EXPANDING ROLES OF LANGUAGE SPECIALISTS

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ABSTRACT

Both content and methodology in language intervention with children have been affected by trends in theories on normal language acquisition. As a consequence, the roles the language specialist must play are increasing. Four major roles are discussed with example case studies.

Waryas (1978) provides an overview of the current state of language intervention with language disordered children. In brief, the two broad issues are content and methodology. The content has been derived largely from research in normal language development and the standard instructional methodology has been the application of operant principles of behavior modification. The general trend in theories on language acquisition from language as structure to an emphasis on its semantic and pragmatic content has resulted in increased importance of the interaction between language and social context. Mahoney (1975) has said:

> "In language development, the critical dimension . . . is precisely the social function of the human communication system, efficient communication. Thus, the set goal of language development is never a specific linguistic structure. Rather, linguistic structure is a means for achieving the set goal of efficient communication within an extended social environment" (p. 141).

Children first learn to communicate and then to use language to improve their communication efficiency in social interaction. That view is having considerable impact on both content and methodological perspectives in language intervention. It has prompted a multi-dimensional view of language incorporating syntax, semantics and pragmatics (Bloom and Lahey, 1978; McLean and Snyder-McLean, 1978; Waryas and Stremel-Campbell, 1978). As a result, the roles the language specialist must play are increasing. The purpose of this paper is to specify four major roles. Relevant literature is reviewed and brief case studies are provided for illustration.

Teacher Role

Hart and Rogers-Warren (1978) summarize major characteristics of the traditional teaching environment. It involves two persons, the child and clinician, and is arranged carefully to reduce distractions. The clinician provides objects, pictures, questions, etc. to elicit language responses from the child. Response frequency is high but there is little opportunity for the child to initiate an interaction with questions, requests and general information. The teaching technology is detailed. Steps in the teaching sequence are specified according to stimulus, response, contingency and criterion for advancement. Initial emphasis is on teaching form or structure as the language response. Followup transfer or generalization of language responses as functional behavior in the natural environment is carefully programmed.

The major criticism of the traditional teaching role is the initial focus on structure of language rather than communication function (Mahoney, 1975; Hart and Rogers-Warren, 1978; McLean and Snyder-McLean, 1978). The importance of learning language as a communication act in social interaction seems to be overlooked. In effect, the child is viewed as a language learning system independent of the social-contextual variables currently seen as crucial to language development (Mahoney, 1975). The

traditional teaching role seems to violate the basic principle that communication is the basis for language rather than the converse. Children are conditioned to emit correct structural responses to obtain conventional reinforcers (tokens, praise such as "good talking") rather than learning how language can work for them to control a variety of more natural consequences involving attention and action from others. The problem of generalization in traditional language programming (Harris, 1975) has been discussed by Mahoney (1975). Mahoney points out that language curriculums are often developed without consideration of childrens' interests or information structure. The result is a lengthy period between the time children learn a linguistic structure to criterion in an intervention setting and the time children use that structure in their spontaneous speech. Teaching a particular structure without regard to the current communicative competence of a child is, according to Mahoney, a situation in which an appropriate strategy becomes ineffective because it is used in an inappropriate context. Traditional language teaching is then approached from the adult clinician's perspective of language rather than the child's perspective (McLean and Snyder-McLean, 1978).

Despite the criticisms, the traditional teaching role should not be considered an outmoded approach. It may be an appropriate choice for some children such as those who demonstrate adequate talking for a variety of communication purposes but who exhibit disordered syntax (Hubbell, 1977). Furthermore, a combination of the traditional role with others to be described here appears to be effective in emphasizing various aspects contributing to a child's language delay (McDonald, 1975; Hubbell, 1977; Hart and Rogers-Warren, 1978). Finally, the importance of grammatical form in language intervention has been stressed by Waryas and Stremel-Campbell (1978):

> ". . . the ordering of elements in accord with structural principles is an essential component in order for semantic and pragmatic content of an utterance to be expressed by a speaker and interpreted by a listener" (p. 159).

They also state that language deficient children must speak the language as if they "know the rules" and a central problem in language teaching is choosing procedures that bring their language behavior into accord with the rules. Teaching procedures are required that facilitate the rule-induction process so that these children will generalize from trained to untrained exemplars of structural rules. The use of miniature linguistic systems is an innovative approach (Ruder, 1978; Wetherby and Striefel, 1978). They are defined as:

> ". . . a stimulus-response matrix in which responses controlled by one class of stimuli are taught to occur in sequential order with responses controlled by another class of stimuli with the end result being that the subject responds correctly to untrained combinations of stimuli from these two classes" (Wetherby and Striefel, 1978, p. 319).

Grammatical form training using a miniature linguistic systems approach is illustrated in the following case study provided by Holdgrafer (1980).

Case Study 1. Two six year old Down Syndrome children were taught to produce the Noun-Verb-Noun structure. This is the underlying structure of English and it provides a base for further structural expansion. A 20 cell matrix (see Figure 1) was constructed with five subject nouns (boy, girl, dog, cat, horse) and four verb-noun sequences (wear glasses, sit floor, eat food, run grass). A stimulus picture represented each cell in the matrix (e.g., girl sit floor). The children were trained, using contingent reinforcement and imitative prompts, to express the subject noun **boy** with each of the four verb-noun sequences (all cells in row 1) and **wear glasses** with each of the five subject nouns (all cells in column 1). Both children produced in Noun-Verb-Noun structure correctly for the remaining cells of the matrix presented in random order on a generalization test. That is, the children behaved as if they "knew the rule" because they produced untrained

exemplars of the structure thus expanding their structural knowledge beyond their typical Verb-Noun responses on pre-training measures.

VERB-NOUNS

		wear glasses	sit floor	eat food	run grass
NOUNS	boy	boy wear glasses	boy sit floor	boy eat food	boy run grass
	girl	girl wear glasses	girl sit floor	girl eat food	girl run grass
	dog	dog wear glasses	dog sit floor	dog eat food	dog run grass
	cat	cat wear glasses	cat sit floor	cat eat food	cat run grass
	horse	horse wear glasses	horse sit floor	horse eat food	horse run grass

Figure 1. 20 Cell Noun-Verb-Noun Matrix

Use of miniature linguistic systems or matrices increases the efficiency of current teaching technology. They provide a basis for determining which exemplars to train and in what order to train them. Matrices provide for systematic grammatical contrasting (Ruder, 1978) and facilitate the rule acquisition process. Wetherby and Striefel (1978) provide an extensive discussion on their application to teaching language.

The remaining roles to be discussed are departures from the traditional teaching role. They emphasize the importance of social context and communication function in language intervention.

Engineer Role

Mahoney (1975) points out that,

> ". . . a communication event is defined as any behavior emitted by one organism that is effective in eliciting a response from another organism" (p. 130).

The application of verbal prompts such as questions and requests to talk used in traditional teaching has a constraining effect on children's spontaneous use of language to communicate (Hubbell, 1977). Children may develop a verbal prompt dependence wherein they withhold language expression until a prompt is provided for them to respond (Sosne, Handleman, and Harris, 1979). In contrast, the intent of any communication act is to produce responses in others. The communication function of an utterance is based upon some need that takes form inside the speaker (McLean and Snyder-McLean, 1978). Creating a need to use spontaneous speech for communication purposes requires engineering the physical environment to provide cues for talking thus minimizing the need for specific verbal cues from adults (Sosne et al., 1979).

One approach is to deny children free access to things they want. The milieu model of language intervention (Hart and Rogers-Warren, 1978) is based on that approach. The program is carried out in an environment where the child spends a substantial portion of time (e.g., pre-school, home). An adult mediates those things the child wants such as attention, affection, assistance, safety, comfort, food, toys, activities, trips, and so forth. These events are made available on request. Hart and Rogers-Warren suggest the milieu model as an alternative to structured teaching or as a supplement for immediate transfer of functional language skills.

Specific contexts can also be created to increase the probability that children will use different classes of communication functions (McLean and Snyder-McLean, 1978; Sosne et al., 1979). These authors provide suggestions for such contexts. For example, upon finding an unopened can of pop the child can learn to ask for an opener. Desirable objects or edibles can be held in a childproof container so the child can learn to instruct an adult to open the container. These two examples correspond to Halliday's (1975) **instrumental** and **regulatory** functions, respectively.

The learning of language structures is incorporated within the context of the social communication in the two approaches described above. There is a development from a pre-verbal to a linguistic system so that as the child's skill level increases, progressively more complex language is demanded. Linguistic structure is reinforced by the natural social consequence of efficient communication. The engineering role requires attention to the child's perspective of language and communication in that contexts are created based on perceived "needs" of children. The following illustration is of a child seen by the author.

Case Study 2. When five year old C.M. was seen initially he attended to tasks briefly, seldom maintained eye contact and seemed to be testing limits by performing inappropriate behaviors and laughing when reprimanded. He frequently emitted loud screechings that did not appear to have any communicative intent. C.M. had previous manual sign training but did not use any signs. He made no attempt to imitate vocal or gestural models but did play appropriately with some objects. C.M. was very aware of his surroundings. He grabbed at materials and frequently left his chair to look around the room.

The primary goal was to encourage C.M. to use verbalizations as a means of communication. Manual signs were required with verbal behaviors to increase the intelligibility of his communication acts, especially for his mother who was deaf. An initial repertoire of consonant and vowel phonemes were shaped using imitation and edible reinforcers. Contexts were then created for C.M. to use consonant-vowel combinations for communication purposes. Contexts were introduced into familiar routines and into activities C.M. appeared to enjoy. Initially, imitative prompts were given to provide C.M. with the appropriate communication behavior. Prompts were faded as quickly as possible by delaying their presentation for longer periods of time to encourage spontaneous usage of the signs and verbalizations. The following are some of the contexts used. They represent a typical session.

The door to the treatment area was locked and C.M.'s chair placed outside. Upon reaching the locked door, he learned to request the clinician to unlock the door by saying /op*a*/. C.M. was instructed to sit down at his usual place but his chair was missing. He used the verbalization /t *a*/ to ask for his chair. Juice and small bits of edibles such as sunflower seeds were available upon request after the completion of other activities. C.M. used /d*a*/ and /i/ to make those requests. Bites of food were sometimes put into a jar with a very tight lid. He used /op*a*/ to request the clinician to open the jar. C.M. used / p/ to request the clinician to activate a spring-loaded jumping toy, to reach an innertube trampoline located out of reach and to lift and bounce him on the trampoline. He used /*a*n/ to request a ride on a scooter board and /p / to instruct the clinician to push him. The syllable /*a*n/ was also used to request the clinician to supply missing rings for a ring stacking activity. C.M. used /*a*n/ to request a ride in a see-saw and for assistance in placing forms in a form box when only the wrong hole was made available to him. A favorite activity of C.M.'s was undressing and dressing a boy doll so he was given only the clothes and encouraged to ask for /b /. Additional verbalizations included /no/ to prevent the clinician from taking a preferred toy from him, /b*a*/ to obtain a ball in a reciprocal game of catch, /b*a*b*a*/ to request bubbles and /m*a*/ to request more of any preferred activity. The social verbalizations /hi/ and /bye/ were encouraged each day. Suggestions for similar activities were provided to C.M.'s pre-school classroom teacher.

C.M. showed gradual gains over about nine months of language intervention. He maintained frequent eye contact during communication exchanges and consistently attempted a combination of signs and verbalizations across a range of communication contexts. Some confusion as to appropriate sign and verbalization occurred and prompting was required. His classroom teacher reported an increase in compliance, better attention to tasks, attempts to imitate new words and intelligible use of word approximations worked on in therapy sessions and in classroom contexts.

The use of language forms by C.M.; labels for objects, actions, locations, always resulted in eliciting a response from the adult clinician directly related to perceived communication intent.

Facilitator Role

Children are active explorers of their environment rather than being passively shaped by it (McLean and Snyder-McLean, 1978). They construct meanings about things, people, events and processes that are eventually mapped or represented linguistically (Miller, 1978a). Hubbell (1977) stressed the importance of facilitating this process in language intervention. He defines facilitation as interacting with the child by following the child's lead in play and talking, using verbal techniques such as labeling, expansion and parallel talking. Hubbell hypothesizes that there are two basic elements in facilitation. The adult becomes less constraining as compared to more direct instructional methods. Also, by following the child's lead, the adult monitors the child's responses more carefully and is able to provide input which is more finely tuned to the child's interests and behavior at the moment. This is a very child oriented perspective to language intervention. The adult presents linguistic forms that are directly relevant to the child's interests and information structure within the most natural of contexts, the child's own play behavior. Structural models presented are adjusted to the child's level of communication competence. This perspective is the basis for Miller's (1978a) Reactive Therapy which was developed primarily for pre-school-aged children who are still actively representing their world through symbolic play. By interacting with children in play the clinician will:

> ". . . establish with the children trusting and meaningful relationships within which the children desire to communicate. Interacting with the children in a rich and varied environment that is meaningful to each one provides a natural milieu within which the children can and want to communicate their ideas" (Miller, 1978a, p. 428).

Joint action and joint attention routines develop in this play interaction and language is eventually acquired as a communication behavior to regulate these routines (Bruner, 1975). Miller (1978b) provides an illustration of the application of her approach which is summarized below.

Case Study 3. Walt was just over three years of age. His most characteristic behaviors included circling through the room, spinning, occasionally shrieking, masturbating, and looking overhead at lights in the ceiling. He actively avoided physical touching and would maintain a relatively constant distance from anyone who attempted to approach him, However, he spent a good portion of his time, if left alone, examining one-inch cubes and constructing elaborate towers displaying precise color patterns. Whenever anyone attempted to join him and share his attention/activity, he moved away and began his circling, masturbating, and gazing at lights. In our initial contacts I could detect no evidence of desire to share attention/activity, must less any indications that Walt understood the turn-taking nature of communication. Therefore, my initial objective with Walt was to try to establish joint attention/activity within a turn-taking, conversational mode.

I discovered quickly that any joint attention would have to be centered on Walt's activity and attention, not mine. That is, in order to even attempt to engage in nonverbal conversational turn-taking, I had to focus my attention on whatever it was Walt was

attending to. And that was often extremely difficult to ascertain. I would guess what perceptual attributes of a process or object Walt seemed to be attending to, and I would comment about those features. As his attention was held for very long periods by things and processes that were not as "interesting" to me, I had to develop a new repertoire of comments I could make. For example, Walt discovered pipes: water pipes, steam pipes, insulated pipes, hot pipes, cold pipes, dirty pipes, crooked pipes, noisy pipes, hidden pipes, meter pipes, sink pipes, inside pipes, outside pipes, sprinkler pipes, underground pipes, drinking fountain pipes, green pipes, yellow pipes, heating pipes, through-the-wall pipes, into-the-floor pipes, overhead pipes, wall pipes, elbow joints for pipes, faucets for pipes, shut-off valves for pipes, locked pipes, sealed pipes, and so on. His attention was riveted to pipes for several months, and our therapy sessions consisted of finding and exploring pipes. In our wanderings through peoples' backyards in search of meter pipes, I often felt rather furtive, but fortunately most people understand that a little boy's passions can be far-ranging and can include meter pipes in other peoples' yards. The important aspect was that we were actively sharing attention and activity, and we were communicating about what we shared.

At the same time as I focused my attention on the perceptual features that engaged Walt's attention, I also included in our conversations comments about what captured my interest in the belief that Walt would wish to extend our joint attention to include my attentions as well. I also began to reduce the number of times I verbally took Walt's turn as he explored his pipes, thus allowing him time to verbalize if he chose. And he so chose. He began to use one-word utterances at first (at age three and one-half), followed soon by the emergence of two and three word utterances which had the appearance of following the normal developmental patterns for two and three word speech reported by Brown (1973).

Case Manager Role

The traditional approach to language intervention has the role of the clinician as the dispenser of therapy (Muma, 1978). From an ecological perspective language learning takes place within the totality of the child's environment where various social agents play an essential role in the process (Mahoney, 1975; McDonald, 1975). Language intervention should also be approached from this perspective (Waryas, 1978). In effect, generalization training should begin at the outset of intervention by involving social agents in the child's natural environment such as parents, teachers, and peers as an integral part of the assessment and treatment process (McDonald, 1975). The clinician then becomes a case manager where "case" includes both the child and significant others who interact with that child. McDonald's (1975) Environmental Language Intervention approach involves assessment at home by parents and in the clinic by the speech clinician. Prescriptive training packages are developed with the parents that incorporate elements of direct teaching, environmental design and play. Parents are taught to develop training activities that are representative of the child's interests and needs at home. The following excerpt from McDonald (1975) illustrates the approach:

> "A single session involved training the sentence rules first in imitative production, then, immediately in conversational use. In the third stage of each session, structured play, the child was trained to use in play those rules and utterance lengths produced in imitation and conversation earlier in the session, thus attempting to generalize the new language behaviors immediately to spontaneous and novel use" (p. 25).

Basic to the generalization procedures are child-adult rule pairs which are posted in salient places in the child's environment as intervention reminders. The child rule states the behavioral objective for the child and the adult rule states the ways in which adults and peers are to interact with the child in order to effect the behavioral objective.

Concluding Remarks

Four roles of the language specialist were discussed that reflect the changing nature of content and methodology in language intervention. Add to them the roles of integrator and synthesizer (Waryas, 1978):

> ". . . not only of information regarding each individual client and how he functions in communicating with his environment, but also of information regarding how input from a variety of disciplines can interface to serve his needs." (p. 79).

All intervention roles must be considered as potential options either singularly or in combination depending on the nature of the child's problems and circumstances. The traditional teaching role is not outmoded but it is no longer necessarily the primary one. The language specialist may choose to emphasize a particular role as was illustrated in the case studies. Very commonly, a combination is necessary to provide a comprehensive treatment plan such as that presented by McDonald (1975). The author recently worked with a young, language delayed child who was being seen concurrently in a pre-school language group. The group experience provided her the opportunity to learn a variety of language forms in communication related activities. The focus of individual sessions was on showing the mother facilitation techniques to be used in play with her child at home. Here a specific role was chosen within the framework of a more comprehensive treatment approach.

In the past, language specialists have sometimes relied almost exclusively on one approach based on some narrow perspective of language (McLean and Snyder-McLean, 1978). Siegel and Brown (1976), endorsed by Waryas (1978), point out that language specialists must have a good grasp of language in its various aspects and a willingness to be inventive in developing new approaches.

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