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ABSTRACT
                The syntax module of the language development
curriculum portion of the Early Childhood-Special Education Teacher
Preparation Program at the University of Virginia includes the
following areas: (1) various aspects of syntax development as
background for an outline of the ontogeny of syntax development in
children 18-106 months of age; (2) syntax development outcomes
appropriate to young children, including the relevancy of such, with
special reference to Chomsky's theoretical position; (3) techniques
for measuring syntax development with particular emphasis placed upon
techniques developed by both Lee and Menyuk; (4) general condition
needed for development of syntax; (5) specific conditions and
appropriate teaching strategies for development of (a) the ability to
express oneself in identified patterns of standard English, (b) the
ability to ask questions, and (c) fluency; and (6) cognitive and
skill competencies needed by teachers for facilitating the
development of syntax in young children. (ED)

Performance-Based

Language Development

Syntax

Marlis Mann
Monograph X

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STEP I: GOALS OF SYNTAX DEVELOPMENT FOR YOUNG CHILDREN

Outogency of Grammar Development. The sequential development of English grammar has been studied by several (Braine, 1963; Brown and Bellugi, 1964, Lee 1966; Meuyuk, 1964; Chomsky, 1957).

Following is a sequential structure which is evident the language development of children.

Phrases

2 word noun Phrase	2 word Designative	2 word Predicative	2 word Verb Phrase
3 word noun Phrase	3 word Designative	3 word Predicative	3 word verb Phrase
	Designative Construction	Predicative Construction	Verb Phrase Construction
	Designative Sentence	Predicative Sentence	Actor-Action Sentence

Simple Transformations

a.	Passive	He was tied up by the man.
b.	Negation	I am not.
c.	Question	Is he sleeping?
d.	Contraction	He'll choke.
e.	Inversion	Now I have kittens.
f.	Relative question	What is that?
g.	Imperative	Don't use my brushes.
h.	Pronomicalization	There isn't any more.
i.	Separation	He took it off.
j.	Auxiliary verb	
	1. be	He is not going to the movies.
	2. have	I've already been there.
	3. do	
k.	Got	I've got a book.
l.	Do	I did read the book.
m.	Possessive	I'm writing Daddy's name.
n.	Reflective	I cut myself.

Generalized Transformations (These are derived from 2 kernel sentences)

o.	Conjunction	They will be over there and momma will be over there.
p.	Conjunction delection	I see lipstick and a comb.

q.	Conditional - if	I'll give it to you if you need it.
r.	So	He saw him so he hit him.
s.	Causal	He won't eat the grass because they will cry.
t.	Pronoun in conjunction	Blacky saw Tippy and he was mad.
u.	Adjective	I have a pink dog.
v.	Relative clause	I don't know what he's doing.
w.	Complement	
	1. infinitival	I want to play.
	2. participial	I like singing.
x.	Interaction	You have to clean clothes to make them clean.
y.	Nominalization	She does the shopping and cooking and baking.
z.	Nominal compound	The baby carriage is here.

<u>Morphemes</u> (Research studies eliciting and observing morpheme expression in children shows a pattern in the order of acquisition for the following fourteen morphemes:)

1-present progressive, 243-in, on, 4-plural, 5-past irregular, 6-possessive, 7-uncontractible copula, 8-articles, 9-past regular, 10-third person regular, 11-third person irregular, 12-uncontractible auxiliary, 13-contractible copula, and 14 contractible auxiliary.[1]

<u>Outogeny of Grammar fluency</u> .

21 Months	Tries to tell experiences
24-30 Months	Language is beginning to be used more extensively as communication for wants, needs, and ideas. Child tries to use words in telling his physical needs or answers simple questions, but does not carry on conversation.
38-48 Months	Frequent questions - many times asks questions to which he already knows the answers. Uses language easily to tell a story or relay an idea to someone else. Expresses feelings, desires, and problems verbally.
48 Months	Can tell a lengthy story mixing fact and fiction. Can carry on lengthy conversation with adult and children, though he may make grammatical errors and missuse words.
60 Months	Answers questions more succinctly and to the point.

Questions for information, not merely
social intercourse or practice in speaking.
Uses conjunctions more freely.

Outogeny of children's questions. Bellugi (1965) in a study
of three children identified three sequential stages in the
development of interrogative structures. Each state was one
to five months long starting somewhere between the 18th and
28th month depending on the child's linguistic abilities.
Following are these stages of interrogative development in
children's language:

Stage I   a. inflectious, auxiliaries, articles and
              most pronouns were absent.
          b. child used intonation to mark a question
          c. there was no yes-or-no questions and only
              a few "wh" questions.
          d. there were no tag questions.
          e. the child did not appear to understand the
              interrogatory structure when he heard it.

Stage II a. articles, pronouns, and negatives preverb
              forms appeared.
          b. auxiliaries were still not present, nor
              were tag questions.

Stage III a. emergence of use of auxiliaries, auxiliary
              inversion, and the do transformation.
          b. inversion and transformation were found in
              yes-or-no questions but were absent in
              "wh" questions.
          c. tag questions were still absent, but children
              understood and responded well to questions.

Combined Syntax Ontogeny

Age in Months	Stage	Appropriate Equipment	Alternatives
18	Begins to combine words. Asks with words (Cattell)	Books with large pictures	Reinforce Child's verbalization
21	Joins 2 words in speech frequently. (Cattell)		Extend child's verbalization
22	Uses 2 concepts in one sentence — "Daddy gone".		Elaborate child verbalization
24-30	In same sentence expresses intention and action: "Peter slide down." Does not relate experiences in well-defined past tense. Indulges in soliloquy and dramatic play in order to hatch his words, phrases, and syntax. Discovers use of the "question" and asks names of things. Spontaneous word combinations in verbal interactions (Stanford Bonet)		
36	Generative grammar develops (development by his own rules). Experiments with many syntactic forms. Two word-phrases most frequent form: "That boy (is) naughty;" "Mommy car stop" (Mommy's car stopped; wouldn't run). Designative constructions, coming into use; phrases expanded into use; phrases expanded into subject-predicate sentence. (What. that thing go round?) Mean length of response: 3.4 words.		

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Age in Months	Stage	Appropriate Equipment	Alternatives
42	Grammatical categories. Speech is made up of: nouns-17%; verbs-22.8%; adjectives-6.5%; adverbs-10.1%; pronouns-19.8%; conjunctions-2.2%; prepositions-6.7%; interjections-1.7%; articles-6.9%; and unclassified-6.3%. Uses new adjectives: strong, new, different. Uses new adverbs: maybe, too. Uses auxiliaries: might, could. Gains skill in permutations: makes questions from declarative statements. Mean length of response: 4.3 words.		
48	Frequent questions - many times one to which he already knows the answers. Uses language easily to tell a story or relay ideas, feelings, desires, problems. Longer sentences are compound and complex in structure. Tells a story. Speaks of imaginary conditions: "Suppose that", "I hope". Can tell a lengthy story mixing fact and fiction. Can carry on lenghty conversation with adults and children, though he may make grammatical errors and misuse words. Questions at a peak, not always interested in explanation but rather how answers fit own thought- Skill increasing in transformations (modification in sentence which transforms kernel).		See language experience strategy

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Age in Months	Stage	Appropriate Equipment	Alternative
48 cont'd.	Sentence structure advances rapidly. Begining to use complex and compound sentences, 6-8 words in lenght. Mean sentences length: 4.2 words. Speech is made up of: nouns-16.3%; verbs-23.1%; adjectives-6.7%; adverbs-10.4%; pronouns-20.3%; conjunctions-2.8%; prepositions-7.5%; interjections-1.3%; articles-7.5%; and unclassified-4.1%.		
48-60	Knows rules for forming the plural and possessive for nouns. Knows rules for past tense. Knows rules for third person singular for verbs.		
54	Use of complex and compound sentences increasing. Reverses syllabic and word order occasionally in sentence. Elaborates sentence by use of conjunction; makes spontaneous corrections in grammar. Mean length of response: 4.7 words.		
60	Language essentially complete in structure and form. Answers questions more succintly and to the point. Uses all types of sentences including complex ones with hypothetical and conditional clauses. Uses conjunctions more freely, but generally frequency of parts of speech same as at 4 years. Grammar reasonably accurate; makes many		

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Age in Months	Stage	Appropriate Equipment	Alternative
	spontaneous corrections. Sentence structure expanding rapidly in accuracy and complexity. Embedding more common. Develops relative clause. Mean length of response: 4.8 words.		
66	Permutations. Great gains in sentence making of all types. Uses all basic structures. Mean length of response: 4.9 words. Makes some errors in grammar but corrects them spontaneously.		
78-94	Speech is made up of: nouns—17.1%; verbs—25%; adjectives—7.6%; adverbs—10%; pronouns—19.2%; conjunctions—2.6%; prepositions—7.6%; interjections—1%; articles 8.3%; and unclassified—1.6%. Sentence length and complexity develops sharply; has command of every form of sentence structure. Mean sentence length; 6.5 words.		
94-106	Chief grammatical errors now are common to his cultural environment. Mean length of response: 7.2 words.		

Syntax Development Outcomes

It is our knowledge of the rules of combination, the syntax of the language, that governs how we construct and understand an infinite number of sentences from a finite vocabulary. Syntax gives language its power.

Syntactic component may be thought of as a device that generates a set consisting of representations of all the well-formed sentences of a language. Since this set is clearly infinite it cannot, by definition, be represented by a list. Hence, the form of the grammar is a finite set of rules, at least some of which must be recursive, i.e., capable of indefinite reapplication.

The conceptually simplest device for characterizing an infinite set (i.e., simplest realization of a set of recursive rules) is a finite state source, and the sets generated by such sources are called finite state languages. A finite state grammar views sentences as sequences of items chosen from an available inventory - the vocabulary of the language so that each choice after the initial one is conditioned by one or more of the preceding sources (Saporta, 1961). A generative grammar is a system of rules that derives an infinite set of well-formed sentences and assigns them correct structural descriptions.

The phrase structure level of language represents the adult's sense of hierarchical grouping in a sentence - the feeling that a sentence breaks into natural major constituents which in turn break into natural smaller constituents. It also represents such basic sentence relations from traditional grammar as subject of a sentence, predicate of a sentence, object of a verb, etc. The phrase structure includes everything essential for a complete semantic interpretation, but it does not order elements as they are ordered in the ultimate structure of language.

Next in the sequence of syntax development is the transformational level. The base structure of a grammar is combined in various strings to produce the transformational level or surface level. Transformational rules map strings (or phrases) into new structured strings that are sentence types. Transformations can delete, substitute, and add elements as phrase structure rules cannot.

A transformational rule describes the structure of the kind of string to which it is applicable, there will generally be an indefinite number of strings that satisfy that structural description. In an actual transformation it is a particular string that is transformed.

Morphemes are the smallest unit of meaning. They can occur alone as a word or not alone as ing, un, pre, which are called "bound". A word may be composed of one or more morphemes; "cats" consists of two morphemes - cat and the plural suffix. Morphemes are divided into classes, and sentences are composed of certain

ordered sequences of classes. Morpheme classes are comparable
to traditional parts of speech but are identified in terms of
substitutions in linguistic contexts rather than in terms of
meaning. Thus, the morphemes that fit in the sentence "The
_____ was good", constitute a class. Morpheme classes
can be divided into two groups, lexical and ~~*ional classes.
Lexical classes are few in number, but ha: * members. In
English these include nouns, verbs, adjec` .., and certain
adverbs. Function classes constitute a large number of small,
closed classes. In English morphemes include conjunctions,
prepositions, auxiliaries, and suffixes such as the plural and
past tense morphemes (Miller and Ervin, 1964). Rules on this
level really belong to the phonological component.

