procedures were for teachers who utilized them, how they differed from normal procedures, and what were the teachers' general reactions to the system.

Results indicated that the implementation of direct and frequent measurement and evaluation system positively affected students' knowledge about their performance. More experimental than control students were optimistic about their progress in reading, and more reported that they relied on data to formulate estimates of whether

they would meet their goals. Although slightly more control students than experimental students correctly named their goal, the vast majority of control students who inaccurately stated their goals did not know or remember their goal, while almost half of the experimental students' incorrectly stated goals were either incomplete or incorrect. Thus, it appears that more experimental students than control students actually were aware of a goal set for their performance and actually had a greater understanding of their goal. The importance of related student-awareness factors, such as self scheduling (Wang & Stiles, 1976) and student selection of activities (Wesson, 1983), have been studied recently. The current findings further support the notion that students' knowledge of their learning may improve academic performance (cf. Bandura, 1982; Farnham-Diggory, 1972).

When teachers were asked to describe modifications they would make if they chose to use the procedures next year, two frequent responses included time-saving tips and the inclusion of a comprehension measure. Both of these issues were dealt with in the initial stages of the study and warrant clarifying here. Initially, teachers were skeptical about the amount of time the continuous evaluation procedures would take. Following training, which attempted to systematically reduce the time needed for the procedures, it was found that the median time spent by teachers to prepare, give directions, and score and graph measurement results for one academic behavior was one minute (Fuchs, Wesson, Tindal, Mirkin, & Deno, 1981).

Regarding comprehension, the research does show high correlations

(.78-.80) between the minute readings used in the evaluation procedure and comprehension (Deno, Mirkin, & Chiang, 1982). The importance of adequate training procedures is evident. First, it would greatly benefit teachers to be trained in the most time-efficient procedures as possible. Also, the high correlation between comprehension and the minute readings should be stressed during the initial training session and be made clear to the teachers, so as to optimize teachers' attitudes on the validity of the measures. In support of this, Meyers, Meyers, and Deno (1980) found that teachers involved in a previous study of the use of formative evaluation and data utilization procedures expressed a desire for a better orientation to the study and better expectations of the techniques used.

Results of this study show a relation between how teachers measured and evaluated student progress and their decisions about student progress, goals, and level of functioning. Initially, in April, control group teachers were both more optimistic and uncertain about students' progress and success. At the end of the school year, in May, this optimism dropped considerably. Findings show that the experimental group relied on direct and frequent measurement considerably more than the control group, and that they found these data to be very helpful for measuring students' progress toward goals. The uncertainty and initial optimism of the control group's responses may have been related to the lack of systematic data on which to rely. Fuchs, Fuchs, and Warren (1982) have demonstrated a tendency for teachers to overestimate student performance on goals when assessments are based on unsystematic procedures.

Another finding, which may relate to the control group's initial optimism, is that the teachers in the experimental group more frequently revised students' goals. Again, the reliance on direct and frequent measurement, which teachers in the experimental group ranked as very helpful for deciding when to change students' programs, may have provided more adequate data to judge students' progress, and consequently know when a goal revision was necessary. Teachers in the control group, due to a lack of adequate data and misjudgment of the student's progress, may have felt comfortable with an unrealistic goal.

In general, this study supports the utilization of direct measurement and continuous evaluation procedures in relation to increased teacher and student knowledge of progress, goals, and level of functioning. Students were more aware of working toward a goal and more optimistic about their progress, and teachers were better able to realistically judge their students' progress, which aids in instructional planning. Teacher reactions to the system, in general, were positive. The majority said they would use the procedures again next year, and over half of these teachers listed no modifications when offered the opportunity. Also, teachers most frequently indicated that they would use the procedures in all four of the following academic areas: reading, spelling, written expression, and math. Thus, there appeared to be a general feeling of optimism from teachers on the applicability of direct and continuous measurement and evaluation procedures.

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Table 1

Means and Standard Deviations of Student Responses
to Rating Scale Measuring Reading Progress^a

	Experimental	Control
Mean	3.77	3.45
Standard Deviation	.85	.89

^aRatings were: 1=poor, 2=not-so-good, 3=pretty good, 4=good,
5=great

Table 2

Percentage of Student Reasons for Inaccurately-Stated Goals

Responses	Experimental	Control
Does not know or remember long range goal	59.0	85.0
Incorrect	21.4	5.0
Incomplete	19.6	10.0

Table 3

Percentage of Reasons Why Students Incorrectly Indicated
Meeting Their Goal

Responses	Experimental	Control
Student incorrectly indicated goal would be met	50.0	58.4
Student incorrectly indicated goal would not be met	15.6	25.0
Student did not understand what goal meant	9.4	16.6
Student did not know his/her goal	18.8	0.0
Teacher was unable to tell if goal would be met	6.2	0.0

