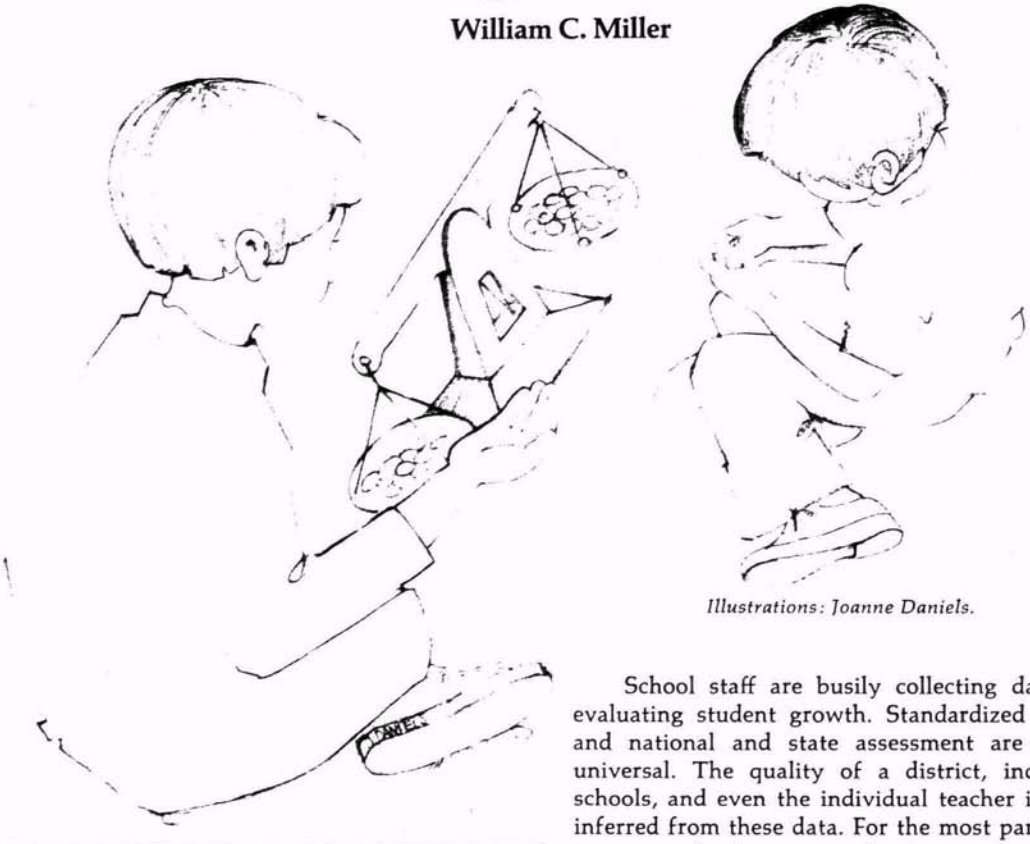
Unobtrusive Measures Can Help in Assessing Growth

William C. Miller



Illustrations: Joanne Daniels.

Eloquent lessons can be learned through unobtrusive measures if these are well focused and intelligently interpreted. Examples of such measures are indicated here.

School staff are busily collecting data and evaluating student growth. Standardized testing and national and state assessment are almost universal. The quality of a district, individual schools, and even the individual teacher is being inferred from these data. For the most part, what is measured relates to academic progress of students. This is true despite the fact that many of the goals of the schools relate to the affective domain.

There are many valuable sources of data and means of collecting information, other than standardized tests and questionnaires. To get a full picture of what is happening in schools and to assess progress toward objectives, there needs to be an awareness of additional dimensions of data collection. Webb *et al.* made the following point about social science research:

> Today, the dominant mass of social science research is based upon interviews and questionnaires.

We lament this overdependence upon a single, fallible method. Interviews and questionnaires intrude as a foreign element into the social setting they would describe, they create as well as measure attitudes, they elicit atypical roles and responses, they are limited to those who are accessible and will cooperate, and the responses obtained are produced in part by dimensions of individual differences irrelevant to the topic at hand.

But the principal objection is that they are used alone. No research method is without bias. Interviews and questionnaires must be supplemented by methods testing the same social science variables but having *different* methodological weaknesses.[1]

One of these alternatives or additional approaches is what Webb termed "non-reactive" data gathering; that is, collection of data about or surrounding an event rather than (or in addition to) relying on measures which ". . . require the cooperation of the respondent and that in themselves do not contaminate the response."[2]

For ages, it has been common practice to use observation as a means of assessing a situation. Ancient Chinese jade sellers learned that a high degree of interest on the part of the buyer caused his pupils to contract. The able present-day physician examines hair texture, skin and fingernail color to help make a diagnosis.

