FOCUS ON EXCEPTIONAL CHILDREN

LANGUAGE PROGRAMMING FOR THE SEVERELY HANDICAPPED

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Currently, one of the most popular but least adequately dealt with aspects of special education is that portion which deals with the education of the severely and profoundly handicapped. Recently, pressure has been put upon educators to acknowledge and respond to litigations which have arisen on behalf of handicapped persons and to develop reasonable public school educational programs for them. Cases such as the *Pennsylvania Association for Retarded Children* v. *Commonwealth of Pennsylvania* (1972), *LeBanks* v. *Spears* (1973), and *Mills* v. *Board of Education of the District of Columbia* (1972) have given clear indication that handicapped children of any kind should not be excluded from provision of an education suited to their individual needs. While some of these cases were clearly decided on behalf of *all* children excluded from public education because of handicapping conditions of any sort, there is even stronger support for providing services to the severely and profoundly handicapped. *Wyatt* v. *Stickney* (1972) and *New York Association for Retarded Children* v. *Rockefeller* (1973) demonstrated clearly that states are also expected to realize their obligation to provide educational services to institutionalized handicapped youngsters regardless whose wards they might be. Probably most important, however, is that set of decisions provided in *Wolf* v. *Legislature of the State of Utah* (1969), *Doe* v. *Board of Education of School Directors of Milwaukee* (1970), *McMillan* v. *Board of Education* (1970), *Reid* v. *Board of Education* (1971), etc., which reaffirmed the fact that our individual state constitutions and laws *guarantee an education to all children.*

One might ask, "Why all the sudden concern regarding the education of the severely and profoundly handicapped?" The answer should be obvious. Despite the fact that educators have been aware of their legal responsibilities regarding the education of all children, they have assumed the right to exclude those who are difficult to educate or whom they could show were extremely expensive to educate. In fact, there are still

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school systems that exclude children who do not have "adequate" language for communication, "adequate" self-help skills, or who have not yet reached a given mental age level, such as six years. The absurdity of this is very much apparent when one considers the basic function that schools can and should be assuming with regard to the development of language and communication skills as well as self-care skills for this population of children. In fact, development in these areas, among others, will certainly enhance the apparent mental functioning of even severely handicapped youngsters.

What does this mean for those of us working in the public schools? Obviously, it means that we can no longer rationalize our exclusion of any handicapped children from public school programs regardless of the severity of their handicap. It means that we can no longer exclude children because we "don't know how to teach them" or "do not have adequate facilities" for teaching them. Rather, it is implied that we should be using all of the information available to us to program for them in the most efficient manner possible.

This article was written explicitly for the classroom teacher who is faced with the responsibility of educating the severely mentally handicapped youngster or who is anticipating the imminent arrival of such youngsters in his or her classroom. We have attempted to provide information regarding specific but generalizable procedures which can be used in developing language skills as teachers

identify problems of concern with severely handicapped youngsters.

There are numerous reasons why language programming is an essential curriculum area for severely handicapped students. The following statements are suggested as some of the more cogent arguments supporting language training.

1. The majority of severely handicapped students have been labeled deficient in speech, language, and overall communication skills. Jordan (1967) found these deficiencies in 40 to 79 percent of the population studied. The number of specific deficiencies was reported to increase with the degree of retardation.

2. Normal environmental conditions similar to those under which most children develop language skills do not lead to corresponding language growth in the severely handicapped. The effects of parent and/or peer modeling are minimal. There are numerous research articles suggesting that severely and profoundly handicapped students acquire language in developmental stages similar to nonhandicapped children but not under the same normal environmental conditions.

3. Much recent work has suggested that longitudinal, well-planned programs for teaching language skills to severely and profoundly handicapped students can be effective (Baer & Guess, 1971; Bricker & Bricker, 1970; Guess, Sailor, Rutherford & Baer, 1968; Lovaas, 1968).

4. In addition to the intrinsic value of improved or new language skills, language behaviors are essential prerequisites to the development of skills in most other curricular areas for severely and profoundly handicapped students (i.e., many self-help skills, vocational skills, and functional academic skills).

5. The potential for language development in severely handicapped children has not been determined to date. It is very likely that as our ability for language training improves, long-term gains in language development will be demonstrated in some severely handicapped students that exceed those currently thought possible.

6. Language, in addition to being a prerequisite to other essential skills, is one of the most prominent factors separating severely handicapped persons from nonhandicapped persons. Appearances, motor skills,

and academic abilities are of lesser import when integration of severely handicapped persons with nonhandicapped persons into some areas of normal societal living is seriously considered.

If some of the above arguments constitute justifiable reasons for teaching language skills to severely handicapped students, then it follows that teachers must have a frame of reference from which they can design and implement language training programs. Thus, the following outline is suggested as one scheme for organizing the components of language instruction for severely handicapped students.

1. *Specific skills essential for persons who teach language to severely handicapped students*

   a. What skills does the teacher need?

   b. Which of these skills does the teacher currently possess?

2. *Strategies for the analysis of available language training programs*

   a. What language training programs are available?

   b. How can a teacher efficiently evaluate available programs?

   c. Which facets of a program are relevant to the current teacher/student situation?

3. *Determination of a classroom model appropriate for meeting current student needs*

   a. Content

      (1) What skills should be taught?

      (2) Why should these skills be taught?

   b. Method

      (1) How can skills best be taught?

      (2) What materials will be needed?

   c. Evaluation

      (1) How is success determined?

      (2) What are the alternatives if success is not achieved?

      (3) What are the next steps if success is achieved?

The remainder of this article will attempt to provide functional information that may be used to facilitate the teaching of language by addressing each of these items. In addition, an exemplary segment of a language training program is provided.

