DOCUMENT RESUME

ED 108 757 PS 007 964

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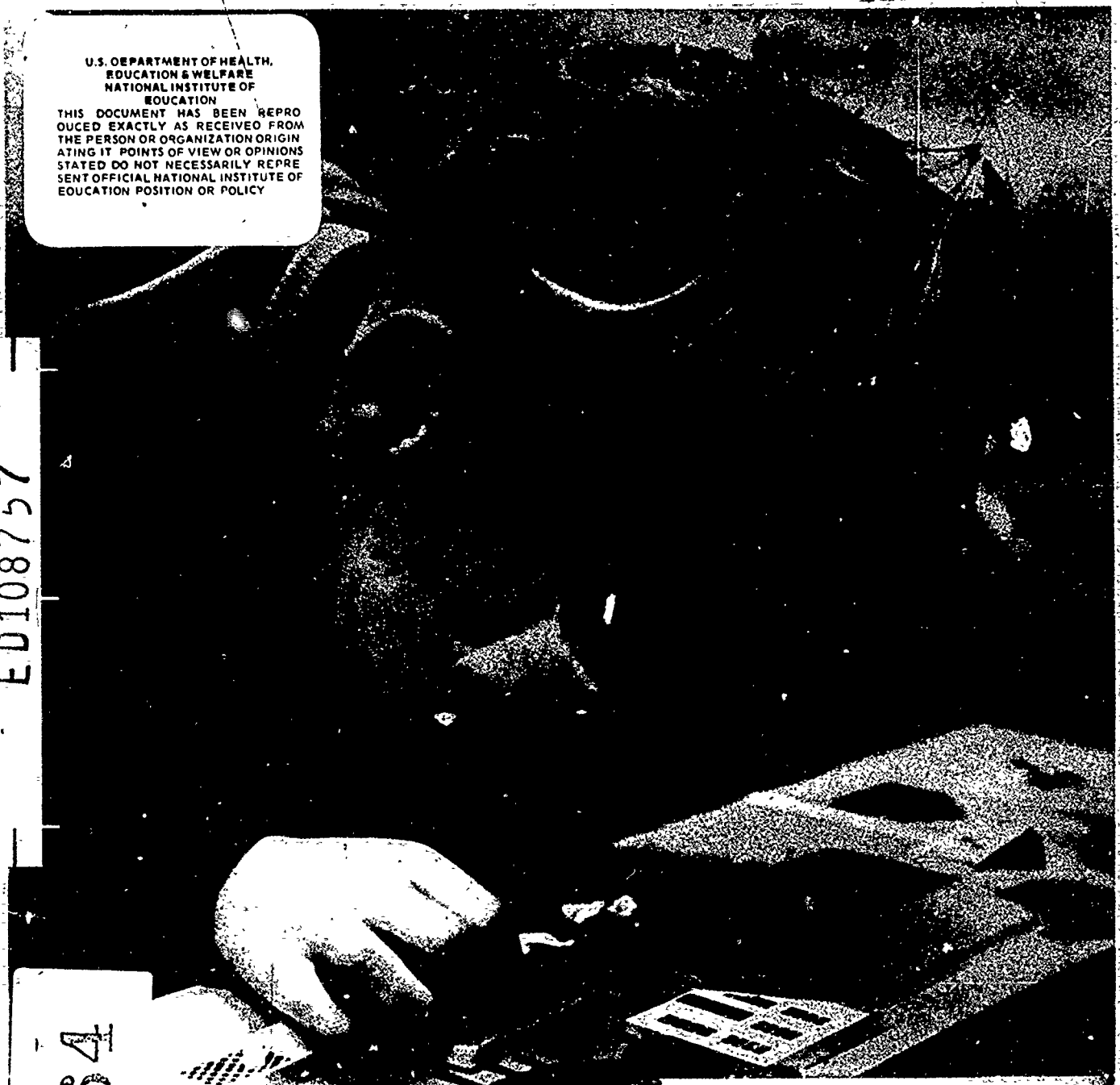
TITLE Developmental Learning Process. A Performance-Based Early Childhood-Special Education Teacher Preparation Program. Monograph No. 5.
INSTITUTION Virginia Univ., Charlottesville. School of Education.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE 74
GRANT OEG-0-7104153(603)-71-74
NOTE 38p.; For other documents on this program, see PS 007 960-974

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS Behavioral Objectives; Developmental Programs; *Early Childhood Education; Interaction Process Analysis; *Learning Processes; Learning Theories; *Performance Based Teacher Education; Positive Reinforcement; Questioning Techniques; Special Education; Student Teacher Relationship; *Teacher Education Curriculum; Teaching Methods; *Teaching Techniques; Verbal Stimuli; Video Tape Recordings

ABSTRACT

This module, used in the Early Childhood-Special Education Teacher Preparation Program at the University of Virginia, describes how the learning facilitator (teacher) functions as an interactor in the developmental learning process in a child-centered curriculum for young children. The introduction contains a description of the role of the learning facilitator in the developmental process and lists the types of encoding techniques and questioning and statement strategies available to the teacher. The use of verbal reinforcement, extention and elaboration as feedback techniques is discussed. The content of verbal interaction is classified according to cognitive, perceptual motor, social and language development, and the mode of interaction defined. Instruction in this module includes use of video tape recordings of teacher-child interactions. An observation rating scale (with coding formulas) and classroom discussion scripts used with these video tapes are presented. Also outlined are the schedule of classes and practicums and the competencies to be acquired by the student through study of this module. (ED)



Developmental Learning Process

Marlis E. Mann

Monograph No. 5

The development of the program reported herein was supported by the Bureau of Education for the Handicapped of the U.S. Office of Education (OEG-0-7104153 [603]) 1971-1974.

The opinions expressed herein do not necessarily reflect the position or policy of the Bureau of Education for the Handicapped and no official endorsement by BEH should be inferred.

Printed by
Jefferson Printing
215 Albemarle St.
Charlottesville, Virginia
for
A Performance-Based Early Childhood-Special Education
Teacher Preparation Program
at the
School of Education
University of Virginia
Charlottesville, Virginia

All Photographs except Back Cover:
Lovelace Cook

BACK COVER: Ruffner Hall, School of Education, University of Virginia.
(Courtesy of University of Virginia Department of Graphics.

The Developmental Learning Process in Early Childhood Education

TABLE OF CONTENTS

INTRODUCTION

In recommending a curriculum process for young children one must have a theoretical rationale upon which such a process shall be based. Since this paper will deal with an aspect of a curriculum process from a developmentalist point of view, a brief preliminary description of that point of view will be helpful.

Developmentalists begin with an orientation which focuses on sequential stages of human development. Their sources for identification of educational outcomes for young children are derived from empirically based learning theory and observed evidence of child development which includes contributions from many disciplines. psychology, anthropology, sociology, pediatrics, and physiology.

A developmentalist, then, is interested in changes with behavioral and physical dimensions as a function of age and/or stage. The interest is in describing how the child is behaving and learning as well as the specific content of what he is learning, since both are evidence of developmental growth. While content is important, it often serves as the means for the process. In other words, the primary outcome may not be content (i.e., it is not always more important for the child to learn about apples than artichokes) but the development and broadening of classification categories and skills that develop from the study of a concept. Therefore in creating a curriculum it is the interaction process between child and environment developmentalists are primarily interested in.