Anthropologists construct the nature of a whole culture from a few fragments of pottery and some ancient tools. As a present-day counterpart, newspapermen or investigators examine the trash cans of famous people and report on their life styles. It is said that bank loan managers pay as much attention to an applicant's dress (especially the condition of his or her shoes) as they do to the financial background form. Some years ago, a water department found it could accurately gauge the viewership of a TV show because after a very popular program, individuals engaged in water-consuming activities. A pollster even planned on using this phenomenon as a rating index and tentatively titled it "Teleflush"!

One can gauge the popularity of a museum exhibit by the amount of wear on the floor. It is said the state of the economy is reflected in the shoe repair business. When times are good, people buy new shoes. In more difficult times, they "make do" and get the old ones repaired. Such non-direct ways of drawing conclusions are called *unobtrusive measures.* If these judgments can be made in other areas, why not in education?

Many of these data elements relate to how teachers are interacting with pupils or how pupils are interacting with other students. *Mirrors of Behavior* is a valuable source of classroom observation instruments. Simon and Boyer describe this technique:

> Interaction analysis systems are "shorthand" methods for collecting observable objective data about the way people talk and act. They make possible a relatively simple record of what is happening but they do not record what is being said.[3]

Their anthology contains twenty-six such efforts and is divided into affective and cognitive systems of observational data collection. In this publication, it is pointed out that:

> While seeking answers, it became apparent to Simon and Boyer that "interaction analysis instruments" had considerable potential for developing effective "humanizing" curricula for children. Indeed, the instruments held promise for both paper-pencil

[1] Eugene J. Webb *et al. Unobtrusive Measures: Nonreactive Research in the Social Sciences.* Chicago: Rand McNally & Company, 1966. p. 1.

[2] *Ibid.*, p. 2.

[3] Anita Simon and E. Gil Boyer. *Mirrors of Behavior: An Anthology of Classroom Observation Instruments.* Philadelphia: Research for Better Schools, Inc., Temple University, 1967. p. 1.

content and computer mediated content in a mode the same as that of Individually Prescribed Instruction.[4]

This is the first draft of a growing list of information items which could be collected about a school and its instructional program which may be of assistance in helping to determine the quality of the education a youngster is receiving. Collecting this information may be helpful in gaining understandings about a given situation which go beyond those which can be secured by state assessment or standardized tests alone. Data of this kind can help measure a school's progress in affective areas, and collecting some of this information would, therefore, help a school faculty determine its progress toward a wider range of goals than is presently assessed in most situations.

The list is not complete. The items presented are tentative. At some later point, there may be an attempt to put these items in questionnaire form, to validate the items, and to determine those which are most significant. Suggested methods for collecting the data may also be developed and tested. Your reactions, suggestions, and additions will be appreciated.

Until a validated means of using unobtrusive measures is developed, interested school faculty may wish to look at this list and select items which promise to help in assessing progress toward selected goals. Of course, only a small portion of these suggested data items will be significant in any given situation. The practitioners, armed with their list of carefully selected and prioritized objectives, should select the most relevant data items and then determine how information about these items can be gathered in a manageable manner. This list may also be used to stimulate thinking about other unobtrusive measures which may be useful.

It is believed that gathering information about these and other unobtrusive items over a period of time can reveal trends. Such data will also be useful in assessing progress toward a broader range of goals than would the use of conventional standardized instruments alone.

Number of situations in which students are:

1. Voluntarily remaining after school to chat with teachers
2. Making significant choices
3. Involved with realia
4. Involved with resource people
5. In active roles
6. Involved in planning learning activities
7. Involved in planning social events
8. Rewriting, rehearsing, and polishing their efforts
9. Making bulletin boards, displays, or models
10. Choosing what is to be studied
11. Reporting to the class
12. Clarifying values
13. Asking questions
14. Learning from other than the written word
15. Working independently
16. Attempting to understand themselves with teacher assistance
17. Learning in areas off the school site
18. Learning from other students
19. Learning salable skills
20. Evaluating their own progress with teacher assistance
21. Smiling
22. Laughing
23. Playing games
24. Using supplementary instructional materials

[4] *Ibid.*, p. i.

25. Examining current topics or issues

26. Carrying and/or using paperbacks which are not textbooks

27. Using their own funds to buy books

28. In risk taking situations (that is, doing new things)

29. Using interest centers.

Data about students:

1. What percentage of students are participating in a community or school service program?

2. What percentage of students drop out each year?

3. What percentage of students skip each day?

4. What percentage of students are tardy each day?

5. How many students have been arrested this school year?

6. How many students run away from home each year?

7. How many students know the principal's name?

8. How many students don't return to class after a fire drill?

9. How many students left school because of pregnancy the last school year?

10. How many students were high or nodded off because of substance abuse yesterday?

11. What percentage of students participate in extracurricular activities?

12. How many shake downs of students by other students occurred last week?

13. How many students attend optional school events?

14. How many students have well thought through educational or vocational plans for next steps after termination of their secondary education?

