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ABSTRACT

Emphasizing the behavioral and social aspects of language as a foundation for instruction, 16 concepts for learning the structure of English in grades 7-9 are outlined in an attempt to set down in logical order the basic concepts involved in the understanding of the English language. The concepts begin with a recognition of the social purposes of language (e.g., Teachers recognize the assumption that language is human behavior.) and continue through recognition of the system that is called the English language and the description of that system, which is grammar (e.g., Students learn to analyze and create sentences of varied style and dense texture resulting from transformations and other stylistic treatments of grammatical structure.). Because the learning of the parts of the system develops the need to perform language operations, behavioral objectives are coordinated with each learning concept. (Author/LH)

Theoretical Paper No. 22

CONCEPTS AND OBJECTIVES FOR LEARNING THE STRUCTURE OF ENGLISH IN GRADES 7, 8, AND 9

By Robert C. Pooley and Lester S. Golub

Report from the Project on Individually Guided Instruction in English Language, Composition, and Literature

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This Theoretical Paper is from the Individually Guided Instruction in English Language, Composition, and Literature Project in Program 2. General objectives of the Program are to establish rationale and strategy for developing instructional systems, to identify sequences of concepts and cognitive skills, to develop assessment procedures for those concepts and skills, to identify or develop instructional materials associated with the concepts and cognitive skills, and to generate new knowledge about instructional procedures. Contributing to these Program objectives, the long-range objective of the English Project is to install and test materials for individually guided instruction in language, composition, and literature. Prerequisite activities include formulating behavioral objectives for students and teachers, based on a content and concepts outline, and developing measurement instruments related to the behavioral objectives.

CONTENTS

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ABSTRACT

The following outline of concepts for learning the structure of English is an attempt to set down in logical order the basic concepts involved in the recognition and understanding of the English language. It emphasizes the behavioral and social aspects of language as the foundation for instruction.

The pedagogy directed by this outline begins with a recognition of the social purposes of language and continues with the aspects of human behavior which govern language learning and improvement in language performance; this in turn leads to the recognition of the system which is called the English language and the description of the system, which is grammar. The learning of the parts of the system develops the need to perform language operations, which are set forth as behavioral objectives.

One useful outcome of this learning is its application to the creation of sentences for purposes of effective and economical communication. The plan as here presented ends at this point but suggests pursuant learnings in Grades 10, 11, and 12 in the development of a rhetoric of English having its foundation in the structure of English sentences.

I
INTRODUCTION

The 16 concepts presented in this paper represent some linguistic information about the structure of the English language which students can study and learn during the junior high school years, Grades 7, 8, and 9.

The goal in teaching these concepts is not to present a series of facts to be memorized by students and recited by rote, as was done in the teaching of traditional school grammar; the goal is to provide a teacher with a series of structural concepts, ordered from simple to complex, and behavioral student objectives which will help the teacher evaluate whether or not students have mastered the use of these concepts in the production of oral and written grammatical structures.

These concepts attempt to describe the structure of the English sentence, and the behavioral objectives attempt to indicate what students might do to use these structures in developing their own sentence sense, their own varied and dense sentences to be used in oral and written composition. There is no guarantee that students who are taught these concepts will write better compositions. However, there is some indication that students who learn the generative-transformational grammatical processes will tend to produce the kinds of varied and dense structures characteristic of professional discourse (Blount, et al., 1968; Mellon, 1967; Bateman & Zidonis, 1966). That is to say, students will tend to use the structures they are taught if they are furnished the means of producing the structures and mastering them as elements of their language competence.

This paper is not intended to be a complete structural or transformational grammar, nor does it propose drills and methodology for the teacher to use. Perhaps the best method and the best grammar drills are those invented and used by the students as they work and develop each concept. The following teacher behavior objectives are offered as a basis for any strategy a teacher might want to take in teaching these concepts.

Behavioral Teacher Objectives

(1) Teachers explain to students that usage and grammar are different:

  (a) Grammar deals with the structural features of the language.

  (b) Usage deals with the social-linguistic features of the language as it is used in a variety of social situations, e.g., dialects, idiolects, levels of usage, and other variations of language such as: register, idiom, jargon, and slang.

(2) Teachers explain to students that the English generally spoken and taught in English classrooms is consultative, standard English.

(3) Teachers contribute to their students' linguistic competence by accepting each student's own language performance without rejection, ridicule, or over-correction. The student's desire to make changes in his language performance is a result of his own motivations and needs; these changes cannot be forced upon him.

(4) Teachers convey to the student the language system in such a way that students can develop a wide repertoire of grammatical structures and transformations used in generating an infinite number of varied and dense sentences for conveying their thoughts in oral and written discourse.

II

CONCEPTS AND OBJECTIVES FOR LEARNING THE STRUCTURE OF ENGLISH IN GRADES 7, 8, AND 9

CONCEPT 1. Teachers recognize the assumption that language is human behavior.

a. Like most behavior, language is learned in part by imitation.

b. Language behavior consists of habits and continuing language-learning experiences.

c. Not all language habits are of equal social or communicative value.

d. Most controlling language habits are acquired prior to school years.

e. The school does not teach a native speaker his language; the school can only refine and expand the speaker's acquisition of language.

f. The school can encourage and provide opportunities for language-learning experiences.

g. The advancement of a child in language performance will bear a close relation to the number and range of language-learning experiences he is encouraged to perform.

h. Some useful language-learning activities include the finding of words with which to communicate new experiences.

i. Language-learning experiences should be based upon a theory of an ordered system of language.

CONCEPT 2. Students learn that spoken English consists of sets of sounds forming words.

a. The sounds that make words in English are called phonemes. (See Table 1.)

b. English word sounds are classified as consonants, vowels, and dipthongs.

Table 1

Phonemic Symbols for English*

(Segmental Phonemes)

Consonants		Vowels	
b	big	i	hit
c	chase	e	met
d	dent	æ	hat
f	fix	ɨ	fur
g	good	ə	cup
h	hit	a	father, hot
j	judge	u	pull, wood
k	kick, cut	o	bone
l	long	ɔ	author
m	meat		
n	neat		
ŋ	song	**Diphthongs**	
p	pit		
r	run, hurry	iy	beat, tree
s	sit	ey	day, fade
š	ship	ay	side, ice
t	take	ɔy	boy, oil
θ	thatch	uw	rule, fool
ð	this	ow	sew, snow
v	very	aw	now, loud
w	wart	iuw	few, music
y	yet		
z	zone		
ž	azure, treasure		

*Modified version of the phonemic system of George L. Trager and Henry Lee Smith, Jr., An Outline of English Structure. Washington, D.C.: American Council of Learned Societies. 1957, p. 50.

c. Changes of sound occurring within words may be called phonemic changes.

d. Many phonemic changes are grammatical signals: e.g., we change man to men, mouse to mice, goose to geese, and foot to feet to form plurals of nouns. We change run to ran, bite to bit, give to gave, swim to swam, and fall to fell to make past tenses of verbs.