If one subscribes to developmental psychology, one holds that how a child develops can be seen sequentially in the major areas of development and can be measured in terms of process and content. Children will fluctuate greatly in their development and, a child below norm performance by which developmental ontogenies are described – is not necessarily deviant. The advantage of knowledge of the developmental sequence is to be able to locate the operating level of the child and then environmentally broaden the skills of that level and/or assist him/her to the next level. The concern of the adult is not whether the child is behind or ahead of the norms, but rather where he/she is and how the child can be assisted to acquire new skills for which he/she is developmentally ready. Wide discrepancies in the growth of abilities are unusual and should be further investigated. Children with wide discrepancies (6 months or more depending on chronological age) below norm of development are considered to be high risk children and it is in these situations that a more direct strategy may be implemented, depending on the are of development involved.

Not all children develop best in an interactive developmental learning environment then, ...d it is not suggested that this is the most effective process with all children for the majority of a learning intervention program whereas norm and near norm children seem to benefit the most from a developmentally based interactive learning environment. Yet all children can benefit from the diagnostic descriptors provided by developmental psychology which provides a means for determining developmental delays and therefore suggests teaching strategies that might be most effective.

The purpose here is to describe how the learning facilitator functions as an interactor in the developmental learning process. Since this approach centers on child responses, it suggests an interactive process that supports a child centered (child acting on the environment) curriculum versus the environment acting on the child.(teacher centered). It provides the interaction process for a child centered environment.

The University of Virginia early childhood curriculum consists of four major elements. These include the learner characteristics of the children, situational variables, teaching strategies or processes, and content carried by the selected strategy.

The set of conditions at any point in time stated as conceptualizations and performances are the basis for designing instructional experiences for children. More specifically:

Learner characteristics play a role in the type of response the child makes. They include developmental level, response modes, socio-economic level, and the interest of the child at any given moment. Other learner characteristics found to be relevant are sex, native language, eyesight, hearing, attending ability, and timing.

Situational variables have to do with the physical content and group structure of the preschool environment. The adult-child ratio is an obvious situational variable. Other variables include placement of materials and equipment, freedom of movement, and time schedule.

Instructional variables are learning strategies. Learning strategies are related to the pattern of the teacher's behavior the manner in which he/she elicits child response and the type of feedback he/she gives to the child response At the University of Virginia Child Development Center two basic instructional strategies or processes are used developmental

and directive. Behavior modification is used in special instances. These are discussed in ... Child Development Center monograph.

Content carried by the strategy is the conceptual understandings the teacher identifies relating to the concept being introduced in the preschool environments or is dependent upon the child's words or the objects that the child is attending to. The developmental process infers that in many situations the child's motivation and attendings decide the content.

While planning this type of curriculum one must look at the variables in conditions for learning. Following are the steps in setting conditions for learning:

1. Administer appropriate instrument to determine child's present level of operation for a given developmental outcome.
2. Determine the developmental learner outcome which will relate to the next developmental level or broaden skills in the present developmental level depending on information received in (1).
3. Evaluate learner characteristics of child.
4. Evaluate situational variables.
5. Select appropriate strategy for the child that takes into account 2, 3, and 4.
6. Determine content for the strategy.
7. Organize the learning environment.
8. Implement the designed conditions.
9. Continually assess where the child is in relation to identified developmental outcome.

Role of Learning Facilitator in Developmental Process.

The verbal behaviors of the adult has long been thought to have an effect on child's responses and in turn what and how he learns. Although many hypotheses have been made few research studies have been conducted to shed light on these speculations. Anderson (1964) in research that dealth with what he considered to be the socializing aspects of classroom life found that the teacher's own leanings toward dominative or integrative contacts determined how children would behave on the same variables. Domiation was defined as forceful behavior between two individuals in which one imposes hiw will upon the other during a social episode or "contact", without regard for his rights. Contacts intended to produce socially integrative behavior are marked by interpersonal flexibility and adaptation that, in turn, reflect mutual respect for human differences.

Anderson's results suggest that in classrooms where a teacher tended to be more integrative, children demonstrated more spontaneity and initiative and volunteered more social contributions to problem solving. On the other hand, where the teacher was more dominative, there was greater child polarization around complying to teacher domination and rejecting it completely. One could hypothesize that if children demonstrated convergent behavior under a dominating teacher and more divergent behavior in social problem solving situations under an integrative teacher they would display similar behavior in cognitive learning situations. An example of this would be Flander's (1960) studies concentrated on differences between direct (authority centered) vs. indirect (supportive) influences and these influences on child learning and attitude change. Besides showing the effect of indirect teacher style on the promotion of positive pupil attitudes toward school, Flanders also showed that they influenced student learning. In observing 15 seventh grade social studies teachers, and 16 eighth grade mathematics teachers who taught an aggregate of 744 pupils, he discovered that (a) indirect teache. influence increases learning when a student's perception of a goal is confused and ambiguous and (b) direct teacher influence increases learning when a student's perceived goal is clear and acceptable.

According to Biber (1973) in a developmental learning environment the teacher establishes a mode of interchange to support the growth process. Much of the verbalization is conversational, but is neither direct in probing nor evaluation. It does not force specific responses nor does the child have the feeling his response has a "correctness or wrongness." It may take the form of putting the child's actions into words or calling out a reciprocal response from the child or it may serve a stimulating function raising questions that arouse curiosity or bring into focus some instance of a conceptual problem that requires resolution. The ongoing cycle of challenge and satisfaction in intellectual mastery provides the source or inner motivation that theorists such as Piaget describe as the child continually seeking equilibrium.

Marshall (1972) in her discussion of open classroom suggests that the teacher, as a facilitator of learning, is a necessary condition to implement openness. More specifically she suggests that the learning facilitator is a catalyst who is

> a resource person rather than an authority figure, helping individuals find ways of answering their questions and asking questions which stimulate the students interest and pursuit of competence, as well as, a provisioner of the educational environment, providing a wide variety of learning activities and materials from which the students may choose and which may be used in divergent as well as convergent directions.

Brandt (1973) in summarizing Bussie and Chittenden's (1970) criteria for an "open teacher" listed the following interactive behaviors with children. (1) seek diagnostic information regarding how and what children are learning, (2) act to guide and extend children's learning activities rather than direct them closely, (3) encounter children honestly, suggesting other resources when they themselves cannot help and evaluating children's products differentially but sincerely (e.g., not praising poor quality work), (4) show respect for the children and (5) display warmth, friendliness and support. Many of these descriptors are abstract as they stand here and would call for rather subjective judgment to be made.

Some educators would imply that learning or perceiving is something that happens *to* a child or an adult because of what we do to them rather than learning and/or perceiving being something that happens *in* a child with all anyone can do is a better job of arranging activities and conditions so the child can gain this happening. It is the developmentalist who seeks to arrange an environment which will stimulate the child to act on it.

There seem to be two basic elements of the developmental teacher strategy that carry content in a learning situation. These consist of an environmental stimulus and reinforcement which are dependent on the response of the learner, and can be provided by the learning facilitator, or a peer.

In the developmental process there are two combinations that are most commonly used. These consist of (a) an antecedent behavior of the learning facilitator or environment (Sa), followed by a learner response (R), (Sa→R), or (b) a learner response(R) followed by a form of feedback or a subsequent stimulus by the environment or learner facilitator (Ss) thus creating a pattern (R →Ss). Occasionally a learning facilitator may use a more directive interaction pattern of (Sa→R →Ss) intermittently with the (Sa →R) or (R →Ss). This would still be labeled within the less directive or developmental model since the larger percentage of interaction is of the (Sa →R) or (R →Ss) nature. In the (Sa →R) pattern the learning facilitator is conscious of creating an environment, be it physical or verbal that will elicit a response from the learner. These stimuli have been labeled encoding strategies meaning those techniques that will get the child to verbalize.