In order to learn grammar, a child must segment the speech
he/she hears into morphemes because morphemes are the ultimate
units of grammatical rules. There are small sound units called
phonemes and longer sound combinations which carry semantic
meanings but these cannot be formulated in terms of phonemes -
they are morphemes.

The child hears, "my book," "your bike, "my birthday",
etc. If he/she erroneously segmented these phrases into morphemes,
They may sound like "myb/ook", "yourb/ook", "myb/irthday."

Morpheme segmentation errors such as myb/ook, or yourb/ook
are uncommon. The child seems to have a highly effective
procedure for developing morpheme segmentation.

Although all languages show fundamental similarities in
their syntactical structures, there is enormous variation in
morphological or inflectional detail. Therefore a child must
first grasp underlying grammatical categories as case, gender,
person, number, tense, aspect, etc., if he is to master all the
particular morphophonemic means used to express these categories
in his language (Ferguson and Slokin, 1973).

In both observational and experimental studies a phenomena of
morphological overgeneralization or overregulaiization has been
noted. A child will acquire the basic functions of an infl. ctional
system before he masters the particular form of inflections.
For example, he will generalize a rule to all instances, more
than is required, as in his initially saying "comed" before
gradually discriminating the proper form of application as being
"came" (Ferguson and Slokin, 1973).

There are additional complex factors affecting children's
acquisition of morphological rules. These include his cognitive
development, perceptual salience, the frequency of inflections
heard in a speech model, the regularity of the inflectional rule,
the number of semantic functions performed by a given suffix in
the language, and the ease with which the morphophoneme can be
produced in the child's own speech.-

Children make two thirds of errors in their inflectional

expres: errors of omission and errors of commission.

        ....i (1973) has postulated a reason to explain a child's
initial omission of morphological rules. He feels that the
child expects to be understood always. And since the child speaks
at home, in familiar surroundings, and to members of the family
who know his history and inclinations, he will be understood,
making accurate, usually redundant morphophonemic expression
unnecessary for him. However as the child moves out into new
surroundings, his speech will require more adaptive flexibility.
Thus he will find it necessary to learn a lexicon and syntax
familiar to his new and particular audiences. This obligates nis
learning to express always and automatically those grammatical
categories of agent, action, number, tense, etc., in proper
morphological form.

        Cazden (1973) states that it is the errors of commission
that provide us with a better guide, through inference, to a
child's linguistic knowledge. Two errors of commission can
be observed: first, provision of the wrong allomorph (i.e.,
knife-es for knives or pantses for pants) and second, failure
to observe the division between regular and irregular forms in
plurality, possession, present indicatives, and past tense
(i.e., mans for men, mines for mine, doos for is doing, maked for
made). One can be sympathetic, though, with children's errors
in irregular forms since the rule exceptions are certainly
arbitrary requiring rote learning in each case.

The specific syntax development outcomes are as follows:

        To develop the child's ability to express himself/herself
the identified grammatical patterns of standard English.
Developmentally the beginning of syntax development are the
phrase components of grammatical structures: 2-word noun phrase;
2-word designative phrase; 2-word predictive phrase; 2-word verb
phrase; 3-word verb phrase; 3-word noun phrase; noun phrases
incorporated into constructions; designative construction;
predicative constructive; verb phrase construction; designative
sentence; predicative sentence; actor-action sentence.

        Simple Transformations

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        b. Negation   I am not.
        c. Question   Is he sleeping?
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d. past irregular
e. possessive
f. uncontractible copula
g. articles
h. past regular
i. third person regular
j. third person irregular
k. uncontractible auxiliary
l. contractible copula
m. contractible auxiliary

Fluency. Fluency is the ease with which a child responds or expresses himself/herself. Development sequence indicators for fluency are as follows:

The child does not respond until encouraged.
The child responds with one or more spontaneous remarks but cannot continue.
The child responds with one or more spontaneous remarks and continues with another remark or two when requested.
The child responds freely, continues when requested and is

highly productive.
The child's responses are at a   , but he/she includes
the teacher in a conversational manner.

Following are the specific fluency outcomes.

1. To develop a precise language of reference so that the
    child will be able to specify the characteristics of
    objects precisely and accurately without needing visual
    props.
2. To develop the child's ability to ask questions as a
    means of seeking and gaining information.
3. To develop the child's ability to verbalize eagerly and
    with ease.

Relevance of Syntax Development

The scientific study of language is called linguistics.
Linguistics describes the state or nature of the language. It is
the study of messages once they are "on the air". Descriptive
linguistics includes the study of phonology, morphology, and
syntax. The linguist determines the code of the message, the
characteristics that distinguish one message from another.

Psycholinguistics is a combination of psychology, linguistics,
and anthropology.

As a discipline it is concerned with the relation between
messages and the characteristics of the persons who select and
interpret them. The psycholinguist studies the encoding and
decoding processes of human individuals.

According to psycholinguistics a complete description of
a language would include an account of all possible phonological
sequences and also a set of rules by which we can predict all
the possible sentences in that language.

Although the term psycholinguistics can be found in psychological
literature as early as 1912, it is still comparatively young as
a descipline. It has come to prominence since 1960.

Psycholinguistics attempt to show how the individual learns
linguistic systems, particularly that of his native language, and
how he uses such systems in thinking and communicating. One of
its major and most difficult problems is how the preschool child
learns his mother tongue, with its complicated and highly
sophisticated systems of sounds, words, and grammatical structures.
It is also interested in vocabulary, the development of more
mastery of syntactical patterns, and above all, learning to read
and write.

The distinction has been drawn in psycholinguistics between
"competence" and "performance" or between what is actually learned
and the manifestation of that learning behavior. When the child
learns his language, what is actually learned as a very complicated

set of habits or dispositions is, of course, inaccessible to
direct observation. The only way we can know about them, even
differentially, is through the analysis of the speaker's performance,
i.e., his use of them in talking, or understanding, or even in
reading and writing.

We cannot say that this competence is what the speaker "knows"
about his language, for he is usually unaware of using any rules
as he speaks. They are more like habits that underlie speech.
Most of us would have the utmost difficulty in explaining what
exactly we know that enables us to recognize and understand
grammatical and meaningful sentences.

The child does not develop his language skills by blind
imitation of adults, nor can his ability be accounted for in
terms of any simplistic stimulus-response model. Rather the child
makes an assumption about a rule or adult language (the meaning
of the adult expression); he tests this assumption by putting it
to work (he interprets or produces an utterance using the hypothesized
rule); and he changes the rule if it proves in any way to be
inadequate (if the meaning he derives in inappropriate or if the
sentence form he produces is misinterpreted or corrected).

To a large extend the child's process of generating and
testing his assumptions about language and modifying them on the
basis of feedback may be considered the part of language ability
that is innate. In order to learn about a language a child must
use language.

Unless he can actually test a rule by constructing an utterance
and using it in some language situation, he will be unable to discover
whether a hypothesis is indeed a rule of adult language or not. It
is essential that he be involved in linguistic interactions with
fluent speakers so he can receive feedback relevant to the particular
hypotheses that he generated.

Syntax deals with organization and relationships and does
not have anything to do with semantics.

Chomsky separates syntax into 3 levels each level having a
sequence of rules which generate sentences within the particular
level.

1. Phrase structure level: simple-active-declarative sentences
   called terminal strings.
2. Transformation level: complex sentences based on terminal
   strings.
3. Morpology level: sequence of inflectional rules from which
   the actual sounds of speech are derived.

The 3 basic phrase types (noun, verb, predicate) are embedded into
an infinite number of larger sentences which are generated in
unpredictable ways.

Chomsky is the major theorist in psycholinguistics. He is a
generative grammarian and feels the organism is innately equipped

with mechanisms which enable the individual to deal with syntax. There are an infinite number of meaningful sentences. Therefore, we must use a system allowing for the generation and transformation of language. Grammatical rules which exist must be developed within the organism due to heredity and learning.

Chomsky's basic rule for formation and transformation is as follows:

(S) sentence	(reduces to)	NP (noun phrase) VP (verb phrase)

NP = N (noun) + A (article)   VP = V (verb) + NP (noun phrase)

(S) sentence

             NP   VP

     A   N   V   NP
   (the)   (rat)   (ate)   (the malt)

Menyuk's study of syntax development (1964) indicates that the child at a very early age categorizes the language he hears in terms of the attributes of a given sentence. These attributes are the rules for formulating various syntactic structures. He then proceeds to generate his unique sentences from these rules rather than just imitating those sentences he has heard. Almost all the basic structures used by adults to generate their sentences can be found in the grammar of children as young as 2 years, 10 months.

Chomsky's Theoretical Position

Human language, according to Chomsky, reflects an intellect which is qualitatively different from that of all other animals. Modern linguistic theory and especially the behavioristic theory has attempted to explain human language in terms of laws of conditioning, habits, stimulus-response learning, reinforcement schedules and generalization which Chomsky claims simply cannot adequately account for what he has referred to as the creative aspect of language use. The creative aspect of language use is the distinctively human ability to express new thoughts and to understand entirely new expressions of thought, within the framework of an "instituted language", that is, a language that is a cultural product subject to laws and principles partially unique to it and partially reflections of general properties of mind. In support of this theoretical point of Chomsky makes frequent reference to the philosoply of Descartes. He claims that 17th century Western Europe provides the traditional philosoply which stresses qualitative differences between the intellect which is capable of mastering human language and that of lesser forms. This traditional philosophy and the insights of philosophical grammarians in particular were

largely ignored by 19th and 20th century modern linguistics. The
result, according to Chomsky, has been to stultify the study of the
essential aspects of language and its development and to eliminate
the possibility of exploring the implications which the study of
language might have for shedding light on the essential properties
of the human mind.

Chomsky's study of language has been conducted through a model
of syntax which basically contains three elements: deep structure,
transformational rules, and surface structure. Surface structure
refers to "a representation of the phrases that constitute a
linguistic expression and the categories to which these phrases
belong". The deep structure refers to "a representation of the
phrases that play a more central role in the semantic interpretation
of the sentence". These two structures may be conceptualized,
although somewhat simplistically, as the sound and meaning of the
language. In order to transform the deep structure or meaning of
a language into the surface structure or sound it is necessary to
possess a system of internally represented rules or more technically,
a generative grammar.

Chomsky analyzes language in terms of both surface structure and
deep structure. The basic unit of surface structure is the phrase
and the basic unit of deep structure is the kernel sentence. It is
hypothesized that these kernel sentences in the transformational
generative grammar of Chomsky are real mental structures. To
illustrate how language may be analyzed in this system, consider
the following three sentences:

1. John is certain that Bill will leave.
2. John is certain to leave.
3. That John will leave is certain.

In terms of surface structure, or phrase analysis; sentences 1 and
2 are similar. They are not similar, however, in terms of deep
structure. Sentences 2 and 3 convey a similar meaning, are similar
in deep structure, in that both sentences convey probability
statements regarding the proposition of John's leaving. An
analysis of the phrase structure suggests, however, that these two
sentences do not have very similar surface structures.

Chomsky claims that modern linguistics and in particular
behavioristic theories have concentrated almost totally on the
surface structure of language and have ignored the deep structure
and the difficult question of how one learns to make the varied
and intricate relationships between sound and meaning. That is,
how the human acquires and utilizes the rules of syntax. Chomsky
argues for the existence of universals in the human mind which may
be though of as biologically based structures which make it possible
for the human to acquire the ability to use language creatively.
These biological structures are species-specific and provide the
basis for what Chomsky and his followers have called a "language
acquisition device" (LAD). The language acquisition device receives
as input the kind of data which is available to the child in
learning his first language and produces as output the generative
grammar of that language. This output is the internally represented
grammar which allows the child to relate deep and surface structure,

allows him to transform meaning into sound and into meaning and
hence to master the language.

