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ABSTRACT

In this monograph, the language and pedagogical concepts embodied in the Tucson Early Education Model are used to develop a systematized method of natural language learning. It is hypothesized that young children in school continually resystematize their language, and that conscious and systematic modeling by the teacher should accelerate this natural language learning. Characteristics of this natural language learning method are: (1) conscious modeling, (2) corrective feedback by the adult, (3) elaboration in modeling, (4) expansion in modeling, (5) extension of knowledge, (6) provision for the child to practice talking, (7) consistent response by an adult in a program of discriminating reinforcement, (8) structuring of the environment so that there is a structural demand for specific modes of thought and particular language forms related to such thought, and (9) verbal expression by an adult of a variety and a range of thought processes. Such an approach demands that the teacher, in order to be a conscious modeler, must think about thinking, think about talking, talk about thinking, and talk about talking. The eventual goal of language modeling is the mutual stimulation of the child's own thinking and talking. The monograph includes charts focusing on the language-intellectual relationship in classroom interaction, a tentative hierarchy of mental activity for hueristic purposes, and a chapter dealing with more sophisticated aspects of the nature of language in the context of natural language learning. (CS)

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FOREWORD

Arline B. Hobson, in her monograph, "The Natural Method of Language Learning: Systematized," skillfully utilizes the language and pedagogical concepts embodied in the Tucson Early Education Model. She has outlined the teacher's professional role in the child's language and thought development. Mrs. Hobson's monograph comes from the research of educators and linguists. It also draws upon interactions and contributions of many staff members of the Arizona Center for Early Childhood Education.

The monograph is an outgrowth of Mrs. Hobson's work as a teacher and of the materials she used while training other teachers. It will be of tremendous value to educators who wish to understand and improve their own professional response to children. The monograph can be used repeatedly by individual teachers as a guide to self-improvement in their responses to young children's language, and it can also serve as a basis for professional in-service programs. The most exciting implication of this monograph is the great potential the concepts and methodology have for teacher education. Mrs. Hobson's work is presented as a rationale to support the idea that a teacher can stimulate natural language learning, consciously and systematically.

Joseph M. Fillerup
Director
Tucson Early Education Model

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The author is indebted to Dr. Marie Hughes, Director of the Early Childhood Center at the time this monograph was initiated, as the inspirer of the monograph and for her work during its early stages of development. The author wishes to express gratitude to Dr. Hughes for her intellectual stimulation, sensitizing influence, and positive teaching.

The author also wishes to pay tribute to the following: Miss Iris Mulvaney (Language Arts Consultant, Tucson Schools) for supporting the humanitarian view of language and for her careful editing of the monograph; Mrs. Jewel Taylor (representing Tucson School District No. 1) for her intellectual supportiveness and her conscientious proofreading; Miss Frederica Wilder (Assistant Superintendent of Elementary Education) for her administrative support; Dr. Joseph M. Fillerup (Director of the Tucson Early Education Model), and to Dr. Carol Rubow (Coordinator of Training) for their continued encouragement that this monograph be completed and published.

INTRODUCTION

As classroom teachers you have undoubtedly been deluged by an abundance of notions about the importance of language and how it should be stimulated or directed in the young child. As you read this monograph, weighing the merits of the systematized method of natural language learning, it is important to recognize that successful implementation of this method is dependent upon holding a point of view about language. This point of view about language is as important for the teacher as is her mastery of techniques. It grows out of a view of society, of man, of the child, and of the child's "becoming" within a complex society. The teacher operates according to a philosophically based concept of professionalism in responding to the child. The child is perceived as an equal human being who needs an adult to help him to understand the environment so that he can either accommodate to or alter the environment.

Language is conceived as the supremely and uniquely human invention whereby meaning can be brought to, extracted from, and, at a distant time and in a distant place, communicated about with others. There is a keen awareness of the power of words, a full appreciation that language reflects how one thinks and that one's thinking is influenced by language. This is true both on a personal level and on a cultural level with specific language characteristics reflecting the philosophical views of the culture. For example, one language may use the passive voice more than does another language where the people are more oriented to believing themselves in control of their destiny.

Language is so powerful, so self-stimulating, that it may even become auto-intoxicating. The trite and almost meaningless verbalizm and "pedagese" of the so-called educator which operate all too often without relevant reference, testify to this. Meaningful language is that which adequately carries ideas and moves back and forth between the concrete and the abstract. However abstract the language may be, it serves to mediate some experience, either physical or ideational. Language that

really carries meaning can usually be redefined through reference to the concrete or by reference to specific examples.

In contributing to the language development of the child the professional role of the teacher is to be available as an adult modeler of an increasingly more complex but more precise, more elaborated but more specific code for the child. The adult is a critical agent in the child's development and of primary importance to the child for his acquisition of language, helping him to make sense out of his environment. Grammatical competence is acquired by the child long before he knows anything about grammar. Without an adult or some more mature person with whom to interact, the child is intellectually and linguistically deprived, whatever his socioeconomic status. The adult relating professionally to the child has a decided responsibility with respect to the child's language development. This is a responsibility to organize and to re-organize the environment so that the child has something to talk about and has need to extend his experiences. Faust and Faust (p. 105) state, "With limited experience with words, words stay fixed in their object longer, obviously delaying the development of symbolization and abstractness." Environment puts demands on the child and if the environment is truly demanding, words cannot stay fixed in objects but must reach out to other places and to other things and into other times.

A wide and diverse range of syntactical patterns facilitates "lifting" of intellectual skills, or growth and maturing of the processes whereby one thinks. There is a professional responsibility, therefore, for the adult to be conscious of the language tools that a child needs to sharpen his intellectual skills. The skill of remembering for example, is aided if the child has control of tenses, control of adverbs, control of adverbial clauses, and control of adverbial phrases. This control comes about only if the child has had an opportunity to hear the patterns modeled, and to hear them modeled frequently in a number of different situations involving remembering. His awareness of time that has passed will become better organized sequentially, cyclically, and in terms of precise timing as he remembers with an adult or with a more competent coder of language such things as:

Blew:	The wind just blew the paper away. The wind blew and blew. The wind blew very hard just now. today. yesterday. last fall. last year.
Was blowing:	The wind was blowing very hard every day. The wind was blowing all day. The wind was blowing before we left.
Has blown:	etc.
Has been blowing:	etc.

Such recall and such organization of time that has passed is acquired in conjunction with the acquisition of linguistic patterns. They serve to organize the past and specify the point of time or the period of time in the past. The inter-relationship of language patterns and of intellectual controls are mutually facilitating. As Gleason (p. 203) says, "The child takes into his speech habits those patterns which he finds to inter-relate and confirm one another. This confirmation is sought by the child as he perseveres, and he does work hard at language learning for several years."

The point of view that prompts a teacher to be professionally responsive to the child must also compel her to engage in evaluating her own language. She engages in moment-by-moment monitoring of the verbal interaction. Later, she engages in analyses of the child's language efforts, however fumbling and inadequate and perhaps socially inappropriate, in order to read his intent and to comprehend his efforts to find a system in his intellectual and linguistic world. In such later analyses she examines also her own verbal behavior to ascertain whether it was the most appropriate.

It may be a truism to say that language development facilitates intellectual growth and that intellectual growth stimulates a child's control of language. Such mutual stimulation can be conceptualized as a spiralling hierarchy. We are so sure of this that we make inferences and judgments about another's intellectual process from the language he uses. Educators have used language as an index in understanding the intellectual processes of students. Yet, we cannot describe in any detail the inner process of the mind. Nor can we explain the precise role of language in the thinking process. Nevertheless, we perceive that a large majority of concepts increase and vary. The verbal interaction with another is a vehicle through which the environment takes on meaning, inviting further thought and demanding more language. The teacher, linguistically sophisticated and professionally disciplined, sharpens the focus for learning. She is able to systematize and thus accelerate the language and thought development of the child for whom she mediates and for whom she provides an adequate coding.

CHAPTER I

THE NATURAL METHOD OF LANGUAGE LEARNING: SYSTEMATIZED

Language Approach Advocated

Having reviewed considerable data pertaining to the child's language growth and intellectual development, the author hypothesizes that young children in school continue to resystematize their language (whether it is in English or in other languages), and that conscious and systematic modeling by the teacher should accelerate this natural language learning and should stimulate growth toward a code that is elaborated, precise, and abstract. Children who lack access to someone at home for personal and conversational interaction, are in particular need of systematic modeling within the classroom. The child who does not have such an adult resource for interaction is at a disadvantage that often causes him to be limited to a restricted language code. Such a restriction inhibits language development limiting the child intellectually to the immediate, spatially; to the present, temporally; and to the concrete. Words are therefore trapped in things of the moment. Though the restricted code characterizes many children of poverty it is by no means limited to poverty nor is it causally created by poverty. It is, rather, causally related to the child's need for more well-formed data input, for more evidence of language system that only a more mature modeler can provide by talking with the child helping him to produce well-formed formulas. Only with such input from an adult modeler can the child resystematize the language for himself.

This monograph is presented as a rationale to support the idea that a teacher can stimulate natural language learning, consciously and systematically. The threads of thought that will reappear many times as you read are summarized in advance as follows:

1. Language and thought mutually facilitate a spiralling growth process.
2. The situations in which the child is placed or finds himself demand language; the nature of each situation conditions the nature of the language demands. There may be need, for example, for new labels for new relations as they are perceived. Newly discovered attributes of objects may be comprehended within the situations, thus new language is required.

3. The child's progression from the infantile sensory motor response toward logical and abstract operations is a continuous process. Increasing assimilation of and accommodation to the environment makes this growth process possible. To short-circuit any level of this growth process may be to impair later language and intellectual development.
4. The natural manner of language teaching intuitively used by many mothers, particularly the better educated, has more method than is generally realized.
5. Characteristics of the natural method systematized and accelerated by the teacher are:
   a. Conscious modeling.
   b. Corrective feedback by the adult.
   c. Elaboration in modeling.
   d. Expansion in modeling.
   e. Extension of knowledge by an adult.
   f. Provision for the child to practice talking.
   g. Consistent response by an adult in a program of discriminating reinforcement.
   h. Structuring of the environment so that there is a structural demand for specific modes of thought and particular language forms related to such thought.
   i. The verbal expression by an adult of a variety and a range of thought processes.
6. The natural method as redefined by the author for adaptation to the classroom requires a systematization and a consciousness of the classroom environment, with controlled lesson designs by the teacher.
7. Linguistic sophistication of the teacher and her knowledge of cognitive development are essential for the maximum effectiveness of all instruction.
8. Always, oral language is primary, occurring before and being basic to reading and writing.