The developmental method of teaching language consists of encoding techniques - those stimuli given by the adult that elicit verbalization from the child which includes questioning and statement giving strategies and corrective feedback techniques (responses to child's utterance) which include verbal reinforcement, extension, elaboration, and extension of thought.

Encoding Techniques

Encoding is the child's ability to put ideas into words. The learning facilitator must determine what it is that motivates the child to talk. The technique used in inducing the child to speak varies from child to child and may not be exactly reproducible by other adults.

As stated previously encoding is the person's ability to put ideas into words. Language development of the child who is beginning to use language symbols is contingent on encoding. John and Goldstein (1964) argued that the process of generalization and discrimination involved in learning the meanings of more abstract words does not come about simply through "reception exposure" to many examples, but through "active participation with more verbally mature individuals." The benefits of a variety of non verbal experiences may depend on the availibility of help in encoding that experience into words. The stimuli to encourage the child to encode will vary from child to child. One must determine what it is that motivates a child to talk. The most frequently used questions by adults and child alike at this stage of development is "What's that?" The other "wh" questions are also appropriate (Stout and Moore, 1968).

Questions to which children can answer "I don't know" are poor questions. The learning facilitator has succeeded only in making the child uncomfortable. Since there are many things the young child and especially the disadvantaged child does not know, asking him questions he can't answer is harmful to his self image.

According to Crump (1970) studies show that there is a great emphasis on factual knowledge questions in the early grades. Intelligent thought requires much more than the simple acquisition of fact. Good questions should be designed to develop the child's ability to perceive and process relevant stimuli received from the senses. Questions should raise the child's thinking above the factual level. Questions require planning so that both language development and some degree of problem solving are involved. A study on teacher's questions asking behavior as a means of stimulating the student's intellectual operations suggested that teachers trained in a process approach program used significantly more perception questions than did the nontrained teachers (Zimmerman and Bergan, 1971).

Crump lists the purposes for teacher questioning as: to arouse interest, to provoke thought, to guide thinking, to stimulate creativity, to direct detail, to draw conclusions and generalizations, to support findings, to diagnose pupil difficulty, and to measure teaching effectiveness.

The learning facilitator also has the responsibility of guiding the child's attention toward the next step in learning. Children need to be involved in thoughtful planning. Experiences should be planned to help children improve their sensory intake, to look for relationships, to become aware of causality, and to become more observant.

Describing observations is based on the development of language skills. An environment which stimulates perception of color, size, weight, shape, texture, etc., gives many opportunities for the facilitator and child to interact with questions that build basic concepts. The child makes comparison, classifies and perceives relationships, and leads toward generalization of experiences.

Another direction of asking questions and making thoughtful guesses, is important as the learning facilitator assesses the child's background information. He learns what concepts the child already knows and can build on them with new materials and skillful questioning. He can plan experimentation and manipulation activities which require the child to ask his own questions and make meaningful predictions of what will happen. Later, the facilitator can help the child to clarify and summarize what has been learned.

The importance of stimulating questions is described by Lowenfield and Brittain (19) as an opportunity to enrich the child's experience of working with the media. As the child is drawing or painting and has reached the stage of naming (usually between three and four years of age), he can be helped toward more imaginative thinking by questioning.

The learning facilitator should interact with a child in such a way that he is invited to talk about his thinking and that he finds gratification in talking about his thinking. His questions should not sound like tests.

Taba (1967) in a discussion of concept formation identified three categories of thought process or cognitive tasks (a) concept formation, (b) interpretation of data and making of inferences, and (c) the application of known principles and facts to explain new phenomena, to predict consequences from known conditions and events, or to develop hypotheses by using generalizations and facts.

Since concept formation is considered the basic form of cognition on which all cognitive processes depend, Taba utilized basic concept formation and defined it as consisting of three different processes or operations. A graphic representation of the cognitive task of concept formation and the skills for using it follow:

Overt Activity	Covert Mental Operation	Eliciting Questions
1. Enumeration and listing	1. Differentiation	1. What did you see? —hear? —note?
2. Grouping	2. Identifying common properties, abstracting	2. What belongs together? What are the criteria?
3. Labeling and	2. Determining the hierarchical order of items. Super and subordination.	3. How would you call these groups? What belongs under what?

Thus, questioning technique serves as an invaluable encoding tool. Planning the questioning adds to the cause of effective interaction. The following are example of using questioning strategies. Two teachers have asked their classes this question: "What would happen if the desert nomads could get all the water they could use?"

The first teacher is using the developmental process of Sa →R while the other is using the questioning as part of Sa→R→Ss or more directive teaching strategy.

Teacher 1 and students:

S1 They wouldn't be traveling anymore. The would just stay to get water.
T1 Why do you say this?
S1 Because they usually travel to get water.
S2 There would be more grass for their sheep.
T1 And what would this mean?
S2 They wouldn't need to move around to get food.
S3 Well, they would probably have more food and the rain would make things grow, The could plant flowers, plants and trees for wood.
T1 And this means—
S3 They could use the wood for houses and stuff.
etc.

Teacher 2 and students:

S6 They'd be using one house and stay in one place.
T2 All right. They'd stay in one place and they might make their houses with mud.

S8 They wouldn't have to move so much.
T2 Why?
S8 Because they'd have enough grass.
T2 Right. to find their animals.
S3 They'd make crops grow.
T2 What kind of crops do you think they'd grow?
S3 Things that need sun and not too much water.
T2 What kind of things would that be?
S3 Barley.
T2 They could grow barley and not have to go to the bazaar to buy it.
(NWREL, 1968, 278)

The two tools the learning facilitator uses then in encoding are the question and statement.

Questioning Strategies.

Questioning strategies appear in three basic forms for the early childhood level. These include direct questions, hypothesis stating questions, and attention seeking questions.

1. Direct questions These are typically "wh" questions that call for facts, labels, or one word responses. These questions ask for a single correct response from a field of alternatives.
   who–who did it?
   when–when are you going?
   what–what shapes are your name tags?
   where–where is you toy?
   which–which picture is better?

2. Hypothesis stating questions–(yes and no questions)
   do–do you see this?
   would–would you put the toy away?

3. Attention seeking questions open questions. These require the child to use sentences and to think more divergently in that the question-stimulus asks for multiple responses.
   How (does, could, will)
   Tell me about
   What can you tell me about
   What does _____ make you think of?
   What things make you think of _____?
   What is _____?
   In what ways does _____?
   What is not happening?
   What kind of pictures do you think I have?
   What other ways can you do it?

The following strategies are suggested by Darrow (1966) to encourage verbalization of conceptual thinking.

Verbal spontaneity and free response:
   Question conditions to elicit;
   What can you tell us about . . . ?
   What can you draw or write about . . .?
   What can you show us about . . . ?

Following are examples of questions eliciting free responses about two:

Tell all you know about *two.*
What is *two*?
What does *two* make you think of?
How can you show *two*?

Do you know any words that mean *two*?
What things make you think of *two?*

Statement Strategies

There are four types of statements that can be used to elicit a response.

