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FOCUS ON EXCEPTIONAL CHILDREN

THE CLASSROOM AS AN ECOSYSTEM

*Anne W. Carroll*¹

THE EXCEPTIONAL CHILD IN THE REGULAR CLASSROOM

The trend toward an increased awareness of the needs and rights of the handicapped has resulted in

- a decreased emphasis upon the more traditional categorical approach to labeling the handicapped and an increasing tendency to view all children as learners with varying degrees of readiness.
- momentum to increase the availability of instructional options for all handicapped children.
- the emergence of an increased partnership between the special educator and the classroom teacher.
- less reliance on traditional standardized tests and more emphasis on actual teaching/learning assessment and careful observation of the learner's behavior as expressed in as natural a setting as possible.
- the need for a systematic approach to viewing the learner and the learning environment.

To instruct men is nothing more than to help human nature to develop in its own way, and the art of instruction depends primarily on harmonizing our messages and the demands we make upon the child with his powers at the moment. [Swiss Educator, 1802]

Thus, the learner affects and is affected by his environment. This reciprocal relationship must be considered in any attempt to describe the learner's behavior systematically.

THE ECOLOGICAL MODEL

An ecological model is proposed in order to provide a conceptual framework within which to discuss the dynamic interaction of the environment and the learner (the ecosystem).

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The ecological viewpoint tries to integrate the individual and the environment into a single whole rather than to view them separately.

Man is in the world and his ecology is the nature of his "inness" . . . what does he do there in nature? What does nature do in him? What is the nature of the transaction? [Shepard & McKinley, 1969, p. 1]

It is not only the student and the teacher who act and react, but the total ecosystem "behaves" as a whole. The child is a contributor as well as a reactor to the learning process.

How Is the Ecological Model Applied to the Classroom?

The ecological model may be applied through a personalized education approach, which is an attempt to achieve a balance between the characteristics of the learner and the learning environment. It is the match of the learning environment with the learner's information, processing strategies, concepts, learning sets, motivational systems achieved, and skills acquired.

It is based upon the dynamic interaction of the student and the learning environment and includes a congruence within the learning environment, providing for adaptive growth within the accommodative capacity of the child. The child's ongoing informational interaction with his environment is the basis for program planning.

Teaching is viewed as the process by which accommodation and assimilation are *facilitated* in the effort to control the match between the environmental circumstances the

pupil encounters and the schemata he has already assimilated (Adelman, 1973).

Hunt (1972) suggested that adaptive growth takes place in a situation which contains information, models, and challenges just discrepant enough from those already stored and mastered to produce interest and call for adaptive modification in the structure of his "intellectual coping" which are not beyond his accommodative capacity at the time.

It may be inferred that "appropriate learning" is dependent upon

1. discrepancy being within the limits of an individual's capacity for accommodation.
2. the appropriate operation of the accommodative and assimilative processes.

An "appropriate match" for successful learning is one where there is an accountable discrepancy between one's adaptive assimilated schemata and the environmental circumstances one encounters (Hunt, 1972).

In contrast, the absence of the discrepancy between environmental circumstances one encounters and one's adaptive assimilated schemata is viewed as resulting in "arrested learning" (Adelman, 1973). In some situations it may be that there is nothing to accommodate, such as in the case where there is inadequate stimulation or when the stimulation is beyond one's accommodative capacity. If the student cannot avoid the circumstance, the result may be inappropriate learning or disruptive learning.

The absence of the "match" may result in a state of disequilibrium on the part of both the teacher and the learner.

THEORY OF COGNITIVE DISSONANCE

Cognitive dissonance as viewed by Festinger (1957) is an antecedent condition which leads to activity oriented toward dissonance reduction. The demands of the environment upon the student may disrupt his equilibrium, forcing him perhaps to display avoidance behaviors which may then disrupt the equilibrium of the teacher's cognitive structure, thus causing a state of dissonance or "level of uncomfortableness." Since the mind is continuously active, it may attempt to reconcile this state by rationalizing the position, discounting the source, or insulating one's beliefs by closing them. Such reconciliation often leads to frustration for many classroom teachers as their desire to help the children in their rooms develop to their greatest potential is hampered by a lack of preventive intervention strategies.

