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AN EXPERIMENTAL COMPARISON OF A STRUCTURAL APPROACH AND A SITUATIONAL APPROACH TO FOREIGN-LANGUAGE TEACHING

by
Philip Carl Hauptman

A dissertation submitted in partial fulfillment
of the requirements for the degree of
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Doctoral Committee:

Associate Professor Ronald Wardhaugh, Chairman
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Associate Professor Harold V. King
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ABSTRACT

AN EXPERIMENTAL COMPARISON OF A STRUCTURAL APPROACH AND A SITUATIONAL APPROACH TO FOREIGN-LANGUAGE TEACHING

by
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An experiment was performed to investigate two approaches to foreign-language teaching. Groups of third, fourth, fifth and sixth grade children were taught Japanese for 15 minutes each day over a period of three weeks using the two approaches. These approaches are described in the study as a "structural approach" and a "situational approach." The chief characteristic of the structural approach was that the material to be taught was sequenced in order of increasing difficulty and/or complexity. The chief characteristic of the situational approach was that the material to be taught was arranged by situations, in the form of dialogues in which the relative difficulty of grammatical and lexical items was not considered.

The independent variables were the two approaches. The dependent variables were the two final criterion tests: a

structural test and a situational test. Analyses of variance and covariance, adjusted for language aptitude, intelligence and sex were performed.

The principal findings were that the group taught by the situational approach (the situational group) performed significantly better than the group taught by the structural approach (the structural group) on items on the situational test and no different from the structural group on items on the structural test. The third and fourth grade students in the situational group performed significantly better than similar students in the structural group on the combined total of the two criterion tests. A similar difference was not observed among fifth and sixth grade students. There was no interaction between grade-level and method. Interaction analyses between language aptitude and method and between intelligence and method were performed. These analyses revealed that the situational approach produced significantly better results among students of high language aptitude and intelligence than did the structural approach. However, they also revealed that there were no corresponding significant differences among students of lower language aptitude and intelligence.

The experimental evidence appears to show that a situational approach to foreign-language teaching produces significantly better results with students of high language

aptitude and high intelligence than does a structural approach. With other students, the results of the two approaches are not significantly different. In addition, it is likely that the situational approach produces affective benefits not produced by the structural approach. However, such benefits were not measured by the criterion tests used in this study.

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CHAPTER I

INTRODUCTION

The purpose of this chapter is four-fold. First, an overview of the status of language teaching will be presented, and beliefs and practices in language teaching will be discussed in historical perspective to indicate that controversy exists regarding the most effective manner of teaching foreign languages. Second, the study to be undertaken, which is a comparison of a structural and a situational approach to language teaching, will be introduced. Third, certain linguistic, psychological, and pedagogical factors will be noted. Finally, an existing need for further research will be pointed out.

The history of foreign-language teaching in the United States has seen a number of radical changes. A stress on the Classics and French characterized the foreign-language programs of our earliest colonial schools. This trend continued until the beginning of the Twentieth Century. The method of studying foreign languages was by memorization of paradigms and grammatical rules which students applied during a process of translation into English. World War II brought an end to the linguistic isolationism of the previous thirty

years. Through the Army Language Schools, linguists became greatly involved in language teaching. The Bloomfieldian school of linguistics provided the theoretical input for these programs which emphasized the spoken language and replaced the previous grammar-translation language methodology with a methodology based on habit-formation.

Behavioral psychology was the psychological theory of learning most closely followed in the spoken approach to foreign-language learning, an approach which later was referred to as audio-lingual in nature. Bloomfieldian linguistics, with its principal interest in form rather than meaning, was entirely consistent with behavioral psychology, which was concerned with overt behavior. Since habit formation was regarded as central to stimulus-response theory, foreign language teaching was dedicated to the proposition that a foreign language should be learned as a series of habits which can be acquired through drilling. For example, Lado stated:

> The fact that language operates largely on the basis of habit shoud be obvious to everyone. It is only through habit that the thousand-and-one rules of grammar, pronunciation, and vocabulary are used by every fluent speaker of the language at normal speed . . . . What . . . [the student] needs is habit-formation practice.[1]

In a comprehensive treatment of the psychology of language teaching, Rivers stated as her First Assumption about language learning that "Foreign-language learning is basically a

mechanical process of habit formation."[2] Wardhaugh pointed out the general commitment of language teaching, up to the present, to behavioral and structural bases:

> That every language is systematic and that a second language should be learned as a habit system appear to have been two fundamental concepts acquired by language teachers trained in those schools which favor the so-called 'linguistic method' of second-language teaching.[3]

It can thus be affirmed that the two bases for foreign-language teaching since World War II have been provided by behavioral psychology and structural linguistics. The behavioral basis is exemplified by habit theory. The structural basis is exemplified by the linguist's notion of the systematic nature of language. Because of these two bases, foreign-language materials have been prepared consistent with the idea of learning in small steps, the content of which increases gradually in difficulty and complexity. Finocchiaro stated such an approach as follows:

> The sounds, forms, or word sequences must be taught and practiced systematically in a progression and order which will permit the learners to associate each little segment of newly acquired language with every other segment they already acquired.[4]

The strict adherence to behavioral and structural principles remained the accepted practice of foreign-language teaching for approximately twenty years. In the past ten years, however, language specialists have been questioning the above principles. Wardhaugh brought out this recent questioning when he wrote:

> While there is no question that these two concepts [i.e., every language is systematic and a second language should be learned as a habit system] have much to recommend them and that those teachers who have based their methodology on the concepts have achieved considerable success, yet neither concept is completely adequate nor do both together form a sufficient basis for a complete second-language pedagogy. A language is more than a system of habits, for a native speaker has abilities beyond those which can be accounted for under most existing definitions of habit. . . .[5]

Chomsky has written in the same vein, saying,

> Language is not a 'habit structure'. . . . There are no known principles of association or reinforcement, and no sense of 'generalization' that can begin to account for this characteristic 'creative' aspect of normal language use.[6]

In 1964 Carroll introduced the term "cognitive code-learning theory" to describe an alternative approach, and he contrasted this new approach with the audio-lingual approach.

Carroll did not go into any details in describing the theory, but he did say that ". . . the cognitive code-learning theory perhaps has more support in contemporary Gestalt trends. . . ."[7] Carroll's was one of the first attempts to speak of second-language teaching in terms of cognitive psychology.

Gestalt psychology was begun by Wertheimer in Germany in 1912. It was introduced into this country by Koffka and Kohler in 1924 and 1925 respectively. Its introduction into American psychology was met by strong opposition from proponents of the leading psychological theory in the United States behaviorism.[8]

Diller was among the first of the language specialists to compare and contrast a behavioral approach with a cognitive approach to foreign-language learning. He referred to those advocating a behavioral approach as "empiricists" and to those advocating a cognitive approach as "rationalists."[9] Diller brought out two main differences between the two groups. First, he claimed the empiricists fear mistakes in their students. They consequently advocate the use of material in which the responses are predetermined. The rationalists, on the other hand, do not advocate predetermined responses, for they do not fear mistakes. The second difference between the two groups, according to Diller, concerns different attitudes toward drill. For the empirists, drill is more important than the intrinsic interest of the materials being used. For the rationalists, however, language learning is an active cognitive process rather than an externally imposed process of conditioning and drill. Thus, drill must employ interesting and meaningful materials.

For the purposes of the present study, Carroll's term cognitive code-learning will be used, but because there is no established cognitive code-learning theory, a particular interpretation of this term will be established. The term cognitive code-learning will be used to refer to the cognitive processes of internalizing the rules of a foreign language. The approach which will be introduced to accomplish this end

is referred to as the Situational Approach. As mentioned above, the Structural Approach prescribes gradation of grammatical and lexical material in order of increasing difficulty and/or complexity. The situational approach prescribes sequencing material by situations only, without concern for the relative "difficulty" of the materials. Whereas the structural approach requires the priority of the form over the context, the situational approach requires that forms can be presented regardless of grammatical complexity, providing they are of manageable length.

At this point, it is necessary to equate cognitive code-learning with the situational approach in a more definitive way. Carroll established the connection between Gestalt psychology and cognitive code-learning when he introduced the latter term. The rationale for equating the situational approach to Gestalt psychology is supported by Bauer who advocated turning to Gestalt psychology for a theoretical basis for foreign-language teaching. He suggested that "Speech patterns should be real and should be naturally embedded in frequent Gestalt-patterns of the language system." He believed that language programs should follow a general procedure, going ". . . from the 'Gestalt' through the behavioral process back to the 'Gestalt.' Grammatical language patterns should be generated within a coherent situational frame and not primarily according to the logic of the grammar."[10]

Frey associated a cognitive code approach with contextualization and defined what he referred to as cognitive code "rule generalization theory." He explained that this theory ". . . views language as a conscious process of internalizing the necessary information about structures of the second language through a pointed analysis of the pattern."[11] Frey felt that the greatest limitations of the (audio-lingual) pattern drill was the absence of natural context.

Some rationale for linking linguistic concepts with the situational approach exists in the writings of Firth. Firth is one of the few linguists who discussed context specifically. He said that "meaning is best regarded as a complex of relations of various kinds between the component terms of a context of situation."[12] Oyelaran explained Firth's context of situation as a combination of interior relations and exterior relations. The former include verbal and non-verbal actions, relevant objects, and the effect of the verbal action. The latter relations incorporate the social, religious and economic strata of the participants, types of discourse involved (e.g., monologue, narrative, etc.), personal characteristics of the participants, and types of speech (e.g., "social flattery, cursing").[13]

Firth's context of situation seems amenable to use in a situational approach, but he was not explicit enough to

demonstrate how the utilization could be accomplished.

Language teachers have seen a need for "contextualizing" material for many years. In 1899, Sweet discussed the importance of context, saying, " . . . we speak in sentences. We do not generally speak in detached sentences. . . ." He said we speak in streams of sentences in which context is important for comprehension. Because this was so he felt that the "main foundation of the practical study of language should be connected texts. . ."[14]

Almost twenty-five years ago Fries, who is often regarded as the initiator of the "linguistic method" of language teaching, wrote as follows:

> Every language is thus inextricably bound up with the whole life experience of the native users of that language. The linguistic forms of my language 'mean' the situations in which I use them. For me to be thoroughly understood, therefore, the hearer must in some way grasp completely the 'situations' as they stimulate my utterances. . . . Hence the need for what I called 'Contextual Orientation' in order to understand and to be understood in a foreign language.[15]

Fries recognized the need for teaching the contexts of the language, but his interests lay more with the cultural contexts than with the linguistic contexts. In practice, Fries advocated that the presentation of the cultural contexts merited only an extracurricular status. The presentations were to be made in the form of lectures and discussions concerning cultural attitudes, beliefs, and practices of the target culture.

In the preceding paragraphs, the respective connections which exist between the situational approach and cognitive code-learning, linguistics, and language teaching have been discussed. At this point, the psychological rationale for the situational approach will be introduced.

Neisser has pointed out that context is extremely important in the synthesis of utterances which are to be comprehended. He cited a study by Miller, Heise, and Lichten, who required subjects to "identify words and nonsense syllables with a noisy background." They showed how "simple knowledge of what to expect made an enormous difference." A context as brief as a sentence acted as an aid to better understanding of words.[16]

The most striking psychological support for the priority of situational sequencing over structural grading of material comes from the psychologists Bandura and Walters. They wrote as follows:

> Relevant research demonstrates that when a model is provided, patterns of behavior are typically acquired in large segments or in their entirety rather than through a slow, gradual process based on differential reinforcement. Following demonstrations by a model, or (though to a lesser extent) following verbal descriptions of desired behavior, the learner generally reproduces more or less the entire response pattern, even though he may perform no overt response, and consequently receive no reinforcement, throughout the demonstration period. Under such circumstances, the acquisition process is quite clearly not as piecemeal as is customarily depicted in modern behavior systems.[17]

One of the very few experiments concerning cognitive code-learning theory was conducted at Purdue University and was described by Chastain and Woerdehoff. The experiment will be described in considerable detail to give a precise account of what has been done, in order to point out a need for further research in the area.

The purpose of the Purdue experiment was to contrast "audio-lingual habit theory" and "cognitive code-learning theory." The audio-lingual habit theory was characterized by:

> (1) the study and manipulation of the structural patterns of the language, (2) the inductive presentation of new material, and (3) the maintenance of the natural order of language learning, i.e., listening comprehension, speaking, reading, and writing. . . .[18]

The cognitive code-learning theory was characterized by:

> (1) the use of exercises designed to teach grammatical understanding of the concepts being introduced, (2) the deductive explanation of all grammar prior to any practice with the structure, and (3) the practice of all language skills from the beginning of the course.[19]

In the actual experiment, 169 students in first semester Spanish at Purdue were randomly assigned to one of the two method groups: 82 in the audio-lingual group and 87 in the cognitive code group. The groups were compared on various characteristics and were found to be evenly matched. After attrition, the final sample contained 99 students in four classes of approximately 25 students in each.