SPECIFIC SKILLS ESSENTIAL FOR PERSONS WHO TEACH LANGUAGE TO SEVERELY HANDICAPPED STUDENTS

Severely handicapped students are often dramatically different, if only in degree, from mildly handicapped or nonhandicapped students; teaching this population does require teachers equipped with unique competencies (Brown & York, 1974). The importance of these teacher competencies is directly related to the degree of disability presented in the student population. Thus, the more severely handicapped the student, the more well developed a teacher's competencies need to be. Competencies necessary for language instruction overlap considerably with the basic skills necessary to teach anything to severely handicapped students. Minimally, teachers must become competent and comfortable with the use of teaching techniques and strategies including modeling/imitation, reinforcement, shaping, prompting, fading, extinction, stimulus control, and generalization training. An operational definition of each of these techniques and examples of their use in language training are given in Figure 1. Further information regarding their use can be found in texts by Reese (1966), Whaley and Malott (1968), Bandura (1969), Sulzer and Mayer (1972), and Miller (1975) to mention just a few.

Teacher competencies necessary for language training obviously go beyond the basic behavioral techniques delineated in Figure 1. Skills which are necessary in designing the instructional situation prior to direct instruction include (1) the ability to task analyze segments of language, and (2) the ability to develop an instructional program in a sequence appropriate to the task analysis derived. These two skills are essential for teachers of severely handicapped students. It is the ability to specify what responses a student should make, and in what sequence the responses should be made, that determines the adequacy of the curriculum for language programming with this population. Hopefully, the example of one segment of a language program presented at the end of this article will suggest a means of task analyzing a set of language skills and a method of building an instructional program based on that analysis.

In addition to task analysis and instructional sequencing skills, further considerations vital to the instructional situation include the selection of appropriate materials and the arrangement of the classroom environment. The classroom arrangement should provide for control and presentation of antecedent stimuli as well as delivery of reinforcement for learning on a planned basis. Provisions should also be made for ongoing and end-product

Figure 1
BEHAVIORAL PROCEDURES FOR USE IN TEACHING*

Procedure	Definition	Example/Use
1. Reinforcement (Positive)	1. The process of increasing or maintaining behavior through the presentation of a stimulus contingent upon the emission of the behavior	Use: 1. Positive reinforcement may be used whenever the teacher desires to teach a new behavior, to increase a behavior already in the child's repertoire, or to maintain a behavior. Ex: 1. To determine appropriate positive reinforcer, teacher may present an assortment and observe child in a free-choice situation.
a. Primary	2. Primary reinforcement has the effect of maintaining or perpetuating life	Use: 2. Primary reinforcement should be used in the early stages of teaching and for children who do not respond to other forms of reinforcement. Ex: 2. When child emits desired sound, teacher delivers food (candy, cereal, etc.).
b. Secondary	3. Secondary reinforcement has effectiveness because of prior systematic association with primary reinforcement	Use: 3. Secondary reinforcement may be used with many children for whom primary reinforcement is not necessary. Praise, or physical approval (hug, pat), should always be given when primary reinforcement is used in order to establish these as secondary reinforcers. Ex: 3. When child emits desired phoneme, teacher delivers pat on back and verbal praise.
2. Modeling/ Imitation	4. A procedure which occurs when the desired behavior is demonstrated, then copied by the student	Use: 4. Imitation may be used when the child does not have the desired behavior in his repertoire but does have the skills necessary to perform the behavior, or some approximation of it. Ex: 4. Teacher emits desired response and reinforces the child for repeating it.
3. Shaping	5. A procedure through which new behaviors are developed. The systematic reinforcement of successive approximations toward the behavioral goal.	Use: 5. Shaping is used when the child does not have the skills to perform the desired terminal behavior. Ex: 5. Teacher reinforces "b," "ba," "ball" in sequence when teaching the word "ball."
4. Prompting	6. A procedure through which extra discriminative stimuli are provided during the learning of a new behavior	Use: 6a. Prompting is used when a child needs additional cues. In the case of a child who has no language, physical prompts may be necessary. Ex: 6a. Teacher holds child's lips together to facilitate emission of "buh" sound. Use: 6b. For a child who has language, verbal prompts may be used. Ex: 6b. Teacher shows ball and says, "It's a ball. Tell me what it is."
5. Fading	7. The gradual removal of discriminative stimuli such as cues and prompts	Use: 7. Fading is used when a teacher perceives that prompts are no longer necessary. Ex: 7. Teacher puts fingers increasingly gently on child's lips while child emits "buh" sound or teacher shows ball and says, "Tell me what it is."
6. Stimulus Control	8. A procedure for discrimination training during which reinforcement is provided for responses to the presence of a certain stimulus and not for responses in the presence of other stimuli	Use: 8. Stimulus control is used when the teacher wishes to be sure that the child will apply his words only under appropriate circumstances. Ex: 8. Teacher reinforces the word "ball" only when a ball is presented to the child.
7. Generalization	9. A process which occurs when the student responds to different stimuli in a similar manner.	Use: 9. The teacher programs for generalization when she wants to be sure that the word the child has learned will be used appropriately for all members of a class of stimuli. Ex: 9. Child says "ball" when various balls or pictures of balls are presented.
8. Extinction	10. The reduction or elimination of a conditioned response by withholding reinforcement for that response	Use: 10. Extinction may be used when the child makes sounds other than those desired—for example, babbling, mumbling screaming. Ex: 10. Teacher does not reinforce the emission of extraneous sounds.

*This is a minimal list of procedures which teachers should be able to use.

assessment.

The following also are appropriate for teacher consideration.

1. Importance of integrating language programming into other curricular areas

2. Necessity of communicating methods of instruction to parents, teachers, and other persons in the students' immediate environment

3. Availability of existing program and research information regarding language training for severely handicapped students.