1. Direct statements:
   "Jerry has found an interesting bug."
2. Hypotheses statement (contains element of doubt):
   "I'm not certain how it will turn out."
3. Attention seeking statement:
   "Look at the wheels go around."
4. Requests in form of a statement (imperative):
   "Come here and turn the handle."

CORRECTIVE FEEDBACK TECHNIQUES

In order to facilitate the learning of sounds, sequences of sounds, names of objects, experiences, and differentiation between the names for familiar objects, experiences, and differentiation between the names for familar objects and experiences, and finally the patterns of grammar and syntax characteristic of his given language the child needs phonetic, semantic, and grammatical feedback. Wyatt (1969) describes the ideal language teaching-learning conditions to contain the following:

1. The adult matches words and phrases closely with those of the child.
2. The adult teaches the child new words of differentiation among similar objects and concepts.
3. The adult provides child with immediate specific verbal feedback.
4. The adult teaches casually in a setting of mutual delight in each other.

Brown (1949) suggests that there are at least three different types of feedback. informational, regarding, and motivating. Feedback should also be continuous and appropriate for the child's age and stage of development (Wyatt, 1969).

The techniques of corrective feedback used in the developmental process are verbal reinforcement, extension of phrases. elaboration and expansion of the child's ideas. Corrective feedback occurs as a response to the child's utterances.

Verbal Reinforcement.

This technique entailed giving immediate "feedback" when the child gives a verbal response (Gray, 1968, Wyatt, 1969). It is important to reinforce the child or make the child feel good for trying to help him to realize why it is good.

A reinforcer is any "stimulus event that will maintain or increase the strength of a response of stimulus-response connection associated with it (Deese, 1956, p. 16)." In this study the reinforcement was in the form of a verbal reinforcer.

Skinner (1957) says that language learning can be studied by observing (a) an operation performed upon the organism from without, and (b) an instance of behavior. For example, speech sounds are emitted and reinforced as any other bits of behavior. Language is divided into two kinds. Mands and utterances making demands upon the hearer are reinforced by the hearer. Tacts are the naming segments of language (richer and more versatile than mands) and reinforcement by the sound and the reinforcement by the adult that increases the amount of verbalization of the child.

Adult reinforcement of speech as such may increase the gross amount of responses. Evidence for this effect does exist, at-least during short sessions (Salzinger, 1962).

A verbal reinforcement technique consists of words like "good," "yes," "that's right," that are used when the trainee answers the child's speech. Verbal reinforcement technique is also present when the adult answers the responses of the child by praising verbally using the following kinds of words in full sentences (Gray, 1968, Wyatt, 1969, Salzinger, 1962).

Words	Sentences
good	Good for you to know that is Jerry's toy.
yes	Yes, it is a black dog.
That's right	That's right, it is round.
I agree	I agree, it does look dirty.
(surprise)	I didn't know you knew that!
(repeat child's word)	Child: "Dog." Adult: "Dog."

Verbal reinforcement confirms to the child that his verbalization was accurate and valid.

Extension.

This technique provides corrective feedback and experiences for the child when he talks with the adult. That is, the adult said more completely what the child had tried to say, but keeps it close to the child's own words. Children between 12 and 24 months usually produce one word utterances most of which are nouns in adult grammar. Verbs and adjectives appear also (McNeill, 1966). It is these words that the adult extends.

The following table from Brown and Bellugi (1964) shows how the adult repeats and adds to the child's words and word parts. These additions make the child's speech more complete and more specifically appropriate to the situation.

Child Says	Learning Facilitator
Baby highchair	Baby is in the highchair
Throw Daddy	Throw it to Daddy.
Eve lunch	Eve is having her lunch.

Such typical extensions constitute examples of feedback. In fact, extensions constitute the one category of adult responses in which the nature of the assistance to the child can be specified. Brown and Bellugi (1964) suggest that extensions provide this assistance, particularly for the acquisition of grammar:

> By adding something to the words the child has just produced one confirms his response insofar as it is appropriate. In addition one takes him somewhat beyond that response but not greatly beyond it. One encodes additional meanings at a moment when he is most likely to be attending to the cues that can teach that meaning (p. 143).

Following are examples of the learning facilitator extending the child's words while interacting in the classroom. This learning facilitator provides the new label of rolling pin for the child to learn.

Situation 1

Learning facilitator	—What is this? (rolling pin)
Child I	—A cookie roller A tortilla roller.
Learning facilitator	—What is it's name?
Child II	—You roll dough with it.
Child III	—It's long Johns.
Child IV	—A roller.
Learning facilitator	*—It is a roller, but it has a special name.*
Learning facilitator	—David, what does your mother call it?
Child I	—I don't know, but she uses it.
Learning facilitator	*—It has a special name. It's called a rolling pin.*
Child II	—Rolling pin.

Situation 2

Child I	—Black and white.
Child II	—Speckled and spotted.
Learning facilitator	—Yes, these seeds are speckled and spotted with black and white.
Child I	—They have points.
Child II	—They got little seeds to eat inside. Open seeds.
Child III	—Yes, it's pointed, too.
Learning facilitator	—Yes, the outer shell is pointed and the inner seed is pointed too. What else is pointed?

Elaboration.

Cazden (1965), in a study with two year olds, found in acquisition of grammar that meaningful variety and frequency of conversational engagement is critical as opposed to corrective exposure to limited forms. She concluded that "what young children should have is plenty of opportunity to talk things over out loud with conversation focused on the development of ideas. Given this opportunity, the acquisition of grammar will be assisted too."

This technique is further supported by Razran (1961) in a Soviet experiment. Nineteen month old children were taught the concept of book by three different methods. One group received a single book and a single sentence. The varied language group received a single book and twenty different sentences about the book. The varied referent group received twenty different books and one sentence. Learning as measured by the child's ability to select a book from a group of objects, was greatest for the varied language group, next best for the varied reference group, and practically non existent for the first group. Slobin (1967), in his studies of children's acquisition of syntax, found that expansions were among the most important teaching devices used by adults. An e

An elaboration technique consists of the learning facilitator giving the child a new word not a part of the child's vocabulary when extending his sentence or when describing something to him (Cazden, 1965, Razran, 1961). The facilitator in responding to the child, uses one of several classes of words for elaboration which are given below. Elaboration consists of adding a descriptive word to the child's words or describing an object to him.

The following areas of concepts can be used in elaboration:

1. Sight
   a. Size—big, little, long, short, tall, wide, tiny, narrow.
   b. Shape—two and three dimension, round, square, cylinder, tube, sphere.
   c. Color—primary, secondary.

d. Condition–old, new, shiney.
e. Composition–wood, plastic, metal, knitted, cloth, etc.
f. Major parts
g. Function–what is it used for?.