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It has been theorized that each individual has formed latitudes of acceptance and rejection on those subjects with which he is involved. There are other subjects with which he chooses to remain noncommitted; this does not mean he remains uninvolved.

According to Sherif and Sherif (1969), norms have been established within one's cognitive structure around which he evaluates incoming information to see if he can tolerate it. If he cannot, he will reject it or let it lie dormant as a noncommitment.

How Much Dissonance Can One Tolerate?

If one examines his own thought processes, he will probably see that he has built up a cognitive buffer to insulate him from much of the dissonance-producing information that he receives on a daily basis. Referring to Festinger's concept, one can see that he could naturally avoid environments that cause a "state of uncomfortableness." Most people seek reinforcing situations and shy away from those that are dissonance-producing. In order to maintain some semblance of mental balance, one may attempt to avoid uncomfortable situations or keep them to a minimum. This is usually not diagnosed as passivity, but rather as a means of survival. The more disequilibrium existing in the mental state, the more mental activity one must generate to decrease the dissonance. Since man is a self-regulating system, he must have some type of gyro to keep him on course. Therefore, when the system is pushed too fast one tends to slow it down or block the input.

How Does the Theory of Cognitive Dissonance Apply to the Classroom?

Most teachers actively seek to attain a state of balance in the classroom. Of course, some people can live with more dissonance than others. Thus, some may disregard information that makes others upset. The theory of cognitive dissonance is built upon the premise that, after one has built a reactive system, one evaluates information in such a way that it fits into his prescribed format for decision making.

How Does One Decrease the Dissonance Level When the Learning or Behavior Problems Manifested within the Classroom Are Contradictory to One's Expectations of Class Behavior?

One approach is to avoid information which might increase the dissonance; the other is an attempt to achieve consonance with the learner and the environment.

The teacher's tolerance range for the acceptance of differences of behaviors in the classroom may be increased through a better assessment of the environment and, through this information, may decrease the range of dissonance. Thus, the state of disequilibrium on the part of the teacher in the classroom may be reduced by the utilization of a systematic approach to assessing the learner and the learning environment.

ASSESSMENT

Hunt (1972) suggested that assessment "should provide information to guide the educational process." The teacher should know what strategies of information processing, what motor habits, and what motivational interests are required before a child can respond with "productive accommodation" to a given curriculum or teaching situation. For example, what motor abilities, symbolic linguistic skills, cognitive abilities, and interests are required before a child can learn to read? Master teachers have usually taught with an intuitive approach to assessing a student's response to a problem; however, little has been organized into a helpful systematic approach.

What Is the Approach to Assessment?

Assessment is not a one-shot kind of process, but rather *an integral and ongoing part of the instructional strategy*. If an activity proves ineffective, it must be recognized as such and replaced; and this data must become a part of the cycle. No assessment is infallible and no one activity helps all children, but rather ongoing evaluation attests to the accuracy of the initial assessment and the effectiveness of the instructional program (Figure 1). Hopefully, in the next few years, specifics in teaching systems relevant to the learning characteristics of children can be identified. "Differential treatment should be a natural outgrowth of differential assessment" (Binet, 1918).

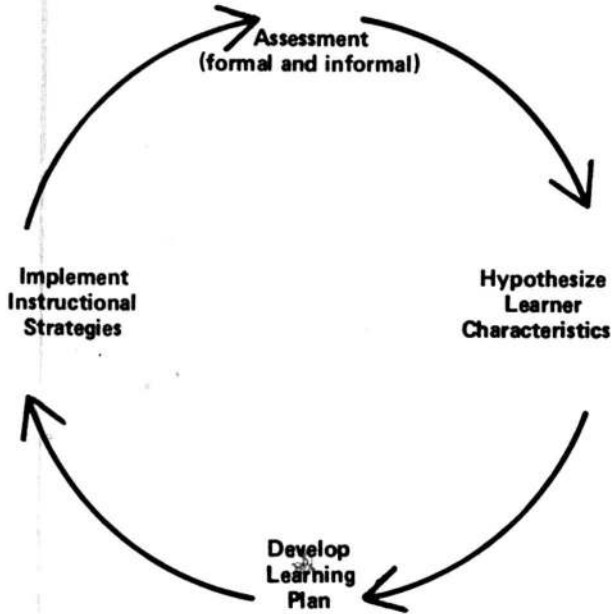
SYSTEM FOR ASSESSING THE LEARNER AND THE LEARNING ENVIRONMENT

The six major steps in assessing a learner and his environment within the classroom setting are as follows:

- Step 1. *Determine the goal* of assessing the learner and his environment.
- Step 2. *Develop a conceptual framework* for assessing the learner and his environment.
- Step 3. *Implement the assessment plan* based upon the above conceptual framework.
- Step 4. *Evaluate the results* of Step 3 and determine the primary learner goals.

Figure 1

CYCLICAL MODEL OF ASSESSMENT



Step 5. *Develop a set of hypotheses* about the student's learning and emotional characteristics.

Step 6. *Develop a learning plan* based upon Step 5, the learner characteristics and the learning environment.

Step 1. Determine the goal of **assessing** the learner and his environment.

The following should be determined prior to the initiation of assessment:

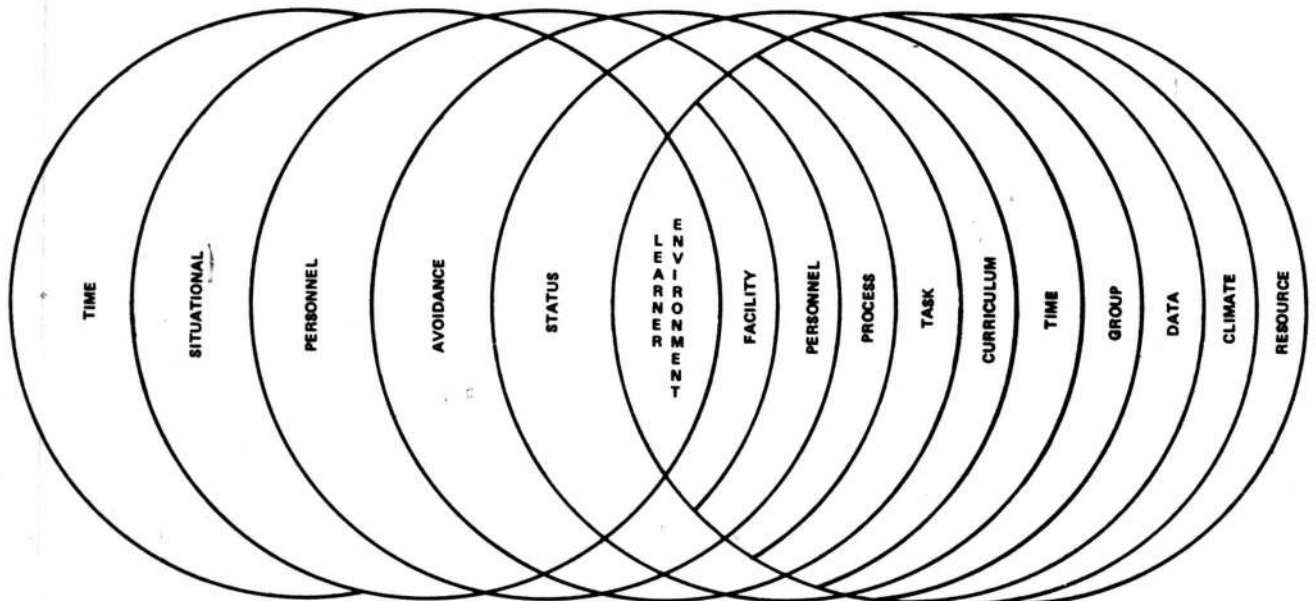
1. What is the purpose of the assessment?
2. What information is necessary to attain the goal?
3. What is the known information about the student and the learning environment?
4. What additional information is necessary to gather?
5. Who will be responsible for the assessment?
6. How will the information be obtained?
7. How will the information be utilized, once obtained?

Step 2. **Develop a conceptual framework** for assessing the learner and the learning environment.

In assessing the learning environment, the teacher attempts to become aware of the options available within the teaching situations, and which combination of options elicits the most appropriate response from the student. It is through the assessment of the total situation that the teacher will attempt to achieve the match that is satisfactory for the learner. (See Figure 2.)