Measuring Syntax Development

The following literature discusses the appropriate instruments
to measure the effectiveness of the identified environmental
conditions with young children.

The 2 year old child is recalcitrant, and one cannot expect
to obtain from him the syntactical structures that were used in a
measure with 4 and 5 year old children by Brown and Bellugi (1964).
Therefore, to assess the syntax structures of the very young child,
one must write grammars on the child's observed speech.

Although a description of the syntactic structures in a child's
language does not give a total account of his language development,
it can go beyond the quantitative measure of percentages and
proportion of adult usage provided in previous studies of children's
grammar. It can encompass the interrelationships of various
measures of language development and describe their interdependencies
(Menyuk, 1961). It may provide a "hypothesis concerning the specific
nature of the innate intellectual equipment of the child" (Chomsky,
19, p. 36).

Lee's Developmental sentence types. Lee (1966) proposed
a method of analyzing language samples that was based upon the work
of Braine (1963) Brown and Bellugi (1964), and Chomsky (1957). The
Developmental Sentence Types model was an attempt to illustrate
the progression that the child might go through from his early
two word combinations to the use of the noun phrase, verb phrase,
and other grammatical forms as independent elements or kernel
sentences from which transformations will be derived.

Lee"s explanatory model of grammar is analogous to a categoriza-
tion theory of learning. It is hypothesized by linguists that the
attributes of a given category are memorized and the child can
then produce new instances of the category.

By using this instrument one can:
1. Identify the grammatical categories of the population's
   language.
2. Determine which categories are used more consistently
   then others.
3. Determine which categories are acquired at an earlier or
   later age.

In a study with Negro preschool children, language samples were
analyzed using Lee's Development Sentence Types model (Lee, 1966).
The transformations and restricted forms of these children were
then compared with the results that Menyuk (1961) obtained from
middleclass preschoolers. Lee's Developmental Sentence Types was
found to be an adequate framework for analyzing language samples
of this type, since it was possible to classify all utterances of
the Head Start children within the Developmental Sentence Types
model. Lee's Developmental Sentences Types can measure a dialect

of standard English to enable study of the language development
of the ghetto child, Appalachian child, or bilingual child. The
utterances used by the Head Start population were found to be
different from those used by middleclass children. Although the
Negro economically impoverished child has many forms in his language
that resemble standary English, results indicate that he has a
highly developed, highly structured linguistic system that is
different from that of his middle class white agemate. The difference
between the Head Start children and the kindergarden children did
not appear to be one of developmental level, but rather one involving
the nature of the response to be categorized as transformations or
as restricted forms.

Language studies of the economically deprived child had used
as their criterion of language development, measurements based on
the standard dialect because of an implicit assumption that non-
standard dialect represents, at most, mere low-level modification
of standard English. Lee's Developmental Sentence Types can
measure a dialect of standard English to enable study of the language
development of the ghetto child, Appalachian child, or bilingual
child.

LEE'S DEVELOPMENTAL SENTENCE TYPES

Level 1 — Two Word Combinations

2 Word Noun Phrases	2 Word Designative	2 Word Predicative	2 Word Verbal	2 Word Fragments	2 Word Stereotyped Ph
Article: a car, the car	Locator: there car, here car	Adjective: car broken, light off	Verb + noun: see car, push it	Phrase Structure: 2 Word	don't cry
Possessive: Daddy car, my car	Demonstrator: this car, that car, dat lion this a car, that's a car	Locator: car there, car here	Verb & particle: go up, fall down, walks in	Locator: up there	be careful
Quantifier: more car, two car	Identifier: it car, it's a car, 'sa car, 's car		Noun & Verb: I see, Mommy do	Prep. Phrase: to office, by the wall	I dunno
Adjective: big car, dirty car				Transformational Negative: not car, not ride	I 'onna
				Conjunction: and car	

Level 11 — Noun Phrases

Noun Phrase
(art. & poss.)
(noun) + (adj.)
N
my big car
no more car
the other big car
no more baby

then let tails

Level 111 — Constructions

Noun Phrases	Designative Construction	Predicative Construction	Verb Phrase Construction	Phrase Structure Fragments	Stereotyped Constructions
incorporated into constructions	locator	adj.	V+(part)+	incorporated into Constructions	an' up an' do
	demonstrator + NP	loc.	NP		go round and
	identifier	NP + NP	PP		listen to tic.
	there the big car	PP	loc		to reach the top
	that my car	the car broken	adv		
	it a car	that car in garage	put away the car		
	itsa big car	the car	ride in a car		
	ida dirty car	there	put car up		

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dat about two   David a good   take car
beans   boy, a baby   again
                 in a crib   open dat
                                 door

                                                                    Stereotyped
                                                                    Constructions
                                                                    incorporated in
                                                                    sentences

Predicative   Actor-Action
Sentence   Sentence
NP+ie+adj   NP & VR
"s   PP   I see n car
        loc   me ride in
        NP   car
the car is   Mommy put car
broken   there
that car's   me take car
in garage   again
my car's   a lady talk
there   to duh man
David is a
good boy
his name is
Wesley

Designative
Sentence
locator
demonstrator
identified
+
is, 's, & NP
there's the
car
this is a
big car
it is a
car
it's my
car
dat is duk
ovah class

Level IV
Kernel
sentences

Level V   Interrogative   Negative   "Do" &   Transformational
Successive   Is that a car   the car is   Negative   Fragments
levels   "We" question: not broken   I don't   incorporates into
emerging   where is the   see a car   transformations
                   car   Conjunction   "an tiger gonna
                   who is there   the car and   Infinitival   house an tiger
                                      the truck are   Complement: got all burned
                                      broken   I wanna take   up"
                                                       a car.
                                      dat's not me   Debby didn'   Stereotyped
                                      dat's Deborah   know it was   Constructions
                                                       dark time   I dunno that one

Menyuk's Syntax Scale. The Chomsky model considers the grammar as having a tripartite structure; namely a phrase structure level, a transformation level and a morphology level. Each of the tree levels of the grammar has a sequence of rules which generate the sentences within the level. Initially, simple-active-declarative sentences are derived at the level of phrase structure. Chomsky calls these sentences terminal strings and they form the basis for all other sentences. The more complex sentences are formulated by the sequence of rules at the second level of the grammar, which Chomsky has termed transformational rules. The transformational rules are of two kinds: optional and obligatory. The optional rules are chosen by the speaker. He can choose to formulate apositive sentence, a negative sentence an imperative sentence, etc. Once having a form there is a set of obligatory rules which must be followed to produce sentences which will be accepted by the listener as grammatical. The transformational rules carry strings with phrase structure into new strings to which the rules at the third level can apply. At the third level of the grammar there is a sequence of morphophonemic or inflectional rules from which the actual sounds of speech are derived. Chomsky's model describes these rules at each level, and tries to explain how a grammar is produced on the basis of these rules.

In the above study the basic structures which generated all the sentences in the total language sample could be described with the framework of the Chomsky model. A children's grammar was written which includes those structures found in both children's and adults' grammar and those structures which are peculiar to the children's grammar. Thus, it is a self-contained system describing a stage of development of children's grammar.

All the basic structures used by adults to generate their sentences can be found in the grammar of the nursey school children. Age increased the ability to use the basic structures in an additive manner and also increased the total sentence output in like stimuli situations. In comparing the number of children in the nursery school group and in the first grade group who used the structures, it was found that most of the structures are acquired at an early age and are used consistently.

The following transformational model describes the rules for generating a sentence from the stage at which a simple-active-declarative sentence is formulated from the parts of speech (phrase structure level) to the level at which sentence is changed to other types such as the negative, passive, imperative, etc. (transformational level) to the final level at which inflectional rules are applied (morphology level)

A transformational model of syntactic structures was used to describe children's grammar from under 3 years of age to over 7 years as a self-contained system and to indicate developmental trends.

Phrase Structure	Examples	Frequency Rates
1. Noun phrase		
2. Verb phrase		
3. Adverbial phrase		
4. Prepositional phrase	for baby	
5. Article	a, the	
6. Noun	man, ball	
7. Verb	hit	
8. Preposition	of, for, in, etc.	

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. Pronomicalization	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		
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 2 kernel sentences.)	
15. Conjunction (and, but, so)	They will be over here and momma will be over there.	
16. Conjunction deletion	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. Casual	He won't eat the grass because they will cry.	
20. Pronoun in conjunction	Blacky say Tippy and he was mad.	
21. Adjective	I have a pink dog.	
22. Relative clause	I don't know what he's doing.	
23. Complement		
a. infinitival	I want to play.	
b. participial	I like singing.	
24. Interation	You have to clean clothes to make them clean.	
25. Nominalization	She does the shopping and cooking and baking.	
26. Nominal compound	The baby carriage is here.	
27. Adverb		

Restricted Forms   Frequency Rate

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1. Verb phrase
    a) omission
    b) redundancy
    c) substitution
2. Noun phrase
    a) omission
    b) redundancy
3. Preposition
    a) omission
    b) redundancy
    c) substitution
4. Article
    a) omission
    b) redundancy
    c) substitution
5. Particle
    a) omission
    b) redundancy
6. Inversion restrictions
    a) subject-object
    b) verb number
7. Double Negation
8. Contraction deletion
9. Question
10. There substitution
11. Separation
12. Reflesive/3rd person
13. Tense restriction
14. Adjective restriction
15. Relative pr. restriction
16. Pronoun restriction
17. Verb form
    a) omission
    b) redundancy
    c) substitution
18. Noun form
    a) omission
    b) redundancy
    c) substitution
19. Possessive
20. Pronoun first person
21. Adverb restriction
22. Auxiliary restriction
23. Conjunction restriction
24. Auxiliary omission
25. Possessive restriction
26. Because of so substitution
27. If omission

UVa Syntax measure... This syntax measure based on Menyuk's scale was developed by Mitch Bowman and Anna Zapatoczny, graduate students in Early Childhood Education at UVa, in an attempt to elicit the identified transformations from the child. The stimulus around which the questions were asked was a fish in a bowl. Four alternative questions are given to elicit the specific transformation. This in in a pilot stage and is sure to have some revisions.

SYNTAX MEASURE

(Based on scale developed by Paula Menyuk)

Questions adult asks the child.

Typical Responses by a Four Year Old Child to the UVa Syntax Measure

Noun Phrases

1. "What do you see here?" (point to fish if necessary)
2. "What color is the fish?"
3. "Does the fish have eyes?"
4. "How many eyes does he have?"

Noun Phrases

1. A fish.
2. Orange.
3. Yep.
4. Two.

Verb Phrases

1. "What is the fish doing?"
2. "What is the fish doing with his mouth?"
3. "What is the fish doing with his tail?"
4. "What else is he doing?"

Verb Phrases

1. He's swimming.
2. He's opening and closing it.
3. He's wiggling it back and forth.
4. It's looking for food.

Prepositions

1. "Where is the fish?"

2. "Where is the water?"
3. "Where are the fish's eyes?"

4. "Where is the bowl?"

Prepositions

1. Right there. Right there In the fish bowl.
2. In the fish bowl.
3. On the side of it's face.
4. Right here, in the middle of the table.

Passive

1. "How was the fish put into the bowl?"

2. "How was the gravel put into the bowl?"

3. "How was the marble put into the bowl?"