Behavioral Objectives:

a) To give several examples of phonemes
To identify the various phonemes in a spoken word
To learn and write the symbols representing English phonemes

b) To identify the consonant sounds in a spoken word
To demonstrate by speaking and writing familiar words that clusters of consonants are blends as in splash and braid

c) To identify the vowel sounds in a spoken word
To demonstrate by speaking and writing familiar words such as size and boy that some vowel sounds consist of two or more phonemes forming a diphthong or triphthong

d) To analyze short spoken words into consonants, vowels, and diphthongs as they occur in the words

e) To identify the sound changes which a base word may undergo
To identify phonemic changes which create plurals of nouns or past tenses of verbs
To identify phonemic changes which create past participles such as swum, gone, sung, and striven
To use phonemic symbols to indicate word-form changes

CONCEPT 3. Students observe that English writing uses an alphabet.

a. There are 26 letters in the written (natural) alphabet but 33 phonemes plus 8 diphthongs in the phonemic symbols of English. The letters of the natural alphabet do not always match a specific phonemic symbol.

b. Knowledge of how to sound some letters in some words can be gained only by experience (e.g., read, garage, foot, bread).

c. The process of writing words with letters is called spelling.

d. English spelling is difficult because the sounds of many letters in many words are determined conventionally i.e., by custom (e.g., ghost, futile).

e. Some "spelling rules" can be learned and applied to English spelling.

f. There are patterns of regularity which apply to the spelling of many words.

g. Accuracy in spelling is gained largely by insights into spelling regularities and by the practice of writing specific words.

Behavioral Objectives:

a) To recite the letters of the English alphabet in the customary order

b) To identify the most predictable sound represented by a letter or combination of letters
To recognize silent letters in English spelling
To explain the influence of silent e at the ends of syllables on the preceding vowel

c) To transcribe a spoken word to written letters from dictation

d) To apply rules of spelling to appropriate words and to note exceptions to these rules
To spell words which do not follow predictable spelling patterns

e) To develop a technique of learning the spellings of new words

f) To strive for accuracy in spelling

g) To use the dictionary to verify spellings

CONCEPT 4. Students learn that words have form and forms.

a. The shortest understandable unit of a word is called a morpheme.

b. Base words consist of one irreducible morpheme. Every base word has a lexical (dictionary) meaning.

c. Words are built from bases and affixes.

d. Some affixes are derivational; that is, when attached to a base they create a new word by showing a new meaning (lexical change).

Illustrations: un + wise = unwise; child + ish = childish; dis + approve = disapprove; pave + ment = pavement; special + ize = specialize; motion + less = motionless.

e. Some affixes are inflectional; that is, when attached to a base they signal a grammatical change. In writing, add -s to nouns to form some plurals (snakes, hats, sticks). We add -s to some verbs to indicate third person singular indicative mode (he takes, she works, it runs). We add -ed, -d, or -t to some verbs to make past tenses (walked, divided, slept). We add -er and -est to some adjectives to express comparative and superlative degrees (finer, finest; slower, slowest; stronger, strongest).

Behavioral Objectives:

a) To give several examples of morphemes

b) To point out the phonemes that are contained in a given morpheme

c) To indicate the base morphemes in a compounded word

d) To point out the base form of given words and to indicate why this base form may be no further reduced

e) To identify and distinguish base words from affixes (prefixes and suffixes)

f) To identify derivational affixes and show how they affect the meanings of the base words to which they are attached

g) To identify inflectional affixes and show how they affect the grammatical relationships of the base or derivational words to which they are attached

h) To use accurately derivational and inflectional affixes in discourse

CONCEPT 5. Students learn from sentence-building experience that words used in sentences may be classified into four form classes and several function groups.

a. The four form classes are distinguished as follows:

Nominals (including nouns and pronouns)
Verbs
Adjectives
Adverbs

b. Students make observations about form-class words

1. Nouns form plurals. A word which can take a plural morpheme may be called a noun. Pronouns replace nouns. Pronouns may be singular or plural depending upon the number of the nouns they replace. Pronoun forms change according to case.

2. Verb forms show tense. Any word which can take a past or present tense morpheme may be called a verb.

3. Adjectives are recognized by the following test pattern: <The book is very _____>, in which the word to be tested is placed in the blank (test frame). If an English sentence results, the word may be called an adjective.

4. Adverbs may be recognized as words that fit such a pattern as <John runs _____.>, <The baby cries _____.>, <The kettle boiled _____.>. In these blanks such words as fast, loudly, friendly, now, yesterday, and always could be inserted. Adverbs are words that answer the questions how, when, where, and why.

c. All other words not falling into one of these four form classes may be called function words. For example, determiners (the), modals (will), and qualifiers (very) are function words. (Function words will be discussed after sentence patterns.)

Behavioral Objectives:

a) To rewrite the singular noun or pronoun plus the plural morpheme as plural nouns or pronouns

b) To rewrite the base form of a verb plus its past or present tense marker as the past or present tense of the verb

c) To identify words which can be used in the NP + Vbe + very + adj test frame pattern as adjectives

d) To identify words which can be used in the NP + Vi + adv test frame pattern as adverbs

e) To distinguish between form-class words and function words in a sentence

CONCEPT 6. Students learn that English language communication occurs by using words in sentences.

a. Speakers of English have a sense of what a sentence is.

b. Making sentences requires words and established arrangements of words.

c. English language communication rests upon systems of word arrangements.

d. Language systems, with the rules that govern them, constitute a grammar.

e. The native speakers of English make the rules which govern the grammar.

f. The grammar of English includes inflectional and derivational affixes: signals of meaning within words (run, ran) and additions to words (see morphemes).

g. A grammar has signals of meaning from the arrangements (order) of words in sentences.

h. English sentences have two main parts, called complete subject and complete predicate, and are represented by the symbols NP + VP.

i. The fundamental kernel sentence may be expressed by the formula S → NP + VP.

j. Elaborations of the kernel sentence are generated by making expansions of the NP and VP.

Behavioral Objectives:

a) To demonstrate by speaking or writing words in succession that some groups of words form sentences and some do not
From lists of prepared word sequences, to select those sequences which form sentences
To form sentences from ungrammatically word-ordered sentences
To demonstrate that some long sequences of words may look like sentences but are not, and that some very short sequences may be sentences

b) To demonstrate in spoken or written exercises that sentences exist because of particular arrangements of words
To demonstrate that communication between speaker or listener, writer and reader, rests upon sequences of words that express a sentence in full, or imply a sentence in context. (e.g., in answer to a question such as "When do you start?" the answer might be, "Tomorrow." The word tomorrow is the spoken part of a sentence implied by the context, "I shall start tomorrow." It is generally recognized that we communicate by sentences and word groups but the communication requires that the word groups have a sentence context.)

c) To illustrate from phonemic signals, morphemic signals, and from word arrangements (syntax) that the grammar of English is concerned with the making of English sentences
To distinguish and describe the relationships between the various systems (e.g., phonemic, morphemic, syntactic, and semantic) of the structure of English

d) To label the complete subject and the complete predicate of given sentences with the symbols NP and VP
To label each item in a variety of word sequences as a sentence, an NP or a VP

e) To create sentences of various kinds, identifying and labeling the NP and VP
To supply an NP for given VP's; to supply a VP for given NP's

CONCEPT 7. Students learn that sentences may be generated from the S → NP + VP kernel.

a. The base kernel is S → NP + VP.

b. Kernel sentences are minimal; they cannot be further reduced and remain sentences.

c. The kernel sentence patterns are differentiated by the manner of expansion of the VP in the base kernel.