What are the alternatives for teachers who do not have all of the skills delineated? It is unlikely that many teachers have mastered all of the aforementioned competencies. The important point is that teachers should thoroughly and objectively assess their competencies in terms of strengths and weaknesses. In doing so, one is likely to find that he or she has competencies in most areas, but may need skill refinement in one area, such as planning language development programs for specific students. One reason for this is that there are so few commercially prepared packages designed for teaching language to severely handicapped students. Thus, the brunt of planning frequently falls on the classroom teacher. Detailed examples of task analyses and instructional program development appropriate for use with the severely handicapped are available (Brown, Scheuerman, Cartwright & York, 1973; Brown & Sontag, 1972; Brown, Williams & Crowner, 1974).

STRATEGIES FOR THE ANALYSIS OF AVAILABLE LANGUAGE TRAINING PROGRAMS

No attempt will be made to provide an analysis of language programs previously used with severely handicapped students within this article. A concise summary of information in this area has been provided by Snyder, Lovitt, and Smith (1975). Published studies and programs vary across several important dimensions beyond the skill areas taught. As previously mentioned, the ability to analyze studies and programs is highly desirable for teachers beginning language instruction with severely handicapped students. Figure 2 is offered to provide assistance in the analysis of programs along several dimensions related specifically to classroom situations.

The dimensions outlined in Figure 2 may be used as a guide in determining which aspects of a published language program are appropriate for particular students in a classroom setting. Different facets of one or more published programs may be combined, with modifications if they appear warranted, to form a basis for language training programs in these situations.

Reviewing several language programs prior to selecting elements of any for use is generally necessary since the range of language differences presented by students is frequently quite extreme and the content of various language programs varies considerably. Some language programs have focused on very early stages of development (Garcia, Baer, & Firestone, 1971; Jeffrey, 1972; MacAuley, 1968; Peine, Gregersen & Sloane, 1970; Schroder & Baer, 1972; Sloane, Johnston & Harris, 1968; Stewart, 1972) while others have emphasized the development of higher level expressive and receptive skills in severely handicapped populations (Baer & Guess, 1973; Barcia, Guess & Byrnes, 1972; Barton, 1970; Guess et al.,; Schumaker & Sherman, 1970; Twardosz & Baer, 1973). It is extremely important that teachers avail themselves of opportunities to become familiar with language training programs available commercially and those suggested in the professional literature.

DETERMINATION OF A CLASSROOM MODEL APPROPRIATE FOR MEETING CURRENT STUDENT NEEDS

One of the most difficult questions for a teacher to answer is, "What did I teach Johnny, Susie, and Billy today?" In order to answer such a question it is imperative that teachers avail themselves of some form of feedback/decision making system. One of the most frequently mentioned systems for this purpose is the Test-Teach-Test model (Chalfant, Kirk & Jensen, 1968). In fact, teachers have been encouraged to use this and similar models with the implication that the use of such a model will surely bring success to their classroom. Unfortunately, the problems involved in providing success in teaching severely handicapped or, for that matter, any students are somewhat more complex. Certainly, such a model is basic when considering that teachers must have available a working model which allows them to make decisions about what they are doing on a day-to-day basis. The problem is, the aforementioned model is generally not discreet enough, as such, to be of much value in making decisions about *what* should be taught. Especially when one is concerned with the ultimate behavior to be attained by severely handicapped students, the need for logical sequencing of behaviors to be learned becomes critical. Immediately then, one is forced to expand his feedback/decision making system so that it includes at least the following questions.

Figure 2

DIMENSIONS FOR CONSIDERATION IN REVIEWING EXISTING LANGUAGE PROGRAMS

1. What are relevant characteristics of the population receiving training?
   a. CA; MA; IQ scores; visible anomalies
   b. Institutionalized or noninstitutionalized population
   c. History of previous language training
   d. Entering language skills
      (1) Receptive skills
      (2) Expressive skills
      (3) Gestural skills

2. What specific language functions were taught?
   a. Expressive vs. receptive training
   b. Form of communication
      (1) Verbal
      (2) Gestural (hand signs)
      (3) Combined verbal and gestural
      (4) Other

3. What resulting language improvements occurred?
   a. Long- vs. short-term results
   b. Follow-up data after training

4. What methods were used for training language?
   a. Imitation training
      (1) Motor training, initially
      (2) Verbal training, initially
   b. Shaping; priming, fading, other operant techniques
   c. Principal technique employed

5. What was the teacher/student ratio?
   a. Individualized vs. group instruction
   b. Number of students taught within instructional setting

6. What specific materials were used?
   a. Classroom materials
   b. Special apparatus (reinforcement desk, etc.)
   c. Reinforcers

7. What skills did the language instructors possess?
   a. Psychologist or trained behavior analyst
   b. Classroom teacher
   c. Classroom aide
   d. Aides employed by institution
   e. Combination of personnel

8. Was there data supporting generalization of language skills?
   a. Generalization within instructional setting
   b. Generalization outside instructional setting
   c. Spontaneous generalization vs. elicited generalization

9. How long did the program take?
   a. Overall time period for program
   b. Length of teaching sessions
   c. Number of sessions per week

10. What modifications will be necessary to adapt this program for classroom use?
    a. Planning time required
    b. Professional assistance required
    c. Specific modifications necessary, i.e., material changes; group instruction feasibility

1. What do I want to teach?
2. Why do I want to teach that skill or concept?
3. How can I teach it?
4. What materials will I need?
5. How can I know if I am succeeding?
6. If I am not succeeding, what do I do?
7. If I succeed, what do I do next?

What Do I Want to Teach?

When teachers ask the question, "What do I want to teach?" they are really asking, "What do I want the student to be able to do that he could not do in the past?" (Brown & York, 1974, p. 6). Teachers have become accustomed to looking for the "what" or content of instruction in curriculum guides or other written resources which they assume can be presented to them by someone who has overall responsibility for educational programming for the youngsters they teach. Unfortunately, this is not the case. While a few curriculum guides are available, most of them do not provide reasonable guidelines which classroom teachers can use in making curricular decisions regarding individual students for whom they must program. There are exceptions to this, of course. Bricker and Bricker (1970) and Sailor, Guess, and Baer (1973), for example, have provided language programs which are both well-developed and sequenced in a manner which contributes significantly to providing an answer to the question, "What do I want to teach?" The following guidelines may be of further assistance in selecting specific content for inclusion in a language training program.