4. "How was the fish bought?"

Passive

1. They – they get it with the net and they dump it from a big fish bowl and they dump it.
2. They get a whole box full – get it in – drop it in.
3. They put glue on it – stick it in there – glue on it stick it in there.
4. From the fish store.

Negative

1. "Is the fish on the floor?"
2. "Where did you buy this fish?"

Negative

1. No.
2. I didn't buy it.

Adult Questions	Child's Responses
3. "When did you feed this fish?"	3. <u>I didn't...</u>
4. "How did you put the marble in the bowl?"	4. <u>I didn't...</u>

Questions and Relative Questions	Questions and Relative Questions
1. "What would you like to ask me about the fish?"	1. <u>How they move?</u>
2. "What else would you like to ask me about the fish?"	2. <u>How did they put this big thing in there?</u>
3. "What else would you like to ask me?"	3. <u>You mean these are your fish?</u>

Contractions and Causal (Because, if, so)	Contraction and Causal (Because, if, so)
1. "What will happen if I hold the fish in my hand? "Why?"	1. He would die. <u>Because he'll</u> get cold.
2. "If I do not feed the fish, how will the fish feel?" "Why?"	2. Sad. <u>Because</u> it would be hungry.
3. "If I take the water out of the bowl, what will the fish do?" "Why?"	3. Die. <u>Because</u> won't have any water.
4. "If I drop the bowl, what will happen?" "Why?"	4. <u>They'll</u> die and the glass — and this will break. <u>Because</u> the air will be cold.

Imperative	Imperative
"Now I want you to talk to the fish."	
1. "Tell the fish to swim through the tunnel."	1. <u>Swim through that tunnel.</u>
2. "Here's some food for the fish. Put it in the water and tell the fish to eat it."	2. <u>Eat that food.</u>
3. "Tell the fish to move the marble."	3. <u>Move those marbles.</u>
4. "Tell the fish to swim faster."	4. <u>Swim faster.</u>

"Got"	Got
1. "Tell me how you got your shoes."	1. I bought them at the shoe store with mommie.
2. "Tell me how you got your shirt (dress)."	2. My mommie bought some — something like this and she made it.

3. (Give child a marble,) "Tell me about what you have in your hand."

3. A marble.

4. (Give child the fish food.) "Tell me about what you have in your hand."

4. Fish food.

"Have" (Auxiliary verb)

Have

1. (Put marble in bowl) "Tell me what I have done."

1. You have put a marble in the fish bowl.

2. "Put your finger in the water." "Tell me what you have done."

2. I have put my finger in the fish bowl.

3. "Put your hands on your head." "Tell me what you have done."

3. I have put my hands on my head.

4. (Pick up the fish bowl.) "Tell me what I have done."

4. You've picked up the fish bowl and put it back down.

Separation

Separation

1. (Give child a marble,) "Put the marble in the bowl," "What did you do?"

1. I put it in the fish bowl.

2. (Give child another marble.) "Put the marble in my hand." What did you do with the marble?"

2. I gave it to you.

3. (Give child the marble again.) "Hold the marble high in the air."

3. I held it high up in the air.

4. "Put the marble on the table." "What did you do with the marble?"

4. I put it on the table.

Past Tense

Past Tense

1. "Go and open the door." "What did you do?"

1. I opened the door and closed it.

2. "Now run and touch the wall." "What did you do?"

2. Touched the wall.

3. "Now touch your nose." "What did you do?"

3. Touched my nose.

4. "Now jump up and down." "What did you do?"

4. Jump up and down. Jumped up and down.

Possessive

Possessive

1. "Whose pencil is this?"

1. Yours.

2. "Whose shirt (dress) is this?"

3. (Show picture No. 1) "Whose pigs are these?'

4. (Show picture No. 2) "Whose bone is this?"

2. <u>Mine</u>.

3. <u>Hers</u>.

4. The <u>dog's</u>.

Reflexive

1. "Hit yourself." "What did you do?"

2. "Now I'll hit myself." "What did I do?"

3. "Touch yourself." "What did you do?"

4. "Now I'll touch myself." "What did I do?"

Reflexive

1. Hit <u>myself</u>-three times.

2. You hit <u>yourself</u> on the arm.

3. Touch <u>myself</u>.

4. <u>Touched</u> myself.

Conjunction

1. (Show marble and pencil.) "Tell me about these."

2. (Show paper and spoon.) "Tell me about these."

3. (Show sock and belt.) "Tell me about these."

4. (Show scissors and book.) "Tell me about these."

Conjunction

1. The marble can roll <u>and</u> the pencil can write.

2. The spoon can dig <u>and</u> you can have a piece of paper and write.

3. You can wear sock <u>and</u> you can put a belt in that.

4. You can cut with this <u>and</u> we can look in this.

Pronoun in conjunction

1. (Show picture No. 3.) "Tell me about this picture."

2. (Show picture No. 4.) "Tell me about this picture."

3. (Show picture No. 5.) "Tell me about this picture."

4. (Show picture No. 6.) "Tell me about this picture."

Pronoun in Conjunction

1. They're playing baseball. They're playing baseball and the little girl is going to get the ball.

2. The hat flew away. And she's trying to get it.

3. They're giving her some place stuff cause her foot is broken.

4. He's going home. And the puppy's going home.

Adjective

1. "Tell me about your shoes."

Adjective

1. Well, they're <u>new</u> and

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my brother polishes
them. And see they
use to be all <u>grumpy</u>.

2. "Tell me about my dress (shirt)."

2. You buyed it. Good.

3. "Tell me about the gravel in the fish bowl."

3. <u>Orange</u>, <u>blue</u>, <u>white</u> and <u>purple</u>.

4. "Tell me about your shirt (dress)."

4. It's <u>new</u>.

Adverb

1. "Run across the room." "Now tell me how you were running."

2. "Clap your hands together as hard as you can." "Now tell me how you were clapping."

3. "Jump up and down." "Now tell me how you were jumping."

4. "Shake your head." "Now tell me how you were shaking your head."

Adverb

1. I was running <u>with my feet</u>.

2. <u>Hard</u>.

3. <u>Hard</u>.

4. <u>Fast</u>.

Complement - Infinitive

1. "If you could do anything, what would you want to do?"

2. "What else do you want to do?"

3. "What else do you want to do?"

4. "What else do you want to do?"

Complement - Infinitive

1. I would <u>want to</u> swim in the water.

2. I would <u>want to</u> pat my cat.

3. I would <u>want to</u> lay down and watch TV all-day.

4. Have some candy and a popcycle.

Complement - Participle

1. "What is it fun doing?"

2. "What else is it fun doing?"

3. "What else is it fun doing?"

4. "What else is it fun doing?"

Complement - Participle

1. <u>Swimming</u>.

2. Eating and <u>sitting</u> down.

3. Play dolls.

4.

Did (Auxiliary verb)

1. "Ask the fish if it ate its food."

2. "Ask the fish if it swam through the tunnel."

Did (Auxiliary verb)

1. <u>Did</u> you <u>eat</u> your food fishes?

2. <u>Did</u> you <u>swim</u> through the tunnel?

3. "Ask the fish if it slept last night."

3. <u>Did</u> you <u>sleep</u> last night?

4. "Ask the fish if it went swimming this morning..

4. <u>Did</u> you <u>swimming</u> this morning.

Other syntax measures.

1. Wechsler Intelligence Scale (WISC) Item Picture Arrangement: child is asked to tell in his own words the picture story he arranged; his response shows his skill in word finding and sentence building - one can detect any deterioration of articulation during contextual speech.

2. Tell a Simple Story (Three Bears, Red Riding Hood, etc.). If a child cannot tell a story spontaneously, the examiner tells the child a simple story and asks him to retell it. This measures child's use of language in connected speech: articulation, vocabulary, sentence structure, word variety, organization of thought, memory for significant detail.

3. Northwestern Syntax Screening Test. (NSST) THe NSST is a quick screening device to make an estimate of syntactic development. It can isolate those children between 3 and 8 years of age who are sufficiently deviant in syntactic development to warrnat further analysis. The NSST measures both receptive and expressive use of syntactic forms, using identical linguistic structures in both parts of the test.
This test is copyrighted and obtainable from the Northwestern University Press.

4. Receptive, Expressive and Phonetic Language Scale.. (O'Asare and John 1961)

    The R-E-P scale allows the observation of receptive, expressive, and phonetic skills for children 6 weeks to 68 months. It combines interviews with the mother and direct observation of the child.

5. Syntaxtical Relations Test for Deaf Children (Ray, Schein, and Frisina 1954). This test is designed to measure the child's grasp of syntax. It is designed to be used with children 3 to 7 years of age. Selecting the correct response depends upon recognizing the part of speech that is missing.

6. Verbal language development Scale (Mechane,   ) This is a checklist scale later from the Vineland Maturity Scale.

7. Berko's Morphology Measure. There are still very few measures for determining a child's application of syntactical rules orally. In 1958 Jean Berko developed a procedure to evaluate a child's knowledge of grammatical rules (Anisfeld and Tueker 1973). She 'etermined this could be done by observing any generalizations of ﹇nese rules to nonsense syllables. She devised a method for eliciting the child's productive control of various inflections-- plurals, present progressive, past tense, possessive, and third person singular--by presenting him with nonsense words in contexts requiring inflections. She chose nonsense syllables because she felt that true, internalized generalizations would be tested rather than memorized or rote inflectional forms.

    There are a number of criticisms of Berko's study: 1--it does not provide a very representative sample of the whole range of the child's usage; 2--performance is dependent on the child's knowledge of certain words and ability to "read" correctly particular pictured

referenced situations; 3--it seems to represent much too low a success level; and 4--it tested only productive control of rules and not receptive control. In general, though, Berko's inventive approach to measuring a child's knowledge of morphological rules is a classic, and a model upon which methods, yet to be refined, can be based.

Step II   Conditions in the Environment to Develop
              Syntax in Young Children
              Situational Variables
              General Conditions
              Specific Conditions for the development of
                  a. Identified grammatical patterns of
                     · Standard English
                  b. Ability to ask questions as a means
                     of seeking
                  c. Ability to verbalize eagerly, and
                     with ease: fluency

CONDITIONS IN THE ENVIROMENT TO DEVELOP
SYNTAX IN YOUNG CHILDREN

Situational Variables Relating to Syntax

The relative contributions of heredity and environment to the
development of language is an unresolved question. Certain
theorists, e.g., Lenneberg and Chomsky have advocated a strongly
environmentalistic position, e.g., Mowrer and Skinner. Those with
a predominantly biological orientation include Lenneberg who has
claimed that language development has a rather specific biological
foundation. The child begins to speak when he is at a certain
maturational level, has attained a given stage of maturation, and
training does not influence the general point in a child's
development at which language use is begun. In support of the
biological viewpoint, Lenneberg (19) points out that there is
a remarkable degree of correlation between measures of motor
development and language development. This correlation holds for
both normal and retarded populations. Lenneberg further states
that language begins when various measures of central nervous
system maturity, such as brain weight, have achieved approximately
65 percent of their mature values. In his studies of language
development in many countries he has found that the rate of speech
development varies extremely little among these diverse cultures.
A study by Greenberg (1963) of 30 different cultures found that
initial phonology was not different among the various cultures
studied. A further line of supporting evidence comes from studies
which compare the language development of children with deaf
parents and children with normally hearing parents. During early
infancy there appears to be almost no difference in the sounds
emitted by the children from these two distinctly different
hearing and speaking environments. Also, the children born to
congenitally deaf parents began to speak at approximately the
same age as the children from normally hearing parents and the
stages in language development were the same for both groups of
children. Support for the biological basis of language development
has also come form studies of homozygous and heterozyhous twins
and from studies involving injury to the brain at various ages.
Lenneberg further claims that language is a species-specific
phenomenon and that attempts to demonstrate language acquisition
in infra-human animals has not been successful. Reported successes
have been the result of an inadequate definition of language.