Figure 2

CONCEPTUAL FRAMEWORK FOR ASSESSING THE LEARNER AND THE LEARNING ENVIRONMENT



FRAMEWORK FOR ASSESSING THE LEARNING ENVIRONMENT

Facility Analysis

Personnel Analysis

Process Analysis

(Input response reinforcement)

Task Analysis

Curriculum Analysis

Climate Analysis

Time Analysis

Group Analysis

Data Analysis

Resource Analysis

Facility Analysis

Questions to be answered about the facility:

1. Are facilities available to provide for large and small group interaction within the classroom?
2. Are individual study areas available (i.e., portable bookshelves or bulletin boards that can be used to divide the areas)?
3. Are learning carrels available (i.e., portable desk top carrels)?
4. Are activity centers available (i.e., communication centers, science centers, etc.)?
5. Are book corners readily accessible to students?
6. Does the student have his own desk or cupboard where he can store his personal material?
7. Are there facilities available in the room or in the school for crisis intervention (i.e., a time-out room)?
8. Are there large areas available in the building or outside that can be used for play activities, drama presentations, etc.?
9. Is there an area around the building that can be used for exploration?
10. Are small rooms available within the building for subdividing the class into subunits?

Personnel Analysis

1. What is the ratio of students to teachers?

2. What personnel are available to help in the personalizing approach (i.e., within the classroom)?

- a. Community volunteers or senior citizens groups?
- b. Peers within the classroom for additional teaching? For example, intra-peer tutoring or older students to help younger students such as high school, junior high, fifth and sixth graders.
- c. Paid aides?
- d. College interns in preservice educational programs?
- e. Interested parent groups?

3. What ancillary support personnel are available in the building and school district (i.e., music, P.E. teachers, curriculum specialists, resource teachers, speech clinicians, social workers, psychologists and nurses)?

Process Analysis

Process analysis is the procedure for examining the task presented according to the skills required to complete it. The following questions on input, response, and reinforcement should be asked.

Input:

1. What type of stimuli or input is given to students throughout most of the day? Visual, auditory, crossmodal?
2. What is the type of input generally used in specific subject areas—i.e.,
 Math: visual, auditory, crossmodal?
 Reading: visual, auditory, crossmodal?
 Spelling: visual, auditory, crossmodal?
3. In social-emotional areas—visual, auditory, crossmodal?
4. What is the cognitive level of input?
 - a. Concrete—i.e., How are a pear and an apple alike? They are round.
 - b. Functional—i.e., They are edible.
 - c. Abstract—i.e., They are both fruit.
5. What is the rate of input—i.e., fast, slow?
6. What is the amount of input—i.e., number of directions given?
7. What is the sequence of input—i.e., sensory, perceptual, memory, language?

Response:

1. What is the most frequent type of *response* requested of the students *throughout most of the day*? Oral, graphic, crossmodal?
2. What is the most frequent *response requested* of students in *specific subject areas*—i.e.,
 Math: oral, graphic, crossmodal?
 Reading: oral, graphic, crossmodal?
 Spelling: oral, graphic, crossmodal?
3. What is the most frequent *response* requested of students in *social-emotional areas*?
4. Are responses sequenced in the order of their difficulty?
 - a. For example, the student affirms or negates the selection of the response by the teacher.
 - b. The student sorts (pictures, objects) according to the categories which correspond to models presented by the teacher. Categories may be size, shape, color, function.
 - c. The student compares and selects or points to a picture, object, or form to correspond to the model presented by the teacher.
 - d. The student sorts as mentioned above, but without a model.
 - e. The student matches pictures, objects, forms, or sounds which are alike.
 - f. The student selects one of a series which is different from the rest of the series.
 - g. The student arranges in series according to gradation in size, color, or some other standard.
 - h. The student verbalizes his thoughts as to any of the above.
 - i. The student responds in multiple-choice.
 - j. The student responds in a short essay answer.

Reinforcement:

1. What *reinforcement strategy* is used by the classroom teacher?
 - a. Oral, graphic?
 - b. Immediate or delayed?
 - c. Social or tangible?
2. What is the type of reinforcement usually given to students in math? in reading? in spelling?
3. What is the type of reinforcement usually given to students in social-emotional areas?