1. *What objects does the child come in contact with most frequently during his daily activities?* Certain objects such as balls, spoons, cups, etc., may provide more naturally reinforcing interactions than other objects because they are functionally useful to the child. Initially, labels for objects that can be manipulated for some purpose should be considered when selecting vocabulary content for language training.

2. *Which people does the child interact with most frequently?* Names, as labels for people of importance to the child, should be considered as target vocabulary content. The ability to label people is reinforced by the natural response of the person hearing his name. The child's own name is always a primary target for receptive and expressive language training.

3. *What words and phrases does he hear most often in his instructional programs?* Selection of key instructional words—such as *put, go, sit, stand,* etc.—that will become components of functional directions will facilitate functioning in both the educational and community environments. Other instructional terms—such as selected adjectives, adverbs, prepositions, and color words—should be taught as they become useful and meaningful to the child or as their use is occasioned in other instructional settings. Initially, stress may be placed on receptive language abilities, but expressive use of words and phrases should also be taught as soon as possible.

4. *What words or phrases are commonly used in the child's home?* Coordination with the parents is necessary to choose words and phrases for language training that can be used at home and at school. This provides the child with as many opportunities as possible for repeated practice and reinforcement of newly acquired language.

5. *What verbal responses will the child be asked to make most often in his environment?* Selection of words and phrases that will facilitate the child's interaction with his environment is essential. Words that enable him to express his needs—such as *play, eat, go, outside*—provide him with vehicles for self-initiated behavior and appropriate interaction with other people in his environment.

6. *What are the long-range goals for the individual student?* The long-range plans for a given child will be determined by teachers, parents, and concerned others. His ultimate station in life should be considered when selecting content for language training, focusing on words and phrases that will be useful given his probable life style and future environment.

To answer these questions, it becomes obvious that a teacher must assess not only a student's language abilities but also his language environment and what this language environment expects from the student.

The principle goals of student assessment should be to pinpoint that skill range within which language training should begin and to specify the direction in which instruction should proceed. There are numerous methods of accurately assessing student performance within a language program. The following sequence represents one possible method.

1. Select a developmental scale that is complete enough to yield a repertoire of language related behaviors of a severely handicapped student. Since there are several

developmental scales in this area—Developmental Pinpoints (Cohen, Gross & Haring, 1975), the TARC Assessment System (Sailor & Mix, 1975)—a teacher could save time and effort by employing a published material rather than developing his/her own.

2. Utilize such a scale to assess developmental, expressive, and receptive language abilities of each student.

3. Combine developmental language information with an assessment of the student's language environment for the purpose of generating a complete picture of student's current language needs.

Why Do I Want to Teach That Skill or Concept?

The second question a teacher must ask herself as part of any teaching-learning program is "Why do I want to teach that skill or concept?" In the opinion of the authors, there are really only two legitimate answers to this question: (1) the skill or concept that one is about to teach is a prerequisite skill or concept for another useful behavior which it is intended to teach later; or (2) the skill or concept being taught has immediate usefulness for the student by either increasing his potential for meaningful interactions with others or providing him with increased ability to function independently. If, as we set about outlining what we will teach to given youngsters, we cannot fit our rationale for teaching given skills or concepts into either of these, we must indeed ask ourselves, "Why do I want to teach that skill or concept?"

How Can I Teach It?

Having decided what should be taught, the teacher must now answer the question, "How can I teach it?" This is probably the most difficult question a teacher has to answer. Teachers look back forlornly to the methods' courses they took as part of their university programs for the answer—and, most frequently, they do not find it. The answer is not to be found solely in the selection of materials as is often implied via the suggestion that a teacher try yet another language program if he or she has not been successful with one or more already. Rather, we must learn to make use of empirical knowledge available to us regarding *how* children learn. Several teaching procedures which when mastered would provide a teacher with basic techniques and strategies for implementing of language programming have been delineated in Figure 1.

What Materials Will I Need?

Having settled on what you will teach and how you will go about the teaching function, it becomes necessary to ask oneself, "What materials will I need?" There are a good number of language development and/or training programs available for use with normal, culturally distinct and mildly handicapped populations. The Peabody Language Development Kits (Dunn, Horton & Smith, 1967) and the Distar Language Program (Englemann, 1969) are primary examples of such programs.

Fewer programs have been designed specifically for teaching language to severely handicapped populations —those youngsters who may enter an educational program with little or no functional language whatsoever. Among those which have recently become available are *A Language Program for the Nonlanguage Child* (Gray & Ryan, 1973), *Language Acquisition Program for the Severely Retarded* (Kent, 1974), and the *Non-Speech Language Initiation Program* (Carrier & Peak, 1975). The development of materials for use in teaching this population is currently of high priority, and a good deal is being produced. The American Association for the Education of the Severely and Profoundly Handicapped provides an information dissemination service to its members which is extremely invaluable and which teachers could readily use to stay abreast of the development of new materials in this area.

Given that materials for use with the severely handicapped are currently difficult to locate and obtain, it is extremely important that teachers of this population develop their ability to (1) use task analysis to delineate the responses their students should regularly be making, and then (2) determine what stimuli should occasion the occurrence of those responses. These stimuli, the items in the environment to which students should respond, must then become the materials for our teaching programs.

How Can I Know If I'm Succeeding?

When each of the aforementioned questions has been dealt with and a teaching program is under way, the need for feedback becomes obvious. Critical decisions need to be made regarding the effectiveness of the strategies and materials which have been employed. Data must be obtained for the purpose of determining whether or not one is making progress toward the accomplishment of given objectives. The critical question confronting teachers now becomes, "What should I record?" The answer to this question is related directly to the objectives set forth when originally asking the question, "What do I want to teach?" Before we can measure any behavior we must have defined it operationally, i.e., in observable and quantifiable terms. Having done this, one has several options.