15. What percentage of students eat the cafeteria lunches?

16. What percentage of students participate in more than one extracurricular activity?

Number of situations in which teachers are:

1. Diagnosing pupils' learning needs

2. Complimenting students

3. Teaching prescriptively, based on a diagnosis

4. Providing assistance with how to do assignments in school

5. Assigning only homework which requires use of home, parent, or community resources

6. Providing a wide variety of significant choices for students

7. Attempting to measure student progress in other than academic areas

8. Measuring and reporting pupil progress relative to what they've learned in school vs. what they've learned elsewhere

9. Touching students in a supportive way

10. Engaging in pupil-teacher planning

11. Smiling

12. Laughing

13. Telling jokes

14. Listening to students read, tell stories, or jokes

15. Making positive remarks about students in the staff lounge

16. Displaying some work from every pupil

17. Voluntarily using their own time to work on school problems

18. Planning faculty social activities

19. Planning activities involving both faculty and students

20. Providing positive feedback about progress to students

21. Voluntarily staying after school to chat with pupils

22. Using their own funds to help students or buy needed materials

Data about staff:

1. What is the teacher absenteeism rate?
2. What is the teacher tardiness rate?
3. How many four-letter words are used by teachers in conversation?
4. How many negative statements were made by teachers to students?
5. How many male staff members have beards or long hair?
6. How many teachers are members of minority groups?
7. How many members of the administration are from minority groups?
8. How many female teachers are in leadership roles?
9. How many female teachers are receiving less compensation for extracurricular assignments than men receive?
10. How many females are in administration?

Number of situations where administrators are:

1. Modeling behavior that is democratic, kind, and humane.
2. Involving staff, parents, students, and community in setting priorities, assessing progress, and reviewing rules
3. Earmarking funds for in-service education, instructional development, and/or research
4. Cooperatively devising constructive, nonpunitive procedures for evaluating staff
5. Providing means whereby students can attend school at different hours, take different courses, where class periods are different lengths, etc.
6. Providing means whereby different pupils can spend varying time to complete the same task
7. Delegating responsibility
8. Providing a means of determining competency, where prerequisites can be waived
9. Devising ways to reduce adversary relationships between administrators and teachers and teachers and pupils
10. Providing a variety of options and alternatives to the traditional program which take into account pupils' learning styles, needs, and interests
11. Stimulating collaborative efforts among staff and between staff and students
12. Providing opportunities for pupils of various abilities and social, ethnic, and economic backgrounds to learn together
13. Listening to students, staff, and parents.

Data about administration:

1. How many principals has the building had in the last three years?
2. How many left because of ulcers, heart attacks, medical leave, or early retirement?
3. How many threatening notes or phone calls has the administration received?
4. How many false fire alarms or bomb scares have been received?
5. How many administrators devote more than half their time to discipline reasons?
6. How many staff meeting agenda items don't deal with instruction?
7. What proportion of staff meeting agenda items are suggested by staff?
8. What percentage of the time in staff meeting are staff members talking?
9. How many items on the staff meeting agenda could have been handled by written information?
10. How many students were suspended last school year?
11. How many new courses or programs have been added this year?
12. How many new mini courses or programs have been added this year?
13. How many courses or programs have been dropped?

Data about the building:

How many of the following do you observe: (a) open classroom doors; (b) open office doors; (c) good smells; (d) bad smells; (e) students' voices; (f) music; (g) animals; (h) cozy corners; (i) students' collections (of any kind); and (j) pupil art work?

1. What is the ratio of hall monitors to students?

2. How many different types of student passes are in use?

3. How many classrooms have student desks screwed down?

4. How many public address announcements are made per day?

5. How many individuals in the school have master keys?

6. How many times during the day do bells ring?

7. How much graffiti is in evidence?

8. How many faculty cars were damaged in the school parking lot last school year?

9. Does the parking lot have spaces reserved for administrators?

10. How many times have the police been called to the school in the last month?

11. How many broken windows have there been this school year?

12. How many deliberately plugged toilets have there been this school year?

13. How many faculty members must sign in or punch a time clock ?

14. How many square feet per teacher are available for the teachers' lounge?

15. How many classrooms have student chairs in straight rows?

16. How many empty bulletin boards or display cases are in evidence?

Miscellaneous information:

- How many inches thick is the negotiated contract?
- How many pages in the student handbook are devoted to "don'ts"?
- How many paragraphs long is the dress and grooming code?
- Does the cafeteria serve the faculty the same lunch it serves pupils?
- How many staff members are voluntarily eating with students?
- How many school activities are there to which parents are invited?
- What proportion of the parents come to these functions?
- How many volunteers from the community work in the school as unpaid helpers?
- How many different roles do these volunteers play?

- What has been the ratio of successful millage elections to those that have been unsuccessful?
- How many staff members recognize the superintendent?
- How many staff members recognize board members?
- How many staff members does the superintendent recognize?
- How many times has the superintendent been in each school building?
- How many classrooms has the superintendent visited?

William C. Miller is Deputy Superintendent, Wayne County Intermediate School District, Wayne, Michigan.