2. Touch–shape, texture, temperature, and weight.

a. Texture–

hard	rough	dry	scratchy
soft	smooth	gritty	prickly
pliable	waxy	rubbery	slippery
furry	mucky	glassy	muchy
rigid	sticky	slick	sandy
wet	gooey		

3. Taste-texture –sweet, sour (cooked, uncooked) delicious, crisp, tart, spicy, greasy, gooey, bitter.
4. Smell–pleasant, unpleasant, odor, smell, spicy, sweet, pungent, strong, milk.
5. Hear –what sound does that make? rattle, pop, screech, buzz, loud, soft, sha , s.nal, clap, bump, hiss, clearn, low, high, muffled, ring.
6. Emotion and feelings–

afraid	pleased	selfish
proud	hopeful	haughty
anxious	happy	peaceful
troubled	sad	poor
grateful	angry	annoyed
ashamed	confident	good
lonesome	wicked	joyful
faithful	wanted	upset
loved	tearful	bashful

7. Positional concepts–

in	over	slanted	slanting	out
on top	diagonal	through	beneath	next to
beside	high	away	there	low
around	north	behind	south	below
between	under	left	on	right
east	above	west	far	top
near	middle	close	before	flat
after	upright	between		

8. Opposites and contrasting conditions–

same-different	light-dark	short-long	old-young
left-right	wet-dry	over-under	in-out
hot-cold	big-small	rough-smooth	up-down
right-wrong	night-day	wide-narrow	behind-ahead
stop-go	big-little	clean-dirty	high-low
soft-hard	on-off	fine-course	loud-quiet
light-heavy			

9. Quantification Experiences–

Pa Part-whole relationships
Number
Weight and mass
Volume
length-width-breadth
Sequence
Value more than
less than
same as

00013

10. Comparison Experiences–

big-bigger-biggest
tall-taller-tallest
little-less-least
more-most
noise-noisier-noisiest
soft-softer-softest
loud-[illegible]-loudest

11. [illegible]periences–

a. Words that express time concepts–

time	day	afternoon
clock	hands	lunchtime
minutes	seconds	numbers
o'clock	morning	noon
hours	evening	early
face	night	late

b. Days of week–

months, seasons — specific time names — daily, weekend, week, today, first, second, etc.

c. Special days and holidays

birthdays weekdays

d. Past–yesterday

e. Present–today

f. Future–tomorrow, next

12. Motion experiences

Motion experiences describe how things move. Marching, running, walking, hopping, "ed" and "ing" tell whether it's happening or has happened, "ly" action words–slowly, quickly, smoothly, quietly, gracefully, jerkily, lazily.

13. Association experiences. Indirect associational experiences are those things that are pertinent to the major concept. Can you think of any other related ideas to_____

Ex: concept: apples introduce the book Johnny Appleseed
letters introduce the conept of the mailman.

Extension of thought. The learning facilitator provides an expansion of the idea with various syntactical models that are more dense with transformations, thereby demonstrating more intellectual discrimination, and more organization of though, and offering more precise semantics. For example:

The children are watching the water boil in order to cook something.
Mike: "I see hot."
Jose: "I see smoke."
Teacher: "That smoke which you think you see is called steam. Steam rises from hot water."

Possible syntactic uses are:	*Simple transformations*
1. Passive	He was tied up by the man.
2. Negation	I am not.
3. Question	Is he sleeping?
4. Contraction	He'll choke.
5. Inversion	Now I have kittens.
6. Relative Question	What is that?
7. Imperative	Don't use my brushes.
8. Pronominalization	There isn't any more.

9. Separation	He took it off.
10. Auxiliary verb	
a. be	He is not going to the movies.
b. have	I've already been there.
c. do	I do have a cookie.
11. Got	I've got a book
12. Do	I did read the book.
13. Possessive	I'm writing daddy's name.
14. Reflective	I cut myself.

Generalized transformations (These are derived from two kernel sentences.)

15. Conjunction	They will be over here and mom will be over here.
16. Conjunction delection	I see lipstick and a comb.
17. Conditional–if	I'll give it to you if you need it.
18. So	He saw him so he hit him.
19. Causal	He won't eat the grass because they will cry.
20. Pronoun in conjunction	Blacky saw Tippy and he was mad.
21. Adjective	I have a pink dog.
22. Relative clause	I don't know.
23. Complement	
a. infinitival	I want to play.
b. participial	I like singing.
24. Interaction	You have to clean clothes to make them clean.
25. Nominalization	She does the chopping and cooking and baking.
26. Adverb	He picked up the toys quickly.

CONTENT OF INTERACTION

M. McVicker Hunt (1964) discussed the concept of the match between the incoming information and that already stored within the listener (the child). He pointed to the discrepancy that often exists between the level of complexity in the language of parents and teachers and the level of complexity of a child can handle comfortably and effectively He suggested the adult incorporate two skills when attempting to determine the appropriate language match for the child. First, the adult should, through listening and observation, ascertain what information the child has already stored and understood and what skills he already commands, and secondly, it must be the adult, the developed organism, who consciously matches his style of communication with that of the child, the less developed one.

The areas of motor, cognitive, social and language development are categorical in nature so that the content of verbal interaction can be classified. Each major area of development contains subcategories. Coding for content will be done by subcategory.

Cognitive development. This area of development contains the subcategories of seriation, temporal and spatial relations, and classification. Examples of these are given below.

Seriation–content relating to ordering. This includes the concepts of and relation of size (big-little), relationships of quantity (more-less), and relationships of quality (rough-smooth).

Temporal relations–these include content relating to time in terms of periods having a beginning and end, concept of events in chronological order, and the concepts that time periods can be variable in length.

Spatial relations–included here are concepts relating to the ability to perceive position in space (in and out), direction in space (to-from), and distance in space (near-far).

Classification–classification deals with grouping. There are basic content areas by which information can be classified These have been discussed previously under elaboration and are simply listed here.

Concept Properties

- size
- shape
- color
- condition
- composition
- major parts
- function

Sensory Elements of a Concept

- touch
- taste
- smell
- hear
- emotion and feeling

Types of Concepts

- positional
- opposites and contrasting conditions
- quantification experiences
- comparison experiences
- time experiences
- motion experiences
- associational experiences

Perceptual motor development. This area of development contains visual perceptual development, fine motor,

visual-fine motor, gross motor, and visual spatial motor skills.

Perceptual Abilities

- Visual Acuity
- Visual Attending
- Visual Memory
- Perceptual Constancy
- Figure Ground Perception
- Perceptual Discrimination
- Depth Perception
- Movement Perception
- Laterality
- Verticality
- Directionality
- Body Awareness

Physical Abilities

- Strength
- Flexibility
- Balance
- Endurance

Perceptual Motor Abilities

- Fine Motor
- Visual-Fine Motor
- Locomotor
- Purposive Skills: Production and Reception of Force

Social Development. There are three major areas in social development. These are self-help skills, individuation, and positive behavioral adjustment to society.

Self-Help Skills

- eating
- clothing
- personal cleanliness
- communication

Individuation

- body image
- self image
- self concept
- self esteem
- self.determination
- social moral self

Behavioral Adjustment to Society. This area includes all those behaviors relating to personality.

- Appropriate enduring relationships with people
- Appropriate reality orientation and constructive use of fantasy
- Controls for appropriate handling of drives, e.g., capacity to delay gratification and constructive use of aggression
- Gratification of goal directed activities precursors of appropriate achievement motivation

Language development.

- Auditory perception
- Phonology
- Syntax
- Reading

Mode of Interaction.