Behavioral Objectives:

a) To generate two-word sentences from the S → NP + VP formula

b) To delete, one at a time, an NP or a VP from the sentences generated in (a) above in order to conclude that both an NP and a VP are needed for a sentence to exist (e.g., John runs. Boys scout.)

c) To identify kernel sentences in a group of randomly paired words

CONCEPT 8. Students learn to identify and construct seven kernel sentence patterns. (See Table 2.)

In the discussion which follows, NP_1 refers to subject noun phrases; NP_2 refers to direct object noun phrases.

a. Two patterns utilize verbs of action:

1. NP + Vi John speaks. (intransitive)
2. NP_1 + Vt + NP_2 Mary baked a cake. (transitive)

Table 2

Kernel Sentence Patterns

Symbol	NP (Subject)	VP (Predicate)		
	1	2	3	4
S	(det) + N	verb or Vbe*	A structure that completes the verb – A complement	(Adverbial) Optional
Vi	NP Boys	Vi	(no complement)	
Vt	NP_1 Some boys	Vt enjoy	NP_2 direct object sports	
Vbe + adv	NP The boys Five boys That boy	Vbe are were is	adverbial word or phrase here in Chicago on the bus	
be + adj	NP The crowd	be was	adjective angry	
be + NP	NP_1 The boys	be were	NP_1 classmates	
Vb	NP_1 The boys The boys	Vb (linking) become, remain grow, continue became remained	{NP_1 / adjective} friends friendly	
Vs	NP_1 The boys That boy	Vs (linking) seem, appear look, sound seem looks	{adjective / NP_1} energetic (to be) a fool	

*The symbol Vbe appears as am, are, is, was , were, be, being, and been.

Key to Symbols: ( ) = optional; { } = choice of one; + = plus; S = sentence; Vi = intransitive verb; Vt = transitive verb; Vbe = forms of be; Vb = verbs like became; Vs = verbs like seem

b. Three patterns employ the verb be.

1. NP + Vbe + adv The boys are here.
2. NP_1 + Vbe + adj The tree is tall.
3. NP_1 + Vbe + NP_1 Tom is my friend.

c. Two patterns employ verbs that link the NP to the VP with specific relationships.

1. Verbs suggesting a relationship of time in continuity: become, remain, grow, continue, etc.

NP + Vb + adj	The boys grew tall. The boys became friendly. The boys remained friends.
NP_1 + Vb + NP_1	The boys continued members.

2. Verbs presenting observations of the senses: seem, appear, look, feel, taste, smell, sound, etc.

NP + Vs + adj

The crowd seemed friendly.
He appeared contented.
His words sounded false.
The pie tastes good.

Occasionally the pattern NP_1 + Vs + NP_1 appears, in which an infinitive to be is omitted:

The girls seemed friends.
Tom looked a fool.

d. Each of these seven patterns may add an adverbial element and remain a kernel.

John speaks loudly.
Mary baked a cake yesterday.
The tree is exceedingly tall.
Tom is always my friend.
The boys are never here.
The boys grew tall suddenly.
The crowd seemed friendly at first.

e. Any NP may be expanded to det + N (det is the abbreviation for determiner, a class of words introducing nouns, including the, a, an, many, few, some, five, ten, etc.).

Some boys practice all sports.

det + N + Vt + det + N

f. VP may be identified as:

Vi with no complement (see Column 3 of Table 2)
Vt, Vbe, Vb, Vs with complements

Behavioral Objectives:

a) To demonstrate that VP may be identified as Vi or Vt

b) To interpret Vi "verb intransitive," as meaning verbs not followed by direct object NP, and Vt "verb transitive," as meaning verbs followed by a direct object NP
To demonstrate in sentences that many verbs of action can function either as Vi or Vt

c) To identify printed sentences whose patterns are NP + Vi and NP_1 + Vt + NP_2

d) To create sentences from the sentence patterns:

(1) NP + Vi (no complement)
(2) NP_1 + Vt + NP_2

e) To write sentences using forms of the verb be

f) To create sentences to the pattern NP + Vbe + adj
To identify the complement in this pattern as an adjective, either single word or phrase

g) To create sentences to the pattern NP_1 + Vbe + NP_1
To identify the complement in this pattern as a noun phrase equivalent to the subject noun phrase

h) To create sentences to the pattern NP + Vbe + adv
To identify the complement in this pattern as an adverbial, either single word or prepositional phrase

i) To define and construct prepositional phrases as prep + NP
To label prepositional phrases in kernel sentences as adverbials

j) From a printed list of be verb sentences to distinguish those of pattern NP + Vbe + adj, NP_1 + Vbe + NP_1 and those of pattern NP + Vbe + adv
To substitute words in the adv, adj, and NP position as complements of the Vbe pattern.

k) To create sentences to the pattern NP + Vb + adj or NP_1 + Vb + NP_2
To list the verbs usually identified by the symbol Vb: become, remain, grow, continue
To substitute words in the adj and NP position as complements of the Vb pattern

l) To create sentences to the pattern NP + Vs + adj
To list the verbs usually identified by the symbol Vs: seem, appear, look, feel, taste, smell, etc.
To substitute words in the adj position as complements of the Vs pattern

m) To point out from a printed list of Vb and Vs those verbs which signal a relationship of continuing time, and those verbs which signal a relationship of observation by the senses

n) To add an adverbial to each kernel sentence pattern

NP + Vi + (adv)
NP_1 + Vt + NP_2 + (adv)
NP + Vbe + adj + (adv)
NP_1 + Vbe + NP + (adv)
NP + Vbe + adv + (adv)
NP + Vb + adj + (adv)
NP_1 + Vb + NP_1 + (adv)
NP + Vs + adj + (adv)
NP_1 + Vs + NP_1 + (adv)

To write sentences to each of these patterns, using adverbials

o) To rewrite NP as (det) + N
To define a "determiner" as a word which introduces a noun and which cannot be used as the adj in the NP + Vbe + very + adj pattern
To identify determiners in a list of sentences representing kernel sentence patterns
To write sentences containing single and grouped determiners (e.g., some, few, a great many, five or six, etc.) and to point out the determiners

p) From experience with kernel sentence patterns, to rewrite the general symbol VP as Vi, Vt, Vbe, Vb and Vs + complement, if needed

CONCEPT 9. Students learn that the verb in the VP may appear in many forms.