A similar biological point of view regarding language
development is espoused by the linguist Chomsky. Chomsky also
views language as a species-specific phenomenon, suggesting that
the ability to use language is the very essence of humanity.
Chomsky has focused his attention primarily on the acquisition of
grammatical rules. He postulates that in order for the child to
be able to acquire language he must discover the underlying system
of grammatical rules. Chomsky suggests that all humans possess
an innate language capacity which might be called a language
acquisition device. Since the child actually hears only a limited
number of sentences and is able to produce an infinite number
by applying various rules of syntax, Chomsky suggests that the
language acquisition device permits the child to extract the
regularities from the sentences he hears and incorporate these

regularities as a system of rules. Once he has acquired this
system of rules, the child can produce and understand sentences
which he has never heard before.

The biological viewpoint of language acquisition postulates
that the most active mechanisms in the development of language are
the innate biological structures of the organism. The child's
language environment according to Lenneberg and Chomsky plays
a rather passive role. The behaviorist position suggests a more
active role for the enviroment. Mowrer, (19), for example,
has used the principles of imitation and reinforcement to explain
language acquisition. According to Mowrer, language is acquired
initially by the child associating the sounds of the human voice
with pleasurable, need-satisfying activities such as being fed.
Due to this pleasant association the child's own vocalizations
are pleasurable and tend to be repeated. The adults in the child's
environment also reinforce babbling which resembles adult speech.
The wide variety of a child's speech is accounted for by the
process of generalization. Linguists have generally been
unenthusiastic about learning theory interpretations of language
acquisition. Particular criticism has focused on the generalization
issue. It has been pointed out, for example, by Brown, Cazden
and Bellugi that children acquire and utilize a wide variety of
syntactic transformations for which there has been apparently no
reinforcement. For the young child, reinforcement is generally
based on the semantic content of vocalizations and not on the
syntax. This condition provides little basis for generalization.

Much of the current research which relates cultural, social
variables to language acquisition has been stimulated by the
work of Basil Bernstein, a sociolinguist. Berstein observed that
there were striking differences between the speech of working
class and middle class children in London. The difference was in
the type of code which was employed in speech. Bernstein (19)
suggested two general types of codes, restricted and elaborate.
Restricted code communication is characterized by context-bound,
particularistic structures and meaning. Elaborated code
communication, on the other hand, is less context-bound, formal
syntactic rules are employed, a relatively differentiated
vocabulary is utilized and the meanings of phrases are universalistic,
that is they are understood by listeners regardless of the
listeners particular background. These code differences have
been explored in the United States population by a number of
researches. In general research has concentrated on lower class
(particularly black) and middle-class speech. One of the most
frequently cited studies is that of Hess and Shipman (1965). Hess
and Shipman were interested specifically in examining the question
of what is cultural deprivation and how does it act to depress
the cognitive resources of children. In order to study this
question Hess and Shipman engaged approximately 160 black mothers
and their 4-year-old children in a series of tasks and interviews.
Striking differences were found in the use of language between
the mothers and children in the various SES levels studied.
Relative to lower class mothers, mothers in the upper middle-class
used significantly more words in describing pictures to their
children, used more complex syntactic structures, used more

abstract words, more complex verbs and a greater variety of modifiers. It was concluded that lower class mothers generally employed a more restricted linguistic code.

The Hess and Shipman study also studied another variable which Bernstein has suggested in related to the use of restricted and elaborated codes and relates to subsequent problem-solving ability. Hess and Shipman found that there were differences between classes in the relative proportion of person-oriented and status-oriented messages. In a status-oriented message there is an appeal to role prescriptions. For example, "Girls don't do that" or "Because I said so, that's why". A person-oriented message, however, includes communication which is based on the attributes of the individual and elaborates causes and consequences, thus trying a particular message to an individual and a social context. It was found that the upper-middle class mothers used a far greater number of person-oriented messages than did the lower-class mothers. The importance of this finding for language development is that the person-oriented messages provide a better model for the social use of language. The middle-class child is likely to be exposed to a language environment in which language is used to signal out his individuality and provide both antecedent and consequent situational ties. The lower-class child appears to be exposed to a vastly different model. Language for the lower class child is more likely to be viewed as a restatement of status differences, much less personal, and without situational ties.

Bernstein's work was originally published in the late 1950's. In a 1970 article Berstein further elaborated his theory of codes and addressed himself to some of the misuses of his earlier work. It appears that there was some confusion on the issue of restricted code. Several authors equated restricted with linguistically deprived or nonverbal. In the 1970 article Bernstein pointed out that such an interpretation is inadequate. He suggests that it is inaccurate to claim that middle-class people use an elaborated code and lower class people use a restricted code. The difference is not in the possession of the code but rather in what situations various codes are used. It appears to Bernstein that major differences in choice of code occur in such child-rearing situations as moral education, discipline and expression of feeling. Whereas middle-class parents are more likely to discuss such matters in the context of an elaborated code, lower-class parents are more likely to use the restricted code. (As an aside, this difference was graphically depicted in a recent television program which describes the lives and life styles of a blue-collar family and white-collar family in the United States. The blue-collar father came home from work one evening obviously tired, and sat down to dinner with his wife and children. As soon as he sat down he said "shut up" and that ended the conversation. The white collar worker and his family were driving to the weekend cottage one Friday afternoon and the father said "I have really had a hectic week. I've been under pressure all week and I want to be pampered, so please keep the noise down". The situations and messages were parallel but the differences in code, the differences in the social use of language, were obvious.) The situational differences in language

use was also demonstrated in a study in which children of different social classes were given two topics about which they were to write letters. There were no differences in syntax and vocabulary attributable to class differences in the formal writing assignment (a business letter) but when the topic was informal the class differences were apparent.

The situational differences in language use also appears to bring together some of the differences among biologists, linguists and behaviorists. The critical feature appears to be a need to distinguish between language competence and language performance. Several authors have pointed out this distinction, including Lenneberg and Menyuk. In a review by Ossex, (19), the point is made that there are four kinds of problems which a theory of language development must account for: 1) the development of prelinguistic babbling; 2) the acquisition of basic language structures; 3) the acquisition of elaborated language sequences; 4) the acquisition of different modes of communication. Osser suggests that social or cultural factors appear to be stongly implicated in the last two areas of development, and play a lesser role in the development of 1 and 2. It might also be claimed that as one progresses through the four areas, the problem of divorcing competence from performance becomes progressively more difficult.

General Conditions

General conditions in the environment that bring about the development of syntax are the previously learned ones of extension, elaboration, expansion of thought, and encoding techniques.

1. Extension - when the learning facilitator says more completely what the child had tried to say, but keeping his words as close to the child's own words as possible.

2. Elaboration - giving the child a new word when his sentence is being extended or when describing something to him.

3. Expansion of Thought - where the language facilitator deliberately models the correct syntax following a child's immature syntactical structure. She then encourages the child to use it by asking him a question, the response to which demands use of the structure.

4. Encoding or questioning strategies particularly those calling for open ended responses such as:

    -attention seeking questions, hypothesis statements and attention seeking statements.

5. Imitation can be used with the directive process.

Following are example learning environments and/or experiences that are designed to bring about the syntax development outcomes of

1. the ability to express oneself using the identified grammatical patterns of standard English;

2. to develop a precise language of reference so that the
   child will be able to specify the characteristics of
   objects precisely and accurately without needing visual
   props;

3. the ability to ask questions as a means of seeking and
   gaining information;

4. ability to verbalize eagerly and with ease.

CONDITIONS FOR DEVELOPING

THE CHILD'S ABILITY TO EXPRESS HIMSELF

USING THE IDENTIFIED GRAMMATICAL PATTERNS OF STANDARD ENGLISH.

ACTIVITY: Popping Corn

Learner Outcome: To develop the child's ability to express
                   himself using the identified grammatical
                   patterns of Standard English

Conditions:

   Learner Characteristics:

   Situational Variables:

   Teaching Strategy: Directive/Developmental

   Content: Popcorn popper (clear top)
              popcorn
              oil
              salt

Make the popcorn with child, conversing all the while in an
effort to elicit the desired syntactical patterns.
Example:
a)   Noun Phrases:
     What do you think is happening to the oil inside the popper?

     What can we put on the popcorn to make it taste better?

     What would you like to drink with your popcorn?

Evaluation:

Activity: Gerbel

Learner Outcome: To develop the child's ability to express
himself using the identified grammatical patterns
of standard English.

Conditions:

  Learner Characteristics:

  Situational Variables:

Instructional Strategy: Questioning strategy and learning
facilitator's feedback to child's questions and responses.
The stimulus around which the questions will be asked are
two gerbils.

    Noun Phrases: 1. What do you see here?
                   2. What color is the gerbil?
                   3. Does he have eyes?
                   4. How many gerbils do you see?

    Verb Phrases: 1. What is the gerbil doing?
                   2. What is he doing with his nose?
                   3. What is he doing with his tail?
                   4. What else is he doing?

    Preposition: 1. Where is the gerbil?
                   2. Where is teh other gerbil?
                   3. Where is his eyes?
                   4. Where is the gerbil's house?

    Passive: 1. How would you feed the gerbil?
                   2. How was the gerbil brought into the room?
                   3. Is the gerbil on the floor?

    Questions and Relative Questions: 1. What would you like
                                            to ask me about the
                                            gerbils?

    Contractions and Causal: 1. What will happen if I hold
                                  the gerbil in my hand?
                              2. If I don't feed the gerbil,
                                  how will he feel? Why?

    Imperative: Now I want you to talk to the gerbils.

                 1. Tell the gerbil to come over here.
                 2. Here is some food for the gerbils.
                     Put in here in the bowl and tell the

gerbil to eat it.
3. Tell the gerbil t play with you.
4. Tell the gerbil ） get on your hand.

Got:
1. Give the chiJ che gerbil food - "Tell me about what you have in your hand."
2. Give the child the gerbil - "Now tell me about what you have in your hand."

Have:
1. Pick up the gerbil. "What have I done?"
2. Rub the gerbil. "What have I done?"
3. Pick up the gerbil's house. "What have I done?"

Separation:
1. "Put the food on the table" - "What did you do?"
2. "Put the food in the bag" - "What did you do with the food?"

Past Tense:
1. Go and get the gerbil. What did you do?
2. Rub the gerbil. What did you do?

Possessive:
1. Whose house is this?
2. Whose food is this?
3. Whose hand is this?

Reflexive:
1. Touch the gerbil. What did you do?
2. Touch yourself. What did you do?
3. Now I'll touch myself. What did I do?

Conjunction:
1. (Show food and house.) Tell me about these.

Pronoun in conjunction:
1. Tell me about this gerbil..
2. Tell me about this gerbil.

Adjective:
1. Tell me about your gerbil.
2. Tell me about your pets at home.

Adverb:
1. Put the gerbil in the box very gently. How did you put the gerbil in the box?

Did:
1. Ask the gerbil if it ate its food.
2. Ask the gerbil if it ran across the floor.
3. Ask the gerbil if it likes you.
4. Ask the gerbil if it wants to visit its friend in the box.

Content. the gerbil

Activity: Making Milk Shakes

Learner Outcome: To develop the children's ability to express
themselves using the following syntactical
structures, as well as to be able to explain
an event that has happened using the structures.