The Natural Method Defined

Systematizing the natural does not mean doing what comes naturally. Rather it is a self-conscious professional role and may at first, or until mastered by the professional adult, seem to be unnatural. "Natural" refers to two things:

a. The developmental pattern of the child's emerging language which scientific observation is revealing in more and more detail, and across many languages as indicated by Slobin when he says that children learn the same way all around the world.
b. The situational demand with a range and diversity of language that is intrinsic to the situation, and to the materials.

Therefore, a teacher of the natural method must be linguistically sophisticated about the language enmeshed in the intellectual and societal

skills being taught. She anticipates the language potential of a situation, consciously modeling the appropriate language in her interaction with the child. She carefully monitors herself at the same time, but also frequently analyzes interaction retroactively to consider if any alternative language behavior would have better stimulated learning and would have exposed the child to a more adequate code.

Categories of "Natural" Modeling

The following detailed discussion of the ways to model language within the pattern of the natural method of language teaching presents some categories which are identified for descriptive reasons solely. Actually, they are often all in effect within a single language response of an adult to a child. It is hoped, that by analyzing them separately and descriptively, the teacher may be helped to perceive the intellectual significance of a language response to the child. This is not to suggest that the teacher should move sequentially from one category to another or that she should model one category one day and another category another day. A single response of adult to child could reflect all categories simultaneously.

Category 1: Corrective Feedback

Based on the knowledge that the child's language learning occurs largely because of the nature of the adult's response to the child's initiative, teachers can consciously and systematically provide such feedback. The feedback is corrective at a number of levels but must be exercised with sufficient sensitivity not to become correction. In fact, correction inhibits a child's tentative effort to resystematize the prevailing code.

A. Corrective Feedback May Be Used To Provide Omissions.

The young child omits functors in the telegraphic speech that characterizes his initial efforts to resystematize the language. He begins by using high content words without the structural elements that relate these contentatives. The functors such as the inflections, auxiliary verbs, prepositions, articles, and conjunctions do not carry much lexical meaning and do not have obvious environmental referents. They are usually unstressed and not too audible. For example, it is not easy to point to anything to explain to the child the meaning of an "-ed" ending or the meaning of "of", or the meaning of "with", or the meaning of "which". An adult can explain many nouns by pointing and many verbs by demonstrating. This "car" can be identified by pointing to it and "pushing" can be explained by an adult pushing a car. But, if the child says "push car", the two high content words in the whole phrase do not adequately carry meaning because of the absence of functors. "Push car", could mean a lot of things like:

I am going to push my toy car.
My daddy pushed the neighbor's car.
Do we need somebody to push our car?
Push my toy car to me.

I'll push my car to you.

Only the adult within the situation can know what language is necessary to code the child's communications adequately, and so the adult may respond, "He is going to push our car." This simple response provides the child with a subject of a verb, with a common and idiomatic future tense form of the verb, "—going to push", and with a possessive pronoun "our".

"Push car" was accepted by the adult and used for feedback to provide the structural elements with which the child could resystematize the language. Of course, it also provided the structural elements which made sense out of the whole phrase "push car". It provided a system with which the child could communicate sense to another who was not even involved in the situation as was the modeling adult.

B. Corrective Feedback Is Used To Provide Labels

The child who has confidence and trust in the adult learns to use him to discover the system of the language world.

A three year old child went with his family on an expedition in New Mexico to explore some unmarked and relatively unknown Anasazi ruins, the remnants of a pre-historic people of the area. The mother was deep in conversation with a friend who had accompanied the family and was exercising only minimal oversight with respect to her three-year old son. He toddled up holding a broken piece of red pottery that had geometric black line and zigzag patterns on it, and said, "Look mommy!"

She glanced at it, smiled indulgently, patted him on the head, and said: "Bless your heart," whereupon she continued her conversation.

Satisfied, with the response from his mother, the child wandered off again searching further. Again he came to her, this time with a piece of white and black pottery and held it out saying again: "Look mommy".

Again she repeated the previous pattern, smiling indulgently, glancing briefly at the potsherd, patting him on the head, saying: "Bless your heart."

A third time, the child ran off over the mound, looking for treasures of the Anasazi and returned this time with a piece of thumbnail pottery, gray with the mark of the thumbnail impressions of the pre-historic people on it. He shouted, "Look mommy, look! Here's a bless your heart."

This incident shows how dependent the young child is upon an adult and how much confidence he has in the adult as his resource for discovery of appropriate labels. It also demonstrates how an indifferent adult can fail to meet the language need of the child.

C. Corrective Feedback Is Used To Help the Child Discover the Proper Word Order

Word order which is so basic to English syntax is acquired very

early by the child as he imitates the adult modeler. He learns very, very early the order of subject + verb + object, but the ordering of other words does not follow the same regularity. For example, ordering the adverbs may not be so easily acquired by the young child.

A first grader said to his teacher, "Good-bye teacher, I come tomorrow back."

The teacher responded, "Good-bye Mary. I'll be glad to see you when you come back tomorrow."

A third grader attempting to write a story asked the teacher: "How leather you spell?"

In this case the teacher was not able to provide immediate corrective feedback so she responded with a suggestion that they find the spelling of "leather" in the dictionary. Corrective feedback to improperly worded questions is very difficult because questions do not easily elicit echo response. However, as this teacher consciously monitored her responses she was troubled by her inadequacy. A little later she approached the child and asked: "Mary, how do you spell weather? How do you spell feather? You asked me a little while ago, 'how do you spell leather?' and we looked it up in the dictionary. Sometimes, instead of using a dictionary, we can think of other words that belong in the same family of sounds." Thus, somewhat delayed, she was able to provide natural, corrective feedback while the child was continuing to work on her story.

D. Corrective Feedback Is Used To Help the Child Discover Appropriate Vocabulary

In a small southwestern community, in an open range area where horses wandered about the streets and in the yards, a young child was observed by his mother shoveling horse manure out of the yard into the gutter. She called out to the child, "Son, what are you doing?"

He replied: "I'm moving this horse shit."

"Oh no," she said, "We don't use that word, that is not a nice word. We say 'we are moving the horse manure.'"

Impatiently, the son looked up at her and said, "Aw, we don't either say that, we say 'horse shit'."

This is a situation in which the adult corrected the child, and told him that the language of his peers and of the community was not appropriate. She failed to recognize and to comment upon his efforts to clean the yard. Had this mother been consciously aware of the value of modeling and the value of corrective feedback within the natural method of language teaching, she probably would have replied after the child's first response, "Well, how very helpful you are to move that horse manure out of the yard, because it can bring flies and it is not very clean to have near the house." With this response she would have made the child feel good about his work;

she would have modeled an alternative form, and she would have left unsaid any criticism of the language of his peers.

The following interaction occurred when a first grade classroom visited a zoo:

Alfred:	"He's scratching herself."
Juan:	"There's him house."
Gloria:	"He's eating with he hands."
Teacher:	"The monkey uses his paws just like you use your hands. He scratches himself with his paws and he uses his paws when he eats. You have very sharp eyes to see that monkey's paws are like a person's hands."

Thus the teacher again provided the appropriate forms semantically, but avoided correcting the children. She also reinforced the children for their observations.

E. Corrective Feedback May Be Used for Assisting the Child in Language Generalization

During a third grade cooking and eating experience, a child said to the teacher, "I really like that soup and I want morether." This child had become quite aware of the fact that there are degrees of differences and he had become aware of the comparative form. He was obviously over-generalizing. The child deserved reinforcement for his linguistic awareness but he also needed the adult to provide corrective feedback so that he might be exposed to the conventional form of comparison.

The teacher replied, "Oh, I knew that you would want more. Good cooks like you make such good soup that everybody wants to eat more." The teacher accepted the child's awareness of comparison, she provided the appropriate form, but did not embarrass him about "ther," an over-generalized, unnecessary, incorrect comparative form.

Another child came in after being on the playground saying, "I'm so tired, I jumpted the rope."

The teacher responded, "I have felt very tired, too, when I jumped rope for a long time." Again she modeled the appropriate past tense form and did not correct the child for the unnecessary over-generalized second ending. In fact, this over-generalization is cause for a teacher to rejoice since it shows that the child has discovered that the system exists. Correction would make the child feel very awkward about his discovery or afraid to try to use the newly discovered system.

Category 2: Summary Feedback

A skilled teacher is aware when ideas are being rapidly generated by children and is sensitive to the necessity at times, to withhold immediate corrective feedback to the individual child. An example follows:

Sandra: "Look at that mountain, it's gonna fall, we gotta be careful climbing up the mountain."
Debra: "If you're not careful, you fall down."
Sandra: "My heart like wind when we go up go; go bo ba boom, cause I scary."
Linwood: "This fun, me going in holes."
Gayle: "They are dips."
Larraine: "Tickles."
Donny: "The road is scary."
Sandra: "I scary, but I no want to go home."
Adriana: "We a long way from school."
Elanda: "That road goes up and down."

The teacher exercised wisdom in her restraint by not participating verbally in this situation since the children were relating to each other and exchanging ideas so enthusiastically that an interruption could have disturbed an exchange of ideas. However, she might have provided a summary feed-back like this:

"You're right. You must be careful climbing mountains because if you're not, you might fall down. We are having fun, aren't we? This road is scary but exciting with all these dip and holes."

In another situation, the children were examining a pomegranate for a tasting experience.

Jose: "I got pomegranates on my tree at home."
Emil: "Seeds, lots of them."
Warren: "Oooo, red."
Marie: "–so bloody."
Jose: "I suck'm. Taste sweet."
Teacher: "We find many little seeds in a pomegranate, held together in a thick, blood-red juice. The seeds taste very sweet if we suck them."

Thus, the teacher, gathering the notions and fragments of ideas that the children expressed, modeled for them to provide the structural language needed to relate their ideas. And, in so doing, she necessarily used a complex sentence that expanded the relationships of ideas.