a. The present participle of any verb is formed by adding -ing to the base form of the verb (the base form is the infinitive, to+V, with to deleted).
Past participles are formed (1) by adding the inflectional suffix morphemes -ed or -en, (2) by an inflectional infix morpheme, or (3) a combination of the two. (Illustrations: (1) taken, walked, picked, mapped, dived, fallen, shaken, etc. (2) swum, sung, hung, sat, etc. (3) brought, driven, stricken, broken, frozen, etc.) The symbol for the past participle is -en.

b. Tense is a change of form of the verb to signal a change of time. English has two tenses, present and past. Present tense is indicated by the base form of the verb (e.g., run, look, talk, eat, swim, or by the inflectional morpheme -s (or -es) added to the base form of the verb. The present tense of the verb be has the forms am after the pronoun I, is after the pronouns he, she, and it, and are after the pronouns you, we, and they. Present time is frequently represented by the present tense of the verb be + the present participle of the verb (e.g., is going, are speaking, am talking, are running, etc.).
Past tense is marked by (1) the inflectional suffix morpheme -ed, (2) an inflectional infix morpheme, or (3) a combination of the two, (4) no change. (Illustrations: (1) stepped, boxed, hoped, etc.; (2) rose, sang, swam, drove, fell, etc.; (3) slept, caught, bought, went, etc.; (4) hit, set, cast, etc.).

c. Many verb forms are created by the addition of an auxiliary to the base form or past tense forms of the verb, or to participles. Auxiliary verbs are: be, have, do in all forms.
Modal auxiliary verbs include: may, might; can, could; shall, should; will, would; must and ought to.

d. Future time may be expressed by:

1) Shall + the base form of the verb (I shall go)
2) Will + the base form of the verb (I will go)
3) A present form of be + the present participle of the verb + an adverb of time (I am going + adverb)
4) A present form of the verb + an adverb of time (I go tomorrow)
5) A present form of verbs such as plan, intend, aim, etc., + the infinitive form of the verb (I plan to go, I intend to go, etc.)

e. Past (-ed) and present (-s) time relationships are expressed by the auxiliaries be, have, or do in the auxiliary of the verb phrase.
(Illustrations: The boys have gone; the boys had gone; the boys will have gone; the boys did go, etc.)

f. The English auxiliary plus the base form of the verb, the verb string, has the following pattern from which all possible tenses, moods, and aspects of a given verb can be derived:

$$\text{tense} + (\text{modal}) + \begin{pmatrix}\text{perfect}\\ \text{aspect}\end{pmatrix} + \begin{pmatrix}\text{progressive}\\ \text{aspect}\end{pmatrix} + V$$

-s, present	shall	(have + -en) + (be + -ing)
-ed, past	will	
	may	
	can	

Behavioral Objectives:

a) To make present participles of verbs by adding -ing to the base form
To identify present participles in sentences
To make past participles of regular (weak) and irregular (strong) types of verbs
To identify past participles in sentences
To use the symbol -ing for a present participle and the symbol -en for any past participle, regardless of actual spelling

b) To define tense as a change of form in a verb to signal past (-ed) or present (-s) time.

To identify present and past tense forms of verbs in given sentences
To describe by what kind of change given past tense verbs are formed: by inflectional suffix morphemes, by inflectional infix morphemes, by a combination of these, or no change

c) To name and employ in verb phrases the regular auxiliary verbs be, have, and do in all their forms
To name and employ in verb phrases the modals may, can, shall, will (present tense forms); might, could, should, would (past tense forms), and ought to
To identify the form of the verb used in combination with auxiliaries

d) To write sentences expressing future time in a variety of ways
To identify future time as expressed in given sentences

e) To express past and present perfect by using the auxiliary have with the main verb
To demonstrate that present or past tense in a verb phrase may be signaled by an auxiliary

f) To use this pattern for the verb string to generate the various tenses, moods, and aspects of a given verb:

Examples:

tense (modal) + (perfect aspect) + (progressive aspect) + V

-s, present	shall	(have + -en) +	(be + ing)
-ed, past	will		
	may		
	can		

(1) - s + shall + have + -en + be + -ing + drink
shall have been drinking

(2) -ed + may + have + -en + drink
might have drunk

(3) -ed + can drink
could drink

(4) -ed + drink
drank

CONCEPT 10. Students learn that sentences containing structural elements in addition to the elements of the seven kernel sentence patterns are generated by transformations.

a. Any sentence which is not a declarative kernel sentence is a transform. The transformation is the process; the resultant structure is the transform.

b. Attributive adjectives and attributive noun structures are the result of a transformation. (Illustration: The angry bull chased the frightened boy.) This sentence contains two elements in addition to the declarative kernel pattern: angry and frightened. The sentence is formed from these kernels:

1. A bull chased the boy. ($NP_1 + Vt + NP_2$)
2. The bull was angry. (NP + Vbe + adj)
3. The boy was frightened. (NP + Vbe + adj)

The adjectives in the transforms the angry bull and the frightened boy are derived from the adjective Kernels 2 and 3, which is necessary before they can be substituted into Kernel 1 to derive the transform: The angry bull chased the frightened boy.

c. The structural elements of a kernel sentence may be termed "a grammatical string." Transformations operate upon the grammatical strings of kernel sentences.

d. Transformation rules rearrange grammatical elements, add new grammatical elements, substitute grammatical elements, and delete grammatical elements. (In the illustration in (b) above, it will be noted that the transform of kernel Sentence 1 has added two adjectives and is therefore no longer a kernel.)

Behavioral Objectives:

a) To identify sentences as kernel sentences (by recognition of pattern) or as transforms (i.e., containing a kernel pattern with rearrangements and added materials)
To point out added elements in transforms

b) To compare the transformed grammatical string with the declarative kernel

c) From a list of given sentences containing simple transformations, to isolate the added elements, and to identify the kernel patterns from which they are derived

d) To list the processes used in transformations: rearrange, add, substitute, delete

CONCEPT II. Students learn that transformations operating on the grammatical string of a single kernel are called single-base transformations.

a. Single-base transformations principally rearrange or delete structural elements.

b. The Yes/No Question Transformation. This transformation occurs when be, have, or a modal forming part of the verb, is moved to the beginning of the sentence (rearrangement).

Jane will sing America. ⇒
Will Jane sing America?

Kenneth has gone. ⇒
Has Kenneth gone?

Someone is at the door. ⇒
Is someone at the door?

When the verb does not contain be, have, or a modal in the auxiliary, the past or present form of do is added to introduce the question.

John likes cake. ⇒
Does John like cake?

Some boys destroyed the fence. ⇒
Did some boys destroy the fence?

In most dialects of American English a question which includes the auxiliary have will begin with the auxiliary do.

John has a bad cold. ⇒
Has John a bad cold?
Does John have a bad cold?

The second is commonly used.

c. The Wh-Question Transformation. To form questions not answered by Yes/No, interrogative words are substituted for a "some _____" form in a kernel sentence: who, what, when, where, why, and how. Sometimes the sentence must be rearranged to insure initial position of the wh-word. Tense + do precedes the base form of the verb when the question is formed from a verb string not using have, be, or modals.

Somebody has borrowed my book. ⇒
(substitution)
Who has borrowed my book?

Ted is reading something. ⇒
(substitution and rearrangement)
What is Ted reading?