The authors' description of the method variables indicated that the differences between the two methods were essentially in the texts used. The audio-lingual classes used Modern Spanish, Second Edition (New York: Harcourt, Brace and World, Inc., 1966), Writing Modern Spanish (New York: Harcourt, Brace and World, Inc., 1966), and a reader, Cuentos y risas (New York: Oxford University Press, 1952). The cognitive code classes used Beginning Spanish, A Cultural Approach (Boston: Houghton Mifflin Company, 1963) as the basic text as well as the same reader used by the audio-lingual classes, Cuentos y risas. The researchers emphasized that these cognitive code classes were not of the grammar-translation variety and that oral recitation involved contextual practice, not pattern practice.

Four criterion tests were administered, one each in listening, speaking, reading, and writing. In comparing the results of the two groups on the criterion tests, the investigations found that on the listening and writing tests there were no significant differences, but they noted a tendency favoring the cognitive code group. On the speaking test, there was also no significant difference but the authors noted a tendency favoring the audio-lingual group. On the reading test, there was a significant difference in favor of the cognitive code group. The authors concluded that the cognitive code students did as well, if not better, than the

audio-lingual students in listening, writing, and speaking, and did better in reading.

An area in which the Purdue experiment was insufficiently explicit was in the materials used. An examination of Modern Spanish indicates that it would fulfill the criteria of most investigators for being an audio-lingual text. The cognitive code text, however, poses more of a problem. The authors claimed that the text for the cognitive code group, Beginning Spanish, A Cultural Approach, ". . . represents very well an approach which stresses understanding of grammatical concepts . . ."[20] An examination of this text shows that it is difficult to understand the rationale for its choice as a cognitive code text for three reasons. First of all, it is not clear what the authors meant by ". . . stresses understanding of grammatical concepts . . ."; second, there is no information concerning how this understanding would be a specifically cognitive activity; and third, there is no explanation of how a deeper understanding is achieved with this text than with the audio-lingual text. Generally, then, it is apparent that the Purdue experiment is inadequate in two important respects: (1) the definitions and descriptions of audio-lingual and cognitive code are imprecise and inconsistent; (2) the manner in which these theories are implemented in the classroom is vague.

In this chapter, it has been pointed out that there has

been a recent questioning of previous following of behavioral and structural principles in foreign-language teaching. This questioning has led to the presentation of an alternative approach to the structural approach: the situational approach. Some linguistic, psychological, and pedagogical support has been demonstrated for such a situational approach. Finally, a general lack of experimentation in comparing the two approaches to language teaching has been noted. There is an obvious need, therefore, for further research which compares the two approaches.

FOOTNOTES

CHAPTER I

[1]Robert Lado, Language Teaching, A Scientific Approach (New York: McGraw-Hill Book Company, 1964), p. 105.

[2]Wilga M. Rivers, The Psychologist and the Foreign-Language Teacher (Chicago: The University of Chicago Press, 1964), p. 31.

[3]Ronald Wardhaugh, "Some Current Problems in Second-Language Teaching," Language Learning, XVIII, Nos. 3 and 4 (1967), p. 21.

[4]Mary Finocchiaro, English as a Second Language: From Theory to Practice (New York: Regents Publishing Company, 1964), p. 13.

[5]Wardhaugh, "Current Problems," p. 21.

[6]Noam Chomsky, "Linguistic Theory," in Language Teaching: Broader Contexts, ed. by Robert G. Mead, Jr. (Menasha, Wisconsin: George Banta Company, Inc., 1966), p. 44.

[7]John B. Carroll, "Research in Language Teaching: The Last Five Years," in Language Teaching: Broader Contexts, ed. by Robert G. Mead, Jr. (Menasha, Wisconsin: George Banta Company, Inc., 1966), p. 35.

[8]Ernest R. Hilgard and Gorden H. Bower, Theories of Learning (3rd ed.; New York: Appleton-Century-Crofts, 1966), p. 229.

[9]Karl Diller, "Generative Grammar and Foreign Language Teaching" (paper presented at the Tenth International Congress of Linguists, Bucharest, Rumania, Sept. 2, 1967), pp. 2-3.

[10]Eric W. Bauer, "Approaches to a Redefinition of Language Learning," Contact, IX (December, 1966), p. 15.

[11]Herschel J. Frey, "Audio-lingual Teaching and the Pattern Drill," Modern Language Journal, LII, No. 6 (1968), p. 350.

[12]J. R. Firth, The Tongues of Men & Speech (London: Oxford University Press, 1964), p. 110.

[13]Olasope O. Oyelaran, "Aspects of Linguistic Theory in Firthian Linguistics," Word, XXIII, Nos. 1, 2, 3 (1967), p. 438.

[14]Henry Sweet, The Practical Study of Languages: A Guide for Teachers and Learners (London: Oxford University Press, 1964), p. 99.

[15]Charles C. Fries, Teaching and Learning English as a Foreign Language (Ann Arbor: University of Michigan Press, 1945), p. 57.

[16]Ulric Neisser, Cognitive Psychology (New York: Appleton-Century-Crofts, 1967), p. 195.

[17]Albert Bandura and Richard Walters, Social Learning and Personality Development (New York: Holt, Rinehart, and Winston, 1963), p. 106.

[18]Kenneth Chastain and Frank J. Woerdehoff,"A Methodological Study of Comparing the Audio-lingual Habit Theory and the Cognitive Code-Learning Theory," Modern Language Journal, LII, No. 5 (1968), p. 269.

[19]Ibid., p. 269.

[20]Ibid., p. 272.

CHAPTER II

RELATED RESEARCH

This chapter contains a review of the literature on the subject of the two approaches described in the previous chapter: the structural approach and the situational approach. Although it is recognized that there are many aspects of language teaching and language learning which are important and related to the study undertaken here, it was decided to concentrate in this review only on those items which are most significant in a discussion of the dichotomy between structural and situational language teaching. The purpose of this review is to bring to attention specific points which are ready for experimentation so that testable hypotheses may be formulated.

STRUCTURAL AND SITUATIONAL LANGUAGE TEACHING

The purpose of this section is to present the relevant research in structural and situational language teaching to arrive at a testable major hypothesis. Because of the prestige the structural approach to language teaching has enjoyed in the past twenty-five years, a review of the literature concerned with this approach would be almost endless.

For this reason, the discussion of the structural approach to language teaching will be limited to a comparison of that approach to the situational approach. The discussion of the situational approach will be more comprehensive, however, because it has generally been more neglected and is, consequently, considerably less known. Unfortunately, only a small number of studies involving situational teaching have been performed; consequently, a great deal of literature is theoretical in nature rather than experimental.

One of the strongest proponents of the situational approach is Newmark. In a discussion of language acquisition, Newmark stated that foreign language acquisition should not be thought of as additive, because isolating parts from wholes is artificial. He argued that "isolation and abstraction of the learner from the contexts in which . . . [the foreign] language is used constitutes serious interference with the language learning process."[1] He emphasized that ". . . language is learned a whole act at a time rather than learned as an assemblage of constituent skills. . ."[2] Newmark advocated the use of dialogues, with limited use of structural drill to introduce variants, as the vehicle for presenting language as a whole.

Newmark and Reibel gave a more explicit description of the situational approach and expressed disagreement with approaches which require grading of material structurally:

> A language will be learned by normal human beings if and only if particular, whole instances of language use are modeled for him and if his own particular acts using the language are selectively reinforced. . . . In practice the design of teaching material to minimize grammatical randomness seems to maximize situational randomness. . . . [They believe it is necessary to] . . . abandon the notion of structural grading and structural ordering of exercise material in favor of situational ordering.[3]

Reibel brought up the necessity of a situational orientation to language teaching and made a distinction between the contextual component and the grammatical component of any foreign language drill or exercise. However, he said that:

> if the grammatical component is kept constant, as in the case . . . of a pattern drill, it must be at the expense of the contextual component, which must be altered for each new sentence, almost invariably in some random, unpredictable way. If, on the other hand, we could allow the grammatical component of the exercise to vary as needed, we could hold the contextual component constant.[4]

Newmark, Mintz, and Lawson put these situational ideas into practice in the form of a text entitled Using American English. In this book, the authors presented the material in the form of dialogues in situations. The text is divided into sixteen different situations. Each situation has four dialogues of four lines each and each dialogue usually has four alternant forms. There is no structural grading of material. The only restrictions are imposed by the situations in the dialogues.[5]

In a review of the text, Bender supported the rationale employed by Newmark, Mintz, and Lawson as shown in their use

of dialogues in a situational approach. He agreed that dialogues are the "obvious contextual wholes for learning usable speech."[6] Furthermore, he pointed out that the text has been used with success in an English as a foreign language program. Bender noted that in addition to a favorable reaction by the teaching staff toward this use of dialogues in a situational approach, ". . . student reaction has been favorable, surprisingly so in view of their general desire for grammatically-oriented materials."[7]

Gumperz is another proponent of the situational approach for providing students with the ". . . linguistic ability they need to communicate effectively in speech communities where these languages are spoken. . . ."[8] As a procedure for deciding on the content of the situations, he advocated first some decisions as to the situations to be used and then the necessity for acting out the particular situations which are chosen. The texts of the enacted dialogues would be agreed upon by native speakers. Gumperz believed that a great advantage of this contextual approach is that it does not necessitate a dependence on often-inaccurate word counts to determine frequencies of occurrence of forms and structures in the preparation of materials. If the situation is accurately defined and enacted, the vocabulary and syntax contained in it would be quite appropriate materials to be taught.

Upshur described four experiments in teaching English as

a foreign language, the results of which have bearing on a comparison of a structural and a situational approach. The purpose of the first experiment was to study whether second language learning (in the second language environment) is related to the amount of formal instruction. The results of this experiment indicated that there was no information to show that improvement in language proficiency was not merely ". . . a function of initial proficiency."[9] The results of the second experiment indicated that ". . . some learning of the linguistic materials being taught does take place during the time they are being taught."[10] The purpose of the third experiment was to test the null hypothesis:

> . . . that a group of English language learners who have been taught earlier course materials will not perform better on a test of later course materials than a group who have not been taught these materials.[11]

The results of the experiment did not allow rejection of the null hypothesis. The results of the fourth experiment suggested that ". . . the degree of mastery of a small amount of foreign language grammatical material will be less than the degree of mastery of a larger amount."[12]

The results of the experiments reported by Upshur suggest a conclusion which is relevant to the subject of situational teaching: sequential mastery of foreign language materials is almost certainly unnecessary and perhaps even impossible. Thus, the use of situational materials is seen as a viable

alternative in second-language teaching.

In addition to research on situational, or ungraded language teaching, a few studies investigating the use of partially graded contextual materials have been conducted. Oller and Obrecht described an experiment involving what they referred to as "Informational Sequence." The chief characteristic of informational sequence is that content material must be sequenced chronologically to show how events are connected "causally." The authors claimed that there are other characteristics of informational sequence but do not specify them. They did not suggest that it is inadvisable to utilize pattern drills to illustrate grammatical points, but they claimed ". . . that in order for pattern drills to be maximally effective, they should be presented in such a way that the student is immersed in realistic communicative activity."[13] They did not suggest that the structural gradation of material be abandoned, but ". . . rather that concern for structural and grammatical considerations should not supersede nor minimize informational sequence."[14] The ideas expressed by the authors seem to have the potential to be extremely valuable. However, their results are found to be lacking in two ways: first, the relatively small number of subjects (twenty-two) involved, raises some doubts as to the generalizability of the results; second, the authors failed to be explicit about how informational sequence is to be implemented. The

usefulness of their results is thus limited by these deficiencies.

Oller and Obrecht described another experiment they conducted, the purpose of which was to compare "meaningful drill" with "not meaningful drill."[15] The difference between the two treatments was that the "meaningful" group received the meaning many times in English before in the target language, Spanish. The "not meaningful" group received the meaning only once in English and this after receiving it in Spanish. The group which received the meaningful drill performed better. The main problem with generalizing from the results of this experiment is that the authors never clarified why one treatment should be considered to be "meaningful," and the other treatment should be considered to be "not meaningful." Again, the authors' failure to be explicit prevents their results from being useful to other language teachers.

Buckby also recommended contextualizing material but did not mention the necessity for the situations to be relevant to the students. Instead, he said, ". . . one can start with a simple situation in which a structure can realistically be repeated a number of times."[16] Unfortunately, Buckby did not suggest how these situations might be discovered or contrived.

Conclusions: Because of the amount of often-contradictory information by Newmark, Upshur, Chastain, Oller, and Obrecht concerning the comparison of a structural and a situational approach to foreign-language teaching, the major area to be investigated should be whether or not there is a significant difference between the structural approach and the situational approach. No such experiment has been found, The only experiments which have been conducted, are those which are often inconsistent with the definitions of these two approaches given in the first chapter.

DIALOGUES

Although this section does not lead to any testable hypothesis, it is included here to show the varied opinion on the use of dialogues and the compatibility of dialogues with situational teaching. As mentioned above, Newmark, Newmark and Reibel, Newmark, Mintz, and Lawson, and Bender supported the use of dialogues as a vehicle for situational teaching. Other writers have discussed using dialogues to supply situations, but in the framework of a structurally oriented program. Mueller agreed with Buckby's recommendation that the situations should be contrived for the purpose of practicing a particular structure. However, Mueller advocated that the teacher supply the situations in which graded material can be practiced.[17]

Wolfe expressed disagreement with the use of structurally unordered materials, and disapproval of memorized dialogues, saying that:

> The fixed dialogue does not necessarily provide a better or more natural context in which to learn lexical items. In this respect, the single context of the fixed dialogue is inferior to the multiple contexts of a drill or series of drills.[18]

As a substitute to the fixed dialogue, Wolfe advocated the use of "original dialogues," which are contrived by having students ". . . talk to each other in pairs inventing questions and answers that practice the linguistic unit being learned."[19] Wolfe did not explain, however, how beginning students would be able to converse in the target language before they have had any practice with prepared material.

West discussed the problem of how to teach language as a form of behavior, i.e., including ". . . posture, facial expression, gesture. . . pauses, intonation, exclamatory noises."[20] He concluded that the dialogue provides a vehicle for such teaching. He referred to the dialogue incorporating all these forms of behavior as a "behavioral dialogue." West was explicit in his explanation that in constructing these dialogues, the principle of structural grading should be retained. He explained that deriving a language program from dialogues produced a "chaotic result."[21]

Pilleux also advocated the use of "structurally graded dialogues." He agreed that the situational atmosphere is

amenable to foreign language learning, but, unfortunately, he felt dialogue practice should be reserved for more advanced students ". . . never with beginners."[22] Pilleux was apparently unaware of the possibility that beginners could benefit from dialogue practice. He did not give any reasons why only advanced students should be exposed to a more meaningful presentation of material.

Conclusions: This section indicates that ideas about dialogues differ widely. For the purposes of this experiment, the kind of dialogues advocated by Newmark, Mintz and Lawson will be used. It is felt that a structurally ungraded dialogue is compatible with the situational approach and is usable in a class of beginners contrary to the opinions expressed by Wolfe, Pilleux and West.

INTELLIGENCE, LANGUAGE APTITUDE, AND AGE

Even a cursory review of the literature of foreign language teaching will indicate that there are other factors relevant to learning a foreign language besides the treatment received. Three of these frequently mentioned variables are intelligence, language aptitude and the age of the learner.

Intelligence:

In a review of the research of intelligence and language learning, Pimsleur, Mosberg, and Morrison explained that there is extensive literature on the relationship between intelli-

gence and foreign language achievement. They pointed out that most of the studies indicate that intelligence is a significant factor in foreign language learning, with correlations ranging from .21 to .65, with many of the correlations around .45.[23]

Carroll indicated, however, that language learning ability was relatively independent of intelligence as measured by I.Q. He stated that this could be demonstrated by pointing out ". . . the well-known fact that intelligence tests have been largely unsuccessful in screening individuals for language training."[24]

From a study of seventh and eighth grade children, Pimsleur found that I.Q. does not correlate as highly with achievement as language aptitude. He found that the correlation between language aptitude and achievement was .62, and the correlation between intelligence and achievement was .46.[25]

Conclusions: Because Carroll, on the one hand, indicated only a rather small correlation exists between intelligence and language achievement, and Pimsleur, on the other hand, indicated a more substantial relationship, it would be interesting to examine this relationship in an experiment.

Language Aptitude

In the previous section, Pimsleur showed that there was a higher correlation between language aptitude and achievement ($r = .62$) than between intelligence and achievement ($r = .46$).

Although specialists might differ on what they believe the exact components of language aptitude to be, there is general agreement that this ability can be broken down into component parts. It is also agreed that language aptitude test results are useful for predicting achievement in foreign language learning.

Carroll listed four components of language aptitude:

1. Phonetic Coding: "the ability to 'code' auditory phonetic material . . ." so it can be remembered for more than a few seconds.

2. Grammatical Sensitivity: "the ability to handle grammar."

3. Rote Memory for Foreign Language Materials: the ". . . capacity to learn a large number of associations . . ."

4. Inductive Language Learning Ability: "the ability to infer linguistic forms, rules, and patterns from new linguistic content."[26]

Pimsleur, however, described language aptitude as consisting of only three components:

1. Verbal Intelligence: "familiarity with words . . ." and the ability to reason analytically about verbal materials.

2. Motivation to Learn the Language.

3. Auditory Ability: the ability to discriminate sounds and the ability to equate sounds and symbols.[27]

Conclusions: Pimsleur found a relatively high correlation exists (r = .62) between language aptitude and achievement. It would be interesting to test whether this correlation would be supported or rejected in another experiment. Also, because of the great amount of discussion concerning intelligence and language aptitude as variables in foreign language learning, it would seem desirable to investigate the correlation between these two variables.

Age

Carroll indicated that there was little information about age as a factor among children learning foreign languages.[28] Jakobovits was not able to present a great deal of information about this factor but did describe a study by Stern, in which the advantages and disadvantages of early second language teaching were discussed.[29] In Stern's study, children were divided into two groups: Group 1, with ages from three to ten and Group 2, with ages from eleven to the school-leaving age. Stern indicated that the children in the second group are possibly at a greater advantage in terms of

maturation aiding them in foreign language learning ability. These older children possessed a more improved memory as well as a "higher level of intellectual growth." In addition, he claimed that they had an ". . . increased capacity to appreciate many aspects of language and culture contacts."[30]

Conclusions: Carroll and Jakobovits indicated that the area of age as a variable in learning a foreign language has been relatively neglected for children but not for adults. Thus, an area in need of investigation is whether one grade-level performs better than the other or whether a significant correlation exists between age and achievement.

INTERACTION BETWEEN METHOD, APTITUDE AND INTELLIGENCE

Hatfield, describing some of the activities of the Center for the Study of Evaluation of Instruction Programs based at U.C.L.A., explained that attention had been given by the Center to the interaction of instruction with individual students. It was found that there was an ". . . interaction between individual students on the method by which they are taught. . . . The same method is not equally effective with students at all levels of ability."[31]

Chastain also felt that ". . . students learn differently and have predispositions for different approaches to learning and that these differences can be anticipated."[32] He stated,

however, that of the factors used to predict achievement (past grades, aptitude, and verbal and math ability), aptitude is the weakest. In the Purdue experiment results, Chastain had two interesting correlation coefficients, but he did not choose to comment on them. The correlation between aptitude and achievement (measured by the average of listening, speaking, reading, and writing) for the cognitive code group was .51 (significant at the .01 level of significance). The correlation between aptitude and achievement for the audio-lingual group was .25 (not significant).[33] It is surprising that the author failed to notice this difference. It seems to indicate that other statistical tests should have been performed to see if, in fact, high aptitude was more important in one group than in the other.

Conclusions: The studies of Hatfield and Chastain on the interaction between language aptitude and intelligence with method indicate that it would be interesting to test whether one of the two approaches favored one level of language aptitude and intelligence more than the other. For example, if a high (or low) language aptitude or intelligence benefited students on either one method or the other, such results would be noted.

CONCLUSIONS

The literature comparing structural and situational language teaching and assessing related areas indicates points which are ready for experimentation. Therefore, the following questions to be investigated will serve as the basis for the hypotheses to be listed in the following chapter.

1. Does a significant difference exist between the results achieved by a structural approach and a situational approach to foreign-language teaching?

2. Does a significant correlation exist between intelligence and achievement in foreign-language learning?

3. Does a significant correlation exist between language aptitude and achievement in foreign-language learning?

4. Does a significant correlation exist between intelligence and language aptitude in foreign language learning?

5. Does one approach favor either high language aptitude and intelligence or low language aptitude and intelligence?

6. Does one grade-level perform better than another in foreign-language learning? Does a significant correlation exist between age and achievement in foreign-language learning?

FOOTNOTES

CHAPTER II

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[2]Ibid., pp. 79, 81.

[3]Leonard Newmark and David A. Reibel, "Necessity and Sufficiency in Language Learning," International Review of Applied Linguistics, VI, No. 2 (1968), pp. 149-152.

[4]David A. Reibel, "The Contextually-Patterned Use of English: An Experiment in Dialogue Writing," English Language Teaching, XIX, No. 2 (1965), p. 64.

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[6]Byron W. Bender, "Review of Using American English" by Leonard Newmark, Jerome Mintz, and Jan Lawson in Language Learning, XVII, Nos. 3 and 4 (1967), p. 209.

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[8]John J. Gumperz, "Linguistic Repertoires, Grammars and Second Language Instruction," Georgetown University Monograph Series on Languages and Linguistics, No. 18 (1965), ed. by Charles Kreidler, p. 82.

[9]John A. Upshur, "Four Experiments on the Relation between Foreign Language Teaching and Learning," Language Learning, XVIII, Nos. 1 and 2 (1968), p. 113.

[10]Ibid., p. 115.

[11]Ibid., p. 116.

[12]Ibid., p. 119.

[13]John W. Oller and Dean H. Obrecht, "The Psycholinguistic Principle of Informal Sequence: An Experiment in Second Language Learning," International Review of Applied Linguistics, VII, No. 2 (1969), p. 119.

[14]Ibid., p. 120.

[15]John W. Oller and Dean H. Obrecht, "Pattern Drill and Communicative Activity: A Psycholinguistic Experiment," International Review of Applied Linguistics, VI, No. 2 (1968).

[16]M. Buckby, "Contextualization of Language Drills," Modern Languages, XLVIII, No. 4 (1967), p. 167.

[17]Theodore Mueller, "The Language Instructor and Teaching Machines," The Bulletin of the Pennsylvania State Modern Language Association, XLV, No. 1 (1966).

[18]David L. Wolfe, "Some Theoretical Aspects of Language Learning and Language Teaching," Language Learning, XVII, Nos. 3 and 4 (1967), p. 177.

[19]Ibid., p. 187.

[20]Michael West, "Learning English as Behavior," in Teaching English as a Second Language: A Book of Readings, ed. by Harold B. Allen (New York: McGraw-Hill Book Company, 1965), p. 160.

[21]Ibid., p. 164.

[22]Mauricio Pilleux, "The Dialogue: A Useful Tool in Language Teaching," TESOL Quarterly, III, No. 3 (1969), p. 209.

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[24]John B. Carroll, "The Prediction of Success in Intensive Foreign Language Training," in Training Research and Education, ed. by Robert Glazer (Pittsburgh: University of Pittsburgh Press, 1962), p. 90.

[25]Paul Pimsleur, "Testing Foreign Language Learning," in Trends in Language Teaching, ed. by Albert Valdman (New York: McGraw-Hill Book Company, 1966), p. 177.

[26]Carroll, "Prediction of Success," pp. 128-129.

[27]Pimsleur, "Testing," p. 182.

[28]John B. Carroll, "Research on Teaching Foreign Languages," in Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand McNally and Company, 1963), pp. 1090-1091.

[29]Leon A. Jakobovits, "Physiology and Psychology of Second Language Learning," in Britannica Review of Foreign Language Education, I, ed. by Emma Marie Birkmaier (Chicago: Encyclopedia Britannica, Inc., 1968).

[30]Ibid., p. 210.

[31]William Hatfield, "Foreign Language Program Evaluation," in Britannica Review of Foreign Language Education, I, ed. by Emma Marie Birkmaier (Chicago: Encyclopedia Britannica, Inc., 1968), pp. 377-378.

[32]Kenneth Chastain, "Prediction of Success in Audio-lingual and Cognitive Classes," Language Learning, XIX, Nos. 1 and 2 (1969), p. 39.

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CHAPTER III

DESIGN OF THE EXPERIMENT

THE EXPERIMENT

The purpose of this experiment was to compare the results in achievement in Japanese of two approaches to presenting material. The first approach (used with Groups I) is referred to as the Structural Approach. Content material in this approach is sequenced in order of increasing difficulty: each pattern compared to and dependent on the material that was previously taught.

The second approach (used with Groups II) is referred to as the Situational Approach. In this approach, material was sequenced situationally, i.e., by situations in which there was no necessity to control relative "difficulty" or "complexity" of patterns. It was only necessary that the material be presented in contexts representative of actual Japanese speech and that it be meaningful to the students. In addition, for the purposes of this experiment, the material was consistent with situations familiar to all students, e.g., "In Class," "Talking on the Phone," etc.

HYPOTHESES

The major hypothesis was:

There is no significant difference in criterion test scores between Groups I and Groups II in grades three and four and in grades five and six:

a. in criterion test scores as measured by structural test items in Japanese;

b. in criterion test scores as measured by situational test items in Japanese;

c. in a criterion test of total proficiency in Japanese, the measure being the combined total score of structural test items and situational test items.

The minor hypotheses were:

1. There is no significant difference between the differences of the Group I results and the Group II results for third and fourth grades and the Group I results and the Group II results for fifth and sixth grades.

2. There is no significant difference in achievement scores between Group I subjects of high language aptitude and Group II subjects of high language aptitude.

3. There is no significant difference in achievement scores between Group I subjects of low language aptitude and Group II subjects of low language aptitude.

4. There is no significant difference in achievement

scores between Group I subjects of high I.Q. and Group II subjects of high I.Q.

5. There is no significant difference in achievement scores between Group I subjects of low I.Q. and Group II subjects of low I.Q.

6. The correlation between proficiency and I.Q. for either treatment is not significantly different from zero.

7. The correlation between proficiency and language aptitude (EMLAT) for either treatment is not significantly different from zero.

8. The correlation between proficiency and age for either treatment is not significantly different from zero.

9. The correlation between language aptitude (EMLAT) and I.Q. is not significantly different from zero.

TREATMENT

In this experiment, all subjects received instruction in Japanese for the same length of time: for 14 days with approximately 15 minutes of instruction each day. There were two treatments: the structural and the situational. Both treatments covered instruction which was identical in vocabulary but not identical in sentence structuring. The difference between the two methods, each of which prescribed a different type of sequencing of material. Because there were no ready-made materials available to accomplish the desired goal, special materials were prepared by the author.

Orientation to the Experiment

In order to introduce the subjects to the experiment, an orientation was held for all subjects before the experiment began. The purpose of this orientation was generally affective in nature, to make the experiment more meaningful to the subjects. The orientation, which lasted about 45 minutes, was divided into three parts. The first part was to enable the children to feel free about expressing themselves. They were asked if they knew anything about Japan or Japanese people. The response to this request was very good in that all students were eager to participate.

The second part was to familiarize the children with Japan. This familiarization consisted of a geographical discussion of where Japan is located, its capital, population, terrain, and industries. Pictures of Japan and Japanese people were shown at this time. The students seemed to be quite interested in this presentation as evidenced by their numerous questions and comments.

The last part of the orientation was to present a number of Japanese expressions which the children would want to know but which were not necessary for the experiment. These expressions included the Japanese equivalents for: teacher, good morning, good day, goodbye, yes, no, etc. (The expressions are listed in Appendix A). This presentation was very successful; the students were extremely eager and cooperative.

Situational Materials

Treatment II (situational) will be discussed first because the corpus to be taught was derived from the materials for this treatment. It was decided that the most meaningful situations for all students would be situations involving school and/or their school friends. It was also decided to present these situations in the form of dialogues involving two or three students. These dialogues could serve as a basis for acting out the situations (role-playing). The corpus was finally narrowed to five dialogues. The first three dialogues were set in class between classmates. The fourth was a telephone conversation between two friends. The last dialogue, again set in school, was a conversation between two friends at recess. The materials were prepared without concern for relative "difficulty" of patterns or structures. One limitation, however, was imposed by the experiment. No structure could be used in the situational materials which would not be covered in the allotted time in the structural materials.

Structural Materials

After the dialogues were composed, a listing of all the structures used was made. The structures were arranged into a hierarchy of increasing difficulty to serve as an outline for the structural materials. Then a vocabulary count was

made on the situational dialogues to determine the vocabulary to be used in the structural lessons. The structural materials were arranged into thirteen frames, each frame devoted to a separate syntactic and/or lexical point. The first frame presented was one of the most common in Japanese: noun + copula. (e.g., It is a pen.) This frame was followed by the presentation of the interrogative, verbs in non-past, particles, adjectives, desiderative, verbs in past, negation, and conjectural. Each frame, except of course the first, began with an illustration of a previously taught pattern. The new pattern was then presented and the children were shown how it differed from the old pattern.

Conventions Followed

Several conventions were followed in preparing the materials for the experiment.

1. The target culture should be eliminated, as much as possible, from the materials. It was felt that an introduction of Japanese culture would possibly introduce additional variables into the experiment which could have an effect on the results.

2. The more polite, -masu forms in Japanese should be used rather than the more familiar, -u forms, although the latter would probably be more natural between Japanese school children. This decision was based on the fact that if the

subjects were ever to expect to use their knowledge of Japanese, these forms would be more appropriate for them.

3. In the preparation of the situational materials, single dialogue utterances were kept to a length which could be managed by a child of the age used in the experiment.

4. It was decided that the most expedient manner for introducing the meanings of structures and vocabulary in such an experiment was by translation. Because of the difficulty of visually representing many forms and relations, pictures were not used to give meanings. Also, Lim found that using translation to give equivalent forms in the target language did not produce more interference than using pictures.[1]

5. As visual aids in the classroom, posters (about 30" x 30") were made illustrating all the material to be presented. There were two reasons for using such posters. First, they saved time in the classes in that it was not necessary to write examples on the board. Second, they insured more uniformity for both structural and both situational classes. These posters are reproduced in Appendices B and C.

6. For the Romanization of the Japanese, a modified version of the old Hepburn Romanization was used. Long vowels were written with double letters, as in Ohayoo "Good morning." The high back unrounded vowel, (usually romanized as u), which is often voiceless or even absent between voiceless consonants (as in watakushi "I") and finally after s (as

in desu, the copula), was omitted from the romanization. Thus, the romanization for the above two forms was watakshi and des.

Procedure

The procedural differences between both groups varied with the differences in the materials described in the preceding section. The explanation was slightly different for both groups. For the structural groups, the explanation generally occurred after the student heard and repeated the new patterns. The children were first given an opportunity to infer the pattern from the presentation. This presentation will be referred to as the "inductive presentation"[2] in the rest of the discussion. The explanation in the situational classes generally occurred before the students heard and repeated forms; thus attention was directed to syntactic and/or lexical features of the sentence. This order of presentation will be referred to as "deductive presentation."[3] Since Lim found that varying the type of explanation, inductive or deductive did not produce any difference in results[4] it is assumed that a similar difference of presentation in this experiment would not produce any differences in results.

Differences in types and procedures of drill also varied according to the different types of materials. The drill selected for the structural groups was mainly of the pattern practice variety, i.e., repetition, substitution, transforma-

tion, expansion drills, etc. Pictures using stick figures were used for cuing in the drills. The general plan for the presentation of each new frame for the structural groups was as follows:

1. Attention pointer, i.e., calling attention to what was going to be practiced, with reference to a similar structure, if possible, in English.

2. Presentation of the old pattern, followed by the presentation of the new pattern.

3. Practice, i.e., repetition of the new pattern.

4. Inductive generalization, i.e., drawing out statements from the students as to the differences between the old and the new patterns.

5. Drill.

Drills for the situational classes included some repetition and substitution drills, but always centered around role-playing. Pictures were used in the situational classes, too, for cuing in the dialogues. The format used for the presentation and practice of each dialogue was as follows:

1. Attention pointer, i.e., calling attention to the dialogue situation.

2. Deductive presentation, i.e., reading of each part with explanation of the syntactic and lexical forms.

3. Group practice, i.e., repeating the dialogues as a group. For this practice, the following order was generally followed:

a. Repetition of the entire dialogue by everyone.

b. Division of the class to take the parts of the dialogue, repetition occurring after the teacher.

c. Reversal of the parts, with further repetition, so that by this point everyone has taken all parts.

d. Reading the parts in chorus, without the teacher.

4. Team practice, i.e., breaking the class into teams of two (or three) to practice the dialogue followed by testing of one another. The teacher would then go from group to group listening and correcting. It was found that this method of team practice was especially effective with the children used in the experiment.

The English translations were withdrawn from both groups, but at different stages. In the structural classes, this withdrawal was usually accomplished during the drill. At that time the English was covered up so that only the Japanese was visible. In the situational classes, this withdrawal was done as soon as possible, with the teacher supplying the cues. Then, when the English no longer seemed necessary as a tool to understanding, it was uncovered to serve as a cue for the order of the elements in the dialogue. At this time, however, the Japanese was covered up as the dialogue was memorized by this point.

Summary of Differences

To summarize, there were four essential differences between the structural and the situational approaches.

1. Sequencing. The most important difference was in the sequencing, or ordering, of the material content of the lessons. The structural materials were sequenced in order of increasing difficulty, with each pattern compared and contrasted with the pattern which had been taught previously. The situational materials were arranged only by situations. No concern was given to the relative difficulty of the material.

2. Explanation. The structural classes received a deductive type of explanation. The situational classes received an inductive type of explanation.

3. Drills. The structural classes used drills of the pattern practice variety, i.e., substitution, transformation, expansion, etc. The situational classes also used some pattern practice drills, but concentrated on role-playing.

4. Practice. The structural groups practiced chorally and individually, in single utterances, usually in the form of an answer to a question or of a response to a verbal or visual cue. The situational groups also practiced chorally, but as team members and individually while role-playing. They usually responded in multiple utterances while acting a part in a dialogue.

SUBJECTS

The population for this experiment was drawn from the University Elementary School of The University of Michigan. The entire population of third, fourth, fifth, and sixth grades was used in the experiment. This particular age group was selected since the Modern Language Aptitude Test - Elementary Form, which as administered to each subject, was written for children at this level. Also, Lim[5] and McKinnon[6] used elementary children and were able to get significant results.

A total of 73 children from the four grades participated in the experiment: 15 from third grade, 18 from fourth grade, 19 from fifth grade, and 21 from sixth grade. Four children were eliminated from the results, thus yielding 69 subjects. (Two mentally retarded children were eliminated, and two children were absent from the final achievement test.) The children in each grade were divided into two groups using a table of random numbers. One group in each grade was arbitrarily designated the structural group and the other group was designated the situational group. The structural groups from grades three and four were combined to form one structural class, and the situational groups from grades three and four were combined to form one situational class. The procedure was repeated in grades five and six to form both a structural class and a situational class for the fifth and

sixth grades. Thus, there was a total of four classes: two structural and two situational, one each for grades three and four and for grades five and six.

OTHER INFORMATION OBTAINED

In addition to the language aptitude and achievement test scores, the I.Q. scores and ages of the children were obtained from pupil records. There were I.Q. scores available for only 60 of the 69 children, since the University School had not finished testing all the children. The I.Q. test used at the University School is the Stanford-Binet test.

MEASURES

EMLAT. As a pre-test, all subjects were administered the Modern Language Aptitude Test - Elementary Form (EMLAT) by Carroll and Sapon, 1967.[7] (One child did not take the test as he was a non-reader.) This test is written for elementary children from third through sixth grades. All directions and questions in the test are given from a tape recorder and the students answer all questions in a test booklet. The test is divided into four parts: Hidden Words, Matching Words, Finding Rhymes, and Number Learning.

Part One. Hidden Words. This part measures the ability of the child to associate symbols with sounds. For example, if the word "sentr" were given, the child would be required to show that he knew that this combination of letters referred

to "center of the middle of a circle. The younger children found considerable difficulty with this part.

Part Two. Matching Words. The subjects are first introduced to the concepts of subjects, verb, modifier, and object. Then they are to look at the first of a pair of sentences and determine the function of the underlined word, i.e., subject, verb, modifier, or object. Then they check the word in the second sentence in the pair with the same function. In this experiment, the children found this part to be the most difficult one in the test.

Part Three. Finding Rhymes. A key word is given, followed by four words. The subject must check the word which rhymes with the key word. The children generally found this part of the test to be the easiest.

Part Four. Number Learning. The children are taught the numbering system of a foreign language. This is the only part where the test questions are given from the tape recorder. At this time, numbers are given in the (foreign) language and the children write the number in Arabic numerals in their test booklets. The group did quite well on this part, although some individuals found it too fast. It is interesting that some of the children with reading problems did quite well as reading was not necessary in this section of the test.

Norms are supplied by the publisher, and percentile

scores can be ascertained. There are separate norms for each grade, and for boys and girls.

Achievement Test. An achievement test, functioning as a criterion was composed for the purposes of this experiment and administered to all subjects. Because there were a few children with reading problems in the group, it was decided to use a test in which reading would not be required. The test questions, along with the directions given the students, are reproduced in Appendix D.

Two types of test items were used: structurally-oriented and situationally-oriented items. The former type consisted of a direction in English, e.g. "Which of the following sentences is correct Japanese?" or "Which of the following sentences is actually true?," etc. This question was followed by two sentence responses. The students were supposed to mark an X in the correct column on the answer sheet, designating either sentence one or sentence two as being correct. For example,

Which sentence is correct Japanese?

1. Hon-o ikimasu. (I am going to go a book.)
2. Hon-o yomimasu. (I am going to read a book.)

Sentence two the correct answer, and the student should put an X in the second column of the answer sheet for that test item.

The situational type of test item also had two choices,

one of which was correct - also to be designated by marking an X in the appropriate column on the answer sheet. This type of item, however, consisted of a question in Japanese, the purpose of which was to set up the situation. This question was followed by two answers, only one of which was the appropriate answer to that question. For example,

Nani-o shimasu ka. (What are you going to do?)

1. Detroit-ni ikimashita. (I went to Detroit.)
2. Terebi-o mimasu. (I am going to watch T.V.)

The correct answer is sentence two and the student was required to put an X in the second column for that test item.

The test contained thirty items. Half were structural and half situational questions. They were randomly put together to constitute one test. In the directions, the children were told that there would be two kinds of questions, with examples to show how the kinds were different and how each type should be answered. The test took approximately twenty minutes to administer.

Since it was not possible to validate the test by giving it first to a pilot group, the method used for validation was to have two outside people, competent in both language teaching and Japanese, examine all test items. While they were examining the items, they answered the following questions: 1) Are the items correct and natural Japanese? 2) Is it easy to recognize which items are structural and which items are

situational? 3) Is it your opinion that both sets of items are of equal difficulty? 4) Are the two sets of items representative of structural and situational activities respectively? The authorities answered all questions affirmatively.

The method used to determine the reliability was the split-half reliability method. By this method, the questions of each type (structural and situational) were divided randomly into two groups. Scores were obtained on the two halves, and then these were correlated. The result was a reliability coefficient for a half test, r_{hh} (r_{hh}=.57). To obtain the reliability coefficient for the whole test (r_{xx}) the Spearman-Brown formula was used. r_{xx}=.73. It is difficult to evaluate this coefficient since an evaluation of a reliability coefficient is generally dependent on an existing reliability coefficient (of a similar test) with which to compare, and there are no other similar Japanese proficiency tests with reliability coefficients.

The test results were recorded by structural scores, situational scores and total scores. The total scores were used to indicate over-all proficiency in Japanese of the student.

CONTROLS AND POSSIBLE LIMITATIONS OF THE EXPERIMENT

Factors affecting the internal and external validity of the experiment are discussed below.[8]

Internal Validity

1. History. Because the experiment was relatively short, the outside influence was minimized. There were no students who came from Japanese-speaking homes, or apparently any homes in which Japanese was even known to a member of the household.

2. Maturation. Due to the brevity of the experiment, this was not a factor.

3. Testing. The post-test contained two types of items. To decrease the effect of learning, thus biasing one type of item, the items were randomly mixed through the test. There was no effect of the EMLAT (given as a pre-test) as it did not contain any Japanese.

4. Instrumentation. The same test was given to all subjects. It was not excessively long, taking only 20 minutes, so that fatigue should not have caused undesirable effects.

5. Statistical Regression. This should not be a factor with the criterion test; there was no pre-test in Japanese, so there was no practice effect. In addition, the groups were not selected on the basis of their extreme scores on any test.

6. Selection Biases. All students in grades three through six were used in the experiment. The assignment of the students to the various groups was random.

7. Experimental Mortality. The mortality rate was very small. The scores of two mentally retarded children were not

included in the calculations. Two other children were absent from the final test. Thus, only four subjects were lost.

8. Selection-Maturation Interaction. This was not a factor, since assignment to either group was random. Also, the subjects had no prior knowledge of Japanese.

External Validity

1. Reactive or Interaction Effect of Testing. The EMLAT was given at the beginning as a pre-test, but the use of this test should not have affected the experiment as the test did not contain any Japanese.

2. Interaction of Selection Biases and Experimental Variable. In this case there is a possible limitation on the results of the experiment. The children are not representative of the normal third through sixth grade population as seen by their high mean I.Q. (127), or by the fact that they were going to a laboratory school rather than to a public school.

3. Multiple Treatment Influence. This factor is not relevant, since only one treatment was given to each group.

Other Controls

Teacher Control. The experimenter did all the teaching. To reduce the effect of any possible personal method biases, specific lesson plans were followed. All classes were taped so that they could be reviewed. It would then be possible to examine what was actually done in each class. If any personal

method biases did result, this would suggest limitations of the results of the experiment.

Teacher Practice Controls. It was possible to schedule the classes alternatively, i.e., first a structural class, then a situational class, then a structural, and finally a situational. However, it was necessary to teach third and fourth grade classes in the morning and both fifth and sixth grade classes in the afternoon. It was also necessary to teach each class at the same time each day, so there might have been some effect of having been more familair with each lesson by the later class, thus having influenced the quality of the teaching. This might be a possible limitation of the results of the experiment.

TIME SCHEDULE

All Students:

Pre-experiment Orientation	30 minutes
EMLAT	60 minutes

Structural Classes: All classes: 15 minutes

Day 1. Review of orientation expressions
Pattern I

2. Review expressions
Review Pattern I
Pattern II

3. Review Patterns I and II
Pattern III

4. Review Pattern III
Pattern IV

5. Review Patterns I-IV

6. Review Patterns I-IV
   Patterns V and VI

7. Review Patterns V and VI

8. Patterns VII and VIII

9. Review Patterns VII and VIII
   Pattern IX

10. Review Pattern IX
    Pattern X

11. Review Patterns IX and X
    Patterns XI and XII

12. Review Patterns XI and XII
    Patterns XIII and XIV

13. Review of Patterns I - XIV

14. Review of Patterns I - XIV

15. Test 20 minutes

Situational Classes:

Day 1. Review of Orientation expressions
       Dialogue 1

2. Review of expressions
   Review dialogue 1
   Begin dialogue 2

3. Review dialogues 1 and 2

4. Continue dialogue 2

5. Review dialogues 1 and 2
   Finish dialogue 2

6. Review dialogues 1 and 2

7. Review dialogue 2
   Dialogue 3

8. Review dialogues 2 and 3

9. Begin dialogue 4

10. Finish dialogue 4

11. Review dialogues 1 - 4
    Begin dialogue 5

12. Finish dialogue 5

13. Review dialogues 1 - 5

14. Review dialogues 1 - 5

15. Test 20 minutes

FOOTNOTES

CHAPTER III

[1]Kiat-Boey Lim, "Prompring vs. Confirmation, Pictures vs. Translations and Other Variables in Children's Learning of Grammar in a Second Language" (unpublished Ed.D. dissertation, Harvard University, 1968), p. 143.

[2]following Lim, Ibid., p. 41.

[3]following Lim, Ibid., p. 40.

[4]Ibid., p. 85.

[5]Ibid.

[6]K. R. McKinnon, "An Experimental Study of the Learning of Syntax in Second Language Learning" (unpublished Ph.D. dissertation, Harvard University, 1965).

[7]John B. Carroll and Stanley M. Sapon, Modern Language Aptitude Test - Elementary Form (New York: The Psychological Corporation, 1967).

[8]Donald T. Campbell and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," in Handbook of Research on Teaching, ed. by N.L. Gage (Chicago: Rand McNally and Company, 1963), pp. 175-176.

CHAPTER IV

ANALYSIS OF THE DATA

RESULTS

This chapter reports the results of the analysis of the data. These results were computed on The University of Michigan Terminal System. The programs used for the computer were the prepared biomedical programs available from the Statistical Research Laboratory of The University of Michigan. Three different programs were used: BMD7D, Description of Strata with Histograms, BMD4V, Analysis of Covariance with Multiple Covariates; and BMDX64, General Linear Hypothesis.

The BMD7D program was used because it computes the mean and standard deviation of each variable and performs a one-way analysis of variance on each variable to compare the means of the strata. It also provides a correlation coefficient matrix for each set of groups. The BMD4V program was used because it performs a one-way analysis of covariance for one or more covariates with unequal treatment group sizes. This program also computes the adjusted means, i.e., the means which would result after removing the effects of the covariates.

The BMDX64 program was used because it performs a two-way analysis of variance for an unbalanced design.

MEANS, STANDARD DEVIATIONS

The first computation was for the means and standard deviations for each set of groups on the following variables: structural test results, situational test results, total test results, language aptitude (EMLAT), I.Q., and age. These results are tabulated in Table 1. In all the tables, significant F-ratios and correlation coefficients are marked with (*), (**), and (***) for the .05; .01, and .005 levels of significance respectively.

VARIANCE

An inspection of Table 1 shows that in all cases the situational groups achieved higher means than the structural groups. To ascertain whether or not there was a significant difference between the means tabulated above, a one-way analysis of variance was performed for each variable. The results of these analyses are given in Table 2.

Table 2 indicates that F-ratios between the means for the structural groups and the situational groups for the situational tests and total tests are significant (at the .01 and .05 levels of significance respectively). The situational groups did significantly better than the structural groups on the situational test items and on the total test. Although

TABLE 1.--Distribution of measures

		Groups I (Structural)	Groups II (Situational)	Groups I and II (Total)
Structural	N	36	33	69
	M	10.47	10.64	10.55
	S.D.	2.08	1.97	2.01
Situational	N	36	33	69
	M	9.39	10.94	10.13
	S.D.	2.27	1.97	2.26
Total	N	36	33	69
	M	19.86	21.58	20.68
	S.D.	3.63	3.35	3.57
EMLAT (percentile)	N	36	32	68
	M	55.69	58.03	56.79
	S.D.	27.35	31.42	29.13
I.Q.	N	31	29	60
	M	124.74	130.17	127.37
	S.D.	18.68	17.02	17.95
	N	36	33	69
	M	123.47	124.67	124.04
	S.D.	12.55	13.93	13.14

TABLE 2.--Analysis of variance of experiment variables

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	0.46	1	0.46	0.11
Test	Within	274.61	67	4.10	
	Total	275.07	68		
Situational	Between	41.39	1	41.39	9.11**
Test	Within	304.43	67	4.54	
	Total	345.83	68		
Total	Between	50.62	1	50.62	4.13*
Tests	Within	820.37	67	12.24	
	Total	870.99	68		
EMLAT	Between	92.51	1	92.51	0.11
(percentile)	Within	56774.6	66	860.22	
	Total	56867.1	67		
IQ	Between	441.86	1	441.86	1.38
	Within	18576.1	58	320.23	
	Total	19017.9	59		
Age	Between	24.56	1	24.56	0.14
	Within	11716.3	67	174.87	
	Total	11740.9	68		

these figures do not indicate that the significance is necessarily due to the treatment variable, rather than to any of the other variables e.g., language aptitude or I.Q., it is indicated that for some reason situational subjects did as well as structural subjects on the structural test and significantly better than structural subjects on situational test items. Also, totally, situational students achieved significantly better than the structural students.

COVARIANCE

Table 1 shows that there is a difference in the means for language aptitude (EMLAT) and for I.Q. for the structural and situational groups: EMLAT means for the structural and situational groups were 55.69 and 58.03 respectively; I.Q. means for the two groups were 124.74 for the structural groups and 130.17 for the situational groups. It is therefore evident that the situational groups had a higher average I.Q. and language aptitude.

The correlation coefficients for the variables for each set of groups were computed. These correlation coefficients are given in Tables 3 and 4. Some of the correlations also suggest it is possible that the difference in achievement means might be due to the difference in aptitude and I.Q.'s in the groups. For example, for total achievement and language aptitude, the correlation coefficient for the structural groups

TABLE 3.--Correlations for structural groups

	2	3	4	5	6
1. Structural Test	0.39	0.82	0.38	0.36	0.11
2. Situational Test		0.85	0.36	-0.04	0.12
3. Total Tests			0.44***	0.17	0.14
4. EMLAT				0.44***	-0.06
5. I.Q.					-0.16
6. Age					

N = 36

TABLE 4.--Correlations for situational groups

	2	3	4	5	6
1. Structural Test	0.45	0.85	0.41	0.29	0.25
2. Situational Test		0.85	0.62	0.40	0.18
3. Total Tests			0.60***	0.41**	0.25
4. EMLAT				0.67***	0.27
5. I.Q.					-0.03
6. Age					

N = 33

was .44 (significant at the .005 level of significance). The correlation coefficient for the same variables for the situational groups was .60 (also significant at the .005 level). The correlation of total achievement with I.Q., for the structural groups, was .17 (not significant). For the situational groups, the correlation coefficient was .41, (significant at the .01 level).

In order to determine the extent to which a possible higher I.Q. or language aptitude could have caused the differences in achievement between the two groups, rather than the method, one-way analyses of covariance were performed. First, variable scores were adjusted for two covariates for third and fourth grades: language aptitude (EMLAT) and I.Q. Then, the variable scores were adjusted for two covariates for fifth and sixth grades. The results of the analyses are summarized in Tables 5-10.

Other analyses of covariance were performed, adjusting for three covariates instead of two: language aptitude, I.Q. and sex. The results of these analyses were found to be similar to those from the analyses for two covariates. These results are summarized in Tables 11-16. Because of the similarity between the results for two covariates and for three covariates, the means and standard deviations for boys and girls were computed for each variable. Then analyses of variance were performed to ascertain whether or not there was a

TABLE 5.--Covariance analysis of structural test scores in grades three and four, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatment (between)	0.60				0.60
Error (within)	116.11	82.98	26	3.19	
Treatment + error (total)	116.17	84.89	27		
Difference for testing adjusted treatment means		1.92	1	1.92	

Adjusted means: structural group: 9.91
situational group: 10.46

TABLE 6.--Covariance analysis of situational test scores in grades three and four, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	7.87				5.66*
Error	128.79	97.92	26	3.77	
Total	136.67	119.23	27		
Difference		21.32	1	21.32	

Adjusted means: structural group: 8.82
situational group: 10.63

TABLE 7.--Covariance analysis of total test scores in grades three and four, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	9.30				4.34*
Error	320.87	215.62	26	8.29	
Total	330.17	251.64	27		
Difference		36.02	1	36.02	

Adjusted means: structural group: 18.73
situational group: 21.09

TABLE 8.--Covariance analysis of structural test scores in grades five and six, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	0.38				0.10
Error	150.70	134.38	35	3.84	
Total	151.08	134.78	36		
Difference		0.40	1	0.40	

Adjusted means: structural group: 10.95
situational group: 10.74

TABLE 9.--Covariance analysis of situational test scores in grades five and six, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	36.06				4.49*
Error	161.69	126.28	35	3.61	
Total	197.74	142.49	36		
Difference		16.21	1	16.21	

Adjusted mean: structural group: 9.83
situational group: 11.18

TABLE 10.--Covariance analysis of total test scores in grades five and six, adjusted for EMLAT and I.Q. scores

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	43.84				1.11
Error	458.83	363.50	35	10.39	
Total	502.67	375.02	36		
Difference		11.52	1	11.52	

Adjusted mean: structural group: 20.78
situational group: 21.92

TABLE 11.--Covariance analysis of structural test scores in grades three and four, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	.60				0.79
Error	116.11	81.27	25	3.25	
Total	116.17	83.84	26		
Difference		2.57	1	2.57	

Adjusted means: structural group: 9.87
situational group: 10.51

TABLE 12.--Covariance analysis of situational test scores in grades three and four, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	7.87				5.37*
Error	128.79	97.85	25	3.91	
Total	136.67	118.87	26		
Difference		21.02	1	21.02	

Adjusted means: structural group: 8.81
situational group: 10.64

TABLE 13.--Covariance analysis of total test scores in grades three and four, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	9.30				4.49*
Error	320.87	213.19	25	8.53	
Total	330.17	251.46	26		
Difference		38.27	1	38.27	

Adjusted means: structural group: 18.68
situational group: 21.15

TABLE 14.--Covariance analysis of structural test scores in grades five and six, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	0.38				0.70
Error	150.70	134.17	34	3.95	
Total	151.08	134.44	35		
Difference		0.28	1	0.28	

Adjusted means: structural group: 10.93
situational group: 10.75

TABLE 15.--Covariance analysis of situational test scores in grades five and six, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	36.06				6.83*
Error	161.69	111.26	34	3.27	
Total	197.74	133.61	35		
Difference		22.35	1	22.35	

Adjusted means: structural group: 9.70
situational group: 11.31

TABLE 16.--Covariance analysis of total test scores in grades five and six, adjusted for EMLAT, I.Q. scores and sex

Source	Sum_y^2	Sum Sq (about regression)	D.F.	Mean Sq	F-ratio
Treatments	43.84				1.74
Error	458.83	344.68	34	10.14	
Total	502.67	362.34	35		
Difference		17.66	1	17.66	

Adjusted means: structural group: 20.63
Situational group: 22.07

significant difference between the boys and girls for any variable. The results of these computations and analyses are found in Tables 17 and 18. Since there were no significant differences, it can be stated that sex was not a significant variable.

Examination of Tables 5, 6, and 7 shows that the F-ratios for the situational test and total tests were significant at the .05 level, even after adjusting for the two covariates of I.Q. and language aptitude. Thus, the situational group in the third and fourth grade-level did significantly better than the structural group on the situational test items. Also, on total proficiency, as measured by the total test score, the situational group did significantly better than the structural group.

Tables 8, 9, and 10 indicate that the situational group in the fifth and sixth grade-level also did significantly better (at the .05 level) than the structural group on situational items but not on the total test. The structural group did not do significantly better (or worse) on any test at either grade level. There was a significant difference between methods for total test results for third and fourth grades but not for fifth and sixth grades, a two-way analysis of variance, using a linear hypothesis, was performed. The results showed that there was no significant difference between the differences of the two methods for grades three and four

TABLE 17.--Distribution of measures for sex variable

		Boys	Girls	All
Structural Test	N	38	31	69
	M	10.26	10.90	10.55
	S.D.	2.01	1.99	2.01
Situational Test	N	38	31	69
	M	9.76	10.58	10.13
	S.D.	2.28	2.17	2.26
Total Tests	N	38	31	69
	M	20.03	21.48	20.68
	S.D.	3.72	3.29	3.58
EMLAT	N	37	31	68
	M	51.03	63.68	56.79
	S.D.	27.76	29.68	29.13
I.Q.	N	34	26	60
	M	127.82	126.77	127.37
	S.D.	19.17	16.59	17.96

TABLE 18.--Analysis of variance by sex

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	6.99	1	6.99	1.75
Test	Within	268.08	67	4.00	
	Total	275.07	68		
Situational	Between	11.41	1	11.41	2.29
Test	Within	334.42	67	4.99	
	Total	345.83	68		
Total	Between	36.27	1	36.07	2.91
Tests	Within	834.72	67	12.46	
	Total	870.99	68		
EMLAT	Between	2699.37	1	2699.37	3.29
	Within	54167.7	66	820.70	
	Total	56867.1	67		
IQ	Between	16.38	1	16.38	0.05
	Within	19001.6	58	327.61	
	Total	19017.9	59		

and grades five and six. The results for this interaction between grade-level and method are summarized in Table 19.

TABLE 19.--Analysis of variance of interaction between grade-level and method

	Sum Sq	D.F.	Mean Sq	F-ratio
Structural test	2.70	1,63	2.70	0.77
Situational test	0.60	1,63	0.60	0.17
Total tests	5.84	1,63	5.84	0.63

Thus, there was no interaction term between grade-level and method. As one would expect, then, any difference between the structural and situational methods should be the same for both grade levels. Because there was no interaction, the fact that the situational group for third and fourth grades appears to do better than that group for the fifth and sixth grades was apparently due to chance. The important result is that at either level, the situational group seems to do better in some skills (situational types of items) and no worse in others (structural types of items).

COMPARISON OF HIGH AND LOW INTELLIGENCE AND LANGUAGE APTITUDE

Re-examination of Tables 3 and 4 will show that a rather noticeable difference exists between the r's obtained by correlating the test results with EMLAT and I.Q. for the structural groups and for the situational groups. For example,

correlating the total test results with I.Q., r (structural groups) = .17 and r (situational groups) = .41; correlating situational tests with I.Q., r (structural groups) = -0.04 and r (situational groups) = .40, etc. Because of these differences, it was decided to test for differences between means among high I.Q. subjects and then among only lower I.Q. students. A test of differences between means was also made for high vs. lower language aptitude subjects. First the medians for EMLAT and I.Q. were computed. The former was 60 and the latter was 127. The subjects were then placed into two of four groups, depending on their I.Q. and EMLAT scores. The means and standard deviations were computed for each groups, and one-way analyses of variance were performed to test for significant differences between means. The results of these tests and computations are tabulated below in Tables 20-27.

An inspection of Tables 20-27 will show that only high language aptitude and high I.Q. F-ratios were significant. There were no significant differences among low language aptitude or low I.Q. subjects. That language aptitude results are similar to I.Q. results would be expected from an examination of the correlation coefficients for EMLAT/I.Q. Tables 3 and 4 indicate that for the structural groups, the correlation is .44; for the situational groups, the correlation is .67.

Tables 20 and 22 indicate that among students of high language aptitude there was a significant difference, at the .01

TABLE 20.--Distribution of measures--high language aptitude

		Structural Groups	Situational Groups	All Groups
Structural Test	M	11.06	11.18	11.12
	S.D.	2.08	1.63	1.84
Situational Test	M	10.41	11.88	11.15
	S.D.	1.33	1.27	1.48
Total Tests	M	21.47	23.06	22.26
	S.D.	2.79	1.82	2.45
		N = 17	N = 17	N = 34

TABLE 21.--Distribution of measures--low language aptitude

		Structural Groups	Situational Groups	All Groups
Structural Test	M	9.95	10.07	10.00
	S.D.	1.99	2.25	2.07
Situational Test	M	8.47	10.00	9.15
	S.D.	2.57	2.17	2.49
Total Tests	M	18.42	20.07	19.15
	S.D.	3.75	4.04	3.91
		N = 19	N = 15	N = 34

TABLE 22.--Distribution of measures--high I.Q. students

		Structural Groups	Situational Groups	All Groups
Structural Test	M	11.31	10.81	11.03
	S.D.	1.84	1.60	1.70
Situational Test	M	9.23	11.75	10.62
	S.D.	2.92	1.57	2.57
Total Tests	N	13	16	29
	M	20.54	22.56	21.66
	S.D.	4.16	1.90	3.22
		N = 13	N = 16	N = 29

TABLE 23.--Distribution of measures--low I.Q. students

		Structural Groups	Situational Groups	All Groups
Structural Test	M	10.11	10.46	10.26
	S.D.	2.03	2.50	2.21
Situational Test	M	9.17	10.00	9.52
	S.D.	1.89	2.27	2.06
Total Tests	M	19.28	20.46	19.77
	S.D.	3.25	4.59	3.84
		N = 18	N = 13	N = 31

TABLE 24.--Analysis of variance of high language aptitude

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	0.12	1	0.12	0.03
Test	Within	111.41	32	3.48	
	Total	111.53	33		
Situational	Between	18.38	1	18.38	10.92**
Test	Within	53.88	32	1.68	
	Total	72.26	33		
Total	Between	21.44	1	21.44	3.87
Tests	Within	177.18	32	5.54	
	Total	198.62	33		

TABLE 25.--Analysis of variance of low language aptitude

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	0.12	1	0.12	0.03
Test	Within	141.88	32	4.43	
	Total	142.00	33		
Situational	Between	19.53	1	19.53	3.38
Test	Within	184.74	32	5.77	
	Total	204.26	33		
Total	Between	22.70	1	22.70	1.51
Tests	Within	481.56	32	15.05	
	Total	504.26	33		

TABLE 26.--Analysis of variance--high I.Q.

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	1.76	1	1.76	0.60
Test	Within	79.21	27	2.93	
	Total	80.97	28		
Situational	Between	45.52	1	45.52	8.82**
Test	Within	139.31	27	5.16	
	Total	184.83	28		
Total	Between	29.38	1	29.38	3.04
Tests	Within	261.17	27	9.67	
	Total	290.55	28		

TABLE 27.--Analysis of variance--low I.Q.

		Sum Sq	D.F.	Mean Sq	F-ratio
Structural	Between	0.93	1	0.93	0.19
Test	Within	145.01	29	5.00	
	Total	145.93	30		
Situational	Between	5.24	1	5.24	1.24
Test	Within	122.50	29	4.22	
	Total	127.74	30		
Total	Between	10.58	1	10.58	0.71
Tests	Within	432.84	29	14.93	
	Total	443.42	30		

level, between the structural and situational groups on situational test items, in favor of the situational groups. There was no significant difference between the means of the two sets of groups for structural test items. Similarly, there was no significant difference between the means for total test score. Similar results were obtained for students of high I.Q. Among these children, the structural groups did not do significantly better or worse on structural test items than the situational groups. However, on situational test items, the situational groups did significantly better, at the .01 level of significance, than the structural groups. On the total test, there was no significant difference. There were no significant differences between the two sets of groups for any variable among students of either low language aptitude or low I.Q.

The above results indicate that for groups of students representative of the sample in this experiment, there is no evidence to show that subjects with either high language aptitude or high I.Q. who had structural training will be better on structural test items than subjects who had situational training. However, there is evidence to show that higher EMLAT or I.Q. students who had situational training will do significantly better on situational test items.

CORRELATIONS

From the hypotheses stated in Chapter III, the following correlations listed in Tables 3 and 4, are of interest. The correlation between proficiency, as measured by the total score, and I.Q., proficiency EMLAT, and proficiency/age. The correlations between proficiency and I.Q. are .17 for the structural groups and .40 for the situational, significant at the .005 level (for a one-tailed test). It was found that there was no significant difference between the structural correlation coefficient and the situational correlation coefficient for any of the variables correlated in this experiment

This correlation between proficiency and I.Q., for the situational groups, corroborates the other results, that students, representative of those in this experiment, of high I.Q. seem to benefit more from situational training than from structural training. I.Q. does not seem to be important for structural training, so that students with lower I.Q.'s can probably achieve as well in a structural-type of class as students with high I.Q.

The correlations between proficiency and language aptitude (EMLAT) are .44 for the structural groups (significant at the .005 level) and .60 for the situational groups (significant at the .005 level). For proficiency and age, the correlations are not significant. For the structural groups, r=.14; for

the situational groups, r=.25. These correlations provide evidence additional to that provided by the interaction analysis that there was no group-method interaction.

The correlation between EMLAT and I.Q. is obviously not the result of either treatment variable in the experiment. Nevertheless, the results do suggest a rather large correlation between EMLAT and I.Q., as was stated above. For the structural groups, r=.44,(significant at the .005 level). For the situational groups, r=.67,(also significant at the .005 level).

SUMMARY OF HYPOTHESES AND RESULTS

MAJOR HYPOTHESIS

There is no significant difference in criterion test scores between Groups I and Groups II in grades three and four and in grades five and six:

a. in criterion test scores as measured by structural test items in Japanese;	a. Hypothesis accepted for all students.
b. in criterion test scores as measured by situational test items in Japanese;	b. Hypothesis rejected for all students.
c. in a criterion test of total proficiency in Japanese, the measure being the combined total score of structural test items and situational test items.	c. Hypothesis rejected for students in grades three and four. Hypothesis accepted for students in grades five and six.

MINOR HYPOTHESES

1. There is no significant difference between the differences of the Group I results and the Group II results for third and fourth grades and the Group I results and the Group II results for fifth and sixth grades.	1. Hypothesis accepted for all students.
2. There is no significant difference in achievement scores between Group I subjects of high language aptitude and Group II subjects of high language aptitude.	2. Hypothesis accepted for results on structural test items and for total test results. Hypothesis rejected for results on situational test items.

3. There is no significant difference in achievement scores between Group I subjects of low language aptitude and Group II subjects of low language aptitude.	3. Hypothesis accepted.
4. There is no significant difference in achievement scores between Group I subjects of high I.Q. and Group II subjects of high I.Q.	4. Hypothesis accepted for results on structural test items and for total test results. Hypothesis rejected for results on situational test items.
5. There is no significant difference in achievement scores between Group I subjects of low I.Q. and Group II subjects of low I.Q.	5. Hypothesis accepted.
6. The correlation between proficiency and I.Q. for either treatment is not significantly different from zero.	6. Hypothesis accepted for students in Groups I. Hypothesis rejected for students in Groups II.
7. The correlation between proficiency and language aptitude (EMLAT) for either treatment is not significantly different from zero.	7. Hypothesis rejected for all students.
8. The correlation between proficiency and age for either treatment is not significantly different from zero.	8. Hypothesis accepted for all students.
9. The correlation between language aptitude (EMLAT) and I.Q. is not significantly different from zero.	9. Hypothesis rejected for all students.

CHAPTER V

SUMMARY AND CONCLUSIONS

An experiment was performed to investigate two approaches to foreign-language teaching. Third, fourth, fifth, and sixth grade children were taught Japanese for three weeks, with approximately 15 minutes of instruction each day. The two approaches investigated are referred to as the "structural approach" and the "situational approach." The chief characteristic of the structural approach was that the material content was sequenced in order of increasing difficulty and/or complexity. The situational approach was characterized by material arranged by situations, in the form of dialogues, in which relative difficulty was of no consideration.

The independent variables were the two approaches. The dependent variables were the two (final) criterion tests: one structural test and one situational test.

A summary of the results of the hypotheses is given in Table 28. Generally, the findings of the experiment were that the situational group performed better than the structural group on situational test items and equal to the structural group on structural test items. The situational group

TABLE 28.--Summary of hypotheses and results

A.--Significant differences between structural and situational groups

		Structural Tests	Situational Tests	Total Tests
Grade Level	3/4	no	*yes (sit:.05)	yes (sit:.05)
Grade Level	5/6	no	yes (sit:.05)	no
EMLAT/IQ	High	no	yes (sit:.01)	no
EMLAT/IQ	Low	no	no	no

*Yes means that there is a significant difference in favor of the situational group at the .05 level of significance.

B.--Interaction of grade-level and method

	3/4	5/6
Structural Method	(1)	(2)
Situational Method	(3)	(4)

Structural Test: 1-3 = 2-4 *(no difference)
Situational Test: 1-3 = 2-4 *(no difference)
Total Tests: 1-3 = 2-4 *(no difference)

*Thus no interaction.

C.--Significance of correlations

	Structural Groups	Situational Groups
Proficiency/IQ	.17 (no)	.41 (yes; .01)
Proficiency/EMLAT	.44 (yes; .005)	.60 (yes; .005)
Proficiency/Age	.14 (no)	.25 (no)
EMLAT/IQ	.44 (yes; .005)	.67 (yes; .005)

did better than the structural group on total tests for third and fourth grades but not for fifth and sixth grades. However, since there was no interaction between grade-level and method, this difference between the two grade levels could be the result of chance.

One can only speculate as to why the situational group achieved better than the structural group. The evidence points to the fact that the situational classes seem to give better training for transfer, in some areas, from classroom activities to proficiency testing of actual speech, at least for groups of students represented by the sample in this experiment.

For students of high language aptitude and high I.Q., the situational groups did better than the structural groups on situational test items and equal to the structural groups on structural test items. This result seems to indicate that the students with higher language aptitudes or I.Q.'s benefited more from a situational type of instruction than from a structural type of instruction. Since there was no difference between the results on structural items and situational items, among students of lower language aptitudes and I.Q.'s it does not appear that these students would benefit more from one method than from the other.

A possible explanation for these results is that students with high language aptitude or high I.Q. do not require that

material be graded in ever-increasing difficulty. They are apparently able to do any necessary abstractions of principles themselves. Students of low language aptitude or low I.Q. apparently do not benefit more from one type of method than from the other.

The implications which one might draw from this experiment to foreign-language teaching are as follows:

1. For children learning a second language, it is not necessary to grade content material in order of increasing difficulty. In classes which are heterogeneous, in terms of I.Q. and language aptitude, it would generally be more beneficial to sequence material by situations. It is not necessary to consider the relative difficulty of the grammatical and/or lexical forms. However, the situations selected should be kept to a manageable length.

2. Children with high language aptitudes and/or high I.Q.'s would benefit more from a foreign-language class in which the approach were situational than from structural instruction. Thus, if the teaching situation permits, high I.Q. or language aptitude children should be assigned to a situational type of a foreign-language class. Students of low language aptitudes and low I.Q.'s will probably not benefit, measureably, from one type of instruction than from another. However, there are obvious affective benefits from relevant material, the results of which might not be measur-

able on a foreign-language proficiency test.

The following limitations of the present experiment also suggest areas for further study and experimentation in teaching foreign languages to children.

1. One person did all the teaching in the experiment. It is possible that the practice of teaching one class might have influenced the quality of teaching in the next. It is equally possible that fatigue at the end of a class might have influenced the quality of teaching in the next class. Although it is believed that rather strict adherence to lesson plans helped eliminate the effects of personal biases toward one method or the other, this possibility does exist. A larger program or experiment, with many teachers, should eliminate any of these effects in a future study.

2. The experiment lasted for only three weeks. It would be interesting to compare the results obtained after a year-long program with those obtained in this experiment to see if the results would be different in an extended experiment.

3. Only children in third, fourth, fifth, and sixth grades used. There was no interaction between grade-level and method for this experiment, but it would be interesting to see if this were true in a larger experiment, in which a larger age span were used.

4. The subjects used in the experiment had a high average I.Q. The mean and median both approximated 127. It would be interesting to see if similar results would be obtained from a group of children with a lower mean I.Q.

APPENDIX A

ORIENTATION MATERIALS

Teacher	Sensei
Good morning	Ohayoo
How are you?	Ikaga des ka
Thank you	Arigatoo
Yes	Hai
No	Iie
Good day	Konnichi-wa
How are you?	Genki des ka?
Fine	Genki des
And you?	Anata-wa
Goodbye	Sayonara

APPENDIX B

STRUCTURAL MATERIALS

(PATTERNS)

PATTERN I

I am (a) _____.	(WATAKSHI-WA) _____ DES.
You are (a) _____.	(ANATA-WA) _____ DES.
It is a pen.	PEN DES.
It is a T.V.	TEREBI DES.

PATTERN II

Old Pattern:

(WATAKSHI-WA) _____ DES.

(ANATA-WA) _____ DES.

PEN DES.

New Pattern:

(WATAKSHI-WA) _____ DES KA

(ANATA-WA) _____ DES KA

PEN DES KA

Am I (a) _____?

Are You (a) _____?

Is it a pen?

PATTERN III

Old Pattern:

(WATAKSHI-WA) _____ DES.

PEN DES.

New Pattern:

I go / will go.	(WATAKSHI-WA)	IKIMAS
John sees/will see (it).	(JOHN-WA)	MIMAS
Bob comes/ will come.	(BOB-WA)	KIMAS
You read/ will read (it).	(ANATA-WA)	YOMIMAS
The teacher does/will do (it).	(SENSEI-WA)	SHIMAS

PATTERN IV

Old Pattern:

(WATAKSHI-WA) _____ DES KA

PEN DES KA

New Pattern:

Do/will I go?	(WATAKSHI-WA)	IKIMAS KA
Does/will John see (it)?	(JOHN-WA)	MIMAS KA
Does/will Bob come?	(BOB-WA)	KIMAS KA
Do/will you read (it)?	(ANATA-WA)	YOMIMAS KA
Does/will the teacher do (it)?	(SENSEI-WA)	SHIMAS KA

PATTERN V

Old Pattern:

(ANATA-WA) IKIMAS

(JOHN-WA) IKIMAS KA

New Pattern:

You go/will go <u>to</u> Detroit.	(ANATA-WA)	DETROIT - <u>NI</u> IKIMAS
Does/will John go <u>to</u> Japan?	(JOHN-WA)	NIHON - <u>NI</u> IKIMAS KA
I go/will go <u>to</u> school.	(WATAKSHI-WA)	GAKKOO - <u>NI</u> IKIMAS
Does/will the teacher go home?	(SENSEI-WA)	UCHI - <u>NI</u> IKIMAS KA
<u>Where</u> does/will Mary go?	(MARY-WA)	DOKO - <u>NI</u> IKIMAS KA

PATTERN VI

Old Pattern:

(MARY-WA) YOMIMAS

(SENSEI-WA) MIMAS KA

(ANATA-WA) SHIMAS

New Pattern:

Mary reads/will read a book.	(MARY-WA)	HON - <u>O</u>	YOMIMAS
Does/will the teacher see (watch) T.V.	(SENSEI-WA)	TEREBI - <u>O</u>	MIMAS KA
You do (your) homework.	(ANATA-WA)	HOMEWORK - <u>O</u>	SHIMAS
<u>What</u> does/will John do?	(JOHN-WA)	<u>NANI</u> - <u>O</u>	SHIMAS KA

<u>BUT</u>:

I meet/will meet the friend.	(WATAKSHI-WA)	TOMODACHI - <u>NI</u>	<u>AIMAS</u>

PATTERN VII

Old Pattern:

(JOHN-WA) HON-O YOMIMAS

(WATAKSHI-WA) GAKKOO-NI IKIMAS

New Pattern:

(JOHN-WA) ATARASHII HON-O YOMIMAS

(WATAKSHI-WA) II GAKKOO-NI IKIMAS

John reads/will read a new book.

I go/will go to a good school.

PATTERN VIII

Old Pattern:

HON-O YOMIMAS

HOMEWORK-O SHIMAS

TEREBI-O MIMAS

GAKKOO-NI IKIMAS

New Pattern:

I read/will read John's book.	(WATAKSHI-WA)	JOHN - NO	HON-O YOMIMAS
I do/will do your homework.	(WATAKSHI-WA)	ANATA - NO	HOMEWORK-O IKIMAS
I see/will see (watch) Mary's T.V.	(WATAKSHI-WA)	MARY - NO	TEREBI-O MIMAS
I go/will go to the university's school.	(WATAKSHI-WA)	UNIVERSITY - NO	GAKKOO-NI IKIMAS

PATTERN IX

Old Pattern:

(WATAKSHI-WA)	UCHI-NI	KIMAS
(WATAKSHI-WA)	TEREBI-O	MIMAS
(WATAKSHI-WA)	HON-O	YOMIMAS
(ANATA-WA)	UCHI-NI	KIMAS KA
(ANATA-WA)	TEREBI-O	MIMAS KA
(ANATA-WA)	HON-O	YOMIMAS KA

New Pattern:

(WATAKSHI-WA)	UCHI-NI	KITAI DES
(WATAKSHI-WA)	TEREBI-O	MITAI DES
(WATAKSHI-WA)	HON-O	YOMITAI DES
(ANATA-WA)	UCHI-NI	KITAI DES KA
(ANATA-WA)	TEREBI-O	MITAI DES KA
(ANATA-WA)	HON-O	YOMITAI DES KA

I want to come to the house.
I want to see (watch) T.V.
I want to read the book.

Do you want to come to the house?
Do you want to see (watch T.V.?
Do you want to read the book?

PATTERN X

Old Pattern:

(WATAKSHI-WA)	GAKKOO-NI	IKIMAS
(WATAKSHI-WA)	TEREBI-O	MIMAS
(ANATA-WA)	HON-O	YOMIMAS KA
(ANATA-WA)	SENSEI	DES KA

New Pattern:

(WATAKSHI-WA)	GAKKOO-NI	IKIMASHTA
(WATAKSHI-WA)	TEREBI-O	MIMASHTA
(WATAKSHI-WA)	HON-O	YOMIMASHTA
(WATAKSHI-WA)	SENSEI	DESHTA
(ANATA-WA)	HOMEWORK-O	SHIMASHTA KA
(ANATA-WA)	TOMODACHI-NI	AIMASHTA KA
(ANATA-WA)	UCHI-NI	KIMASHTA KA
(ANATA-WA)	SENSEI	DESHTA KA

I went to school.

I saw T.V.

I read a book.

I was a teacher.

Did you do the homework?

Did you meet the friend?

Did you come home?

Were you a teacher?

PATTERN XI

I don't/won't come home.

I don't/won't read a book.

I don't/won't do the homework.

I didn't meet the friend.

I didn't go to Detroit.

Old Pattern:

UCHI-NI KIMAS

HON-O YOMIMAS

HOMEWORK-O SHIMAS

TOMODACHI-NI AIMASHTA

DETROIT-NI IKIMASHTA

New Pattern:

UCHI-NI KIMASEN

HON-O YOMIMASEN

HOMEWORK-O SHIMASEN

TOMODACHI-NI AIMASEN DESHTA

DETROIT-NI IKIMASEN DESHTA

PATTERN XII

Old Pattern:

(WATAKSHI-WA) DETROIT-NI IKIMAS

(WATAKSHI-WA) TEREBI-O MIMAS

(WATAKSHI-WA) TOMODACHI-NI AIMAS

New Pattern:

DETROIT-NI IKIMASHOO

TEREBI-O MIMASHOO

TOMODACHI-NI AIMASHOO

Let's go to Detroit.

Let's see (watch) T.V.

Let's meet the friend.

PATTERN XIII

Old Pattern:

(WATAKSHI-WA) NIHON-NI IKIMAS

(WATAKSHI-WA) ANN ARBOR-NI IKIMAS

New Pattern:

I come (came) from Japan. (WATAKSHI-WA) NIHON-KARA KIMASHTA

I come (came) from Ann Arbor. (WATAKSHI-WA) ANN ARBOR-KARA KIMASHTA

APPENDIX C

SITUATIONAL MATERIALS

(DIALOGUES)

DIALOGUE 1

IN CLASS

(1a)	A:	Hi. (Good morning.)	A:	Ohayoo
(1b)		How are you?		Genki des ka?
(2)	B:	Fine.	B.	Genki des.
(3)	A:	How was your weekend?	A.	Weekend-wa doo deshta ka?
(4a)	B.	Fine. (It was good.)	B.	Ii deshta.
(4b)		We went to Detroit.		Detroit-ni ikimashta.

(Variants)

(1a)	A.	Hi. (Good day.)	A.	Konnichi-wa.
		How are you?		Ikaga des ka?
(2)	B.	Fine.	B.	Hai, genki des.
(3)	A.	_____		
(4a)	B.	_____		
(4b)		_____		

DIALOGUE 2

IN CLASS
(Cont'd.)

(1)	A.	Did you meet the new boy (new friend)?	A.	Atarashii tomodachi-ni aimashta ka?
(2a)	B.	No, I didn't meet him.	B.	Iie, aimasen deshta.
(2b)		What's his name?		Namae-wa nan des ka?
(3)	A.	His name is_____.	A.	Namae-wa_____des.
(4)	B.	Let's meet him.	B.	Aimashoo.

(Variants)

(1)	A.	_____		
(2a)	B.	No, I didn't (don't) meet him yet.	B.	Iie, mada aimasen.
(2b)		What's that boy's name?		Ano ko-no namae-wa nan des ka?
(3)	A.	That boy's name is _____.	A.	Ano ko-no namae-wa_____ des.
(4)	B.	Let's meet_____.	B.	_____-ni aimashoo.

DIALOGUE 3

IN CLASS
(Cont'd.)

(1a)	A.	Hi. (Good morning.)	A.	Ohayoo
(1b)		I'm_____.		Watakshi-wa_____des.
(1c)		You're_____, aren't you?		Anata-wa_____des nee?
(2)	C.	Yes.	C.	Hai.
(3)	A.	Where do (did) you come from?	A.	Doko-kara kimashta ka?
(4)	C.	I'm from Japan. (I came from Japan.)	A.	Nihon-kara kimashta.

(Variants)

(1a)	A.	Hi. (Good day.) My name is_____. Your name is_____, isn't it?	A.	Konnichi-wa Watakshi-no namae-wa _____des. Anata-no namae-wa _____des nee?
(2)	C.	_____		
(3)	A.	_____		
(4)	C.	_____		

DIALOGUE 4

ON THE TELEPHONE

(1)	A.	Hello.	A.	Moshi, moshi.
(2)	B.	Is this_____? (Is it_____?)	B.	_____-san des ka?
(3)	A.	Yes, it is. (Yes, it is so.)	A.	Hai, soo des.
(4a) (4b)	B.	This (it) is_____. What are you going to do tomorrow? (Tomorrow, what do you do?)	B.	_____des. Ashta, nani-o shimas ka?
(5)	A.	I'm going to read a book. (I read a book.)	A.	Hon-o yomimas.
(6)	B.	Do you want to come to my house?	B.	Uchi-ni kitai des ka?
(7)	A.	Yes, I'll come. (Yes, I go.)	A.	Hai, ikimas.

DIALOGUE 5

RECESS

(1)	A.	What are you going to do after school? (After school, what do you do?)	A. Gakkoo-no ato de, nani-o shimas-ka?
(2)	B.	Do you want to watch T.V. at my house?	B. Watakshi-no uchi-de, terebi-o mitai des ka?
(3)	A.	What will we see?	A. Nani-o mimas ka?
(4)	B.	Let's watch Gunsmoke.	B. Gunsmoke-o mimashoo.

(Variants)

(1)	A.	_____	
(2)	B.	_____	
(3)	A.	What shall we see?	A. Nani-o mimashoo ka?
(4)	B.	_____	

(Variants)

(1)	A.	_____	
(2)	B.	_____	
(3)	A.	What do you want to see?	A. Nani-o mitai des ka?
(4)	B.	_____	

APPENDIX D

ACHIEVEMENT TESTS

JAPANESE EXAM

DIRECTIONS:

This is a test over what we have studied for the last three weeks. There are 30 problems in the test. Some of the problems you will probably find easy and some of them you might find difficult. If some of them seem difficult, don't let that worry you.

There are 2 types of problems on the test. In one type of problem, I will ask a question in English. Then I will read 2 sentences in Japanese. You decide which one answers the question and mark 1 on your answer sheet if the first sentence is correct. If the second sentence is correct, mark 2 on your answer sheet.

For Example: Example One:

Which sentence is correct?
1. Hon-o ikimasu
2. Hon-o yomimasu

Number 2 has been marked on your answer sheet to show you that HON-O YOMIMASU is the correct answer.

Are there any questions?

In the other type of question, I will ask a question in Japanese. Then I will give two answers. Only one of the answers is the correct answer to that question. Mark number 1 on your answer sheet if the first sentence is the correct answer. Mark number 2 on your answer sheet if the second sentence is correct.

For Example: Example Two:

Genki desu ka?
1. Genki desu
2. Sensei desu

Number 1 has been marked on your answer sheet to show you that GENKI DESU is the correct answer.

Now there are two more examples:

Example Three: Which sentence is correct?
1. Ann Arbor-ni ikimasu
2. Ikimasu ni Ann Arbor.

The correct answer is number 1. Did you check number 1?

Example Four: Nani-o shimasu-ka?
1. Detroit-ni ikimashita
2. Terebi-o mimasu

The correct answer is number 2. Did you check number 2?

ARE THERE ANY QUESTIONS?

Now let's begin the test.

I will read each question twice.

1. Which sentence is correct?
   1. Yesterday, atarashii deshita.
   2. Yesterday, atarashii desu.

2. Anata-wa John desu-ka?
   1. Hai, watakushi-wa John desu.
   2. Hai, anata-wa John desu.

3. Which sentence is a QUESTION?
   1. Anata-wa shimasu.
   2. Anata-wa shimasu-ka.

4. Nihon-kara kimashita-ka?
   1. Iie, New York-kara kimashita.
   2. Hai, Nihon-ni ikimashita.

5. Which sentence is correct?
   1. Iie, yesterday, hon-o yomimasen.
   2. Iie, yesterday, hon-o yomimasen deshita.

6. Uchi-ni kitai desu-ka?
   1. Hai, ikimasu.
   2. Hai, kimashoo.

7. Which sentence is correct?
   1. Tomodachi-ni aimasu.
   2. Tomodachi-o aimasu.

8. Ikaga desu-ka?
   1. Genki desu.
   2. Ikaga desu.

9. Anata-no uchi de, nani-o mitai desu-ka?
   1. Mimashoo.
   2. LAUGH-IN-o mitai desu.

10. Which sentence is TRUE?
    1. Today, Hauptman-sensei-wa gakkoo-ni kimashita.
    2. Today, Hauptman-sensei-wa Nihon-ni kimashita.

11. Which sentence is correct?
    1. Tomorrow, tomodachi-ni aimashita.
    2. Tomorrow, tomodachi-ni aimashoo.

12. Konnichi-wa. Anata-wa atarashii tomodachi desu-ka?
    1. Hai, sensei desu.
    2. Hai, tomodachi desu.

13. Gakkoo-no ato-de, Nani-o shimasu-ka?
    1. Terebi-o mimashita.
    2. Terebi-o mitai desu.

14. Which sentence is correct?
    1. Yesterday, Hon-o yomimasu-ka.
    2. Yesterday, hon-o yomimashita.

15. Vacation-wa doo deshita-ka?
    1. Hawaii-ni ikimashita.
    2. Hawaii deshita.

16. Namae-wa nan desu-ka?
    1. Namae-wa Billy desu-ka.
    2. Namae-wa Billy desu.

17. Which sentence is correct?
    1. Watakushi-wa Chicago-kara kimashita.
    2. Watakushi-wa Chicago-kara ikimashita.

18. Tomodachi-ni aimashita-ka?
    1. Aimasen deshita.
    2. Aimasen.

19. Which sentence shows what I WANT TO DO?
    1. Terebi-o mimasu.
    2. Terebi-o mitai desu.

20. Which sentence is correct?
    1. Iie, uchi-ni kimasu.
    2. Iie, uchi-ni kimasen.

21. Nani-o shimasu-ka?
    1. Tomodachi-ni aimashita.
    2. Hon-o yomimasu.

22. Which sentence is correct?
    1. Watakushi sensei desu.
    2. Watakushi-wa sensei desu.

23. Which sentence is correct? (HOLD UP PEN.)
    1. Sensei-no pen desu.
    2. Pen-no sensei desu.

24. Weekendo-wa Doo deshita-ka?
    1. Genki deshita.
    2. Ii deshita.

25. Which sentence is correct?
    1. Mary-wa hon-o yomimasu.
    2. Mary-wa hon-ni yomimasu.

26. Which sentence is correct?
    1. Watakushi-wa Detroit-ni ikimasu.
    2. Watakushi-wa Detroit-ni mimasu.

27. Terebi-o mitai desu-ka?
    1. Hai, terebi-o mimasu.
    2. Hai, terebi-o mimashoo.

28. Doko-kara kimashita-ka?
    1. Uchi-ni kimashita.
    2. Nihon-kara kimashita.

29. Which sentence is more of an INVITATION?
    1. Detroit-ni ikimasu.
    2. Detroit-ni ikimashoo.

30. Ano ko-no namae-wa nan desu-ka?
    1. Ano ko-no namae-wa John desu.
    2. Anata-no namae-wa John desu.

Name _____ Grade _____

ANSWER SHEET
JAPANESE TEST

Ex

Example 1.		x	16.		
Example 2.	x		17.		
Example 3.			18.		
Example 4.			19.		
			20.		
1.			21.		
2.			22.		
3.			23.		
4.			24.		
5.			25.		
6.			26.		
7.			27.		
8.			28.		
9.			29.		
10.			30.		
11.					
12.					
13.					
14.					
15.					

APPENDIX E

PERSONAL DATA SHEET

Group I (Structural) _____
Group II (Situational) _____

Japanese Language Experiment
University Elementary School
Winter, 1970
Philip C. Hauptman

PERSONAL DATA SHEET

Name _____ Boy_____ Girl ____ Age _____

Birthdate _____ Grade _____ Teacher _____

TEST SCORES:

1. I.Q. _____ Date Tested _____ Place Tested _____

Test Used _____

2. EMLAT: Raw Score _____ Percentile Score _____

3. Achievement Test: Total Raw Score _____ z Score _____

Structural Score _____ z Score _____

Situational Score _____ z Score _____

ATTENDANCE RECORD

A = Absent
L = Late

Week of:	Monday	Tuesday	Wednesday	Thursday	Friday
Feb. 2					
Feb. 9					
Feb. 16					

Additional Remarks: (Use Reverse Side)

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