Table 4

Percentage of Students Citing How They Knew if They
Were Going to Meet Their Goal

Responses	Experimental	Control
Completion of text	40.0	51.7
Do not know	10.8	27.6
Graph/chart	24.6	0.0
Informed by teacher	10.8	10.3
Think so	9.2	10.3
Higher scores	1.5	0.0
Reading group level	1.5	0.0
No goal set	1.5	0.0

Table 5

Percentage of Teachers Describing the Differences
Between Continuous Evaluation Procedures
and Normal Procedures for Evaluating Student Progress

Responses	Percentage of Teachers
<u>Continuous evaluation procedures:</u>	
Have more frequent evaluations	20.8
Show continuous progress	11.7
Have no separate comprehension measure	8.4
Are more accurate	7.1
Use different data to evaluate progress	7.1
Relate directly to I.E.P. goals	5.8
Are less accurate	5.2
Use random samples of readings	4.7
Permit changes in the instructional plan after developing the I.E.P.	3.2
Do not give the overall picture	3.2
Check teacher effectiveness	3.2

Table 6

Percentage of Teachers Rating the Usefulness of Continuous
Evaluation Procedures for Different Purposes

Purpose	Rating				
	Not Sure	Not Helpful	Somewhat Helpful	Helpful	Very Helpful
Developing IEPs	0.0	20.0	30.0	27.0	23.0
Establishing Goals	0.0	10.0	30.0	37.0	23.0
Measuring Progress Toward Goals	0.0	5.0	18.0	22.0	55.0
Deciding When to Change Students' Programs	1.0	9.1	16.2	15.2	58.6
Communicating to School Personnel	9.0	10.0	40.0	17.0	24.0
Communicating to Parents	1.0	11.0	34.0	22.0	32.0
Communicating to Students	0.0	5.0	20.0	30.0	45.0

Table 7

Percentage of Teacher Rankings for which Continuous
Evaluation Procedures Were Most Useful

Purpose	Ranking		
	Most Useful	Second Most Useful	Third Most Useful
Developing IEPs	11.7	2.2	10.7
Establishing Goals	5.3	6.5	10.7
Measuring Progress Toward Goals	36.2	33.3	3.6
Deciding When to Change Students' Programs	16.0	29.0	8.3
Communicating to School Personnel	4.3	0.0	22.6
Communicating to Parents	9.6	7.5	14.3
Communicating to Students	17.0	21.5	29.8

Table 8

Percentage of Teachers in April and May Indicating
Students' Goal Attainment Based on Progress

Response	<u>April</u>		<u>May</u>	
	Experimental	Control	Experimental	Control
Yes	66.7	72.7	62.2	59.5
No	16.7	6.1	28.6	27.0
Uncertain	16.7	21.2	9.2	13.5

Table-9

Percentage of Teachers in April and May Indicating
Success of Students' Reading Programs

Response	April		May	
	Experimental	Control	Experimental	Control
Yes	79.4	84.8	76.5	69.2
No	7.2	3.0	8.2	2.6
Uncertain	13.4	12.1	15.3	28.2

Table 10

Means and Standard Deviations of Teacher Responses
to Descriptions of Student Progress^a

	<u>April</u>		<u>May</u>	
	Experimental	Control	Experimental	Control
Mean	3.08	3.00	3.09	2.94
Standard Deviation	.89	.80	.98	.94

^aRatings were: 1=poor, 2=fair, 3=good, 4=very good, 5=excellent

Table 11

Percentage of Teachers Indicating Reliance on Types
of Information Providing an Indication of Student Progress

Type of Information	April		May	
	Experi- mental	Control	Experi- mental	Control
Standardized achievement tests	16.5	13.9	38.9	48.7
Standardized diagnostic measures	8.2	8.3	17.9	20.5
District developed tests	23.7	5.6	11.6	12.8
Basal text mastery test	52.6	86.1	53.7	79.5
Criterion-referenced measures	85.6	52.8	80.0	48.7
Teacher-made tests/oral quizzes	40.2	63.9	31.6	43.6
Scoring workbooks	57.7	58.3	68.4	64.1
Scoring worksheets	55.7	75.0	69.5	66.7
Amount of work completed	53.6	69.4	44.2	51.3
Informal observation of student performance	85.6	77.8	88.4	76.9
Formal observation	11.3	8.3	10.5	10.3
Consultation with classroom teacher regarding classroom performance	60.8	66.7	56.8	64.1
Number of short-term objectives mastered	44.3	52.8	41.1	53.8
Other	12.4	38.9	5.3	17.9

Appendix A

END-OF-YEAR-STUDENT INTERVIEW

Student's Name _____ Date _____

Data Collector's Name _____

1) What kind of progress have you made in reading this year?