We must do the work sometime. ⇒
(substitution and rearrangement)
When must we do the work?

Charles went somewhere ⇒
(substitution, rearrangement, addition of do)
Where did Charles go?

d. The Negative Transformation. The negative transformation occurs when not is placed after the auxiliaries be, have, or a modal. If be, have, or a modal is not present, the auxiliary do is inserted before not.

Jane will sing America. ⇒
Jane will not (won't) sing America.

Kenneth has gone. ⇒
Kenneth has not (hasn't) gone.

Jane sang America. ⇒
Jane did not (didn't sing America.

Negative questions follow the same pattern:

Will Jane sing?	Won't Jane sing?
Did Jane sing?	Didn't Jane sing?

e. The Imperative Transformation. The imperative transformation involves the deletion of the subject and auxiliaries of a kernel sentence. This transformation occurs only in sentences using the second person.

You will read the poem. ⇒
Read the poem.

You will consider the consequences. ⇒
Consider the consequences.

f. The Expletive Transformation. Some sentences begin with introductory unstressed words called expletives. These words are there and it. The transformation involves two steps: 1) there or it is prefixed to the sentence, and 2) be is moved to a position after there or it. The sentence must have some form of be in it.

Four chairs were in the room. ⇒
There were four chairs in the room.

The silence was long. ⇒
There was a long silence.

To know this is useful. ⇒
It is useful to know this.

That he would go there is strange. ⇒
It is strange that he would go there.

English does not ordinarily end a weather statement with the verb be. Therefore we do not say Rain is, or Snow was; we say It is raining or It was snowing, using the expletive transformation.

g. The Indirect Object Transformation. In some grammars the pattern of an indirect object sentence is offered as a kernel with this formula: $NP_1 + Vt + NP_3 + NP_2$ (My son gave his teacher a rose). However, since the indirect object appears to be the product of deletion and rearrangement, it is considered a transformation in this grammar. This transformation occurs only in connection with certain transitive verbs, such as: buy, sell, write, give, send, bring, mail, etc. In the transformation the preposition to or for is deleted, and the noun of the prepositional phrase is fixed in a position immediately before the NP_2 of the kernel, which is the direct object. Thus, the indirect object always stands immediately before the direct object. Pronouns are frequently indirect objects.

I wrote a letter to the Senator. ⇒
I wrote the Senator a letter.

I made a dress for my sister. ⇒
I made my sister a dress.

John gave a kiss to her. ⇒
John gave her a kiss.

The boys' parents bought gifts for them. ⇒
The boys' parents bought them gifts.

h. The Passive Transformation. In English there is a choice of relationships between the doer of an action and the receiver of the action. This distinction is labeled active voice and passive voice. In active voice patterns the NP_1 is the doer of the action: The boy ate the pie. But this may be transformed to a pattern in which the receiver of the action is placed first, as in The pie was eaten by the boy. This transformation may be indicated by these formulas:

Active: NP_1 + tense + Vt + NP_2

Passive: NP_2 + tense + be + en + Vt + by + NP_1

The transform is produced by the following steps:

1. NP_2 is moved to the beginning of the grammatical string—to the subject position.
2. Tense is carried over from the kernel string.
3. Some form of the verb be is added, carrying the tense of the kernel, present or past.
4. The -en morpheme—the past participle form of the verb—is required.
5. The preposition by is inserted.
6. NP_1 of the kernel becomes the object of the preposition by.

In sentences in which the doer of the action is unknown or not important, the NP_1 can be deleted in the transform.

The room should have been cleaned (by someone). ⇒
The room should have been cleaned.

Somebody stole my money. ⇒
My money was stolen (by somebody).
My money was stolen.

The effective use of active voice and passive voice is a composition skill gained by experience and practice. Usually the active voice is preferable but in building up background to lead to an assertion, the passive voice is frequently used. Passive statements usually lack vigor. The ball was hit by John is felt to be less vigorous than John hit the ball. Nevertheless, if the purpose of the sentence is to call attention to or identify the ball, then the passive structure is fully justified.

Behavioral Objectives:

a) To define and illustrate single-base transformation
To identify transformation as a process, and transform as a product
To demonstrate that transformations rearrange grammatical elements, add new grammatical elements, substitute grammatical elements, and delete grammatical elements

b) To convert kernel statements to Yes/No questions
To illustrate the rules governing the formation of Yes/No questions

c) To convert kernel statements to Wh-questions
To demonstrate how these question structures differ from those of the Yes/No questions

d) To convert kernel statements to negative statements
To demonstrate the rules governing the formation of negative transformations
To convert positive questions to negative questions

e) To convert kernel statements to imperative statements
To recognize that this transformation occurs only with statements in the second person by selecting appropriate sentences from a list
To demonstrate the deletions that produce the request transformation

f) To convert kernel statements to expletive statements
To write the two steps governing this transformation
To employ the idiomatic use of the expletive it in descriptions of weather phenomena

g) To convert a kernel statement of the pattern NP_1 + Vt + NP_2 + prepositional phrase to an indirect object transform
To write a pattern formula for the indirect object sentence

h) To identify given sentences as containing either active or passive voice
To convert a kernel statement in the active voice to a passive transformation
To write the formula for the active sentence and the resultant formula for the passive sentence
To use the symbols be + -en in writing the formula for the passive voice
To demonstrate the steps followed in producing this transformation
To construct transforms with the passive in which the NP_1 can be deleted
To contrast uses of paired sentences written in the active voice and the passive voice

CONCEPT 12. Students learn that transformations operating on the grammatical strings of two or more kernels are called double-base transformations.

a. Double-base transformations are accomplished through a process called embedding which involves the rearrangement, addition, substitution, and/or deletion of grammatical elements. One or more of these processes will be used in every double-base transformation. The following illustration employs several of these processes as an example. The transformations involved are analyzed separately in sections b, c, d, etc., which follow.

Kernel 1. The cat leaped up on the table.

Kernel 2. The cat licked up the cream.

Transform 1. The cat leaped up on the table and licked up the cream. (Note that the kernels are united by a conjunction.)

Transform 2. The cat, by leaping on the table, licked up the cream.

In Transform 2 the following processes are employed:

Rearrangement: the position of leaping on the table.
Addition: the preposition by
Substitution: leaping (a participle) for leaped (a verb)
Deletion: The cat of Kernel 2; up of Kernel 1.

Transformation 2 embeds Kernel 1 into the frame of Kernel 2, reducing it from a predication (i.e., subject + verb) to a phrase (participle + prepositional phrase).

b. When a portion of one kernel is inserted into the structure of another kernel, the process is called embedding; the inserted structure is embedded in the structure of another kernel. In the illustration cited above Kernel 1 is reduced to a phrase and is embedded in the structure of Kernel 2.

c. The Adjective and Noun Adjunct Transformations. Every adjective standing before a noun in a noun phrase is derived from a kernel having the formula NP + Vbe + adj (The boy is good). In this transformation the kernel is embedded in the structure of another kernel, and all unnecessary words are deleted, usually leaving only the adjective.