Task Analysis

1. What skills are involved in the performance of the task?
2. What is the main skill to be acquired?
3. What are the necessary subskills to complete the task?

Curriculum Analysis**Program Analysis:**

1. Are there programs available in reading, math, and spelling which provide a variety of input stimuli for students?
2. Who gives the input? The teacher, other student, peer? This input can be on an individual basis or on a group basis. For example, the individual giving himself input through reading, etc.

Materials Analysis:

1. List the materials used in the classroom and inspect the responses required of students; such as graphic writing response; oral response; rhetoric, such as gestures or pointing, matching, etc.
2. List materials used in the classroom which provide variety of activities; such as the visual auditory, manipulative, and creative.
3. What materials in the classroom lend themselves to individual study?
4. What hardware is available to supplement the curricula, such as language master, overhead, tape recorder?

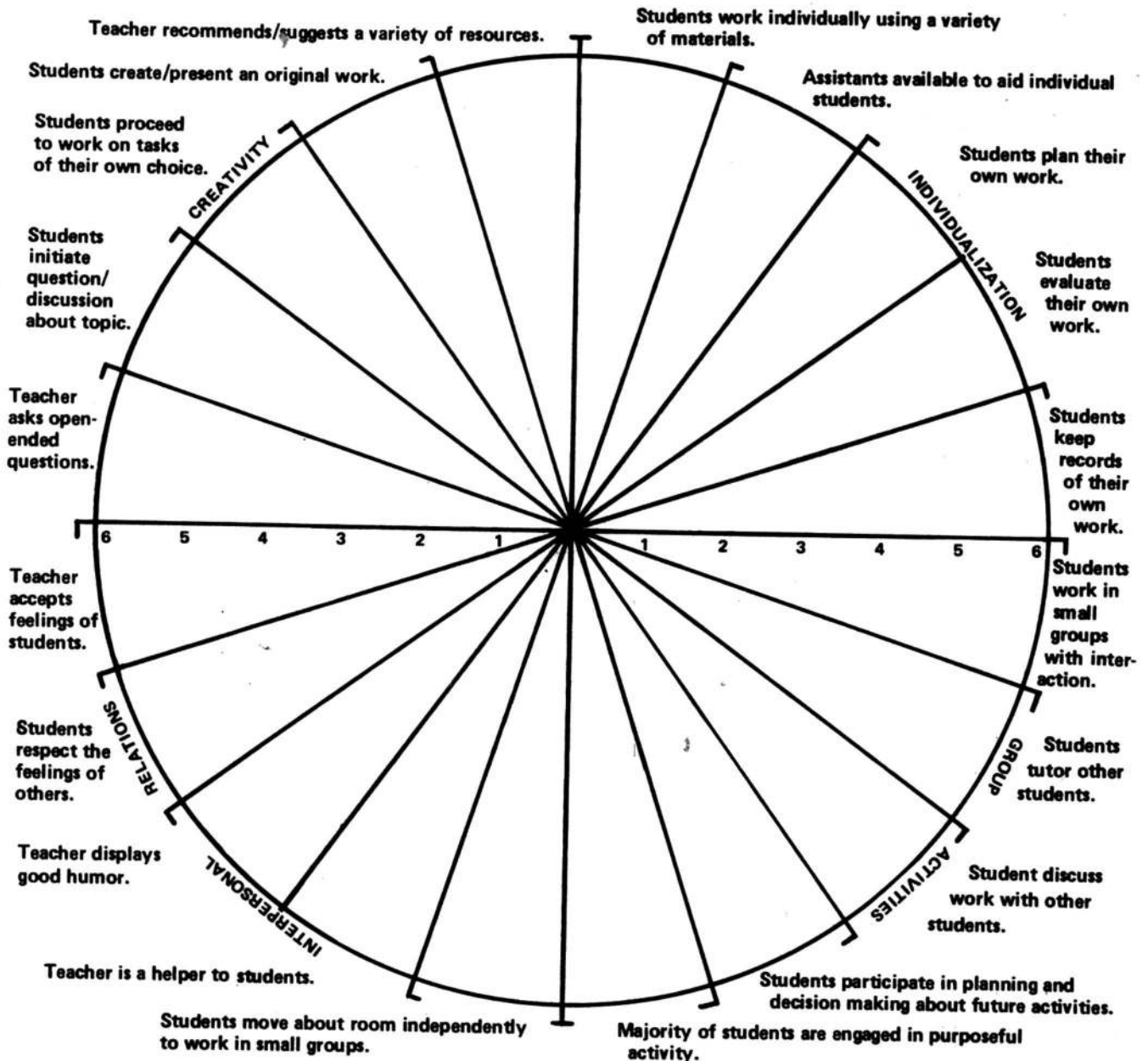
Climate Analysis

Behavior may be observed by considering specified characteristics operating within the classroom environment. According to research on classroom processes, there are four characteristics of the educational setting which may be observed informally by teacher-peer or teacher-administrator to assess the educational climate. These characteristics are creativity, individualization, group activities, and interpersonal relations (Galloway, 1970). Both teacher and student behaviors may be observed using the four-area framework (Figure 3).

Figure 3
CLASSROOM OBSERVATION CHECKLIST

Date _____ Time _____ Teacher _____ Observer _____ Lesson _____
Date & Time Date & Time Date & Time
1st Observation (10 min.) _____ 2nd Observation _____ 3rd Observation _____

Checklist may be used for the following: a) math lesson b) reading c) spelling d) social studies
Rating scale: 1) None 2) Little 3) Some 4) Occasionally 5) Usually 6) To a great extent



- a. Health resources—nurses, school physicians?
 - b. Psychological resources—psychologists, consulting psychiatrists, social worker?
 - c. Parent involvement?
 - d. Instructional resource materials?
 - e. Resource room?
 - f. Human resources available within the building—reading specialist, counselor, etc.?
2. District Resources.
 3. Community Resources.
 4. State Resources.
 5. National Resources.

ASSESSING THE LEARNER

Status Analysis

Avoidance Analysis

Personnel Analysis

Situational Analysis

Time Analysis

Status Analysis

Should attempt to answer the question: What does he know?

1. What is the level of achievement in the basic academic areas—in math, reading, and spelling?
2. Is there a discrepancy in his achievement and social-emotional behavior based upon the input and response modes?

Avoidance Analysis

1. Are there *specific subjects* he avoids? For example, during reading time does he drop his books on the floor and get a drink of water? During spelling tests does he have to sharpen his pencil? In math does he rarely complete his assignments? Possibly, he is more fearful of receiving an "F" than an incomplete, which he can rationalize.
2. Are there *specific tasks* he avoids—e.g., written language, copying activities, word problems in math, or specific types of homework assignments?

3. Are there *specific settings* he avoids? Is there anything in common for them?
4. Are there *specific people* he avoids—e.g., in terms of adults or other students?

Personnel Analysis

1. Does he learn best with an adult—e.g., a teacher, a volunteer, an aide, an intern?
2. Does he learn best with peer or older students?
3. Does he appear to learn best through group activities or individual activities?
4. What types of activities does he do best in small groups? What type of learning does he accomplish best with adults? With peers?

Situational Analysis

Should attempt to answer the question: Where does he learn?

1. In the classroom.
 - a. Large group activities?
 - b. Small group activities?
 - c. Individually oriented activities?
 - d. Activity centers?
2. On the playground.
 - a. Parallel play activities?
 - b. Team activities?
3. Special room.
 - a. Reading room?
 - b. Library?
 - c. Resource teacher?
 - d. Media centers?

Time Analysis

Should attempt to answer two questions.

1. What time of the day does he appear to learn best?
 - a. Before mid-morning?
 - b. Before lunch?
 - c. Before mid-afternoon?
2. How long can he stay with an activity, and what type of activity?

Step 3. Implement the Assessment Plan based upon the above conceptual framework.

How can conceptual framework be implemented? Observations of behavior might be

1. *Continuous recording.* Behavior being recorded is easily observed. It occurs in a variety of settings and, particularly, occurs less than twenty five times per day. It is usually wise to record each instance of the behavior.
2. *Time sample recording.* When the behavior being recorded occurs only in a specific setting, such as reading instruction or on the playground, when it is difficult to observe, or when it occurs more than twenty five times per day, a time sampling recording technique is usually advisable.
3. *Duration recording.* Some behaviors are a concern to teachers, not because of their frequency, but because of their duration. A simple recording technique might be to observe the child when he is given a book to read and record the number of seconds or minutes he spends actually pursuing the book during a period of three to ten minutes using a stopwatch.

4. *Work records.* For some children, the behavior of greatest concern to the teacher may be the percent of the assigned work completed, percent of completed work correct, rate of work. Care should be taken to record work, age, academic subject separately to keep the number of possible responses approximately equal on successive days, and to make sure the assigned work requires discrete responses.
5. *Walk through the day.* One of the most advantageous approaches to observing a child's behavior is to select two or three children the teacher is most concerned about and spend one full day devoted to following them. This includes the playground and the lunchroom.

Who may give input?

1. *The child himself* through a conference approach is usually a viable source of information and one which is often overlooked. Conferences should include what the child himself views as being his strengths and areas in which he feels the need to improve. (See Figure 5.)

Figure 5

Esther M. Bearg, fifth grade teacher, Mt. Pleasant School, West Orange, New Jersey, states, "We educators have tried numerous grading systems over the years, but how far have we really progressed in our quest for sincere, explicit reporting? I finally had my students write their own report cards as auxiliaries to the official ones,

encouraging them to write comments about themselves as though they were I. The result? Their comments were better than mine. Why? Because as you can see below, I was polite; my students were direct. Perhaps the task of reporting should belong to us both."

I said . . .

They said . . .

Donna needs firm yet gentle discipline to help her see what is appropriate both in her academic work and in interaction with her peers.

She should not make fun of people just because others do.

John means well. Firm, consistent, regular guidance will develop his ability to sustain his positive feelings and behavior toward school.

I think he needs a lot of improvement. He really does.

There has been some improvement in Bruce's work because his attitude toward school is better. However, he must keep after his daily work.

I think Bruce is doing so-so.

Basically Joe is capable and enthusiastic. Regular guidance and understanding will help him see the need for doing what is required.

He shouldn't talk so much. And he should have more self-control and respect everything in the room. And he should talk in turn.

[*Today's Education, NEA Journal, 1967*]

- The classroom teacher may provide input through her observations of the child through formal assessment—such as achievement tests, etc.; through weekly achievement tests in the classroom; through criterion referenced testing; and through informal analysis.

Example: One example of a breakdown in communication between a teacher and child in assessing his learning problem was a youngster who said that he had been told by his teacher that if he did not understand his math to talk with her as soon as he had finished the page. However, this conversation took place in April, and he said that his teacher had told him that in October, but he could never talk with her about it because he had never completed a page of math.

- Parents can provide valuable background information, help in the developmental history and rule out any interfering health factors, describe the child's behavior at home, etc.
- Ancillary personnel, roving principals, other teachers, health nurses, social workers, school psychologists, special education teachers may also be available to give input into reaffirming the teacher's impressions of the child. Most, however, feel at this time that the classroom teacher has the best opportunity to observe the child and his behavior.

SUMMARY

Beliefs on assessing the learner and his environment.

- Assessing the learner and his environment is a cyclical process.
- Assessing the learner and his environment should be a flexible process.
- Assessing the learner and his environment should include a multitude of resources.
- Each measure of assessment should be carefully selected.
- Assessment should include both formal and informal measures.
- Assessment is a prerequisite to personalizing educational programs.
- Assessment should include both the learner characteristics as well as the resources within the environment.
- The assessment of the learner and his environment should result in a plan of action with strategies for program implementation.

- The assessment should include a systematic way of recording the student's growth in the program.
- The teacher as the learning facilitator has the primary responsibility for assessing a learner and his environment.

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CLASSROOM FORUM

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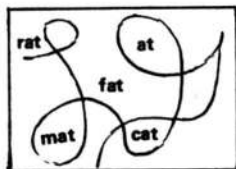
My students with Specific Learning Disabilities seem to become bored with the repetition and drill sometimes needed for mastery of reading skills. Do you have some suggestions that might be used to increase interest and motivate the students in learning?