Conditions: A) Learner Characteristics:

           B) Situational Variables:

           C) Teaching Strategy: Developmental extension,
elaboration, expansion, and questioning strategies
are used as the event happens in front of the
children, ans as they participate in it, to
elicit the following syntactical structures:
(examples of questions to be asked)

Noun Phrases: 1. What is this? (point to ingredients
singly)
2. What flavor is the ice cream? The jam?
3. Is the ice cream hot or cold, soft or hard?

Verb Phrases: 1. What are we doing with the ice cream.
(as someone takes it from the carton
and puts it in the blender)
2. What will happen to the milk and ice
cream when the blender is turned on?
3. What should we do with the blender (plug
it in)?
4. Where should we put the blender (on the
floor)? Why? [also prep. phrase]

Preposition: 1. Where am I going to put the vanilla?
(into the blender)
2. You get ice cream from milk. Where does
milk come from? How do we get chocolate
milk?
3. Where are the strawberries (in the jar)?
Where do we find strawberries?
4. (Child puts in ice cream. Another child
puts in milk) Now where is __child__
pouring the milk? (over, around the
ice cream).

Causal: 1. What will happen when the strawberry jam
is added?
2. What will happen when the blender is turned
on?
3. What do people do to milk to get ice cream?
What do they do to strawberries to get jam?

4.   What happens when ice cream gets hot?

Concluding Questions:

1.   Can anyone describe the taste of
milkshake (smooth, soft, cold, strawberry)?
2.   Can anyone expain how we made the milk-
shake?
3.   How could we make a chocolate instead of
a strawberry milkshake (banana, vanilla)?

D) .Materials: blender, strawberry jam, vanilla, milk,
vanilla ice cream, cups.

E)   Evaluation:

Activity: Watering the Plants

Learner Outcome: (I) To guide the child from his present syntax
pattern to more complex syntax patterns.

(II) To encourage verbalization and questioning
as a means of expressing and gaining information.

Conditions:

Learner Characteristics:

Situational Variables:

Instructional Strategy: (Developmental) Using questioning
strategies and appropriate feedback
techniques, discuss the watering
of the plants set up in the class.

Syntax Patterns:

Noun Phrases: "What do you see here?"   (Cucumber plants)
"What color are they?"
"What are these?"   (They are leaves.)
"What color are they?:

Prepositions: "What do we do with this?"   (Point to water
dispenser)
"Where did you get the water?"
"Where did the water go?"
"Then what happens?"

Verb Phrases: "What are you doing?"   (Watering the plants?)
"Where are you going?"   (To get water)
"What is the water doing?"

Passive: "How would you water the plant?"
"How was the plant put in the tray?"
"How could you feed the plant?"

Causal: "What would happen if the plant didn't get
water?"
"What would happen if we gave it too much
water?"
"What would happen if no dirt were around it?"

Imperative: "Bring the water here."
"Sit in this chair."
"Tell me what your doing."

Possessive: "Whose plants are these?"

"Whose water is this?"
"Whose hand is this?"

Reflexive: "Touch the leaves. What did you do?"
"Pour the water. What did you do?"
"Touch yourself. What did you do?"

Negative: Is the water on the floor?
Where did you buy this water?
Where did you buy these plants?

Got: Give the child a water dispenser. - "Tell
me about what you have in your hand."
Give the child a plant tray. - "Now tell
me about what you have in your hand."

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express himself using the identified grammatical patterns of Standard English; specifically the use of the present progressive and the past perfect.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Developmental
    The group is seated around a small class-room table and chair. The teacher takes the first turn. She gets up from the group, goes to the shelf, gets out some work, and carries it back to the table. She sits down and while seated goes through the motions of working, repeating "I am working," all the while. She then gets up and takes the work back to the shelf repeating, "I have worked," while doing so. Each child in the group may take a turn. All the children are encouraged to repeat the two sentences with the child who is doing the activity.
    After everyone who wants a turn has had a turn, the teacher then asks for other ideas of things to do.

    Content: Whatever materials the teacher's using.

Evaluation:

Activity:

Learner Outcome: Developmental; Understanding the causal
                    relationship between two events during "because".

Conditions:

    Learner Characteristics:

    Situational Variables:

Teaching Strategy: Directive
    Procedure:
    1. Make the statement: "Ellen wears a dress because she
        is a girl." Then ask, "Why does Ellen wear a dress?"
        Have the student respond in a complete sentence:
        "Ellen wears a dress because she is a girl." Do this
        to establish the causal relationship between the two
        events using the connecting word "because".

        Susan is laughing because she is happy.

        The windows are open because it is hot.

        People wear coats because it is cold.

        Airplanes fly because they have wings.

        We use unbrellas because it is raining.

    2. Leave the sentence openeded and have the student
        supply the ending after the "because".

        The man drinks because...(he is thirsty).

        The child goes to bed because...(he is sleepy).

        I eat because...(I am hungary).

        He closed the window because...(it was cold).

        Mothers wash clothes because...(they get dirty).

        Turn on the light because...(it is dark).

    3. Ask the child questions which require a causal response.
        Encourage the child to answer in full sentences.

        Why can't people fly?

        Why are lions kept in cages?

Why do cars have lights?

Why don't we drink soup with a fork?

Why do people sleep?

Why shouldn't children play with knives?

4. Present some of the following incongruities. Have the
   student identify the incongruous of the sentence and
   correct it.

   We take medicine because we are healthy.

   The boy eats because he is thirsty.

   The man sleeps because he is awake.

   The girl uses an unbrella because it is sunny.

Content: The preceeding script.

Evaluation:

Activity:

Learner Outcome: Syntax Developmental Skills. The child will be
                    able to express himself using Standard English
                    as he tells a story of a given picture.

                    a) The child will choose a picture and tell a
                        story about the picture. He will use a tape
                        recorder to record his story.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teacher Strategy: Developmental
    1. When a child shows interest in the listening center the
        teacher explains why the pictures are there and the tape
        recorder is set up.
    2. Once interest is shown the teacher moves about the room
        leaving the child to develop and record his story.

    Content: Recorder and tape (blank)
                Ear phones for using after story has been told.
                Various pictures such as the story pictures from
                Peabody Lang Kit.
                Situational pictures such as:
                1. a child crying because she fell and another
                    child helping her.
                2. two children standing outside a dark forbidding
                    house.
                3. a boy chasing an unhappy looking dog.

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express herself
                  using the identified grammatical patterns of
                  Standard English.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: directive, employing repetition and
                  unison response, and following Gagne's
                  steps for teaching a concept.

    Content: assorted familiar round objects (balloons, ball,
                  record, quarter, small saucer, jar lid, round
                  hand mirror) and a square wooden block and wooden
                  triangel.

    This lesson has the dual purpose of introducing
the concept of "roundness" and developing the
syntactical construction of the simple negative.
1) introduce concept with a circle drawn on the
blackboard, using model statement "this is round",
then follow with two concrete positive instances
of concept asking the children individually "What
is this?" and then "Is this round?"; have
children individually or in unison repeat "This
is round." (modeling the correct response for them
when necessary);
2) introduce a negative instance of the concept
(a square block), repeating same response pattern
as above using the simple negative construction
"This is not round";
3) with both a positive and negative instance of
the concept, compare and have the children repeat
in unsion the appropriate response;
4) have each child correctly identify one (different)
object as not round by stating "This is not round".
At the end of the lesson each child was given a
round balloon.

Evaluation:

Activity:

Learner Outcome: To be able to use simple positive and negative sentence constructions.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Directive

I will ask the children "What is this?" If necessary I will identify the shell for them. Then ask questions which require positive or negative sentences in response, such as: "Is it hard?" "Is it gooey?" "Do you like it?", etc.

Each child will answer questions about the conch shell using a complete positive or negative sentence structure. Each child will use both sentence forms during the course of the lesson. I will call on them in turn, and supply the correct response if they do not use it, so that they may imitate the form.

Content: one large pink and orange conch shell.

Evaluation:

Activity:

Learner Outcome: The ability to use pronouns correctly

Conditions:

      Learner Characteristics:

      Situational Variables:

Teaching Strategy: We play a game called "I like" and "She likes". I ask Melanie questions about herself or her sister. She must answer each one by starting with "I like" or "She likes". For every correct usage she chalks up a point by her name on the board. She also gets points for saying "I don't know", since she ordinarily would have said "Me don't know". She thought of this herself. When she gets fifteen points she can draw pictures of things she likes on the board.

Content: A chalkboard and chalk are the only items needed.

Evaluation:

Activity: Looking at Picture Books

Learner Outcome: To answer questions using the syntactic forms
                   of noun phrase, verb phrase, prepositions,
                   negatives, imperatives, possessives, adjectives,
                   adverbs.

Conditions:

     Learner Characteristics:

     Situational Variables:

     Instructional Strategy: Consists mainly of reading portions
     of the books and hopefully getting the children to verbalize
     about them.   I provide corrective feedback.

     Questioning strategies:
     "What color is the strange animal?"
     "What are they doing?"
     "Where is Madelene?"
     "Tell Thidwick to get rid of those animals."
     "Whose horns are these?"
     "Describe the fish" (child holds the book away from me)
     "Close that book quickly.   How did you close it?"

     Content: Books: Dr. Seuss: Red Fish; Blue Fish
                                      Thidwick the Big Hearted Moose
                                      Horton Hears a Who
                         Ludwig Bemelmans: Madeline
                         The Sesame Street Book of Puzzlers

Evaluation:

Activity:

Learner Outcome: To develop the child's ability to express him-
self in noun phrases, with prepositions, in cause
and effect sentences, and with auxiliary verbs.
To encourage verbalization and questioning as a
means of expressing and gaining information.
To guide the child from his present syntax
pattern to move complex syntax patterns.
To develop language abilities which will enable
the child to describe the characteristics of
objects without relying on visual props.

Conditions:

  Learner Characteristics:

  Situational Variables:

Noun Phrases:
What is this? (point to whole plant)
What is this? (point to blossom)
What color is it?
What are these? (point to peppers)
What color are they?
What are these? (point to leaves)
What are these? (point to stems)

Prepositions:
What are the blossoms?
What do we do with this? (handing his water)
Where does the water go?
Then what happens?

Causal:
What would happen if the plant didn't get any water? Why?
What would happen if I broke one of the branches? Would
that part of the plant live?
What would happen if the plant didn't have any dirt around
it?
What would happen if we gave it too much water? Why?

"Have":
What have you done with the water?
Where has the water gone?
What have you gotten on your finger? (touching dirt after
watering)
Where have you put the empty glass?

Conclusion:
What did you learn about this pepper plant? Does it need
food like you do? What are the parts of the plant? (Various
other questions would be formulated if the child needs
guidance in expressing what he has learned.)

Similar activities and questioning could be set up daily, discussing
such topics as pictures the children are coloring in coloring books,
making popcorn, various costumes the children could dress up in,
and how to build a construction out of blocks.

Activity:

Learner Outcome: To develop the child's ability to verbalize
                    eagerly and with ease .
                    Have the child be aware of the grammatical
                    patterns of Standard English and to eventually
                    have the ability to express himself using those
                    patterns.
                    Have the child seek and gain information through
                    asking questions.
                    To have child understand characteristics of objects
                    in the terrarium so he can describe them later
                    without visual props.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: 1. extension /
                          2. elaboration
                          3. expansion
                          4. encoding (questioning strategies)

Noun Phrases:
1. What is on the table?
2. What is in the bowl?
3. What else is in the bowl?, etc.
4. What color is the moss?
5. How many pine cones do you see?