1. If trials are held constant from one teaching session to the next, "number correct" is an adequate measure. It constitutes one of the easiest ways to determine whether or not a student is making progress in a teaching/learning program. This method of assessment is problematical though in that, if data is to be compared from day to day on a meaningful basis, the number of trials occurring when teaching a given behavior must be held constant from day to day. For example, if one is working on the teaching of an object name such as *table*, a teacher might ask a student to "point to the *table*," "touch the *table*," or "put the _____ on the *table*," but the number of trials afforded students would have to be the same in all teaching situations, i.e., 10 trials per session. If this is not done, differences appearing from day to day may well be a function of the number of opportunities (trials) afforded a youngster while teaching a given concept of action. Examples of teaching programs for severely handicapped students which have utilized this type of measurement can be found in the papers compiled by Brown and Sontag (1972) and Brown, Scheuerman, Cartwright, and York (1973).

2. A second option available to teachers is to record the percentage of correct responses made by students per session. This type of measurement is preferrable to using number of correct and incorrect responses for each session. When using percentage of correct responses as a dependent teaching variable, the length of the teaching sessions or number of trials offered on a given day are not intrinsically important. There is a potential hazard inherent in recording the percentage of correct responses per session though. If the number of trials is not held constant from one session to the next, a student may be making more errors per session while showing higher percentages of correct responses, i.e., with 10 problems, 90% correct indicates 9 correct and 1 wrong response; with 30 problems, 90% correct indicates 27 correct and *3* wrong responses—an actual increase in both correct and incorrect responses. Examples of the use of percent of correct responses as a measure of learning are provided by Barton (1970) and Garcia, Guess, and Byrnes (1973).

3. Rate of correct responding can be recorded for each teaching session (number of correct responses divided by the time taken to emit them). Rate measures, while being somewhat more difficult for teachers to work with initially, provide the most meaningful kind of data for analyzing student learning. All responses are appropriate or inappropriate, despite their accuracy, in relation to a measure of time. A student may, for example, be able to respond verbally to simple questions; but if he does not do so within time limits which make his behavior socially acceptable, it will not be perceived as adequate. Once verbal responses are learned, they must be regulated in terms of rate so as to be acceptable in appropriate social circumstances. Examples of this type of recording have been provided by Freschi (1974) and numerous others.

If I Am Not Succeeding, What Do I Do?
If I Succeed, What Do I Do Next?

One of the obvious benefits resulting from the collection of data while teaching is that the data collected tells us immediately whether or not we are making progress toward the achievement of our objectives. The appropriate interpretation of data is often difficult though. When working with severely handicapped youngsters, we sometimes lose our objectivity and tend toward evaluation of our teaching programs on the basis of our own involvement or effort. This is reflected in statements such as "Gee, the _____ language program works great with these kids!" or "That imitation/modeling procedure sure seems to be working well!" which are frequently made without reference to student data. Freschi (1974) has provided examples of data reflecting several problems which frequently occur in the teaching/learning situation along with interpretive ideas and suggestions for solving them. In general, if a student is not making reasonable progress toward the criterion established for a given objective, teachers should consider the alternatives shown in Figure 3 as possible courses of action.

SEGMENT FROM A
LANGUAGE TRAINING PROGRAM

In an effort to make the suggestions within this article concrete and of greater application in the classroom, the following example of one segment of a language training program is offered. This example is presented in the order of questions that were raised relative to the development of a classroom teaching model. Obviously, this set of language skills was selected, and a corresponding program was designed, for a particular group of students. The program's application to other severely handicapped students may or may not be appropriate. The segment represents one phase of receptive language training which deals specifically with the understanding of words that

Figure 3
AN INSTRUCTIONAL FLOW CHART FOR USE WITH SEVERELY HANDICAPPED STUDENTS
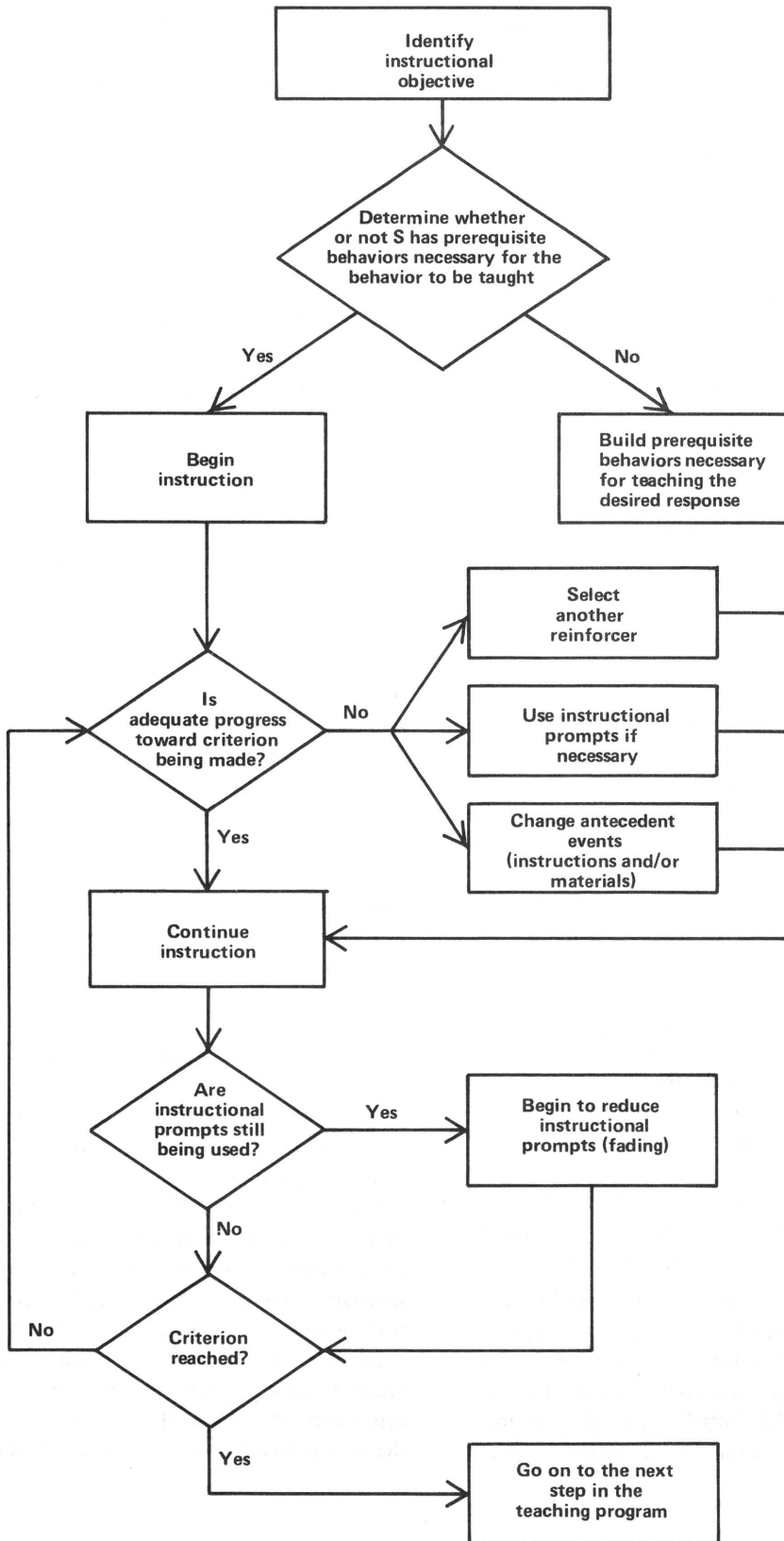
denote a time and place sequence. It was developed for a group of five severely handicapped students in a public school classroom based on the following assessment procedures.