- Poor Not-so-Good Pretty Good Good Great Don't Know

2) Do you know what your goal is in reading for this year? Yes No

If yes, can you tell it to me. (Write below)

3) Will you meet your reading goal this year? Yes No

4) How do you know if you are going to meet your reading goal this year?

Student's Accuracy

Please indicate the accuracy of the student's responses by answering the following questions:

1) Did the student name correctly his/her reading goal? Yes No

If no, how was it wrong? _____

2) Did the student indicate correctly whether he/she will meet his/her goal in reading?

Yes

No

If no, what was wrong?

Appendix B

END-OF-YEAR SPECIAL TEACHER QUESTIONNAIRE (MN)

Student's Name _____ Date _____

1) How different were the continuous evaluation procedures you implemented from your normal procedures for evaluating student progress?

Very Different Different Somewhat the same Very much the same

2) In what ways do the continuous evaluation procedures you implemented differ from your normal procedures for evaluating student progress?

- a. _____

- b. _____

- c. _____

How useful were the continuous evaluation procedures in:

3) Developing the student's IEP?

Not sure Not Helpful Somewhat Helpful Helpful Very Helpful

4) Establishing goals?

Not sure Not Helpful Somewhat Helpful Helpful Very Helpful

5) Measuring progress toward goals?

Not sure Not Helpful Somewhat Helpful Helpful Very Helpful

6) Deciding when to change the student's program?

Not sure Not Helpful Somewhat Helpful Helpful Very Helpful

7) Communicating evaluation information to school personnel?

Not sure. Not Helpful Somewhat helpful Helpful Very Helpful

8) Communicating evaluation information to parents?

Not sure Not Helpful Somewhat helpful Helpful Very Helpful

9) Communicating evaluation information to students?

Not sure Not Helpful Somewhat helpful Helpful Very Helpful

10) Among the uses cited above, please rank order 3 purposes for which the procedures were most useful:

most useful for _____

second most useful for _____

third most useful for _____

11) How time consuming were the procedures?

Very time Consuming Time Consuming Not Very Time Consuming Not at all Time Consuming

12) If you had a choice, would you use the procedures next year in some way?

Yes No Maybe

If yes, please describe briefly what, if any, modifications you will make in the procedures?

If yes, in what academic areas will you use these procedures?

Appendix C

Quarterly Teacher Questionnaire

Student's Name _____ Date _____

Teacher's Name _____

1) Is the student making sufficient progress in reading so that he/she will meet the annual reading goal?

Yes No Uncertain

2) Have you changed your reading goal within the last two months?

Yes No Uncertain

3) Is your current reading program successful?

Yes No Uncertain

4) For reading, please write a precise statement that describes the student's current level of functioning or indicate that you are uncertain about the student's current level of functioning.

Current Level of Functioning

Uncertain

5) Please characterize this student's progress so far this year by one of the following descriptions:

Poor Fair Good Very Good Excellent

Check (✓) the type(s) of information you used to answer question five. Circle the one type of information you rely on the most to provide an indication of student progress.

- | | |
|--|--|
| <input type="checkbox"/> 1. Standardized achievement tests | <input type="checkbox"/> 11. Informal observation of student performance |
| <input type="checkbox"/> 2. Standardized diagnostic measures | <input type="checkbox"/> 12. Formal observation |
| <input type="checkbox"/> 3. District developed tests | <input type="checkbox"/> 13. Consultation with classroom teacher regarding classroom performance |
| <input type="checkbox"/> 4. Basal text mastery tests | <input type="checkbox"/> 14. Number of short-term objectives mastered |
| <input type="checkbox"/> 5. Criterion-referenced measures | <input type="checkbox"/> 15. Other _____ |
| <input type="checkbox"/> 6. Direct and frequent measurement | |
| <input type="checkbox"/> 7. Teacher-made tests/oral quizzes | |
| <input type="checkbox"/> 8. Scoring workbooks | |
| <input type="checkbox"/> 9. Scoring worksheets | |
| <input type="checkbox"/> 10. Amount of work completed | |

Make sure you have circled the type of information you rely on the most to provide an indication of student progress.

PUBLICATIONS

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University of Minnesota

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The publications listed here are only those that have been prepared since 1982. For a complete, annotated list of all IRLD publications, write to the Editor.

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