The mode of interaction refers to the type of cognitive operation that is being called upon in the interaction process. Some teacher observation scales and teaching models promise to open up possibilities for measuring this dimension of intellectual activity in the classroom. A fair amount of this work seems to have been inspired by Guilford's research on the structure of intellect (1956). For example, Gallagher and Aschner (1965) have developed an elaborate system for anlyzing teacher-pupil interaction in the classroom with special focus on several factors in the Guilford model. cognitive memory and convergent , evaluative, and divergent thinking. Such an observation scale makes it possible to monitor the extent to which the intellectual processes are emphasized in the classroom and to note their effects on educational accomplishment. A more recent publication by Meeker (1969) further elaborates the applicability of the Guilford model to the classroom and suggests specific curricular designs to nurture certain cognitive operations. These include memory, evaluation, convergent production, and divergent production of figural symbolic, semantic, and behavioral material. A more focused attempt at actualizing Guilford's divergent production operation was Suchman's (1960) inquiry training program, a kind of teacher guided learning by discovery. There are, of course, ways other than Guilford's to classify intellective processes in the classroom. Smith (1960), for example, has studied teacher behavior extensively and identified twelve logical operations involved in it. They include defining describing, designating, stating, reporting, comparing and constrasting, substituting, classifying, opinioning, evaluating, conditional inferring, and explaining. Presumably these operations are modeled by teachers with the expectation that pupils will learn to perform them.

Hunkins (1972) identified the cognitive process categories of memory, comprehension, application, analysis, synthesis and evaluation in teacher-student question inventory. Soar (1972) found in applying the *Florida Taxonomy of Cognitive Behavior* to Head Start follow through children that lower levels of cognitive processes such as memory recall and working with similarities and differences correlated positively with pupil growth in abstract thinking whereas the higher levels of application analysis, synthesis and evaluation correlated negatively for the most part (Brandt, 1973). This would be expected when using an instrument which is designed to measure adult problem solving processes with children operating peooperational cognitive stage.

The mode in the developmental process instrument is specifically designed to measure these cognitive operations which a young child can be expected to use. From analysis of the developmental process patterns of questions asked and needs used hopefully can be identified so the learning facilitator can become aware of her behavior and its relationship to the child's behavior.

The mode of interaction infers that the stimulator/or responder is always transmitting information in some way. The mode becomes the way the information or content is transmitted. Mode in the developmental process consists of the following categories, label, memory, inform, classifies, demonstrates, explains, specifies, corrects, expresses feelings and fantasizes.

MEDIA MOTIVATION FOR INTERACTION

Media in the early childhood movement environment could include organic objects, artifacts, children's literature, movies, films, filmstrips, slides, tapes, lighting, music, found objects, art reproductions, sculpture toys, art media for creating purposes, songs, rhymes, records, and any other environmental object that would motivate the child to verbalize (Mann and Taylor, 1973).

It is often media in the environment that arouses the child's curiosity to ask a "wh" question, to make an exclamation statement or comment or in the case of verbal media–imitate. Many children will learn a song, rhyme or story from listening to a record. Media is the core of a child centered environment and it is the responses the child makes in relationship to media that enables the adult to provide corrective feedback. The media then is the motivation which stimulates the child responses in an (R – Sa) cycle of the developmental process. When it is evident that media is related to the child's response the specific type of media will be coded on the scale.

Measuring the Developmental Process

The following observation rating scale is used to measure the developmental process. The rater or raters view a videotape of learning facilitator-child interactions marking the frequency of event types as they occur. The rater will then replay the tape marking the number of times the strategies could have occured. More specifically, the form of interaction, mode of interaction, conceptual content, and media motivation when it occurs are recorded for each verbal interactive incident between teacher and child. Also recorded will be the form of the developmental process which should have been used if the teacher either misuses a form or omits usage.

Rating Scale for Developmental Process

Teacher _____

Developmental Outcome _____

Learner Characteristics of Child _____

Situational Variables _____

Incident	Strategy Used	Strategy Should Have Used	Mode of Interaction	Content of Interaction	Media Motivation
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Coding for *Form* of Developmental Process

CODE	
	Sa--R: Encoding Strategies
DQ	Direct question
HQ	Hypothesis stating question
AQ	Attention seeking question
DS	Direct statement
HS	Hypothesis statement
AS	Attention seeking statement
IS	Imperative statement
	R--Sa: Feedback Strategies
VR	Verbal reinforcement
Ex	Extension of phrases
El	Elaboration
Ep	Expansion of thought

MR — Memory Recall - to ask for recall of information which was received at an earlier time. Ex: "Where have you used these before?"

I — Informs - to tell a fact.

Cl — Classifies - label, describe.

How did it get started?
Where does it come from?
Who made it?

Analogous relation
Synonymous relation
What is it like?

What is it like?
What is the color (form, texture, etc.)?
What does it look (feel, taste, etc.) like?

How can you use it?
Does it help?
How does it help?
How could it be used?

What does it consist of?
What parts does it have?

How it develops
What it becomes
Will it change?
How will it change?
What is it when it is changed?

D — Demonstrates - to illustrate by example, specimen, or experiment.

Ex — Explains - to make clear or plain.

S — Specifies - differentiates (which block is longer?) What is not happening in the picture? The child is expected to identify similarities or differences to compare on some other basis or to carry out a specified operation which he has been previously taught.

C — Corrects - to make right, rectify, amend

E F — Expresses feeling

F — Fantasizes in thematic play - Why do you suppose that is so?

Coding for *Content* of Interaction

Code	
	Cognitive Development
C-S	Seriation
C-Tr	Temporal Relations
C-C	Classification
C-SR	Spatial Relationships
	Motor Development
M-VP	Visual Perception abilities
M-LS	Perceptual Motor abilities: Locomotor Skill
M-VF	Perceptual Motor abilities: Visual-fine Motor Skills
M-PA	Physical abilities
	Social Development
S-SH	Self-help skills
S-I	Individuation
S-A	Positive social adjustment
	Language Development
AP	Auditory Perception
P	Phonology
S	Syntax
R	Reading

Code for *Media* Motivation

Code	
F	Film
FS	Filmstrip
O	Object
TV	TV Show
G	Game
S	Song
FP	Fingerplay
R	Rhyme
RE	Record
B	Book

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DEVELOPMENTAL PROCESS COMPETENCIES

Cognitive Competencies. Following are the terms, concepts, and people learning facilitators should be able to identify and discuss.

Terms

Learner characteristics
Situational variables
Instructional strategies or processes
Content
Learning facilitator
Developmentalist
Categories of Concepts:
- Positional
- Opposites
- Quantification
- Comparison
- Time
- Motion
- Association experiences

Concepts

Setting conditions for learning
Developmental process as a strategy
Encoding
Questioning strategies
Corrective feedback techniques
Verbal reinforcement
Extension of syntax
Elaboration
Extension of thought
Mode of interaction
Content of interaction

People

Hilda Taba
Brown and Bellugi
J. McVicker Hunt
Courtney Cazden

Skill Competencies. The learning facilitator should be able to provide an environment to stimulate children to respond on their own accord. In order to do this the facilitator should have the following skill competencies.

1. Implement the corrective feedback strategies in appropriate situations of:
   - verbal reinforcement
   - extension of grammar
   - elaboration
   - extension of thought.
2. Implement the encoding techniques in appropriate situations:
   - Questions: Direct questions

Questions:	Hypothesis stating questions
	Attention seeking questions
Statements:	Direct statement
	Hypothesis statement
	Attention seeking statement
	Imperatives

DEVELOPMENTAL PROCESS SCHEDULE

Week I

Day I— Class: overview presentation by Instructor of developmental process.
View videotapes on Feedback Techniques (see Appendix A).
View film: Tell (Techniques in Early Language Learning)

Day II— Practicum: Practice Corrective Feedback Technique in Field Center
Initial videotape made. Supervisor will evaluate interaction patterns with student. Supervisor will code while video tape is being made. The tape will be rewound and played for trainee. Supervisor will point out the corrective feedback patterns to the trainee. The purpose of this taping is to ascertain that the trainee clearly understands the corrective feedback techniques.