It is not at all unusual for children, as well as teachers, to become tired of traditional activities used in reading instruction, especially when much repetition and reinforcement are needed for mastery of skills. However, there are many activities and games that can be utilized for both

instruction and reinforcement. These various activities can be worthwhile learning experiences, as well as fun and stimulating to the student. It is important to keep in mind that each activity should have a given objective leading toward a specific goal. Such unique programming should greatly enhance motivation and, hence, learning.

Teacher-made activities and games often can be among the most successful activities. Usually, they can be quickly and inexpensively made. Many of the activities listed here are geared to a linguistic approach but can be easily modified to suit individual programs and needs.

1. *Scribble*. Teacher makes flowing scribbles on paper and writes words to be emphasized within the scribble (hides them). The teacher then calls out a word, and the student finds and circles the correct word. Color cuing of the words can be used when necessary. Scribbles can be colored in after completion. This activity can be done between peers and at the chalkboard.



2. *Follow the Dots (Words)*. On chalkboard or on paper, the teacher utilizes an abstract form or simple picture (triangle, Christmas tree, etc.). She places a dot at each strategic point of the design and puts a word beside each point. Teacher calls out a specific word. The student finds the word and connects the dot to the one called out previously. Students can make their own designs by reading words in random order and connecting the dots.

3. *Gameboard*. The teacher glues squares of colored construction paper, felt, or the like on poster board to form a path. Different colors can be used to make it more attractive and to point out more clearly the different steps in the path. Reading words to be emphasized are placed on index cards (one, two, or three words per card). A point allotment is given to each card, according to the number and difficulty of words on the card. If the student reads the card correctly, he may go the allotted number of steps. The first to reach the END is the winner. This gameboard can be used for various other areas; for example, color or shape recognition, math facts, etc.

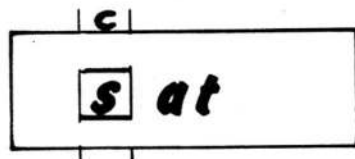
4. *Word Hunts*. This activity utilizes cards made for the gameboard mentioned in #3. Other cards (for example, Dolch words) can be used too. Cards are "hidden" throughout the room. For each card that the student finds and reads correctly, he earns a point; or he can take the card home or place it in his word file box, depending upon the class organization.

5. *Individual Letter Cards*. These cards can be made from 1½" x 1½" poster board. Each student has a set of letters. The teacher calls out words, and the student spells by choosing the correct letters and sequencing them.

6. *Small Word Cards*. Sentences are written on oaktag or poster board. The sentence is cut into separate words, and the words are mixed up. The student unscrambles the sentence and then may paste corrected sentence to construction paper.

7. *Sentence Strips*. Strategic sentences from a story are placed on oaktag or poster board strips. The student reads the sentence strips, then sequences according to the order in the given story. The strips can be pasted to a piece of construction paper, and the student may take his "own" story home if desired.

8. *Word Sliders*. This handy gadget, quickly and easily made, is used for words with patterns (linguistic). A 4"x6" rectangle is cut from poster board. The constant pattern (example: _at) is written on the rectangle. Two slits are made in the initial consonant position. A thin strip of paper is inserted in the slits, utilizing letters needed to complete the pattern. Slits can be made in initial, medial, or final positions.



9. *Language Masters*. Teacher makes up cards with words, phrases, and/or sentences to be emphasized in reading. This enables repetition of words in a different manner.

10. *Typewriting*. Student types favorite passage in a story. He reads it back to the teacher, then takes it home. This can also be used for isolated words that the student is learning.

11. *Tic-Tac-Toe*. This game can be played as a class or with small groups. A large tic-tac-toe-board is drawn on the chalkboard. The teacher inserts words to be reinforced. The first member of "X" team reads a word and tells how many syllables. If he is correct, he places an "X" over the word he read. Then "O" progresses in a similar manner. Game continues until one team can draw a horizontal, diagonal, or vertical line to connect three words.

12. *Passport Game*. Each student has a card (passport). The student shows the passport (says the word, phrase, or sentence on the card), before boarding the boat. When the captain calls out a port (card), he gets off the boat.