1. Developmental language skills were assessed using Developmental Pinpoints (Cohen, Gross & Haring, 1975). Specific areas assessed included students' responses to verbal requests. It was found that the students could respond to some one-component verbal directions but not to those involving *first, next,* and *last*.

2. An assessment of the language environments of the students showed that most would be in self-contained special education classes integrated in a regular elementary school for at least 3 or 4 more years. Thus the students would need to respond to the "language of school instruction" which includes the functional use of language concepts involving *first, next, last*.

1. What Skills Should Be Taught?

The instructional program outlined here is an attempt to provide direct and systematic instruction in a receptive language skill: understanding a selected word sequence denoting time and position in space. The word sequence chosen for instruction is *first/next/last*. The major or terminal objective of this program is stated as follows:

Given a teacher direction or statement that includes the word sequence *first, next, last, S* will touch or label an object, person or pictured event that designates each position according to time (auditory cue) and/or position in space (visual cue).[2]

A task analysis approach such as that suggested by Batemen (1971) was used to delineate and sequence specific content objectives.

TASK ANALYSIS

Objective I: Teaching the word sequence *first, next, last* with time (auditory cue) and position in space (visual cue) presented concurrently. Given a set of objects, people, or pictured events and an auditory cue (verbal explanation of position) containing the word sequence first, next, and last, *S* will touch or label the *first, next,* and *last* positions when the position in space (visual cue) is given concurrent with the auditory cue.

Part 1: Given a set of 3 beads of different colors and a verbal explanation, *S* will respond correctly to *T* cue, "Touch the one that is *first (next, last).*"

Step 1: Given 1 bead on a string, *S* will touch *first* position after verbal explanation.

Step 2: Given 3 beads on a string and a verbal explanation, *S* will touch the one in the *first* position.

Step 3: Given 3 beads of different color on a string and a verbal explanation, *S* will touch the one in *next* position.

Step 4: ... *S* will touch *first* and *next*.

Step 5: ... *S* will touch *last*.

Step 6: ... *S* will touch *first, next* and/or *last*.

Part 2: Given 3 objects and a verbal explanation, *S* will label or touch the one in each position *first, next,* and/or *last* when auditory and visual cues are concurrent.

Step 1: *S* will respond to the cue, "Touch the one that is *first.*"

Step 2: *S* will touch the one that is *next*.

Step 3: *S* will touch the one that is *last*.

Step 4: *S* will touch the one that is *first, next,* and/or *last*.

Part 3: Given 3 people in a line one behind the other and a verbal explanation, *S* will touch or label the person in each position *first, next, last* when auditory and visual cues are concurrent.

Step 1: *S* will touch the person in *first* position.

Step 2: *S* will touch the person in *next* position.

Step 3: *S* will touch the person in *last* position.

Step 4: *S* will touch the person in *first, next,* and/or *last* position.

Part 4: Given 3 pictures each representing a daily event or activity and a verbal explanation, *S*

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2. The objective here is not necessarily performance of each specific task (although that measurement across cues, tasks, and settings will be used for evaluation) but rather the ability to act appropriately upon word sequence cues. For example, in the bead stringing task the objective is not that the child string beads, but that he show comprehension of the language cues.

will touch or label the event in each position *first, next,* and/or *last* when auditory cue is concurrent with visual cue.

Step 1:   *S* will touch the event that is *first*.

Step 2:   *S* will touch the event that is *next*.

Step 3:   *S* will touch the event that is *last*.

Step 4:   *S* will touch the event that is *first, next,* and/or *last*.

Part 5:   Given 3 beads, objects, people, or pictured events *without* verbal explanation, *S* will touch or label the bead, object, person, or event in each position *first, next,* or *last* upon *T* cue.

Step 1:   Part 1, step 6 repeated without verbal explanation.

Step 2:   Part 2, step 4 repeated without verbal explanation.

Step 3:   Part 3, step 4 repeated without verbal explanation.