Kernel 1: (Main sentence) The boy ate his breakfast.

Kernel 2: (Insert sentence) The boy is good.

Transform: The good boy ate his breakfast.

Kernel 1: The tree seemed immense.

Kernel 2: The tree was ancient.

Transform: The ancient tree seemed immense.

The adjective transformation is the simplest process for expanding a noun phrase of a kernel sentence: the boy is expanded to the good boy, the tall boy, etc., by this process.
In a similar manner noun phrases are expanded by the construction called a noun adjunct. A noun adjunct is a noun without

a possessive inflection signal, placed directly before another noun. Noun adjuncts sometimes appear to be adjectives, but they are not capable of fitting into the adjective test pattern. (See below.)

Kernel 1: The city has streets.

Kernel 2: The streets are well-paved.

Transform: The city streets are well-paved.

The word city is the noun adjunct. It is equivalent to "of the city" in the transform <The streets of the city are well-paved.>
In the sentence <The house had a brick wall.> the word brick looks like an adjective. However, when we apply the adjective test pattern we find we cannot say <The wall is very brick.>. Consequently, we recognize that brick is not an adjective but rather a noun adjunct, deriving from a sentence such as: <The wall is made of brick.>.

d. The Object Complement Transformation. The object complement is a second object which follows the direct object to show the result of such actions as choose, elect, make, vote, and others. The processes employed are embedding and deletion.

Kernel 1: (Main sentence) We elected Tom.

Kernel 2: (Insert sentence) Tom is captain.

Transform: We elected Tom captain.

(Note that all that remains of Kernel 2 is the word captain, which is inserted in Kernel 1 after the direct object.)
In the sentence <Eating candy makes the boy fat.> two transformations are involved. Note these steps:

1. Someone is eating candy.
2. By deletion (Someone is) eating candy.
3. Kernel 1: Eating candy makes (someone) fat.
4. Kernel 2: The boy is fat.
5. Transform: Eating candy makes the boy fat.

By this process the adjective fat becomes the object complement to the noun boy.

e. The Relative Clause Transformation. One of the most commonly used transformations is the relative clause transformation. The embedding process involves substitution and addition, and sometimes rearrangement. The words substituted in this transformation are the relatives who, whom, whose, that, and which, expressing a subordinate relationship of one kernel to another. Illustrations:

Kernel 1: (Main sentence) The speaker was interesting.

Kernel 2: (Insert sentence) The speaker gave the address.

Process: The speaker (The speaker = who gave the address) was interesting.

Transform: The speaker who gave the address was interesting.

Kernel 1: This is the bus.

Kernel 2: I came on the bus.

Process: This is the bus (I came on [the bus = that])

Transform: This is the bus that I came on.

Relative clauses are also formed by using the relatives where and when. Illustrations:

Kernel 1: The house had a porch.

Kernel 2: I was born in the house.

Process: The house (I was born [in the house = where]) had a porch.

Transform: The house where I was born had a porch.

Kernel 1: That was the time.

Kernel 2: We had fun then.

Process: That was the time (we had fun [then = when]

Transform: That was the time when we had fun.

f. Noun clause transformations. Another very useful transformation embeds a noun clause derived from a kernel sentence. These clauses are used particularly after such verbs as know, realize, appreciate, see, observe, and other similar verbs where the clauses function as objects of the verb of the first kernel. But embedded noun clauses can also function as subjects and as objects of prepositions. The relatives that, which, who, whom, and whose are added to the transform as needed, or are substituted for an NP.

Kernel 1: He knows [something = that]

Kernel 2: A storm is coming.

Transform: He knows that a storm is coming.

Kernel 1: He sees [something = that]

Kernel 2: His work is almost finished.

Transform: He sees that his work is almost finished.

These examples use that as the added connective word. Connectives such as why, where, who, when, and what may also be used:

Kernel 1: He knows [something = what]

Kernel 2: Something happened.

Transform: He knows what happened.

Kernel 1: He knows [the reason = why]

Kernel 2: The accident occurred.

Transform: He knows why the accident occurred.

Kernel 1: He knew [the time = when]

Kernel 2: It was time to go.

Transform: He knew when it was time to go.

(Deletion transform) He knew when to go. (Note that it was time may be deleted.)

The noun clause may function as a subject.

Kernel 1: Something annoyed Tom.

Kernel 2: The game was lost.

Process: [The game was lost = something] + that

Transform: That the game was lost annoyed Tom.

Kernel 1: Something surprised no one.

Kernel 2: The school bond issue passed.

Process: [The school bond issue passed = something] + that

Transform: That the school bond issue passed surprised no one.

g. Deletion transformations affecting sentences with embedded relative clauses.

1) Deletion of relative pronouns: When the relative pronoun functions as the direct object of a verb, or as the object of a verb, or as the object of a preposition, it may optionally be deleted.

Relative clause transform: He lost the watch that I gave him.

Deletion transform: He lost the watch I gave him.

Relative clause transform: This is the house in which I live.

Process: This is the house in [which] I live.

Transform, with rearrangement required by English Idiom: This is the house I live in.

2) Deletion with the relative + be

Relative clause transform: The squirrel [that is] in the tree is playful.

Deletion transform: The squirrel in the tree is playful.

(Note that the relative clause is reduced to a prepositional phrase.)

Relative clause transform: The squirrel [that is] scampering up the tree is playful.

Deletion transform: The squirrel scampering up the tree is playful. (Note that the deletion of that is results in a participle scampering. This transform may be called the participle transform.)

Relative clause transform: The squirrel [that is] hidden in the branches is playful.

Deletion transform: The squirrel hidden in the branches is playful. (Note that hidden is also a participle, produced by the participle transformation.)

These examples show that relative clauses formed by the relative clause transformation can be further reduced by a deletion transformation called a participle transformation. This operation produces a more compact structure such as a participle of the present or past form or a prepositional phrase.

h. The Possessive Noun Viewed as a Transform. Historically the possessive forms of nouns are derived from a genitive case in early English. On certain Old English nouns the genitive singular case was signaled by the ending -as later reduced to -es. In modern English this signal has become -'s as in boy's, friend's, church's, etc. Plural possessives ending in -s usually add only the apostrophe ('), as in boys', friends', churches'.
The genitive case marker on a noun indicates that there is a possessive relationship between that noun and the following noun. Thus John's bicycle = John has (possesses) a bicycle. Mary's intelligence = Mary has (possesses) intelligence. From this relationship the possessive John's bicycle may be considered a transform of the kernel John has a bicycle.

Kernel 1: Mary helped solve the problem.

Kernel 2: Mary has intelligence.

Process: Mary [Mary has intelligence] helped solve the problem.

Transform: Mary's intelligence helped solve the problem.

Such a sentence as There was a fight at the children's playground. may be analyzed as derived from two kernels:

Kernel 1: A fight occurred somewhere.

Transform: There was a fight somewhere. (Expletive there transformation)

Kernel 2: The children have a playground.

Transform: The children's playground.

Final transform: There was a fight at the children's playground.

i. Formation of of phrases from the possessive transformation. Some of phrases, like The head of the house are preferred in place of the simple possessive The house's head. In general, of phrases may be used interchangeably with possessive forms, but there is a tendency to avoid the possessive form when the noun designates an inanimate object. We commonly say a day's work, the water's edge; but the clock's hands, the carpet's pattern, the house's front, and the Police's Commissioner are unusual.

Kernel 1: The house has walls.

Transform: The house's walls = the walls of the house

Kernel 2: The walls are bulging.

Transform: The walls of the house are bulging.

Kernel 1: A state has resources.

Transform: The state's resources = the resources of the state.

Kernel 2: Resources enrich [the state = it]

Transform: The resources of the state enrich it.

j. Transformations using with phrases. The relative clause formed with a who or that connective plus the verb have in any form may be reduced by deletion to a with phrase.

Kernel 1: A boy plays football successfully.

Kernel 2: A boy has determination.

Process: A boy [a boy has determination] plays football successfully.

Transform 1: A boy who has determination plays football successfully.

Transform 2: (substituting with for who has) A boy with determination plays football successfully.

Kernel 1: A worker succeeds in his job.

Kernel 2: A worker has ability.

Transform 1: A worker who has ability succeeds in his job.

Transform 2: (substituting with for who has) A worker with ability succeeds in his job.

Behavioral Objectives:

a) To define double-base transformations
To embed two kernel sentences so as to produce a double-base transformation
To demonstrate the processes of rearrangement, addition, substitution, and deletion of grammatical elements in kernel sentences as transformations are performed

b) To embed a portion or more of any one kernel into an appropriate spot in another kernel
To define embedding

c) To utilize effectively the processes of transformation involving two or more kernels so as to produce transform sentences of the following types:

The Adjective Transform
The Noun Adjunct Transform
The Object Complement Transform
The Relative Clause Transform
The Noun Clause Transform
Deletion Transforms from Embedded Relative Clauses
Possessive Noun Transforms
Of Phrases Formed from Possessive Transforms
With Phrases from Relative Clauses

CONCEPT 13. Students learn to employ transformations to achieve subordination of one sentence to another.

The Subordinate Clause Transformation. English sentences frequently begin with a subordinated clause introduced by a subordinator to indicate a condition, or

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to express a relationship of time, place, or manner. Any sentence can become a subordinate clause by the addition of a subordinator placed immediately before it. A clause may derive from a kernel sentence or a transform sentence.

Some of the common subordinators are:

after	when, whenever
because	where, wherever
before	since (time)
if	as (time or manner)
while (time)	as if
than	as though
unless	as soon as
until	

Main sentence: The lawyer filled out the bills (when).

Insert sentence: The vessel sailed.

Possible transforms:

The lawyer filled out the bills after the vessel sailed.
The lawyer filled out the bills before the vessel sailed.
The lawyer filled out the bills as soon as the vessel sailed.
The lawyer filled out the bills because the vessel sailed.

Note: Because these structures become adverbial clauses, answering the questions when? where? how? and why?, they may be related to the wh-question transformation. It is clear that the first three transforms above answer the question when?, and the fourth answers the question why? With a different embedded sentence how? and where? could also be answered with respect to the main sentence.

When the embedded structure begins with a subordinator, it may precede or follow the main sentence.

The lawyer filled out the bills after the vessel sailed.

After the vessel sailed, the lawyer filled out the bills.

Note the punctuation required in the second sentence above. If the adverbial clause precedes the main clause, a comma separates the adverbial and the main clause, for example:

Main sentence: We can do this (when).
Insert sentence: Someone objects.

Possible transformations:

Until someone objects, we can do this.
Unless someone objects, we can do this.
After someone objects, we can do this.
Whenever someone objects, we can do this.

Behavioral Objectives:

a) To join one sentence to another by the addition of a subordinator

b) To use effectively subordinators indicating an answer to the questions when? where? how? and why? with respect to the main sentence

c) To use correctly the punctuation required when a subordinate clause precedes the main clause

CONCEPT 14. Students learn to employ transformations to achieve coordination of sentences or sentence elements.

a. Coordination transformations. Coordination provides the means to produce sentences in which words or structures of related meanings may be grouped. This grouping is the basis of what is called parallel structure, a useful device in composition.
A compound sentence is formed when two sentences are joined by a coordinator such as and, but, for.

Sentence 1: Large crowds gathered on the streets.

Sentence 2: People gazed at the parade.

Transform: Large crowds gathered on the streets, and people gazed at the parade.

Sentence 1: Most men drive to work.

Sentence 2: Some men prefer to walk to work.

Transform: Most men drive to work, but some prefer to walk to work.

Transform with deletions: Most men drive to work, but some prefer to walk.

b. Sentences with the same NP or VP offer an opportunity for deleting repetitions.
(predication = NP + VP)

Sentence 1: The teacher gave John a book.

Sentence 2: The teacher gave John an assignment.

Transform: The teacher gave John a book and an assignment.

c. Identical grammatical structures can be coordinated.

Compound sentences.

Sentence 1: John's mother made him a scarf.
Sentence 2: John's mother made him gloves.
Transform: John's mother made him a scarf and she also made him gloves.

Compounded adverbs:
The skidding car swung suddenly and wildly into the ditch.

Compounded adjectives:
The day began hot and humid.

Compounded predicates:

Tom dashed out of the room. He threw up his hands. He shouted loudly.	Tom dashed out of the room, threw up his hands, and shouted loudly.

Compounded phrases:

The mother was worn out by the long day, the fretful children, and the excessive heat. (Note that the preposition need not be repeated).

Compounded subject or object noun phrases:

The laborers, the houseworkers, and the gardeners were all given a day off.

I reported as accurately as I could the dust cloud, the intense light, and the fearful boom.

Behavioral Objectives:

a) To use coordinators and, but, and for to produce compound sentences

b) To make deletions in coordinated transforms where useful and effective

c) To coordinate series of identical grammatical structures related in meaning and leading to parallel sentence structure: adverbs and adverb phrases, adjectives and adjective phrases, prepositional phrases, noun phrases as subjects and objects

d) To employ, in prose sentences, coordinations which reduce predication and derive effective condensation from the use of parallel structures

CONCEPT 15. Students learn how to make transformations that develop sentence modifiers, separated from the sentence they modify and identified in speech by falling juncture and in writing by a comma. Various structures, some derived from transformations, are used to develop sentence modifiers.

a. Adverbs and prepositional phrases derived from kernels:

Ideally, the play should open tonight.

In principal, I agree with you.

To everyone's delight, he was the chief figure on the crowded platform.

b. Subordinate clauses:

The Smiths accepted an invitation to the party.

They did not attend the party.

Although the Smiths accepted an invitation to the party, they did not attend (it).

c. The absolute construction:

The speaker leaned forward on the podium.

His fine, thin hands rested on it.

The speaker leaned forward, his fine, thin hands resting on the podium.

d. The non-restrictive relative clause:

All nonrestrictive modifiers are sentence modifiers. Example: Benjamin Franklin, who experimented with kites, identified electricity in lightning. The clause, who experimented with kites, is not needed to identify Benjamin Franklin but adds a gratuitous but logically connected fact to the sentence as a whole. In contrast, note this restrictive modifier which is therefore not a sentence modifier: The boy who just came in is my brother. The clause who just came in is essential to the identification of the subject boy and is therefore a restrictive modifier.

e. The participial phrase (derived by deletion and substitution in a non-restrictive clause):

Marie, who hesitated for a moment, answered uncertainly.

Alternative 1: Hesitating for a moment, Marie answered uncertainly.
Alternative 2: Marie, hesitating for a moment, answered uncertainly.
Alternative 3: Marie answered uncertainly, hesitating for a moment.

The frightened soldier, who was aiming his rifle, suddenly fired.

Alternative 1: The frightened soldier, aiming his rifle, suddenly fired.
Alternative 2: Aiming his rifle, the frightened soldier suddenly fired.

When, as in Alternative 2, the participial phrase precedes the subject of the sentence, the subject must generally follow the phrase to avoid confusion. In this illustration the participial phrase is a modifier of the subject. When the relationship of phrase and subject is not observed, a "dangling" participle results, as in:

Having eaten my lunch, the rusty old Ford took me up the mountain.

The subject to be modified by the phrase is I, which should properly follow the phrase.

f. The appositive (derived by deletion from a nonrestrictive relative clause):

The janitor, who was always a tidy person, neatly stacked the books on the desk.

Appositive (underlined)

Alternative 1: The janitor, always a tidy person, neatly stacked the books on the desk.

Adjective phrase in appositive position (underlined)

Alternative 2, with further deletion: The janitor, always tidy, neatly stacked the books on the desk.

It is obvious that these sentence modifier transformations contribute to the economy and compression of prose style. Each transformation contributes its essential meaning in a structure which has been reduced from a full predication, and is embedded in, or attached to, a main sentence which is a full predication.

Behavioral Objectives:

a) To perform transformations utilizing kernels transformed to adverbs and adverbial phrases resulting in word or phrase sentence modifiers.

b) To create sentence modifiers by the use of subordinate clauses

c) To develop sentence modifiers in the form of the absolute construction

d) To develop sentence modifiers formed from non-restrictive relative clauses and from participial phrases

e) To derive and use appositive structures by deletions from nonrestrictive relative clauses

f) To employ sentences in connected prose which reduce predications by means of deletions from relative clauses

CONCEPT 16. Students learn to analyze and create sentences of varied style and dense texture resulting from transformations and other stylistic treatments of grammatical structures.

The following sentence by Thomas Wolfe is analyzed to reveal the transformations employed, the resultant structures and the kernels from which they were derived:

Drinking his morning coffee, he listened to early noises, the chink of milk bottles on the doorstep, the whir and whiz of a telephone dial in the next apartment, and the reverberating snore of a sandblaster already at work.

The principal kernel of this sentence, retained as a main clause is: He listened to noises with the pattern NP_1 + Vt + to + NP_2. The transformed additional kernels are analyzed in Table 3.

From analyses such as these, the nature of a transformational grammar becomes apparent. Students learn from such analyses that sentences of dense texture are built from many kernels transformed to words, phrases, or clauses embedded in a base or main kernel.

A review of the transforms exhibited in Table 3 reveals that:

Kernels 1, 3, 5, and 9 are reduced to adjectives or adjective phrases.

Kernels 4, 6, 7, 8, and 11 are reduced to appositive nouns.

Table 3

Analysis of a Sentence by Thomas Wolfe

Underlying kernels	Resultant structure	Classification of result
1. The noises were early.	early	adjective
2. He was drinking his coffee.	drinking his coffee	participial phrase
3. The coffee was of the morning.	morning	adjective
4. One noise was the chink of milk bottles.	the chink of milk bottles	noun in apposition
5. The milk bottles were on the doorstep.	on the doorstep	adjective phrase
6. One noise was a dial.	a dial	noun in a phrase
7. The dial made a whir.	the whir	noun in apposition
8. The dial made a whiz.	the whiz	noun in apposition
9. The dial was on a telephone.	of a telephone	adjective phrase
10. The telephone was in the next apartment.	in the next apartment	adverbial phrase adjective
11. One noise was a snore.	the snore	noun in apposition
12. The snore reverberated.	reverberating	participle adjective
13. A sandblaster snored.	of a sandblaster	adjective phrase
14. The sandblaster was already at work.	already at work	adverbial phrase adjective

Kernels 10 and 14 are reduced to adverbial phrases.

Kernels 2 and 12 are reduced to participial phrases.

This illustration uses no clauses.

Illustrations of varieties of sentence transformations by which kernels may be reduced to words, phrases, or clauses grouped into parallel series: (the parallel structures are underlined).

a. Clauses (embedded kernel sentences in the NP or the VP of a main sentence). He is a man for whom I have greatest admiration, whose life has exhibited high purpose and firm resolve, and from whom the public have every right to expect large achievement.

b. Infinitives (to and verb used in an NP, an adjective, or adverb position). I chose this form of life because I like to hunt, to fish, to explore the untrod paths, and to taste and enjoy the unspoiled wilderness.

c. Gerunds (verb and -ing used in an NP position). This success came from perceiving the right move at the right time, pursuing relentlessly his goal when adopted, and realizing to the full the implications of each advance.

d. Participles (verb and -en or -ing used in an adjective position). With quickened appreciation he watched the flock of ducks wheeling to descend, spreading feet forward as brakes, setting wings in a glide pattern, and striking with splashes the surface of the pond, decelerating and coming to rest.

e. Prepositional phrases (preposition + an NP). From a distance he viewed the busy highway with its six lanes of traffic, its clearly marked edges, its illuminated signs and flashing signals, and its uninterrupted procession of cars and trucks.

f. Appositive noun phrases. He found the shop unusually well stocked with garden supplies—rows of shiny new

lawn mowers, massive leaf sweepers, arrays of edging instruments, walls filled with rakes and shovels, and dusty piles of fertilizer sacks.

In this structure the underlined noun phrases are presented in apposition to the noun phrase garden supplies. A series of structures of this kind makes possible the listing of many parallel elements without recourse to predications.

g. Absolute constructions. He stood there forlorn, his back bent with age, his hands gnarled and crooked, his head low, and his aspect dejected.

Note that the absolute construction results from the deletion of the verb be from a kernel. Thus the kernel His back was bent with age becomes his back, bent with age; his hands were gnarled and crooked becomes his hands, gnarled and crooked, etc.

Behavioral Objectives:

a) To analyze sentences involving a number of transforms, relating these transforms to the kernels from which they were derived

b) To write sentences of varied style and dense structure by employing single- and double-base transformations.

c) To write effective sentences employing parallel structure as a device to include a large content of meaning in a structure of limited predication

d) To compare sentences employing, as the means of reducing predication, kernels transformed to clauses, infinitive phrases, gerund phrases, participial phrases, prepositional phrases, appositive structures, and absolute constructions

e) To write prose involving these transforms

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