Verb Phrases:
1. How did I get the objects to go in the terrarium?
2. What did I do to get these objects?
3. How does the dirt help the plants?
4. How would you get the gravel out to the bowl?
5. How can we keep these plants alive?

Prepositions:
1. Where is the terrarium?
2. Where are the rocks? Tell me.
3. Where are the leaves of the ferns?

Contractions and Causal: Causal:
1. What will happen if the plants get too much   1.
    sun. Why?
2. Should we water these plants every day?   2.

Why not?   <u>Causal:</u>
3. Do we find these plants at the beach? Why?   3.
4. Could these plants grow in a different kind 4.
    of container? Why?

Concluding Statement: Tell me all you can about the terrarium.
How are these plants different from ones you see in gardens
around the house ?

Content: I will use a terrarium which consists of rocks, charcoal,
moss, ferns, dirt, and pine cones.

Activity:

Learner Outcome: To use the following syntactical structures.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Questioning strategies to elicit the appropriate syntactical structures.

Noun Phrases:
1. What is this? (point to the flour
2. What color is this bowl?
3. Is the flour soft or hard?

Verb Phrases:
1. What are we doing? (stirring, pouring, mixing, etc.)
2. Now what are we doing? (rolling clay, pounding clay)

Prepositions:
1. Where is the flour?
2. Now where is the flour? (in the bowl)
3. WHere are you sitting?
4. Where is the bowl?

Passive:
1. How did the clay become red?

Negative:
1. Is the flour purple?
2. Where did you buy the flour?

Causal:
1. If we did not add the water to the flour and salt, would we still have clay?
2. If we did not add the coloring, would the clay be red?

Have:
1. Tell me what I have done. (roll clay into ball)
2. Now tell me what I have done. (pound clay flat on table)

Separation:
1. Make a snake with the clay. What did you do with your clay?

Past tense:
1. Make your clay flat. What did you do?

Possessives:
1. Whose clay is this? (point to child's)
2. Whose clay is this? (point to own clay)

Adjective:
1. Tell me about your clay.

Adverb:
1. Pound your clay. Now tell me how you did that. (soft, hard, etc.)

Content: flour, salt, water, bowl, spoon, measuring cup, tempra paint (powdered) or food coloring.
Recipe: 3 parts flour, 1 part salt, water to proper consistency add color and mix until color is vivid.

Evaluation:

CONDITIONS TO DEVELOP THE ABILITY TO ASK QUESTIONS

AS A MEANS OF SEEKING AND GAINING INFORMATION.

Activity:

Learner Outcome: To be able to ask questions to gain information
                   (syntactical outcome)

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Developmental Process
    1. A big envelope contains a picture of an object; envelope
        tacked on bulletin board, divider, center.
    2. Object is for children to ask questions, using "wh"
        words and within time limit find out what hidden picture
        shows.
    3. A child can be in charge and even select the picture
        to stump the others.

    Content: File of pictures (Peabody Language, Kit Pics good)
               large envelope or tagboard envelope or pocket the
               "wh" words in evidence.

Evaluation:

Activity:

Learner outcome: To develop the ability to ask questions as a means
                   of seeking and gaining information.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Developmental
    On the table is a decorated box labeled the Mystery Box with
    a mystery object inside.
    Each child writes these questions about what's inside so they
    can make an approporiate guess.
    As each child does this center, he puts the questions on the
    teacher's desk and she answers them at the end of class.

    Content: A mystery box, a secret item inside the box, such
    as a nail, paper clip, or stuffed animal, slips of paper
    to write the questions on.

Evaluation:

Activity:

Learner Outcome: To develop the ability to ask questions as a means of seeking and gaining information. (With the child used here, I will be attempting to reinforce this ability.

Conditions:

Learner Characteristics:

Situational Variables:

Teaching Strategy: Directive
A. "What Do I Have?" game:
1. Child is shown a paper figure of a rabbit. The figure is discussed, and the child is told that the object of the game is to make the figure look real (i.e., to put various distinguishing features on it.) In order to do this, he must pretend to be the rabbit and must ask questions about what the rabbit has. That is, he is to ask questions such as, "Do I have a nose?" "A mouth?" Each time he asks an appropriate question, the facilitator expands his statement: "Yess, you have a mouth, and it is red. . ." She then gives him a representation of the appropriate body part, which has been cut from colored construction paper, to glue on to the main body of the rabbit.
2. The process is repeated with a duck and then with a gingerbread man figure. He dresses the ginger bread man figure with all the items listed below in "content".

Content: Paper figures of a gingerbread man, rabbit, and duck cut from construction paper in various colors. Colored accoutrements for each: gingerbread man: hair, eyes, mouth, scarf, shirt, buttons, pants, shoes, belt; rabbit: tail, eye, nose; duck: feet, eye, mouth. Glue.

Evaluation:

Activity: Twenty Questions

Learner Outcome: To develop the ability to ask questions as a
                   means of seeking and gaining information.

Conditions:

   Learner Characteristics: 5 to 6 year old children.

   Situational Variables:

   Teaching Strategy: Directive

   Call each of the children before the group in turn. Hand him
   a card to hold so that no one else can see it. Have him
   whisper in your ear what it is (vary the difficulty to suit
   the ability of the child). Have the rest of the group
   ask questions about it. Is it something you wear?, etc.
   The leader answers only "yes" or "no". See if the group can
   guess the object with 20 questions or less.

   Content: Several pictures of familiar objects.

Evaluation:

Activity:

Learner Outcome: To develop the ability to ask questions
                  To develop the ability to use grammatical structures
                  To practice verbalizing

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy: Directive the first time.

    1. The instructor or a child says "I'm thinking of someone."
    2. The children take turns asking questions beginning with:
        a. "Is it...(a boy)?".
        b. "Does...(she have long hair)?"
        c. "What...(color is his hair)?"
        d. "Where...(does she sit)?"
        e. "How...(tall is he)?"
    3. Grammatical perfection should not be demanded of young
        children (K-1) but older children should ask their
        questions correctly (depending on their level of
        achievement, of course.) Children may model the correct
        grammar of the instructor or of other children, but there
        ought to be no penalty for incorrect questions - only
        encouragement for correct ones.

    Content: None

Evaluation:

Activity: "I have something in my box..."

Learner Outcome: To develop the child's ability to ask questions
as a means of seeking and gaining information.

Conditions:

Learner Characteristics:

Situation Variables:

Teaching Strategy: Developmental

Learning Facilitator: "I have something in my box, can you
guess what it is?"
Ask me a question like "Is it big?"
Learning Facilitator attempts to encourage the child to ask
such questions as:
Is it big?
Is it green?
Is it heavy?
What do you do with it?
Can you eat it?

Evaluation:

CONDITIONS TO DEVELOP THE CHILD'S ABILITY

TO VERBALIZE EAGERLY AND WITH EASE.

Activity:

Learner Outcome: To develop the child's ability to verbalize
                   eagerly and with ease.

Conditions:

    Learner Characteristics:

    Situational Variables:

    Teaching Strategy:. Developmental

    Learning Facilitator and child will interact using doll as
    focus of interaction.

    Do you have a doll you play with at home?
    Is it like this doll?
    Does your doll have a name?
    What is this doll's name?
    Would you like to help me dress it?
    What clothes shall we chose?

    Content: A doll
             doll clothes

Evaluation:

Activity: What did we just see?

Learner Outcome: To develop a precise language of reference so
                   that the child will be able to specify the
                   characteristics of objects precisely and
                   accurately without needing visual props. (Don
                   Moore) - so child can identify characteristics
                   of objects not in immediate environment.

Conditions:

        Learner Characteristics:

        Situational Variables:

        Teaching Strategy: Directive/Developmental

        Learning Facilitator presents the child with 5 objects and
        says, "Now let's play a guessing game. (Place objects
        back into box) Put your hand in the box and touch one of
        the toys, and try to tell me what you have." Encourage
        the child to describe the item. "Do you remember what
        it looked like?
        What color it was?
        How big?
        How would you use it?
        Could you sit in it?
        Does it grow in a garden?

        Content: 1 cardboard box with lid
                   1 medium-sized red ball
                   1 small blue box
                   1 toy chair (doll-house size)
                   1 doll shoe
                   1 paper flower

Evaluation:

Activity: Baking banana bread

Learner Outcome: To develop a precise language of reference so
that the child will be able to specify the
characteristics of objects precisely and
accurately.

Conditions:

   Learner Characteristics:

   Situational Variables:

   Strategy: Directive/developmental

      Make banana bread with children, conversing during the
   entire lesson, providing verbal feedback and asking questions
   to encourage verbalization.

   examples:
   What happens when you mix the wet and dry ingredients together?
   What happens to the batter when you put it in the oven?
   Also, talk about each ingredient describing color, texture,
   etc.

   Content: bananas, sugar, flour, salt, baking soda, eggs,
   pan, bowls, spoons, oven.

Evaluation:

STEP 111:   TEACHER PREPARATION PROGRAM FOR
               SYNTAX DEVELOPMENT

COMPETENCIES NEEDED BY LEARNING FACILITATORS
FOR THE DEVELOPMENT OF SYNTAX IN YOUNG CHILDREN

Orienting Experiences
Foundation Experiences
Selected Readings for Syntax
Measurement of Syntax Exercise

Competencies Needed by Learning Facilitators for the Development
of Syntax in Young Children.

Skill Competencies. The trainee will be able to:
1. Elaborate on child's verbalization
2. Expand the child's thoughts.
3. Extend the child's words to nearest intended meaning of the child.
4. Use all syntactical forms of English grammar in speech when
   interacting with children.
5. Analyze developmental grammar of a child from one word responses
   to the highest forms of transformations used by seven-year-old
   children.
6. Use the Northwestern Syntax Screening Test with a target child.
7. Analyze syntax using Lee Developmental Sentence Types.

Cognitive Competencies. The trainee will demonstrate
evidence of cognitive knowledge in:
1. Role of expansion of thought in syntax development.
2. Role of extension in child's syntax development.
3. The development of syntax in Standard English.
4. The elements that comprise Standard English such as types of
   phrases, inflections, transformations, and morphology.
5. Role of elaboration in syntax development.
6. Major theorists points of view in the development of syntax.

Orienting Experiences

The following activities are designed to facilitate the student's
sensitatization to the development of children's expressive language
skills, particularly syntax, the conditions in the environment that
assist the child's grammatical development and the skills learning
facilitators need to provide the conditions.

1. Students will interact with a 2 to 4 year old child on
   video-tape to later analyze their language patterns.
2. Students will read overview paper on syntax development.
   This is located in the Cognitive Understandings of Language
   Development Module.

Foundation Experiences

The following experiences are designed to assist trainees in
conceptualizing and performing acts related to the development of
the skills necessary in providing appropriate environmental
conditions for the development of syntax.

Attend lectures on Lee's Developmental Sentence Types

Attend a lecture on basic transformations of Standard English.

Lee's Slide Tape Presentation

Trainees will analyze pre- and posttest measures of mother

and child interaction. The mother recieved a language treatment
after the pretest. Trainees will use Lee's Developmental Sentence
Types to analyze the syntax of the mother and child. Mother's
interaction will also be measured in terms of corrective feedback
techniques. Trainees will then compare pre- and posttest differences.
Trainees will meet in small groups and compare their results.
Trainees should be at least 80 percent correct in their analyzes.

Trainees will attend lecture on Lee's Developmental Sentence
Types.

Trainees will analyze the syntax transformations from a
conversation between an adult and child using Menyik's scale.
Trainees will then examine their analyzes in small groups, discussing
their reasons for classification. Trainees should have classified
the tranformations at least 80 percent correctly.

Trainees will read the module on syntax development and the
selected readings. A class period will be related to the discussion
of these readings and how to provide learning experiences that will
develop syntax.

Selected Readings for Syntax

Development of Syntax

Atney, I.J. Synthesis of papers on language development and reading. Reading Research Quarterly, Fall 1971, 7,1, pp. 9-15.

Athey, I.J. Language models and readings Reading Research Quarterly, Fall 197 , 7, , pp. 16-110.

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Bellugi-Klimer, U., & Hass W., Syntactical structures for modeling in preschool language training. Paper prepared for Early Childhood Research Center, National Laboratory on ECE, 19 .

Brown, R., & Bellugi, U., Three processes in the acquisition of syntax.' Harvard Educational Review.

Cazden, C.B. Children's questions: Their forms, functions and roles in education Young Children, 1970, 202-220.

Menyuk, P. Syntactic structures in the language of children. Child Development, 1963, 34, 407-422.

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Bellugi-Klimer, U. Some language comprehension tests. In C.S. Lavatelli (Ed.), Language training in early childhood education. Urbana, Ill: ERIC Clearinghouse on Early Childhood Education, University of Illinois, 1971, 157-169.

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Readings for Psycholinguistics

Yergin, D. The Chomsky revolution. New York Times Magazine, December 3, 1972.

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Lenneberg, E.H. On explaining language. Science 164, 3380, May 1969,

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115-134.

Syntax development in children with developmental delays.

Rosenthal, J.H. A preliminary psycholinguistic study of children
with learning disabilities. Journal of Learning Disabilities,
8,3, August 1970, 11-15.

Fygetakis, L.J., & Ingram, D. Language rehabilitation and programmed
conditioning: A case study. Journal of Learning Disabilities,
6,2, February 1973, 5-9.

Wiig, E.H., & Semel, E.M., & Grouse, M.B. The use of English
morphology by high-risk and learning disabled children. Journal
of Learning Disabilities, August/September, 6,7, 1973, 59-67.

Stark, J.; Foster, C.; Gidden, J.J.: Gottsleben, R.H., & Wright, T.S.
Teaching the aphasic child. Exceptional Children, October 1968,
149-

Additional optional readings on syntax.

If further clarification of the lecture is needed read, Lee, L.L.
Developmental sentence types: A method for comparing, normal
and deviant syntactic development. Journal of Speech and
Hearing Disorders.

Hobson, A. Systematic language modeling. Contemporary Education,
15,4, 19 .

Nelson, Katherine Structure and Strategy in learning to talk.
Monograph - Society for Research in Child Development. 38,
1 & 2, 1973.

Menyuk, P. Syntactic rules used by children from perschool through
first grade. Child Development, 1964, 35, 533-546.

Cazden, C.B. & Bellugi U. The Child's grammar from 1 to 111. In
Hill, J.P. (Ed.) Minnesota Symposium on Child Psychology 1969
pp. 28-73.

Measurement of Syntax Exercise

On the following pages the trainee will analyze the mother
and child's syntax useage by means of the Lee's Developmental
Sentence Types. The coding system provided is helpful in doing
this.

You may wish to work in small groups while analyzing this
mother-child interaction as it is helpful to discuss your reason for
selecting a particular level and category.

Upon compection you may check your ratings against those
provided by the instructor.

Next you will want to analyze the type of corrective feedback
provided by the mother. Follow the same procedure when analyzing
the syntax.

CODING SYSTEM

I NP - Level I - noun phrase

I D - Level I - designative

I P - Level I - predicative

I V - Level I - verbal

I F - Level I - fragments

I SP - Level I - stereotyped phrases

II NP - Level II - noun phrase

II F - Level II - fragments

II VP - Level II - verb phrase

III DC - Level III - designative construction

III PC - Level III - predicative construction

III VPC - Level III - verb phrases constructions

III SC - Level III - stereotyped constructions

IV DS - Level IV - designative sentences

IV PS - Level IV - action-actor sentence

IV SC - Level IV - stereotyped constructions

V I - Level V - Interrogative

V N - Level V - negative

V DN - Level V - do & negative

MOTHER-CHILD INTERACTION

Syntax level	Sentence type		Type of Corrective Feedback by Mother

P - Look at the book
Allsion
See the mittens
Can you say mittens?

C - mittens

P - The mittens are red
And what is that?

C - ball

P - The ball is red and blue
and white and the ball is
round

C - red

P - The ball is round

C - Round

P - And it's made of rubber.
What is this?

C - apple

P - apple and the apple is
red

C - dat apple

P - And that's a pear, the
pear is yellow and the
apple is red

C - apple and pear

P - apple and pear

C - dat a pear

P - yea -- that's a pear
and that's a what?

C - apple

Syntax   Sentence   Type of Corrective
level   type   Feedback by Mother

         P - apple and the apple
             is red and what's that?

         C - dats all down

         P - that s a chair huh?
             What do you do with
             a chair?

         C - dat down

         P - You sit down huh!
             Oh! What is this?

         C - It eyes

         P - That's the dog's eyes
             and what is this?

         C - His legs

         P - His legs

         C - leg

         P - Where's your eyes
             Where's your nose
             Where's your mouth

         C - right there

         P - Where's your stomach?

         C - right there

         P - Where's your fingers?
             Where's your ears?

         C - right there

         P - Where's your fingers?
             Where's your ears?

         C - right there

         P - Where's your teeth?
             Those your teeth?
             That's good Allison.
             Ooh! What is this?

         C - ans

         P - dogs

         C - dog

Syntax level	Sentence type	Ty_e of Corrective Feedback by Mother
	P - there's one	
	C - one	
	P - Two - two, say two	
	C - dog	
	P - Say two	
	C - two dogs	
	P - say three	
	C - three	
	P - dogs What are these? What are these?	
	C - ba	
	P - balls	
	C - balls	
	P - What is this?	
	C - truck	
	P - Come on ---- OK. What is this Allsion?	
	C - truck	
	P - What color is the truck? Excuse me	
	C - 'cuse me	
	P - What is this?	
	C - truck	
	P - truck and what color is the truck?	
	C - red	
	P - Yes, the truck is red and the truck is made of metal - I guess it's metal. And what are these?	

Syntax   Sentence   Type of Corrective
level   type   Feedback by Mother

_____   _____

          C - wheel

          P - Wheels
              Come on - come back

          C - back

          P - Come on - come look at
              the birds

          C - birds come

          P - Yeh! You want to see the
              birds? Look at the bird -
              That's a big bird.
              See big bird
              And what is this?

          C - Man

          P - Man
              That's a man and what are
              these?

          C - Man

          P - Is that a man?
              It's a boy and a girl.
              Boy and girl.
              Can you say boy - boy

          C - boy, boy

          P - You mean bye-bye
              Look at the ship
              See the big ship
              And what is this?

          C - Big Shoop

          P - Bathtub

          C - Bathtub

          P - What do you do in the bathtub?

          C - 'ake 'ath

          P - take a bath

          C - bath

          P - take a bath

Syntax level	Sentence type	Type of Corrective Feedback by Mother		
		C - take a bath		
		P - Oh you going to hug me, Oh! Take a bath.		
111	VPC	P - Look at the book Alliston	3g	
111	VPC	See the mittens		
V	I	Can you say mittens?		
	O	C - mittens		
IV	PS	P - The mittens are red	1	3a
V	I	And what is that?		
	O	C - ball		
IV	PS	P - The ball is red and blue'	1	3a
		and white and the ball is	1	3a
		round		
	O	C - red		
IV	PS	P - The ball is round	3a	3f
	O	C - Round		
V	TF	P - And it's made of	3d	
		rubber. What is this?		
	O	C - apple		
IV	PS	P - Apple and the apple is red	1	1 3a
I	D	C - dat apple		
I	D	P - And that's a pear	3f	
		the pear is yellow	3a	
		and the apple is red	1	3a
	O	C - apple - pear		
111	F	P - apple and pear	1	
1	D	C - dat a pear		
	D	P - yes-that's a pear ·	1	1
		and that's a what.		
	O	C - apple		
IV	PS	P - apple and the apple is red	1	1 3a
V	I	and what's that?		

Syntax level	Sentence type		Type of Corrective Feedback by Mother
I	D	C - dats doll down	
I	D	P - that's a chair huh?	31
V	I	What do you do with a chair	3f
I	F	C - dat down	
IV	AA	P - You sit down huh!	
V	I	Oh! What is this?	
I	D	C - It eyes	
IV	DS	P - That's the dog's eyes	3e
V	I	And what is this?	
I	NP	C - His legs	
I	NP	P - His legs	1
	O	C - leg	
V	I	P - Where's your eyes	3e
V	I	Where's your nose	3e
V	I	Where's your mouth	3e
I	F	C - right there	
V	I	P - Where's your stomach?	3e
I	F	C - right there	
V	I	P - Where's your fingers?	3e
V	I	Where's your ears?	3e
I	F	C - right there	
V	I	P - Where's your teeth?	3e
V	I	Those your teeth?	3e
I	SP	That's good Allison.	
V	I	Ooh! What are those?	
	O	C - ans	
	O	P - dogs	3g
	O	C - dog	
IV	DS	P - there's one	
	O	C - one	
III	VPC	P - Two - two, say two	3c

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Syntax level	Sentence type		Type of Corrective Feedback by Mother		
		O	C - dog		
III	VPC		P - Say two	3c	
I	NP		C - two dogs		
III	VPC		P - say three	3c	
		O	P - three		
		O	C - dogs		
V	I		What are these?	3g	
V	I		What are these?		
		O	C - ba		
		O	P - balls	3g	
		O	C - balls		
V	I		P - What is this?		
		O	C - truck		
I	SP		P - Come on --- OK. What is this Alliston	1	
		O	C - truck		
V	I		P - What color is the truck? Excuse me	1	
III	VPC				
III	VPC		C - 'cuse me		
V	I		P - What is this?		
		O	C - truck		
V	I		P - truck and what color is the truck?	1	1
		O	C - red		
iv/V	PS/?		P - Yes. The truck is red and the truck is made of metal I guess it's metal. And what are these?	1 2	3d
V/V	?/I				
		O	C - wheel		
		O	P - Wheels Come on - come back	1	
I/I	SP/SP				

Syntax level	Sentence type		Type of Corrective Feedback by Mother	
	O	C - back		
I/III	SP/VPC	P - Come on - come look at the birds	3f	
I	V	C - Birds come		
V	I	P - Yeh! You want to see the birds?	1	1
III	VPC	Look at the bird— That's a big bird!	1	3h
III	VPC	See big bird	1	3h
V	I	And what is this?		
	O	C - Man		
	O	P - Man		
I	D	That's a man and	2	
V	I	what are these?		
	O	C - Man		
V	I	P - Is that a man?	2	
V	N	It's a boy and a girl	3g	3g
III	F	Boy and girl	3g	3g
V	I	Can you say boy - boy	3g	3g
	O	C - Boy, boy		
IV	AA	P - You mean bye-byw	3g	
III	VPC	Look at the ship	3g	
III	VPC	See the big ship	3g	
V	I	And what is this?	3g	3h
I	NP	C - Big Shoop		
	O	P - Bathtub	3g	
	O	C - Bathtub		
V	I	P - What do you do in the bathtub?	1	
I	V	C - 'ake 'ath		
III	VPC	P - take a bath	1	
	O	C - bath		
III	VPC	P - take a bath	2	
III	VPC	C - take a bath—		

Syntax level	Sentence type		Type of Corrective Feedback by Mother
V	DN	P — Oh you going to hug me	3f
III	VPC	Oh! Take a bath.	1

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