Step 4:   Part 4, step 4 repeated without verbal explanation.

Objective II: Teaching *first, next,* and *last* when time (auditory cue) is not concurrent with spatial order (visual cue).

Given 3 objects, people, or pictured events presented in varied or ordered positions in space, *S* will respond correctly to teacher cue, "Touch the one that is *first (next* and/or *last)."*

Part 1:   Given 3 objects and verbal explanation, *S* will touch or label the object presented *first, next,* and/or *last* in explanation upon *T* cue.

Step 1:   *S* will touch object presented *first* in verbal explanation.

Step 2:   *S* will touch object presented *next* in verbal explanation.

Step 3:   *S* will touch object presented *last* in verbal explanation.

Step 4:   *S* will touch object presented *first, next,* or *last* in verbal explanation.

Part 2:   Given 3 people in a line and a verbal explanation, *S* will touch the person whose

name was presented *first, next,* and/or *last* in the explanation upon *T* cue.

Step 1:   *S* will touch person presented *first*.

Step 2:   *S* will touch person presented *next*.

Step 3:   *S* will touch person presented *last*.

Step 4:   *S* will touch person presented *first, next,* and/or *last*.

Part 3:   Given 3 pictured events or activities in varied order *S* will correctly touch the event that occurs *first, next,* and/or *last* upon *T* cue.

Step 1:   *S* will touch the event that occurs *first*.

Step 2:   *S* will touch the event that occurs *next*.

Step 3:   *S* will touch the event that occurs *last*.

Step 4:   *S* will touch the event that occurs *first, next,* and/or *last*.

2. Why Should These Skills Be Taught?

It is crucial that severely handicapped students be given as many methods as possible for ordering incoming verbal and nonverbal information. This specific word sequence was chosen because (1) it is frequently used in teacher directions, (2) it is useful in making directions clearer for students, (3) it can make instruction more efficient, and (4) it provides a framework for expanded instruction in time and/or position of objects in space. Severely handicapped students entering a regular public school building will need to be able to respond to many commands involving the terms *first, next, last.* For example, "Line up first." "You're next." "Who's next?" and "Raise your hand first." are frequently heard statements.

3. How Can Skills Best Be Taught?
What Materials Will Be Needed?

The methodology for teaching these or any skills will vary somewhat according to individual teacher training and student differences. Nevertheless, the strategies presented are typical of those necessary when working with persons presenting severe language deficiencies. Specific methods are given for teaching each step of the task analysis.

Objective I: Teaching *first, next, last* with time (auditory cue) and position in space (visual cue) presented concurrently.

Part I: Beads

Instructional Arrangement: Ss are seated across table from *T*

Materials: Beads of various colors and a string

Prerequisites: Color discrimination

Teaching Procedure:

Step 1: Teacher strings one bead as she says, "*First* is the (red) one. *S's name,* touch the one that is *first.*" If *S* responds correctly, he is reinforced and *T* removes bead, picks a different colored bead, strings it and says, "*First* is the (green) one." *T* continues with each *S* until criterion is reached.

Criterion: 5 correct responses out of 5 trials

Correction Procedures:
1. Present cue again.
2. Model, then present cue.
3. Model, prime, present cue until response is correct, then reinforce.

Step 2: Teacher strings three beads of different colors. *T* says, "*First* is the (red) one." (*T* strings 2 more beads but does not give verbal explanation.) "*S's name,* touch the one that is *first.*" Repeat for each *S* until criterion is met.

Criterion: Same as Step 1

Correction: Same as Step 1

Step 3: Teacher repeats stringing operation as in Step 2 saying, "*First* is the (red) one, *next* is the (green) one." (*T* strings last bead but does not give verbal explanation.) If *S* responds correctly, *T* removes beads and strings 3 beads of different colors repeating verbal explanation until criterion is met for each *S*. For incorrect responses, *T* begins correction procedure.

Criterion: Same as Step 1

Correction: Same as Step 1

Step 4: *T* strings beads as in Step 3 saying, "*First* is the (green) one, *next* is the (red) one." (*T* strings last bead but does not give verbal explanation.) "*S's name,* touch the one that is *first.*" *T* waits for *S* response. If correct, *T* says, "Touch the one that is *next.*" *S* is reinforced for correct responses. If response is incorrect after *first* cue, *T* repeats verbal explanation and presents cue again. If response is again incorrect, *T* begins correction procedure.

Criterion: 5/5 correct responses to both cues in one session

Correction: Same as Part 1

Step 5: Teacher strings beads as in Step 4 saying, "*First* is the (red) one, *next* is the (green) one, *last* is the (blue) one. *S's name,* touch the one that is *last.*" *S* is reinforced for correct response. If incorrect, *T* repeats first two components of verbal explanation and says, "Touch the one that is *last.*" If response is again incorrect, *T* begins correction procedure.

Criterion: Same as Step 1

Correction: Same as Step 1

Step 6: *T* strings beads as in Step 5 and gives verbal explanation, "*First* is the (red) one, *next* is the (blue) one, *last* is the (green) one. *S's name,* touch the one that is *first.*" *T* waits for response. If correct, *T* repeats verbal explanation and says, "*S's name,* touch the one that is *last.*" Cues are then varied.

Criterion: Same as Step 1

Correction: Same as Step 1 or move back to previous step for repeated trials

Steps 1 through 6 would now be repeated with the additional requirement that students actually place beads on a string in response to teacher verbal cues, i.e., "*First,* put the red one on the string. *Next,* put the green one on the string. Put the blue one on *last.*"

4. How Is Success Determined? What Alternatives Are Available If Success Is Not Achieved?

In this program success is determined by an ongoing evaluation of whether or not students achieve given criterion levels set for mastery of the steps necessary to reach each objective. Thus, when a student reaches the criterion set for one step, he progresses to the next step. However, if the student does not succeed in reaching criterion, the teacher institutes a correction procedure and continues teaching until criterion is met.

5. What Are the Next Steps If Success Is Achieved?

One major advantage of using a task analysis approach such as the one presented here is that it provides a method

of predetermining the sequence in which content objectives will be taught. As the student masters each objective, the teacher moves to instruction on the next objective in the task analysis. In the example given in this article, when the student masters Step 6 of Objective I, Part 1, the teacher prepares to teach Step 1, Objective I, Part 2 (teaching the same skills with varying cues) which is the next step in the task analysis.

Ultimately, a student who is taught this entire segment of a language program should acquire functional understanding of the words *first, next,* and *last* across varying cues, events, objects, and places. The teacher's next responsibility would be to see that this newly acquired skill is integrated into other curricular areas. Thus, the student should be using his understanding of *first, next,* and *last* in the development of math, self-help, and home-living skills to mention just a few. At the same time a reassessment of the student's language needs, considered in conjunction with available program information, will dictate new levels of language learning toward which one should strive.

CONCLUSION

Providing a meaningful educational program for severely handicapped students is an extremely complex process. Despite concerted efforts in this area, there are very few resources available to the classroom teachers who are responsible for educating these children at this time. This article presents an admittedly simplistic compilation of ideas and suggestions which it is hoped will be of some immediate usefulness to classroom teachers. Existing programs were not dealt with adequately, but it is hoped that teachers will avail themselves of the references provided for the purpose of pursuing more information regarding programs which seem appropriate to their use.

It seems obvious that we should be striving to establish a continuum of logical and functional language skills for the purpose of teaching them to severely handicapped students. It is imperative that our long- and short-term goals and objectives be specified and taught in a manner which does contribute to the maximum development of language skills over a period of time. As this is being done, we should also give consideration to the way in which given students will probably ultimately communicate. While the development of verbal language should be our goal for this population whenever feasible, we should not lose sight of the fact that gestural communication and the use of various types of communication boards can also facilitate the communicative abilities of this population significantly at times. Whatever the specific nature of the

language program being used, we must constantly be reminded to ask ourselves, "Are measurable gains in language performance being observed?" and "Are new language behaviors being acquired within reasonable periods of time?" These questions are in effect the parameters which we must use to determine the effectiveness of our teaching programs.

It is also important that we integrate the results of our language training into the overall curriculum for the youngsters we teach. A critical question which we will consistently have to ask ourselves is, "Is the student using what he learns in the structured classroom situation in other places and situations and with other people? The overall worth of what we do with these youngsters will be determined by whether or not their interaction with their environment is improved immediately and, more importantly, for the future.

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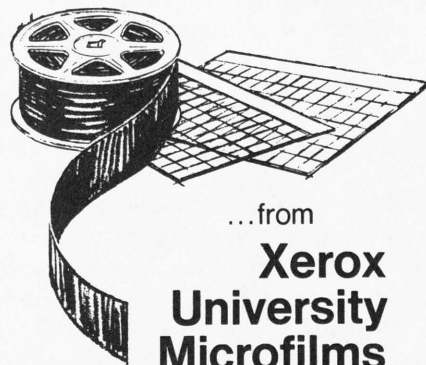
CLASSROOM FORUM

Edited by Alwyn H. Holloway, Center Coordinator
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Although in her first year, Miss W. is an energetic, resourceful, and caring teacher. After having attempted, unsuccessfully, several planned interventive techniques with one of her pupils diagnosed as having a learning disability, this teacher feels a parent conference is indicated for the purpose of gaining a more adequate understanding of the child and to enlist parent cooperation. From previous school records, the pupil's mother has been described as a very angry, hostile woman who blames the school system for her child's difficulties. What are some guidelines this first year teacher should utilize when holding such a parent conference?

Interviewing is an art, a skilled technique that can be improved and eventually perfected through continued practice. Practice must also be accompanied by knowledge about interviewing and through self-knowledge. Basic to being an effective communicator is the development of skill in being an effective listener. This involves listening not only to objective word content but to subjective content as well—for example, body language and the "hidden message."

Tricks of the Trade

1. Be prepared for your conference. Know exactly what you want to communicate and what you expect the parent to do in relation to information shared. Be sure your expectations are legitimate. If you are uneasy about the conference, seek consultation and try to discern exactly what makes you feel uneasy. Unfortunately, many parents have become conditioned to anticipate "bad news" when a school conference is scheduled. They frequently come anxious and perhaps frightened; some few come very angry and defensive.

The last thing a parent needs is to have to cope with the teacher's insecurity.

2. Begin the conference with the manifest purpose of the conference. Dispense with rambling pleasantries, as this is often done to relieve the teacher's anxiety more often than to put the parent at ease. For the parent already anxious about the unknown, it is more helpful to offer a straightforward statement about the purpose.

3. Since most parents can handle a straightforward, nonjudgmental presentation of the problem, be prepared to present the child's areas of strength as well as of weakness. It is important to share with parents what steps have been taken already. Ask the parents if they have experienced related problems at home with the child and what means have been attempted to manage problems.

4. Ask extremely anxious or angry parents about their previous experiences with school conferences. Like it or not, we all know that many parents have had some legitimately maddening experiences. Often, they are all too willing to tell you. The parents' response will give you clues about how best to proceed. The very fact that you ask communicates concern and the wish to make your conference different and more positive.

5. Avoid probing into personal family information. Recognize where your profession ends and the mental health profession begins. For those parents who pour out their life history in fifteen minutes, tactfully refocus on the topic at hand. Often, such parents leave the conference with the feeling that they said too much.

6. Avoid giving false reassurance, i.e., "I am sure things will work out with medication and your cooperation, etc." It is better to offer hope only when there are adequate grounds. Generally, it is more helpful to be realistic.

7. If recommendations are to be made, be sure they are appropriate and carefully presented. Wording is often crucial. In addition, assist the parents with referral information, available resources, telephone numbers, and contact persons, etc., to facilitate their following through with the recommendations.