Day III— Practicum: Practice corrective feedback techniques in the field center.
Class: Discussion of application of feedback technique in various situations.

Day IV Practicum: Continue to work on technique. Visitation to field centers by staff. Each student will be visited in his natural classroom environment. The emphasis of this visit is in regard to the functioning of the field center experience.

Day V— Practicum: Final video of feedback techniques.
Class: Discussion of the following readings.

Biber, B. Issues in the relation of psychology to childhood education. Paper presented to meetings of the Society for Research in Child Development, Phila., Pa., March 31, 1973.

Broman, B.L. Too much slushing–let children talk. *Childhood Education*, December, 1969, 132-134.

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Wolff, D., & Gotkin, L. Teaching from within–A strategy for introducing transactional instructional games. Unpublished paper. New York Univeristy. 1971.

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Mann, M.E. The developmental learning process in early childhood education.

Week II–Developmental Process

Day I— Practicum: Begin gathering base on normal and developmentally delayed child
Set up learning center
Class: presentation of questioning strategies

Day II— Practicum: Initial video tape on questioning strategies
Class: Discussion of application of questioning technique in various situations

Day III— Practicum: Practice on questioning strategies
Class: Discussion of application of questioning techniques in various situations

Day IV— Practicum: Field center visitation for general supervision

Day V— Practicum: Final video taping on questioning strategies.
Class: Discussion of the following readings:

Characteristics of the English Infant School (handout).

Featherstone, J. The primary school revolution in Great Britain. *The New Republic*, Aug. 1, Sept. 2, and Sept. 9, 1967

Hirsch, E.S. What are good responsive environments for young children? *Young Children*, December, 1972, 75-80.

Marshall, H.H. Criteria for an open classroom. *Young Children*, October 1972, 13-19.

Taylor, A.P. The premises of experience-centered education. Unpublished paper. SWREL, Albequrque, New Mexico, 1971.

The Prospect School, Record Keeping for the open classroom, Bennington, Vermont. Unpublished paper.

Week III

Day I - Practicum. Begin daily planning for normal and delayed child. Begin practicing total developmental process.
Class: Discussion of environment for developmental process.

SELECTED READINGS FOR DEVELOPMENTAL LEARNING PROCESS

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APPENDIX A

MODEL VIDEO TAPE SCRIPTS FOR

FOR VERBAL REINFORCEMENT, EXTENSION, AND ELABORATION

Video-tape No. 1: Verbal Praise

1. Plaque. *Verbal Praise.* Flash on while demonstration is in process. Introduction. Model No. 1 Verbal Praise

2. Explanation. The mother is going to say something to make her child feel good every time the child says a word so that he knows it is good to talk and that what he is saying is correct. When a child is learning to talk he needs to have someone tell him if he is speaking correctly.

Verbal praise words are like these:

a. good
b. yes
c. that's right
d. I agree with you
e. Or a surprise question like "I didn't know you knew that?"

3. Demonstration: adult and child interact using story book and bag of contents.

4. Conclusion:
Did you notice how the mother used verbal praise words like

a. good
b. yes
c. that's right
d. I agree with you
e. or a surprise question like "I didn't know you knew that?"

You will be able to think of other praise words to use with your child.

Video-tape No. 2: Extension

1. Plaque: *Finish the sentence.*
Introduction: Model No. 2 Finish the sentence.

2. Explanation. Finishing a child's sentence is when the mother says more completely what the child had tried to say, but keeping her words as close to the child's own words as possible. She says more words than the child does.

Here are some examples:

Situation: The child spilled milk on the floor.
Child says: "milk on floor."
Mother says: "Yes! You spilt milk on the floor."

The mother tries to figure out what the child means by his one or two words and then resays his words in a sentence.

Situation: The kittens are playing with balls of yarn.
Child says: Kitty
Mother says: Yes! The kitttens are playing with the yarn.

Watch how the mother takes the child's words and makes a sentence for him.
Remember whenever possible use verbal reinforcement words like "good," "yes," "that's right" before extending child's sentence.

3. Demonstration: adult and child interact using story book and objects.

4. Conclusion:
Did you notice how the mother took the child's words and made a sentence. She also used verbal praise words like "yes," "that's right" whenever she could.

Video-tape No. 3 Elaboration-color

1. Plaque: *Elaboration-add a color word.*
Introduction: Model No. 3 Add a color word.

2 Explanation: The way a mother can help her child learn new words is by giving her child these new words when she talks to him When the mother finishes the child's words into a sentence like in extension she should also give him a new word.

The first kind of new words the mother can give her child are color words. This is very simple to do because everything has a color.

Show objects:	red ball	yellow *rose*
	green *block*	Picture in book—name objects and color.
		red fire engine

The child does not have to speak for the mother to give him a new word.

The mother can also add a new word to something the child is playing with or something that the child has not talked about.

Example:
Situation: Child is playing with a truck.
Mother says: Johnny is playing with a red truck.

3. Demonstration: adult and child interact with story book and objects.

4. Did you notice how the mother used a color word when she extended or finished her child's sentence. Also she used verbal reinforcement words like "yes," "that's right" whenever possible.

5. Conclusion:
You will not always hear your child say these new words right away. He has to hear them many times. Then someday he will used a word you gave him several weeks or months ago. He takes in and remembers more than he speaks.

Video-tape No. 4 Elaboration-shape

1. Plaque: *Elaboration-add a shape word.*
Introduction: Add a shape word.

2 Explanation: As we said before the way a mother can help her child learn new words is by giving her child these new words when she talks to him. She does this when she completes the words her child gives to her into a sentence. The first kind of new words we added in the child's words were color words. Now we will add shape words to the child's words or when we tell the child about something he is playing with or an object in a storybook. The mother should point to the shape she is talking about.

Shape words are words like: round square

Show objects: a round ball a square block

Example:
Situation: Johnny is playing with a ball.
Mother says: I see you are playing with a round ball.
Watch how the mother gives the child shape words.

3. Demonstration: adult and child interact—storybook objects.

4 Did you notice how the mother used a shape word when she extended or finished her child's sentence. Some of the shape words used were: "round," "square."

Also, she used verbal reinforcement words like: yes, good, that's right, whenever possible.

5. Conclusion:
Remember you will not always hear your child use his new words right away. He has to hear them many times. Your child is really learning. He takes in and remembers more than he speaks.

You should choose only one kind of new word to give the child when finishing the child's sentence. If you use more than one he becomes confused.

Video-tape No. 5 Elaboration Label of Class

1. Plaque: *Elaboration-add a name or group word.*
Introduction: Model No. 5 Add a name or group word.

2. Explanation. We have learned to give the child new color and shape words when we extend or complete his words in a sentence. Now we will add name words or the name of a group to the child's words when we complete his sentence or when we describe something to the child.

Example:

A. a name is a name of something — bell block
Show objects and give them their names — banana cookies

B. Next there are groups of objects that are alike in some way

The objects that I name can be put into a group like
banana and cookies = food
ball and truck = toys
dog and cat = animals

If you think the child does not know the name for ball you give him the name for it.
If he knows the name of the object you tell him what group it is in like toys.

Another example would be. If he knows the name for a cat, the mother would say. "Yes! the cat is an animal."

Remember - first you would give him the name of the object if he didn't know it. If you know the child knows the name then you tell him what group the object is in. Watch how the mother uses name or group words.