Category 3: Elaboration

The elaboration aspect of modeling, whether it is initiated by an adult or is an adult response to child initiative, linguistically assists the child in his perceptual awareness. It calls attention to details, characteristics, similarities, differences, and to attributes within the perceptual field. A group of first grade children were examining a collection of brushes of all kinds, and the following occurred:

Juan: "See, Teacher. The same."
Teacher: "You know shapes very well, Juan. These two brushes are both round. This little pink manicure brush is round. This man's brown hair brush is larger, but it is also round."

Jose: "This one. It's not quite round. Almost round."

Teacher: "This gold-backed brush with the scalloped edge is oval. Oval is not quite round. You also see shapes very well, Jose."

This teacher with her use of adjectival forms enlarged not only the child's language but his perceptual awareness. She provided the labels that the child did not possess. She helped the child to see that similar objects have attributes in common but that they also have attributes that are different.

To speak with specificity is a good way for the teacher to introduce more elaborated speech into her modeling. For a teacher simply to cease saying "it" and to label specifically, instead, requires the teacher to use more elaborated language. For example, rather than saying, "It's so quiet," a teacher might say: "This street which usually has so much noisy traffic on it, is unusually quiet with all the cars being detoured to the other street." This specificity and the avoidance of vague references demands elaboration. Complex language structure naturally follows.

Too often, a teacher unconsciously uses vague and indefinite adverbial expressions which do not provide modeling of elaboration for the child. With reference to emptying the trash, the teacher is likely to say, "Let's take it out."

If, as the modeler, the teacher is conscious of specificity of thought requiring elaboration of language, she might say instead, "Let's put the trash can just outside our door where Mr. Johnson can easily pick it up to carry to the big incinerator on the south side of the building." Thus, she uses prepositional phrases and clauses which will help the children to be more specific in their language.

Category 4: Expansion in Modeling

The term expansion in modeling is not to be confused with expansion as used by Bellugi and Brown in their discussion about providing missing parts for the telegraphic speech of the very young child. In this discussion, the author uses "expansion" to mean an expansion of awareness of both time and place, a moving of the mind from the immediate in the environment and from the present time to another place at another time, a movement out of the perceptual field. This quality of modeling was used by the teacher who was helping the children examine a collection of brushes.

Picking up an eyebrow brush, Mary said, "My mother has one."

The teacher asked: "How does she use it, Mary?"

The teacher continued, "When I was a little girl in a school play, I used a brush like this to put mascara on my eyelashes so that everyone in the audience could see my eyes better."

Thus the teacher transported the children to the past and into a different situation. She did it easily by a sharing from her own experiences but within the natural demand of the materials.

Mrs. Brown brought a watermelon to school explaining: "This watermelon came from a seed that my husband and my children and I

saved from a watermelon we ate last summer. We liked it so well, that we planted the seeds hoping we could get a melon that was just as good. I thought we might try today to see if this really is a sweet melon."

Again, sharing of personal experiences takes one beyond the immediate and outside the present. This naturally elicits a variety of tenses and adverbial forms and provides a modeling of complex language.

Category 5: Extension of Knowledge

The extension of knowledge as an aspect of language modeling comes the closest to the role of the traditional school teacher as a dispenser of information. However, in its most natural form, it begins in the home with the mother extending the child's awareness. For example:

Child: "Kuk, big kuk."

Mother: "Oh, it *is.* It is a big truck. (Corrective feedback) It's a big yellow truck. (Elaboration) Your daddy drove a big yellow truck like that to help your grandpa (Expansion). That truck is as strong as 100 horses." (Extension of knowledge).

It is dubious whether any mother would say all that at one time to an eighteen month old child, but it does demonstrate how the categories of language teaching that are natural to the situation, including the extension of knowledge, can be involved in a single response.

Exploring a collection of brushes the teacher and the children may wonder about bristles. A teacher may say, "Brushes used to be made mostly from boar bristles or from the hairs of pigs. Today the brushes are usually made of nylon, a synthetic material." Depending upon the age of the children and the nature of their responses, the teacher may proceed with a discussion of sources of natural boar or synthetic nylon, manufacturer's technique, etc. Such an extension of knowledge requires a diversity of language structures such as connectives, clauses, modifiers, and phrases.

Category 6: A Program of Discriminating Reinforcement

A child's language learning is dependent upon his having available a more mature resource and model. If this modeler supports and reinforces the child as a resystematizer of language, the child will be more likely to make use of this person to confirm his language discoveries. The modeler of the natural method of language teaching, systematically, encourages the child in his resystemization by her very involvement with the child conversationally. She accepts the child's communications and she is responsive to all his tentative efforts to communicate with her. Though she provides corrective feedback, she consciously avoids correction which can inhibit and discourage the child. In fact, she is so identified with his efforts to systematize that she recognizes that so-called sub-standard usage is often a tentative effort to code and re-systematize. Therefore, when the child says, "I want morether," she can rejoice that he has discovered

comparative forms. She can therefore reply, "You may have more if you wish," thus reinforcing his discovery.

If a child says, "I don't got no paper," the teacher can respond to his communication concerning "not" and say, "If you don't have any paper, you can't write a story, can you? I have some paper for you."

If the child says "My cousin *drownded* the new kittens," she can recognize that he is really aware of the system of tense and can reply therefore, "How did you feel when your cousin drowned the kittens?"

The traditional teacher who suffers agony because the child misuses the language, is unable to provide the kind of reinforcement that encourages the child to continue re-systematizing his language world. The child who is made to feel uncomfortable about a misuse of form will be restricted and awkward about the flow of ideas. Only if a child feels he can verbalize fluently and express his ideas freely, will he be accepting of the conventional coding of the language world. Therefore, the adult who truly reinforces is the one who perceives in the child's awkward linguistic structures an intellectual press to find and to use a language system. This is what she reinforces; in this she rejoices. She overlooks the awkwardness of the structures, though she will undoubtedly provide corrective feedback so the child has available a more standard and a more appropriate code.

Sometimes, of course, these unconventional and awkward structures have a spontaneity and charm that an adult should cherish. For example, a 5-year-old was with his parents in the home of some friends and was asked if he would like to have some more soup. He replied with enthusiasm; "Oh yes, I really do want some more soup, I like your soup and I want a lot. At home, my mommy makes my bowl full to brimming."

Adult reinforcement is basic to the language learning of the child. It is made available by a language teacher using the natural method systematically at several levels:

1. Acceptance of the child's language. This constitutes a basic reinforcement, for the child knows he has a listener who not only models language for him but who is available as an adult resource as he goes about his child work of re-systematization. Therefore, however limited, sub-standard, antagonistic, or even vulgar the language of the child might be, an accepting adult responds to the ideas being presented by the child, and avoids comment about the words in which the ideas are couched.

   If the child just points at his grouping of hornshells, for example, and only tugs at the adults's sleeve as little children might well do, the adult can say one of several things such as: "What else do you want to show me about these spiral shells?" or "Are there other ways to put these hornshells into groups?" or, "This big long reddish shell is just the same shape as the tiny white shell, isn't it?" etc.

   If the child says "I ain't gonna make no more messy pictures," the teacher could say "I know you always try to be careful and I know you're going to show us a very interesting picture with an interesting story."

If the child says to the teacher who is taking the dictation about cinnamon toast, "Write 'David doesn't like it,'" she could respond "Some people do find cinnamon toast too sweet," or "Maybe there was too much cinnamon on it for you David." And then she would proceed to take his dictation without reacting. She accepts the fact that the child does not like what she expected children would like. She respects his right to have his own taste and his own opinion.

The child says, "Custer's a son of a bitch, teacher."

The teacher could reply, "Custer was a general who fought a battle in which many American soldiers and American Indians were killed." Thus she respects the sentiment of the child, but applies a more conventional label for Custer.

2. Responsiveness of the adult. Such responsiveness to the child in conversation is also reinforcing because it dignifies the child as a communicator and tells him that he is important enough to talk with. The teacher responsiveness says in effect, "You are my equal; you are worth my time; you are interesting to listen to; I learn from you." What better inducement could there be for a child to use this adult as a listener, as a resource of information, and for clues about the language system?

3. Generous verbal reinforcement specifically articulating approved behavior. The specificity of articulation offers opportunities for modeling semantic precision to say nothing of structural complexity. It opens the doors for direct language teaching by a teacher who engages in reinforcement of linguistic discoveries. For example, Maria says: "Oh, the dog is a poodle. Poodle begins with the same sound as Peter's name."

Immediately, of course, the teacher in this situation would say something to this effect, "You have very good ears, Maria. You hear very well to know that poodle and Peter begin with the same sound, a P." This would be a verbal reinforcement specific to linguistic discovery.

In another situation in a fourth grade classroom, a child became quite bored with the meandering conversation and eventually burst into the conversation saying, "Miss Brown, speaking of the fire alarm—"

The teacher commented, "Ron that was a very good way to bring us back to the subject and to keep us on the track of the conversation. We were talking about the fire alarm but we got off the subject and we were talking about many other things." Her reinforcement of this socially acceptable way of saying "Let's get back to the subject," prompted the use of this form for several weeks to come, and whenever you went into that particular fourth grade classroom you were likely to hear some child saying, "Speaking of that . . ."

In a second grade classroom, a teacher entered a play house center where the children were engaged in preparing for afternoon tea. The

child playing role of mother came to the door and asked appropriately what business the teacher had with them. The teacher immediately entered the role-playing situation and said that she was on a T.V. station survey to find out what programs were most popular in the community. She was invited in and asked if she would like a cup of tea with them. The children served the tea, and somebody passed her make-believe cookies on a little tin plate. The teacher nibbled the "pretend" cookies, sipped her tea, and asked the survey questions to which the children responded quite gravely. As she was leaving, she said "Thank you very much. You are fine hosts, you serve delicious tea and the cookies were certainly good. You obviously know, all of you, why you listen to T.V. and what it's all about because you were able to answer each question very thoughtfully." Thus, she was able to tell them specifically what they did well and to provide the appropriate labels and the appropriate language clues for discussing certain behavior.

In another situation a teacher was on the floor with the children who were attempting to construct a bridge. There was considerable difficulty constructing the arch and finally one of the boys was able to place the blocks in such a way that an arch was formed that was reasonably stable. The teacher said "Juan, you engineered that very well. It takes a good engineer to build bridges that have arches and to make the arches stable." Again, she identified the behavior that was good, and let him know that what he did was good. This kind of reinforcement, which is generous but which specifically identifies the behavior, is essentially objective. It is a far cry from the personally-oriented kind of reinforcement that prompts the adult to say, "I like what you did; you make me very happy when you act that way; that's very good; I like that." The latter kind of reinforcement is not conducive to development of autonomy in learning, whereas generous reinforcement specifically identifying the behavior provides encouragement for intrinsic rather than extrinsic rewards. Also, such reinforcement calls for specific labeling.

Summary of Categories

The natural but systematic adult modeling requires conscious awareness of the preceding categories of:

1. Corrective Feedback.
2. Summary Feedback.
3. Elaboration.
4. Expansion.
5. Extension of Knowledge.
6. Generous, specific reinforcement.

The parent who failed to label the potsherd for the three-year-old toddler who decided therefore it was a "bless-your-heart," missed a wonderful opportunity to model all six categories in a simple response to

the child in favor of adult conversation. The following interaction might have ensued:

Child: "Look Mommy, look."

Mother: "You have such good eyes for pretty things" (specific reinforcement). This potsherd has a lovely red color" (labeling and elaboration).

Child: "Uh uh, black, too. Black things on red."

Mother: "The black lines on this piece of red pottery are very straight, (corrective feedback and elaboration) like the black stripes on the red shirt you wore yesterday (expansion). This potsherd is part of a bowl some little Anasazi boy may have eaten from hundreds of years ago" (extension of knowledge).

Though the adult natually takes initiative in much conversation, the exercise of the categories probably has the most significance when used in response to the child's initiative. Then the adult is truly helping the child to discover a code adequate for the expression of his own thinking and for his own environmental encounter.

Although this author has not chosen to become involved in this monograph in bilingual and bidialectical considerations, she would be remiss not to suggest to the teacher that modeling the public standard dialect does not mean modeling a superior language. The public standard dialect has virtue primarily because it is public and is standard, therefore useful for purposes of social mobility. Always, the teacher using the natural method accepts the idea in whatever language or dialect it is couched and, being linguistically concerned, she will discover the system the child employs. Labov (p.66) indicates that "there are, in fact, several damaging consequences of the social deprivation theory" and "the teacher's attitude toward the child is an important factor in the latter's success or failure." He sums up his thinking (p.67) with, "There is no reason to believe that my non-standard vernacular is in itself an obstacle to learning. The chief problem is ignorance of language on the part of all concerned."

CHAPTER II

CONSCIOUS MODELING

The educator who is committed to the natural method of language teaching is required to perform several demanding but challenging tasks, in order to be fully conscious as a modeler:

1. to think about thinking
2. to think about talking
3. to talk about thinking
4. to talk about talking

Necessity for Examination of Language

The eventual goal of language modeling is the mutual stimulation of the child's thinking and talking. Therefore, the educator must be conscious of his own talking and thinking.

Both mother and teacher have traditionally followed the pattern of telling, warning, testing, correcting, and rewarding or punishing the child. Even the adherents to the natural method of language teaching find themselves reverting to the traditional pattern, because the modeling of their teachers and mothers has successfully influenced them. The most committed modeler of the natural method of language teaching dares not relax his diligence in monitoring his interaction with children. As the modeler analyzes this interaction he can determine whether or not his verbal behavior assists the child in bringing more order into his language world. The application of the natural method, systematized and accelerated, brings linguistic order into the child's life, thus helping him to possess his world more fully and to control his environment more adequately. This is what "mediation" really means. The educator is, therefore, compelled to examine and describe to himself the nature of the language in which the child codes his experiences. This is a necessity because the teacher wants to be able to identify syntactical growth and semantic refinement.

Thus, a conscious modeler of the language is aware that, enmeshed and embedded in intellectual skills, are intrinsic language demands and a great variety of language options. If for example, the skill of "choosing" needs to be acquired by the child, the teacher needs to inventory the language potential in making choices in order to model the language that facilitates choice making, such as:

either – or
good, better, best
not so good
bad, worse, worse
'er, 'est
which one
I'd prefer . . . because . . .
if I do that, then this results
I would rather . . .
What other way . . . ?
Neither she nor I . . .
etc.

Such an inventory of language intrinsic to a specific skill is basic to the competence of a teacher utilizing the natural method of language teaching. The very process of a teacher's searching for a complete inventory alerts this teacher to the mutual facilitation of language and thought, and challenges her to consider how best to organize the environment so that a particular intellectual skill is evoked with its own intrinsic language demand. This dual awareness of thought requiring language and of language stimulating thought should help the teacher to sharpen her focus and to increase her effectiveness as a modeler, thus making the system of language more obvious to the resystematizing child.

Importance of Environmental Constraints

In the interest of systematizing and accelerating the child's natural development in language and thought, the teacher is compelled to impose some environmental constraints. If she is focusing on the cultivation of tentative thought and the practice of the "if . . . then . . ." pattern, she is obligated to lead the child to anticipate an experience, to plan an experience, to weigh possibilities, and to think about what to do if certain conditions do or do not exist. Tentative thought and the practice of "if . . . then . . ." cannot be left to happenstance. The teacher is obligated to structure and to constrain a situation that will stimulate the practice of a specific skill with its intrinsic language, thus it is her responsibility to structure the environment so that there is a situational demand for specific modes of thought, and to be prepared to model the particular language forms related to such thought.

Vocabulary grows and syntactical control increases as the individual needs new words and more grammatical indicators for every frame of thought. Not until the child needs to retrieve the experiences of the past does he feel the need for past tense forms and the appropriate adverbs. If he demonstrates either this inclination to associate previous experiences with the present and/or an ability to use past tense forms and appropriate adverbs, he needs to be invited to participate in conversations that recall the past. In such conversations the adult will necessarily model the linguistic manifestations of the intellectual exercise of retrieval, and the child will feel the need to participate, too. Thus, he is prompted to imitate and practice this skill of retrieval and recall.

Continuous Analysis of Language Interaction

To apply the natural method effectively, a teacher will be continuously analyzing the verbal interactions within the group to identify any areas of delayed intellectual development as manifested in deficiencies of vocabulary and syntax. The teacher can determine in this way the intellectual and language needs on which to focus in designing learning situations and in structuring the environment.

Teacher Fluency Important in Interaction

The skill of implementing the natural method of language teaching rests heavily on the capacity of the teacher to be fluent and to be able to exercise the various categories of the natural language teaching with respect to the materials of the environment. Since "natural" refers to the naturalness of language as it pertains to the materials of the environment, the teacher has need to acquire fluency in conversational interaction with the children. The following are guides to assist the teacher to anticipate the modeling needs of a given situation and to have available a range and diversity of language, natural to the situation, facilitating to thought, and readily available for fluent interaction:

A. Inventory of language intrinsic to the "learning to learn" skills.
B. Language adjustments across the hierarchy of intellectual skills.
C. The language potential of the kinship schemata.
D. The appropriate use of questions.

A. Learning To Learn Skills

Each of the following skills help to build the intellectual base making it possible for a person to continue learning and to continue at more complex levels. For each skill there is a body of language intrinsic to it. It is very important as a teacher to be aware of the diverse range of language possibilities that are enmeshed in the particular skill. For example in #13 Table 1, to elicit and to weigh alternatives, or to choose, evokes such language as presented on page 25.

TABLE 1

LEARNING TO LEARN SKILLS

Skills	Inventory of Intrinsic Language
1. To awaken sensory perception: taste, hearing, smell, sight, touch. To compare things tested. To label with words the experiences and activities.	
2. To foster the habit of labeling.	
3. To foster recognition and discrimination.	

4. To arouse curiousity.
5. To develop categorization skills.
6. To develop spatial awareness.
7. To develop temporal awareness:
   a. To encourage recall and reconstruction.
   b. To encourage practice of anticipation.
   c. To develop skill of organizing in terms of sequence.
8. To develop the concept of change:

spatial	developmental (growth process)	atmospheric
temporal		mechanical
textural	cyclical	chemical

9. To foster the practice of tentativeness.
10. To stimulate awareness of cause and affect.
11. To encourage imagination.
12. To facilitate problem-solving (social-intellectual).
13. To elicit and weigh alternatives.
14. To foster aspects of the creative process:

fluency	elaboration
flexibility	originality

15. To guide the differentiation of fantasy and reality.
16. To develop discrimination of relevance in what is said in relation to the "givens" in the situation.
17. To foster linguistic awareness;

new words in use	completeness of thought
use of apt smile	(use of prepositions and
elaboration of thought	conjunctions and subordination)

18. To acquire positive self concept.
19. To acquire mastery of the societal arts: speaking writing, reading.

B. Language Adjustment Across the Hierarchy of Intellectual Skills

Sensory awareness, for example, though primitive in the sense that it is primary, is always useful. A generalizing theoretical scientist is less of a man if his sensory capacity is dull and is not kept active and alive. To master the skills hierarchically is not to climb a ladder but is to have freedom to move up and down a spiral ramp.

Again, to anticipate the full potential of language and thought as a modeler, the teacher should frequently consider the language demands across the hierarchy in terms of (1) Range of diversity of language, (2) Precision of language, and (3) Abstraction in language. The following is an effort to show how, in looking at a given set of materials, the language may be anticipated in terms of moving across the hierarchy. With respect to any given object or situation, language can be anticipated at each level of the hierarchy. For a teacher to engage in such an exercise at regular intervals contributes greatly both to her fluency and her precision, to say nothing of the increase in her linguistic awareness.

TABLE 2

A TENTATIVE HIERARCHY OF MENTAL ACTIVITY FOR HUERISTIC PURPOSES ONLY*

by Dr. Marie M. Hughes

	Mental Activity	Inventory of Intrinsic Language
Level I		
Sensing	Obtaining information through the senses.	
Perceiving:	Being selectively aware.	
Discriminating:	Detecting, distinguishing by certain features, a characteristic recognition.	
Level II		
Remembering:	Having a motion or idea come into the mind which implies an earlier experience; random or passive memory.	
Retrieving:	Deliberate recovering or regaining by remembering, recalling.	
Identifying:	Labeling recognition by discrimination.	
Level III		
Comparing and Contrasting:	Examining objects and situations in terms of their characteristics, their likeness and differences.	
Grouping:	Classifying, categorizing.	
Exploring:	Deliberate wondering about, searching into, questioning.	
Level IV		
Evaluating and Judging:	Rating by some identifiable criteria. May be personal value of bias–criteria used are known or acknowledged by the individual.	
Abstracting:	Lifting out one or more qualities or factors to achieve a higher classification, that is grouping or categorizing to include a larger number of specifics.	
Hypothesizing and Predicting:	Accepting a proposition with conditional factors. If then – given this, predict that.	

Level V	
Organizing:	Arranging or systematizing the interdependent part of a whole, placing of events in some identifiable relationship.
Imagining:	Responding to properties of an object or event not present to the senses.
Planning:	Arranging events in some order and relationship to one another.
Inferring:	Assigning meaning beyond the data or observation available. Placing discrete facts and observations in some relationship from which added meaning may be gained.
Analyzing:	Breeding situations, objects and ideas into their multiple facets perceiving multiple relationships.
Formulating and Generalizing:	Stating principles, laws, relationships that derive from a class of events.
Level VI	
Inventing–Composing:	Bring in together elements, factors, objects in some new form or use – combining.
Synthesizing – Conceptualizing:	Which brings elements, ideas, generalizations together that have not been brought together before, usually under a new rubric or construct.
Creating:	Expressing creativity at the highest level of generating new ideas, assumptions, etc. Changing the area, materials, methods, in which one is working.

*Dr. Marie Huges has made available to the TEEM program this arrangement of the intellectual skills in a hierarchical manner, but with the admonition that this does not mean one abandons or ceases to use a simple skill when he masters the more complex skills.

C. The Language Potential of the Kinship Schemata

The child encountering the language world does not have the opportunity of encountering simple forms first and then moving on to more complex forms. He meets the language world in its totality, and it is all about him all at once.

Even the mother who thinks she is presenting the child with simple language tasks when she asks the child to say "nose, eye, mouth, ears" etc., usually phrases these demands in complex structures such as: "I wonder where I can find baby's nose. Oh, here's baby's nose, right in the middle of his little face, with two red cheeks on either side. Now, baby, say 'nose,' say 'nose' for mommy."

Baby: "Nose."

Mother: "That's a good baby. My baby knows how to talk. My baby says nose just like a grown-up person. Now I wonder; where, oh where, are baby's ears? Are they on top of his head, are they on the back of his head, or are they on the side of his head? Oh, here are baby's ears on the side of his head, little ears that mommy wiggles for him. Baby, say 'ears' for mommy, say 'ears'."

Baby: "Ears".

Thus, the child being taught to repeat specific vocabulary often has it presented within complex structures and within anything but simple language, but eventually the child makes system out of this total and confusing world. He makes the system; he makes it again; he resystematizes it. Resystematizing from evidence that is not sequential, that is "all-over" and that is scattered in bits and pieces, he generates a language system for himself. The child's grammar does not coincide with the public standard adult grammar. How then can we guide ourselves as educators to talk with children so as to cover the range of intellectual skills, the range of language potential? How can we provide content in which we can involve the child? How can we continue to model as learners ourselves with respect to the content? This we must do; it is our responsibility as educators. Wann, Dorn, and Liddle (p. 125) stated, "Children seek information and attempt to organize it into some kind of conceptual framework. Supporting and extending children's efforts in this direction become a central responsibility of the teacher of young children."

Almy (p. 16) in describing Piagetian theories comments "knowledge arises and becomes organized as the children interact with their environment." We can add that for interaction to give rise to knowledge there must be a number of environmental experiences. A single exposure does not often give rise to knowledge. Knowledge of (note that the authors do not say "knowledge about") the language arises from such multiplicity of environmental encounters. It is obvious, then, that the expression by an adult of a variety of thought processes with respect to some given content is very important to guide the child to make sense out of the language world. Any given objects or experiences, to be fully

comprehended, must be perceived in terms of origins, characteristics, parts, similarities to other objects and experiences, functions or purposes, and an outcome or anticipated change. Such understanding also provides the opening for a vast array of varying modes of thought, each having unique linguistic manifestations intrinsic to it. For example, retrieval, as mentioned before, requires the use of past tense forms and appropriate adverbs. Choosing requires the use of the comparatives and the either/or notion. The kinship association offers suggestions for lesson design that could evoke from the child an array of modes of thought. The following chart indicates possibilities.

The catagories shown are not presented as an orderly progression. One does not move from discussion of category A to B or C. When the chart is carefully explored by the teacher for potential language and thought, it will be noted that entering one category leads one eventually into others. In other words, the categories cross-classify. The author recommends that, periodically, the adult review the categories to ascertain that all of them have been covered within recent days or weeks. If it is discovered that any one category has not been covered, an effort can then be made in the near future to utilize that category with its inherent syntax, vocabulary and semantics. The language manifestations exist because of being intrinsic to the intellectual skills which are basic to looking at the experience from within the particular category.

In the following schemata the third column can be used to record the language intrinsic to a category (Table 3)*. If the object discussed is a house, for example, it may be noted that when the "house" was fully examined, there was a very natural lead-in to the traditional subject matter areas of the school curriculum such as science, mathematics, social studies, reading, etc. with all the language characteristic of the academic disciplines.

*The author must give credit to Dr. Robert Wilson, linguist at UCLA, who in a conference with her at the University of Arizona advocated that such understanding through kinship associations is basic to the growth of a meaningful vocabulary. The author has extended this concept.

TABLE 3

SCHEMATA TO PLAN FOR FOCUS ON THE LANGUAGE – INTELLECTUAL RELATIONSHIP IN CLASSROOM INTERACTION

The purpose for these schemata are two fold:

1. To anticipate the evocation of language and intellectual processes.
2. To analyze the quality of thought and of language of a group or of a child in order to ascertain the kind of language model needed in future situations.

Kinship Association	Intellectual Meaning	Intrinsic Language Manifestations
A. Origins/Background (ecological-relationships) Where does it come from? How did it get started? Who made it? etc.	–retrieval of knowledge and of experience –retrieval of the past –causality –sequence	
B. Characteristics, Qualities What does it look (feel, taste, etc.) like? What is the color (texture, form, etc.)? What is it like? How does it feel (taste, smell, look, etc.)?	–sensory perception –associative thinking –comparisons –negation (sometimes) –abstraction –identification –figurative thinking –affect	
C. Component Parts, Details What does it consist of? What parts does it have?	–discrimination –classification –negation (sometimes) –whole part relationships –labeling	
D. Similar Objects or Experiences–Classify Analogous relation Synonomous relation	–generalization –classification and sub-classification –comparison –labeling –figurative thinking	
E. Functions-Use, Purpose How can you use it? Does it help? How does it help? How could it be used?	–retrieval –projection into other situations (future thinking) –association –imagination	

F. Outcome	—future oriented thinking
How it develops	—tentativeness
What it becomes	—awareness of change
Will it change?	—sequence
How will it change?	—causality
What it is when it is changed?	—comparison

An adult who is deeply involved in the environment will be so engrossed in his own continued learning, that over a period of time his own interests will cover the kinship associations of an object or an experience. There follows a natural situational demand for a great variety of intellectual processes with concomitant facilitating language. A child in close association with such an adult would encounter various intellectual processes with language variety in a natural and random but comprehensive manner. This is probably part of the reason that a four or five year old child from an educated home where adults talk with him can use most of the language patterns.

The author offers later a closer scrutiny of data regarding how language is learned, how concepts are formed, and what is known about deficiency in either area. Such understanding undergirds a teacher's conscious control of a systematic use of the natural method of language teaching.

D. The Appropriateness of Questions

Traditional patterns of teacher questioning are patterns of testing which inhibit easy, fluent interaction reducing the child to a brief response which the teacher finds acceptable. The natural method of language teaching attempts to involve the child in unselfconscious oral language interaction with an adult.

It is more appropriate for the teacher of the natural method to elicit question-asking behavior from the child rather than to quiz the child. Therefore, her own questioning should be used to open minds and to extend intellectual inquiry. The convergent question with a single right answer has little place. However, the divergent open-ended question is a way of modeling question-asking, research behavior. This attitude about questioning would prompt a teacher to say such things as:

I wonder why
. . . where
. . . how, etc.
It would be interesting to know what would happen if . . .
Do you have some suggestions about this?
What would you suggest that we try?
What, in your opinion, is the way to do this?
How much can you tell us about how to_____ ?

E. Movement Toward the Abstract and the Figurative

A conscious language modeler can help the child to discover the semantic refinements that come with abstraction.

A child examining a spiral shell will abstract the salient features of spiralness more readily if the teaching adult arranges for him to see or to handle mutliple concrete spiralling objects, such as a cone shell, an ice cream cone, a staircase, an egg beater, and some springs. Further practical use of abstractions such as "spiralling events," "spiralling plans," etc. are understood if the child has occasion to hear them used in appropriate context. Such abstractions are often figurative and idiomatic and are seldom employed consciously by teachers. Yet they are essential if the language is to be fully utilized. Furthermore, transferability of concepts hinges largely on this capacity for abstraction of saliency. Please note, for example, the use of "hinges" as a verb in the last sentence, a "for instance" of such abstraction.

CHAPTER III

PROGRAM ESSENTIALS FOR IMPLEMENTING THE NATURAL METHOD OF LANGUAGE LEARNING WITHIN A CLASSROOM

The effective implementation of the systematization of the natural method of language learning within the classroom requires the availability to the children of adults who operate with some basic philosophical and professional commitments to a particular theoretical framework when interacting with children.

These adults accept the role of modeler as being crucial to a child's learning. It is noteworthy, indeed, that the animals higher on the evolutionary scale with respect to cerebral functioning are characterized by long infancy periods and close association with the adults of the species. With reference, specifically, to the language learning of the human infant, it is imperative in the early years for the child to have adult resources in the form of effective modelers if he is to develop a language and an intellectual base that is adequate to support his development to full potential.

The modeler makes it possible for the child to acquire two very important aspects of language learning:

1. Grammatical competence, the skill to use the grammatical system, an ability usually well-nigh complete at age four. In other words, the child discovers the system of his language world because he has available to him an adult who uses this system, with all its diversity and its relative consistency.
2. The necessary code for mediating experiences or a way to talk so that experience has added meaning. For example, an experience may have meaning because labels are provided in progressively refined form and at levels of increasing specificity. The child pointing to a tree progresses from simple pointing to "da," "that," "tree," "Christmas tree," "pine tree," "scotch pine tree," "evergreen," "coniferous tree," and etc. The experience may have added meaning because modifying language has been modeled which facilitates identification, discrimination, and comparison. The child acquires the language to talk about the evergreen tree.
   the trees that are always green
   the trees that never lose all the needles at once

the long, prickly needles
the large, flat leaves
the trees that shed their leaves in the winter and the trees that do not, etc.

This modeling may provide added meaning because language is supplied that facilitates categorization, both downward to subclasses and upward to generalization that covers higher categories and principles, or across to related areas. From "tree" the child can be led to be aware of the whole plant and animal kingdom and to the whole system of identifying all of life and all matter.

A tree is a plant.
A plant may be a tree.
All plants are not trees.
A bush is like a tree.
Trees bloom, bear fruit, have seeds.
Trees need water and oxygen.
Animals need water and oxygen – etc.
Animals need water and oxygen, but animals are not plants.
Animals are living and plants have life but are not animals.
Plant life and animal life both have cell structure but – etc.

The modeling may add meaning to the experience because it provides language that facilitates recall and projection. The adult may say to the child:

You and I saw pecan trees growing in Oklahoma.
The young pecan trees are being planted here in Arizona to see if a new agricultural crop can be added to the area.
We used to grow cotton here where the young pecan orchards have been started.

Associations can be made with previous experiences, through modeling. For example the adult might say:

Do you remember how hard it was to lean over and pick cotton?
You can't shake cotton off the bush the way you can shake pecans from a tree.

Through modeling, conjectures may be made about possible upcoming experiences. The adult might wonder:

How will cotton pickers feel about harvesting pecans?
Will it be easier or harder work for them?
If there should be a drought in Arizona and if irrigation becomes limited, what will the pecans be like?

Thus, new experiences are used to extend knowledge whereby a child's social and physical world are better understood and better controlled by the child.

It should be quite obvious that the intellectual needs of the child evoke specific linguistic needs. Therefore, if we are to concern ourselves with teaching the child specific syntactical forms effectively, we must, of necessity, consider the intellectual needs of

the child to use such syntax. The past forms must somehow be bound up with remembering; future tense forms must somehow be bound up with projection. So, if we approach the child with concern for his language development, we are, of necessity, forced to consider his intellectual development. If we attempt to teach the child in such a way that we strengthen his intellectual base, we must consider language, because, enmeshed in the development of any of the intellectual skills, are intrinsic syntactical forms which must be used. It is worth repeating that language and thought are mutually facilitating, acting upon each other to stimulate spiralling growth. It is good for the adult functioning in the classroom to reflect upon this obvious truth, in order to consider whether, at times, she attempts to teach specific syntax without full awareness that the only purposes for language, really, is to mediate experience, to relate experiences, and to communicate about the experiences and the relationships.

The Adult Recognizes Child's Struggle for System

The language-thought bond and the effort of the adult to comprehend the nature of the child's search for system within his social, physical, and language world prompts the professional adult to look carefully and critically at the child's fumbling efforts to express his new discoveries of system. In professionally committed adults this observation generates an intense interest and delight in what the children say, stimulating them to treasure anecdotes that reveal the child's effort to discover a coding with which he can mediate his experiences more adequately.

A second grader, for example, asked an adult visitor if she were a mother whereupon she began to tell him about her four children.

"Oh, he interrupted, "You are four mothers."

"I'm one mother," she explained, "with four children."

"Hun-uh," he protested, "you are four mothers."

"Jose," she asked, "how many children are there in your family?"

"We have six kids," he responded.

"Six children," she persisted, "You have one mother and she has six children."

"Huh-uh," he argued, "she's six mothers."

Here we have a child with an intellectual awareness that can only be coded in the most clumsy fashion because the language system is not sufficiently sensitive. Of course, there are adults who would view Jose's arguing as antagonism and not as an awareness of human relationships.

There is an obvious value in collecting, sharing, and cherishing these anecdotal data as the basis for a heightened awareness of the child's search for system. The child's serious learning intent ranges from his prelingual struggles to find a code to his later overgeneralizations about a newly discovered system leading to what is often labeled as poor usage. The child may desire to share new knowledge, but he may not have such knowledge coded adequately so that he can talk about it. A sensitive and professional

adult will recognize the child's frustration and provide the code. On the other hand, the child's incorrect English may really be his effort to apply a newly-discovered aspect of the language system such as the child who said he wants "morether". The child who says he likes this "more better" is also using incorrect English. Actually, each of these children have made the great discovery that there are comparative forms and that the degrees of differences between things can be coded and communicated about.

The child who says "I got my feets wet" has similarly discovered one of the codes of plurality with which he can communicate about quantity. The adult who is conscious of the interaction of language and thought will rejoice about those discoveries and will continue to model so that the children will be able to adjust codes within the conventions of the language.

There are those adults who are not aware of the interaction of language and thought and who often exhibit a pristine reaction, correcting the child, and thereby inhibiting his search for the system of language. Both language development and intellectual inquiry into the system of language are thus blocked.

Necessary Teacher Characteristics

The adult philosophically, theoretically, and professionally is committed to accepting the role of modeler so that the child may acquire grammatical competence and a code for mediating experiences. She will also carry some all-pervasive qualities into all of her interactions with children, whatever the situation, whatever the teaching role. These all-pervasive essentials constitute the climate that nourishes and strengthens the language base and the intellectual base. Let us look at these essentials now:

1. Acceptance of the child.

This means accepting the child as he is, as he looks, thinks, talks, and feels. It is not a synonym for "toleration." It is basically the antonym of apathy. Let us look again at the situation in which the children are commenting about cinnamon toast. The teacher is taking dictation:

David: "Write, 'David doesn't like it.' "
Teacher: "Alright, why don't you like it, David?"
David: "Too sweet."
Teacher: "Some people have different tastes."

This teacher was not disturbed by discovering that David did not like what she was expecting him to like, and she was able to accept this without making an effort to persuade the child that he ought to like it. She accepted this response as a sincere and legitimate expression.

Accepting the child's language may be, for some teachers, a little more difficult. A child brings to school the language of the home, which may be substandard grammatically and vulgar according to standard conventions of language. To suggest to the child that there's a nicer way of saying

something, is to tell him that you don't like the way he's talking, or that the correct way to use a particular syntax may be also telling the child that you don't like the way his parents are talking. An adult who believes in the power of modeling will not take the easy shortcut of correction and of direct instruction. To do the latter will undoubtedly hinder the fluency of intellectual interaction to say nothing of casting aspersions on the child's home base.

"He be my best fren," may be the dialect of the home. A professional response would be one that entered upon a discussion of friendship or of friends in response to the conversational initiative of the child.

Furthermore, a professional follow-up would be to wonder about and to seek information about local dialect. "He be" of the Negro dialect is not standard English but it is standard for this particular dialect. Linguists state that there are more refined and sensitive tenses in the Negro dialect that in standard English dialect. Social mobility, however, may well be served by some standardization of dialect, hence the probable virtue of modeling the standard dialect.

2. Responsiveness

Responsiveness to the child means that the teacher is not always exercising command. The conversational direction often results from the teacher's response to the child's initiative in observation, and in talking about his observations. A responsive adult, a truly responsive adult, is a learner herself who views the child as an equal human being. Granted the child is at a level of less experience with respect to relating to the environment, he is to be dignified as another learner. Therefore, the adult must yield the role of dispenser of content and of tester. If responsive to the child's initiative, the adult may very often be confronted by questions with which he or she cannot cope on the spot. Therefore, the adult too, must participate as a learner in the situation, and he will model learning and ways to discover information. This modeling of adult learning has embedded in it, also, a great wealth of language for modeling, as the following third grade interaction illustrates:

Delia:	Mrs. Jones, I can't read the words on this postcard; the ones under the picture.
Mrs. Jones:	The print is too small for me, too, to read, in this light. Maybe we could read it if we moved close to the window or if we turned on the floor lamp.
Delia:	I'll turn on the lamp. Hey, where does the light really come from?
Mrs. Jones: (Notice the complexity of structure and of vocabulary)	I can't give you a simple answer probably because I don't really know myself. Electricity is generated by a variety of methods and the watts that reach that lamp may have more than one source.
Sandra:	My Daddy, he works there.
Juan:	Where?
Sandra:	At the electric power-plant.

Mrs. Jones: Maybe Sandra's father could help us to know more about where the light in the lamp really comes from. Our librarian can help us to find information about the original harnessing of electricity and about the ways to generate power.

Delia: Let's read this postcard first. Okay? Can I go to the library afterwards?

3. Modeling

Modeling, when professionally systematized, has already been discussed as a basic philosophical commitment. At the professional level, modeling is used by the adult consciously. If there is true commitment to modeling as being essential to the child's learning, the adult will feel no need to correct the child or to require the child to repeat after her. She will know that she is the adult resource that the child uses for discovering the systems of the language, and she will have faith and confidence in the child's use of her. There is a demand on her, therefore, to model consciously the language that reflects thought and to be readily available to the child on a one-to-one interaction basis.

4. Reinforcement

All-pervasive within the learning situation is a generous and verbal reinforcement by the adult of specific contributions made by the child to increase his learning within the situation. Reinforcement is not for the child as a person but is for his behavior which is specified by the adult. There is a great difference between saying "That's a good boy" and "That was a very good way to bind the book," or "Warren has built and sloped the road so well that the cars can make the turn without running off the road." Ideally, reinforcement is verbal, generous, and specific to the task. Such reinforcement demands a complex and precise coding.

The organization of the classroom and the kinds of curriculum materials are also consciously and thoughtfully arranged so that there is intrinsic gratification in the learning process. This, too, is reinforcing.

Reinforcement of discovery of the language system, or reinforcement of linguistic awareness, will be discussed later. This contributes to increased consciousness of the language system and to a new delight in manipulating the language, leading so easily to humor and to aesthetic development.

5. Organization of the Environment

The classroom is so arranged, organized and frequently reorganized that there is much demand for talking within small groups. A personalization of learning naturally follows largely because of the increased possibility for the child to talk with his peers and because he has easy access to an adult to mediate new experiences and to help him discover the appropriate code for the mediation. The small grouping and the

personalization make it possible for the child to practice language with meaning within situations so that he, himself, can influence his own intellectual development by his own increased language control.

6. Multipleness

The variety of materials within the classroom and the out-of-classroom experiences that bring the child into life contact with materials similar to those in the classroom make it possible for the child to transfer knowledge across many situations. Learning geometric shapes, for example, is not a paper and pencil exercise but is the process of recognizing and identifying shapes as characteristics of many objects within the whole community environment. Therefore, the child has many opportunities to apply new knowledge, linguistic skills, and semantic refinement in many situations.

This multipleness takes the child into situations where he can use his newly-found skills. For example, geometric shapes may be identified on pencil and paper. In many cases in classrooms where multipleness prevails, the child may identify the triangle on paper at some point in his experience, but he will first know that his shape is a triangle in life situations. He will be able to walk down the street and to say that the triangular highway sign tells us thus-and-so, that we can cut the sandwiches like triangles rather than like rectangles, that the new house going up in the neighborhood is not the square-topped Spanish style home but one with an Alpine peaked roof, triangular in contour. He will recognize the triangularity of a camera stand and will label it as a "tripod".

7. Orchestration

Orchestration is probably the most unique and the most innovative aspect of the all-pervasive atmosphere that should prevail and nourish the learning of language in its most natural way. Orchestration suggests, that at each moment all day long the adult is attending to the language, the intellectual skills, the attitudes, and the societal needs and skills of the child simultaneously. These are inter-woven, interrelated, and all are mutually supportive.

All of these above seven qualities prevailing within the classroom are necessary if the adult is to implement most effectively the systematization of the natural method of language learning. True professionalism requires the implementing of the natural method systematically and consciously with as much consistency as is humanly possible. It also requires the kind of person who can cultivate the seven essentials so that they are so pervasive in the child's environment that the child accepts them as natural to society and to all human interaction.

CHAPTER IV

INTELLECTUAL GROWTH AND LANGUAGE DEVELOPMENT

Language and Concept Formation

It has often been debated whether the child thinks before he speaks, or vice versa, just as there has been speculation as to how Homo sapiens ever contrived a language anyway. Today, educators carry a conviction that language growth and intellectual growth are mutually stimulating.

New material is emerging from psychologists about the language development of the child. There is evidence to suggest that the child is establishing elementary concepts before his verbal utterances have conformed to the socially recognized patterns of language. Early concept function is alinguistic, says John Carroll (1964); however, Irving E. Sigel (1964) suggests that it is with the advent of language that the child can begin to think symbolically and to conceptualize on more than a single salient feature of the environment. The child cannot, at the preoperational level (ages two to four), handle mentally the multiple characteristics of objects. Sigel states, "Since experience and language so influence our ability to conceptualize experience, exposure to a wide variety of relevant experiences and encouragement in the acquisition of verbal skills may increase both the quality and quantity of a child's concepts; and may facilitate his application of concepts by providing a more coherent and stable cognitive organization."

M.M. Lewis (1963) describes the infant's language growth in some detail. He describes a child under two years using "tee" to name a cat, a dog, then a cow and a horse. Such an apparently non-discriminating grouping may relate to some confusion such as identifying a horse as a large dog. Then too, the child's awareness of similarities of the animals may relate less to objective characteristics than to similarity of their functions. Both cats and dogs, for example, are available for petting. From the large "tee" grouping and labeling, the observed infant progressed to a level of discrimination which he coded linguistically as follows:

"pushie" for cat
"goggie" for dog
"moo-ka" for cow
"hosh" for horse

The built-in pressure involved in the adult-child relationship influenced this child soon thereafter to the conventional labeling. Says Lewis (1963), "it is by some dual process of extension and contraction that the children

learn to classify animals as we do." (p. 54) He also observes, "A child's instrumental uses of his own speech, which have their roots in his earliest expressive utterance, are means by which he experiments in satisfying his needs through extending and contracting the application of his sound-patterns, under the constant responsive guidance of those who share his experiences. In the course of time the adoption of conventional words in place of his own primitive sound-patterns ultimately leads him to recognize that words may be the names of things. This is certainly a most powerful factor in his cognitive development, helping him towards the modes of abstract thinking current in the society in which he lives. But the course of this cognitive development has its beginnings in the earliest moments of his life. It is carried forward by the daily interchange of his behavior with others; it moves in directions determined by his needs, his emotions and his purposes." (p. 57)

Lewis also speaks of freeing the word from the immediate situation. This freeing begins when the child starts to use words in relation to anticipated behavior or to action that is still in the future. We have all observed the young child's seemingly automatic performance of running for his coat when someone says, "Let's go bye-bye." His associations are very concretely linked to self and to appropriate garments. As he matures, the child associates "going" with others and with situations that are remote in time, both past and future. More subtle semantic refinements have extended the meaning of "going" to the point that its idiomatic implication of future is probably as frequent as the standard future tense in most speech. For example, "We're going to go there someday," rather than, "We shall go there someday."

Value of Language Mediation

Verbalization is a facilitating agent in the total development of the child. As a young child vocalizes sounds that are associated with his learning of objects and concepts, he is constantly enriching such input as he progresses through the stages of association and generalization.

Faust and Faust (1964) state, "With limited experience with words, words stay fixed in their objects longer" (p. 105), obviously delaying the development of symbolization and abstractness.

Therefore, the adult is a critical agent in the child's development and of primary importance to the child for his socialization of language and for contributing to relevance of his environmental organization. Without an adult or a more mature person with whom to interact, the child is intellectually and linguistically deprived whatever his socio-economic status.

Restricted and Elaborated Language Codes

Sigel states (1964), "Since experience and language so influence our ability to conceptualize experience, exposure to a wide variety of relevant experiences and encouragement in the acquisition of verbal skills may

increase both the quality and quantity of a child's concepts; and may facilitate his application of concepts by providing a more coherent and stable cognitive organization." (p. 242)

Hess and Shipman (1965) in a study to explore the cognitive meaning in the mother-child communication at different social status levels found this idea emerging, "that the meaning of deprivation is a deprivation of meaning—a cognitive environment in which behavior is controlled by status roles rather than by attention to the individual characteristics of a specific situation and one in which behavior is not mediated by verbal cues or by teaching that relates events to one another and the present to the future." (pp.270-85) The authors continue to say such a child is more responsive to authority than to his own personal motivation and that he is devoid of long-range goals. Child I in a deprived home is subjected mainly to imperatives that demand arbitrarily a particular performance or feeling. Such a child may hear, "Shut up!" instead of the polite request directed to Child II as follows: "John, would you mind keeping your voice down while I'm on the telephone. This is a very important call to the doctor about your sore foot, and I want to be sure we understand each other if we are to help you get well soon."

Child I must obey, disobey, or ignore commands with whatever consequences that are involved and he decides this alone.

Child II is offered a reason for a request to modify, not totally discontinue, his behavior. The situation is open for him to inquire further about the request and the reasons for the request.

Child I is controlled by status rule or the authority of a parent, which he can reject and probably will reject when he's big enough.

Child II is guided by the parent to see the value of changing behavior in a changed situation.

We can distinguish between homes that are limited to restricted language codes and homes that have access to elaborated language codes. The home environment conducive to an elaborated language code may exist at all social levels because it does not necessarily mean a profusion of things nor extensive travel. However, it does mean thorough involvement in the environment, variety within the environment, stimulus to curiosity, and a great deal of adult-child interaction with all the elaborated language and concepts that an adult can bring to a child's perception of his experience and of his environment.

Conversation with an adult is an essential stimulus to adequate language growth and intellectual development. Ideally, the child has built his language core in his pre-school years at home. Brooks, Hockett, and O'Rourke (1963) claim that a child masters the grammatical core of his native language at the same age he masters its sound system. "The grammatical core includes all the patterns for building larger expressions out of smaller ones, and also a certain subset of the total vocabulary, namely, some special elements like English *an, the, but, with, if, be, she, that, when,* the *s* of *boys* (meaning plural), the *ed* of *discovered,* that turn up in every discourse no matter what is being talked about." (p. 12)

The child accomplishes the building of his language core with all the implicit intellectual skills primarily by active language interaction with his parents. When such interaction is not part of his life, the child is deprived intellectually, linguistically, and emotionally. Such deprivation occurs at all social and economic levels wherever pressures coupled with parental insensitivity restrict experiences and aspirations on one hand, and permit little opportunity for an adult to talk directly with a child in a dyad relationship on the other hand. The restricted life requires minimal language for communication. Such a home centers almost solely on the present and the concrete, and therefore, the language does not encompass forms relating to the remote or the abstract. In consequence, the child has not associated the past with the present and is deficient in the intellectual skill of remembering. He has not speculated about the future, and neither in his language nor with his intellect has he practiced tentativeness. His awareness of objects and experiences is often limited to direct perceptual data and so he has not developed the skill of relating cause and effect, and of categorizing at the multi-levels that give full insight. There is obviously a restriction of thought because of the restricted language, and a corresponding restriction of language because of restricted experience and perception. A vicious cycle has been set in motion of limitation in one area creating limitation in the other. Because continuous language growth and intellectual development stimulate and parallel each other, a teacher using the natural method views herself as the primary catalyst to interrupt any cycle of limitations that she observes in a child's performance. Acting as a catalyst, she arranges for the child to interact with her on as much of a one-to-one basis as is realistically feasible in the class setting.

Stodolsky (1965), inquiring into the process of maternal behavior and language and concept formation in Negro pre-school children at all levels in Chicago, describes some of the home's "hidden curriculum." She concludes that there are "four crucial aspects of maternal behavior for learning of language in the child: the quality of the language model, corrective feedback, opportunity for practice of language, and a maternal cognitive structure which focuses on categories and relevant dimensions of objects." (p. 17-18) About forty-six per cent of a child variance in vocabulary scores could be credited to the above, according to Stodolsky.

The first and last criteria of a quality language model and of a motivational cognitive structure focusing on categories and relevant dimensions of objects are inextricably interwoven and interrelated. When these two criteria are met, there is provided to the child "someone who structures the environment along salient and relevant dimensions" that aid in his language learning.

A typical example of mother's intercession in a siblings' quarrel bears out the value of the "someone" mentioned above.

So often we can hear the following quarrel:

Jane: This is *my* mommy.
John: No, it's not. She's *my* mommy.

Mother: Jane, I'm your mommy, and John, I'm your mommy, too. You are both my children.

The adult has introduced the differentiating linguistic cues "too" and "both". Further, she has emphasized some of the features basic to recognizing family relationship and their classificatory terms. Thus, Jane and John have had their language extended as well as having their concepts of family, mother and sibling better defined.

It is known, however, that a child can focus on categories, can abstract, and can generalize even before he talks. To recognize the permanence of an object, and to associate it with pleasure or pain are indicative of considerable intellectual activity of abstracting and generalizing. The baby's shout of glee when he hears the rattle of bottles or his whimper when he is put into his bed have told us that he knows the meaning of food and the meaning to nap. To state that more complex abstraction and generalization are highly correlated to language growth is to admit a truism. As was previously stated in the Introduction, we are so sure of this that we make inferences about another's intellectual process from the language he uses. Educators also use language as an index in understanding the intellectual processes of students, yet we cannot describe in any detail the inner process of the mind, nor can we explain the precise role of language in the thinking process. Nevertheless, we preceive that a large majority of concepts can be extended only as language grows, and that language grows as the concepts build. It is in the verbal interaction with an adult that the environment takes on meaning, inviting further thought, and demanding more language. The teacher in the classroom, fortunately, draws on a linguistic sophistication and discipline that sharpens the focus for learning; she is able to systematize and thus accelerate the language and thought development of the child.

It is indeed fortunate that a child has access to a linguistically sophisticated adult in the classroom to compensate for whatever deficiencies that characterize his home.

CHAPTER V

LANGUAGE MATURITY

In their effort to systematize the natural method more effectively some teachers will be prompted to learn more about the nature of language and its systems at a more scholarly and sophisticated level. This last chapter is written with the hope that it will help to whet intellectual appetites in that direction. If it is *too much* at this point, the author advises a delay in reading it until there is a felt need to seek further understanding of language per se.

Growth in Syntactical Control

Studies of young children indicate that there is a fairly constant order in the command of syntax, according to O'Donnell, Griffin, and Norris (1967), although the rate of development varies. There is also an increase in transformational density. They observed in their study that all but three of thirty-nine specific structures and functions of speech identified for study had been mastered by the kindergarten child, and those were three which were seldom used by older children, or not in use in the children's situation. There must always be a situational demand for a language form it if is to be effectively practiced and absorbed internally as part of the speaker's repertoire.

It can be noted here that there are language formulas that are relatively constant, forms that can be acquired and used very quickly. They are amenities of speech which are relatively unrelated to intellectual involvement. Formulas like, "How do you do?", "How are you?", and "I'm fine, and you?" are not to be confused with English patterns that can be altered and manipulated into countless forms for environmental mediation.

Transformational Density

As a child matures, his language increases in transformational density. This means that he combines within a main clause and all subordinate clauses, a variety of structures. A sentence may carry many implied statements. For example, there are six implied statements in, "The big black cat crossed the high bridge."

(1) The cat crossed the bridge.
(2) The cat is big.

(3) The cat is black.
(4) The bridge is a high bridge.
(5) The action has already happened (tense).
(6) There is only one cat and only one bridge (singularity).

A sentence with transformational density is loaded with meaning because of additions to the main or kernel idea, the relating of kernel ideas to each other, and limitations of ideas involved. For example, in the selection of an article, limitations are stated. "The" is a determiner signalling the approach of a noun which may be singular or plural, whereas "a" signals specifically that a singular noun follows.

Syntactical complexity resulting from increasing density of transformation correlates far more closely with maturity than does mere fluency or voluble flow of speech.

For example, a discussion about tasting asparagus might evoke such observations as follows:

Carlos: It's long.
Marie: It's green.
Carlos: I ate some. I didn't like the taste.
Marie: I like the taste.

The teacher in her response could transform these four very simple sentences into a structure with density. She can generate a more elaborated and more mature structure to model such as, "Carlos didn't like the taste of the long, green asparagus, but Marie did."

Sentence Kernels

Grammarians are seeking to identify the fewest number of sentence types within the English language with which one can communicate adequately and which are basic to all the possible elaborated sentence forms. A conscious modeler of the language could certainly be more systematic if he knew just what sentences were kernel. However, there is not agreement about these kernel sentences. Owen Thomas (1966) says, "A kernel sentence is simple, active, declarative, with no complex noun or verb phrases (i.e., no adjectives, adverbs, conjunctions, prepositions, etc.)" (p.10). He points out that relationships within such a sentence are obligatory whereas a transformation is optional. Owen Thomas uses the following example: "The boy is eating the cake," is a kernel sentence. The following are transformations of the kernel:

(1) The tall boy is eating the cake.
(2) Is the boy eating the cake?
(3) The boy isn't eating the cake.
(4) What is the boy eating?
(5) The cake is being eaten by the boy.

Thomas lists four basic types of kernel sentences. Restated in terms not usually used by linguistics, they are:

(1) Subject + to be + a noun or an adjective + the option of an adverb.
(2) Subject + an intransitive verb of action + the option of an adverb.
(3) Subject + a transitive verb + a direct object + the option of an adverb.
(4) Subject + a copulative verb + an adjective or a noun + the option of an adverb.

Some illustrative examples offered by Thomas (p. 32) are:

(1) The animal is an aardvark.
The aardvark may be happy.
The aardvark has been there.
(2) The forest is sleeping.
The dew has fallen.
The parachutist may jump tomorrow.
(3) The Frenchman drank the wine yesterday.
The draftsman may have bought an elephant.
The aardvark is eating his supper.
(4) The professor has become angry.
The team looks terrible today.
The steak tastes good.

Since these kernel forms are basic to all the transformations of the language, an observant teacher could determine whether all patterns were easily used by her students with completeness and without ommission of functors, the structural elements of the language. This is not to suggest that speech at the primary level should be held to the level of the kernel sentence. Quite to the contrary, the teacher expansion of child speech should introduce increasing varieties of patterns with increasing density of transformations.

As a matter of fact, some children by third grade may be interested in the linguistic play involved in seeing how many ways specific ideas can be expressed and in deciding which they like best. This can be done without resorting to conventional grammatical analysis and drill.

For example, a situation may lead to the utterance of such sentences:

I hear the birds.
The birds are singing.
Their songs are happy.

The children can be guided to restate their ideas in one sentence but in a variety of sentence patterns such as:

The birds I hear are singing happy songs.
The birds that I hear are singing happy songs.
I hear the birds singing happy songs.
The songs that I hear the birds singing are happy.
The songs I hear the birds singing are happy.
I hear happy songs sung by the birds.
I hear happy songs that are sung by the birds.
I hear the birds happily singing.
I hear the birds singing happily.

Egocentric and Socialized Speech

The qualitative observations over several decades of child development and of language and of thought by Jean Piaget and his colleagues in Switzerland, have influenced psychologists and educators to concern themselves more and more with the nature of the processes of a child becoming a thinking and organizing adult who can code his experience linguistically and who utlizes language as a mediating instrument both to understand and to use his environment.

Out of this has developed increasing distrust of the idea of fixed intelligence. There is considerable evidence that intelligence grows with language as a major facilitating agent to enhance the child's perception of environment. With adequate language, a child can better see and experience his world. Just being able to label discriminatingly what he sees, enhances the child's perception. On the other hand, the child's language takes on meaning as he, himself, becomes involved in an active environmental experience. Cooking experiences in a classroom with rich language related to intellectual understanding of the scientific processes in cooking are excellent examples of the school's meeting the need for the child to live through a language and environmental interaction.

Piaget identified levels of language development as the child progresses from a self-centeredness to a socialized level, distinguishing between egocentric speech and socialized speech. Although egocentric speech may be uttered in a group setting, the speaker may not be concerned at all with communications, whereas socialized speech is at an interacting level of communication. According to Flavell (1963), the young child is egocentric and marvels that others see things differently than he does and that there are other points of view. It is in the actively interacting process with the adult that the child is able to progress from egocentric to socialized speech. Piaget (1963) describes the egocentric speech at three levels:

(1) Repetition: a remnant of baby prattle with no social character.
(2) Monologue: the child talks to himself as though he were thinking aloud.
(3) Dual or Collective Monologue: A monologue in the presence of another whose reaction or response is of no concern.

Socialized language, however, consists of various areas, all of which involve interaction and the awareness of others' thoughts like:

(1) Adapted information
(2) Criticism
(3) Commands, requests, threats
(4) Questions
(5) Answers

According to Piaget, the egocentric level characterizes early childhood performance. There is considerable evidence that as late as grade one and even beyond grade one such egocentricity may persist. Piaget states that there can be no doubt that without originally imitating others and

without the desire to call his parents and to influence them, the child would probably never learn to talk. In contrast, socialized speech which opens the possibility for learning and for practice of new modes of thought is developed from a satisfying relationship with an adult.

Sensory-Motor Development

Paralleling the growth from egocentric to socialized speech, the young child in his exploration of his world is touching, manipulating, categorizing, conceptualizing, and stabilizing his concepts.

Piaget describes in much detail the nature of the child's environmental exploration, his accommodation to his environment, and his assimilation of perception, association, and insights.

The new infant explores his world through his senses and responds to perceptions with motor involvement. This is extended until about age two. It is perceptual and essentialy non-symbolic with the child responding physically to environmental stimuli. Sensory stimulation and variation in stimulation are especially vital for maximum development at that level.

From about ages two to eleven, the child begins to recognize his environment for himself, to recognize "groupings" and to see his world symbolically. This is accomplished largely through concrete manipulation of the environment.

From eleven to fifteen, the child normally moves to a level of formal operations with increased logic and abstraction of thought.

There is considerable evidence that to short circuit any of these levels and their multiple sublevels of development is to permanently impair development. The more actively involved the infant has been in exploration of his environment during the sensory-motor period, the better able he is to classify and categorize his world at the next level of intellectual growth. Conversely, the less involved he is during the sensory-motor period, the less able he is to comprehend his world. The more adequately the child relates to environmental experiences at any level, the more adequate he is to meet and to derive meaning for himself from later experiences.

This raises the question as to whether the natural method of language learning can be accelerated. The author believes that if the adults in the child's life are more aware of the implications to the child's intellectual growth of an adult mediating the environment and coding it with a sophisticated linguistic skill, these same adults will recognize how essential they are for modeling corrective feedback elaboration, expansion, extension of knowledge, and reinforcement. Such awareness will prompt them to structure the environment to provide clear intellectual and linguistic foci. The nature of such a structured arrangement will be determined by the teacher's analysis of the language of the classroom to ascertain what growth is needed linguistically to facilitate further cognitive development and vice versa.

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