3. Demonstration: adult and child interact with story book and objects.

4. Conclusion. Did you notice that the mother gave the child the name of the object he was playing with or in the picture if the child did not know its name. If the child knew the name of the object she gave him the class the object belonged to.

The name words were
The group words were

Remember don't worry if the child does not use his new word right away. He may or may not use it within a few days. He must hear it several times and it becomes stored in his mind even if he doesn't speak it. Be sure to use only one kind of new word to give the child when you finish his sentence so he will understand what you are talking about.

Video-tape No. 6 Elaboration–what an object is made of

1. Plaque: Tell what the object is made of.
Introduction: Model No. 6 Tell what the object is made of.

2. Explanation. We have learned to give the child new color words, shape words like round, square, triangle, and name or group words. Remember group words are words that tell how a group of objects are similar in some way.

Now we are going to add new words that tell what an object is made of to the child's words when we complete his sentence or when we describe something to the child.
Words that tell what the object is made of are like these.
For example:

Show objects: rubber ball — wood block - plastic ball — leather shoe

Watch how the mother gives her child words that tell what the object is made of.

3. Demonstration: adult and child interact with objects and storybook.

4. Conclusion:
Did you notice how the mother gave her child new words that told what the object was made out of. Some of the composition words she used were: metal leather plastic rubber
We now know we can use color words, shape words, name or group words, or words that tell what the object is made of to give a child a new word when we complete the child's words or describe something to him.
We should use only one kind of new word each time so we don't confuse the child be giving him too many words.
The mother has to decide what the child already knows and what new word would be best to use.
Remember, just because the child doesn't use his new words right away doesn't mean the mother is not doing a good job Children take in and remember many words that they use later in life.

Video-tape No. 7 Elaboration–parts of things

1. Plaque: *Add a part word.*
Introduction: Model No. 7 Add a major part word.

2. Explanation We have learned to give the child new color words, shape words, name or group words, and words that tell what the object is made of. We use only one kind of new word each time we extend the child's sentence or describe something for him so we don't confuse him by giving him too many words.
Now we are going to add new major parts words to the child's words when we complete his sentence or describe something to the child. Major parts words tell or name a major part of an object.

An important concept for two-year old children is to learn the parts of the body. Name those parts of the body that you think the child doesn't know. When naming a part of something be sure to point to the part so the child sees what you are talking about. You can have the child find the part of his own body or on the object. Watch how the mother names the major parts of things for her child.

3. Demonstration: adult and child interact with objects and storybook.
Emphasizing naming major parts of objects when extending or describing.
For example: Show objects
doll–name major parts
truck–name major parts
horn–name major parts

4. Conclusion:
Did you see how the mother gave her child new major part words by naming a major part of an object.
Some of the major part words she used were:

Object	Major
1.	
2.	
3.	
4.	

Now we have color words– red, yellow, grren, blue
shape words– round circle, square, triangle
label words– dog, cat, rose, mum, banana, bread
class words– animals, flowers, fruit
composition words– wood, cotton, leather
major part words– like eyes, ears, feet on the body like wheels, window, steering the wheel on a car.

Video-tape No. 8 Elaboration-Function–what something does.
1. Plaque: *Add a new function word.*
Introduction: Model No. 8 Add a function word

2. Explanation. We now have 5 kinds of new words to give a child when we complete his words in a sentence or when we tell him about an object he is looking at in a storybook or an object he is playing with.
They are: color words–the color of the object
ball pencil
shape words–the shape of the object
block paint
label words–the name of the object
hammer brush
class words–the name of the group the object belongs to
composition words–what the object is made of
major parts words–name of a part of an object
The next kind of new word we can give the child is a function word. A function word tells what the object does or its use.
For example:

Object	Its function
ball	throw-it–catch it–hit it with a bat, kick it, etc.

hammer	build with it, pound
pencil	write with it
block	build with it

When using a function word the mother should act out, demonstrate or point to a picture in a book that tells what the function word means.

3. Demonstration adul. nd child interact with objects and storybook with adult emphasizing function and action words.

same as above storybook–The Ear Book

4. Conclusion:

Did you notice how the mother tried to use function words–those that told what the object does or the object's use. Also how she showed the child what the word meant by demonstrating it herself or pointing to a picture that showed the meaning.

Some of the function words the mother used were

1.
2.
3.

Remember the mother must choose only one kind of new word to add each time. If she adds too many words she will confuse the child and he will not learn the meaning of the word. Use a function word when the meaning can be demonstrated by the mother or by a picture so the child will know the meaning of the word you are giving him.

Video-tape No. 9 Elaboration - Numerosity

1. Plaque: *Add a number word.*

Introduction: Model No. 9 Add a number word.

2. Explanation We now have 6 kinds of new words to give a child when we extend or complete his words in a sentence. or when we describe an object to him:

They are:

1. color words–that tell the color of the object
2. shape words– that tell the shape of the object
3. name words–that tell the name of the object
4. group words–that tell the name of the group the object belongs to
5. words that tell what the object is made of
6. major parts words–that tell the name of a part of an object
7. function words–that tell what the object does or its use

The seventh type of new word we can give the child is a number word. Number words used with two-year olds should be between one and five. When using a number word point to the group you are talking about and possible count to the number you used after you complete the sentence.

For example:

Child says: "Ducks."

Mother responds: "Yes! There are three ducks! One, two, three!" (Pointing to each as she counts, use actual storybook to demonstrate this)

An example would be if the child were playing with some balls. The mother could say "You are playing with two balls. One, two."

3. Demonstration Interaction between adult and child emphasizing number words. Use pictures with several things–groups of several objects like blocks, balls, etc.

4. Conclusion:

Did you notice how the mother used number words when completing the child's sentences or describing objects to him. The mother did not use numbers over five and counted to the number she used in the sentence so the child would know the meaning of the word.

Choose only one kind of new word to give a child each time you complete his sentences and when you are describing an object to him.

Remember –your child may or may not verbalize his new words right away. It does not mean he is not learning the new words. He takes in and remembers more words than he uses right away.

Video-tape No. 10 Elaboration–Other physical characteristics

1. Plaque: *Add other physical characteristic words*

Introduction: Model No. 10 Add other physical characteristic words

2. Explanation: We have talked about 7 kinds of new words we can give a child–they are:
   1. color words tell the color of the object, like red, blue.
   2. shape words tell the shape of the object, like round, etc.
   3. name and group words–the name of the object or group the object belongs to
   4. words tell what the object is made of like straw, cotton
   5. major parts words tell the name of a part of the object like windows, door, roof of a house
   6. function words tell what the object does or its use like
   7. number words that tell how many objects or how many things on an object

All of these words tell something about an object.

The last kind of new words a mother can give her child are physical characteristics that we have not previously discussed in the other types or words. This includes characteristics like size: big, little, large, small

texture: smooth, rough, spongy, squishy

weight: heavy, light

density: solid, empty, hollow

method of construction: paster together, sewed together

and any other type of physical characteristic word we haven't learned yet.

For example, let's take a wood block and see how many physical characteristics we can say about it.

Show–wood block

size: big, little

texture: smooth

density: solid

method of construction:

Watch how the mother will try to use some of these words.

3. Demonstration. adult and child interact using objects emphasizing size, texture, weight, density and method of construction.

4. Conclusion:

Did you notice how the mother used physical characteristic words.

The size words she used were: small

The texture words she used were: soft, rough

The density words she used were: hard

The method of construction words she used were: