INTRODUCTION

The speed and fluency of international communication have outstripped the speed of teaching and learning languages. Language is the most powerful tool of communication. How communication may be facilitated, depends upon the systematic investigation into the scientific analysis of teaching and learning of languages. In this context it may be realized that linguistics is an important discipline which provides the scientific and systematic analysis of language.

Assumptions underlying the nature of a language directly affect, what is taught through the analysis of pronunciation, grammar and vocabulary which may vary both in type and extent. Difference in the type of description and in ideas on language learning affect both the methods and the teaching of it.

Various teaching procedures in vogue have given rise to a number of significant questions concerning the nature and properties of a particular language and the measures of student achievement. Language teaching methods and the teaching strategies depend ultimately on what the teacher or the pioneer
of the particular method thinks a language is. Thus, a method which is based on the assumption that language is an assemblage of words, will differ considerably from one based on the assumption that a language is a system.

It is now being increasingly understood that language is a unique system of phonemes, morphemes, words and their associative peculiarities of the structure. Language is a system of arbitrary vocal symbols - and these symbols are associated with some meaning. Man's feelings and activities are very clearly tied up with the formation of a structure of a language. It is bound up with nationality, religion and the feeling of self. It is used for work, worship and play by everyone, be he beggar or banker, savage or civilized.

Susan Ervin Tripp (1964) lists three particular features which combine to produce human language: the combination and the recombination of a limited number of elements; the creation of arbitrary meanings for combinations which are conventional in a social group; and the reference to distant objects and events and to intangible concepts. These three characteristics make human language expendable and flexible in form and in meaning.¹

The word 'language' is very comprehensive. It is to be

analysed at phonemic, morphological and syntactic levels. When a person speaks, he produces vocal noises and these noises are given the meanings prevalent in that cultural set up. Each language belongs to a particular language community. Noises are complex structures, made up of small units and combining into larger sequence that follow specific pattern in a particular speech community. "These unit and patterns of sound associated with the units and patterns of cultural meaning constitute the system of communication that is language. This system is organised as a structure into which new sounds and experiences are fitted and from which they get their significance."  

The structure of language has two parallel substructures - expression and content - and a web of association between the two. Expression is the system of sounds, words, phrases, sentences as spoken, heard, felt or imagined independently of their particular meanings. Content is the system of classified units of cultural meaning and their combinations and relations in a language. Associations are ties between expression and content.  

Many fields of knowledge have been concerned with language and some have elaborated theories to explain its

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3 Ibid.
workings. Since different fields of knowledge are concerned with different things or study the same thing in different ways, it is not surprising to have a large number of different answers to the question - what is language?

- Language is a medium of communication.
- Language is speech.
- Language is signalled by vocal symbols and they are arbitrary vocal symbols.
- Language is a system of vocal arbitrary symbols.
- Language is peculiar to a particular society or speech community.

Thus, "Language - in its most common, pervasive, representative and apparently central manifestation involves oral-aural communication. We, therefore, say that language consists of oral-aural symbols of communication, arbitrary in their association to particular meanings and units and arbitrary in their particular shape for a given language."  

Language differs from culture to culture, from nation to nation and from one region to another. Each language is unique in its structure and this uniqueness of a language is determined by the characteristics basic to that very language. Thus, we see that the very nature of a language is such that it

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can be acquired from that speech-community to which the speaker of a language belongs. It is not a parental property, it is purely restricted to a particular culture or society.

- Language may be acquired but it can't be produced. Learner has to imitate the sounds, words, phrases and sentence-patterns of that language.
- Language is imitative and flexible. It is always subjected to change.
- Language is never complete. A living language can never be static, as it is affected by the external forces of society.
- It proceeds from concreteness to abstractness.

The baffling variety of the languages shows remarkable similarities as they all have phonemes, morphemes, words, sentences and certain sentence-type, certain parts of speech sequence and meaning etc. The features which differentiate language are not merely a matter of words or variation of forms. Each language is a structurally different system of communication.

From the foregoing observation it may be seen that a language is learned in its various characteristic forms - phonological, morphological, syntactic and semantic at different levels of complexity. This also provides a meaningful pointer to the process when an individual learns more than one language.
Some individuals become bilingual through necessity, where two different linguistic communities are in contact. We learn a second language and third language but "the degree of control of the first, second and even third and fourth languages is not necessarily comparable. The first language may be used only in the home, the second in school and a third in religious practice. When each language has a well defined function and is practiced in connection with that function, there is more or less stable bilingual situation."  

Bilingualism is defined as a demonstrated ability to engage in communication via more than one language.  

In this study eleven basic Hindi sentence-patterns, developed by the investigator were taught to non-Hindi speaking students as a second language. Popularity a second language is one other than one's own mother tongue. In fact, in its extreme only one Indian language may qualify as a second language for any other.

Learning a second language is not a matter of merely knowing some rules and words and their meanings. It is a matter of learning a new skill, a new habit. The learner of

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5 Ibid., p. 17.

second language should master, as a matter of automatic habits, three things:

- sound system of the target language.
- the basic sentence and phrase patterns of that language.
- a limited vocabulary in keeping with his or her needs and interests.

Learning a second language is more than learning a description of it. We say a person knows how to use a language when he can use its structure accurately for communication at will with attention focused on the content, recalling automatically the units and patterns as needed and holding them at a conversational speed. In learning a second language, many factors are involved. These are autonomy of expression, content and their association. These three elements of a pattern proceed at different rates and in no set sequence.

From a pedagogical point of view it seems to be important to make a distinction between the second and the foreign language. Of all the languages other than mother tongue, "some are taught in conditions where there is some reinforcement from the learner's immediate environment, whereas some are strictly confined to the class-room teaching. Since the presence or absence of this extraneous stimuli
necessitates re-adjustment of teaching strategies to particular situations, one may very well name the two situations as second language and foreign language teaching situations respectively.\(^7\)

Thus, teaching a second language can never be the same as the teaching of a first and foreign language. So methods of teaching these languages will differ according to the types of languages to be taught. Method includes what all teaching includes; whether it is the teaching of arithmetic or astronomy, of music or language. "All teaching whether good or bad must include some sort of selection, some sort of gradation, some sort of presentation and some sort of repetition."\(^8\)

Anthropologists, psychologists, sociologists and linguists are becoming more and more interested in opening new and promising avenues of inquiry in the extremely complex phenomenon of human language. This is because more sophisticated models explaining the process of language learning are being put forward by psychologists and linguists. The responsibility for imparting linguistic competence and inducing linguistic performance still lies with the classroom.

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teacher. So in language teaching method or strategy is the powerful tool through which something can be taught. "After all it is only the method that determines the what and how of language instruction." 9

There is still another view that teacher is the only important element: wherever there is a will to learn: the quality of the learner is what counts. Thirdly, there is the view that the teacher is the only important element; methods are only as good as their teachers. They are simply instruments in the hands of the teachers. 10 It is understood in a logically simple form that a method of teaching a language is an overall plan for the orderly presentation of the language material.

While sciences have advanced by approximation in which each new stage results from an improvement, language methods have followed the pendulum of fashion from one extreme to the other. Historically, for teaching a language, different methods have been practised and are still in vogue. Difference in methods may be the result of (a) different theories of language, (b) different types of language description, and (c) different ideas on language learning. Most of the methods developed over the past few centuries are still in use in one form or another in various parts of the world. The most common

9 Ibid., p. 138.
10 Ibid.
types of methods identified in the literature are: Direct Method, the Natural Method, the Psychological Method, the Phonetic Method, Reading Method, Translation Method, Translation-Grammar Method, the Unit Method, the Practice Method, the Mimicry Memorization Method and so on.

The most recent methods of teaching a language are Audio-lingual and Cognitive-code methods. These two methods have been taken for the presentation of structures of Hindi to non-Hindi speaking students as a second language in the present experiment. A brief explanation of these two methods is, therefore, provided before describing the design of experiment followed in this work.

AUDIO-LINGUAL METHOD

Although interest in foreign language teaching before 1940 was in evidence through the writings of William Devight Whitney, Otto Jesperson and Leonard Bloomfield, it was not until 1941 and around that the linguistic sciences were applied to the problem of language teaching. The most common method of teaching a language, at that time, was "Grammar-Translation-Method."

In a course of time through the contribution of C.C. Fries (1950), the pattern practice method was devised. At the English Language Institute, University of Michigan, Ann Arbor, U.S.A., several experiments were conducted on
foreign students using pattern practice as principal method. Later on this has been labelled as Audio-lingual Method. The transformational generative linguists under the leadership of Noam Chomsky have contributed towards the development of another method which is called as Cognitive-code. The psychological theories of learning on which these two methods are based, may be referred to as S-R theory and Cognitive field theory respectively.

The protagonists of these methods hold a view that language-learning models constructed on the basis of Audio-lingual and Cognitive-code theories are more effective media of teaching and learning a language. Audio-lingual habit theory relates more closely to a mechanistic interpretation of language acquisition while the Cognitive-code theory corresponds more nearly to a mentalistic one. As observed earlier the Audio-lingual habit theory derives its inspiration from S-R theory of conditioning, where simple linkages between stimulus and response are made automatic and non-deliberate.

Psychologists such as Balysyev, Rivers, Skinner and others stress the importance of conditioning and habit formation in language learning. Neurologists such as Penfield feel that conditioning plays a significant role in language learning. According to the advocates of the S-R theory, learning occurs by the process of association, conditioning
and setting up appropriate reinforcement contingencies. Valette (1966) has pointed out that "new textual materials in modern languages are based on the assumptions that language learning is chiefly a mechanical process of habit formation."

The exponents of the Audio-lingual habit theory have asserted that systematic methods and techniques may be developed with the generalizations of the S-R theories. A very lucid formulation of assumptions and principles underlying the Audio-lingual method under Audio-lingual habit theory has been attempted by Edward M. Anthony (1963). The following basic assumptions are specially pointed out:

- Language is human, aural-oral and symbolically meaningful.
- Any given language is structured uniquely. This can also be stated negatively. No two languages are structured alike.
- The structure of a language can be discovered and described usefully and systematically.
- Primary manifestation (the aural-oral aspects) should be taught before secondary manifestation (reading and writing). Understanding the spoken language is taught

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more efficiently before oral production, and indeed a first step production.

- The secondary manifestation (the reading and writing aspects) should be in the stated order, since graphic symbols must be seen before they are produced, and thus reading, in a sense, is actually the first step in learning to write.

- Other uses of language - tertiary in this scheme - such as literary and artistic manifestations, pedagogically also follow reception/production order.

- Procedural assumption states that (a) languages are habits, (b) habits are established by repetition and (c) languages must be taught through repetition of some sort.¹²

The basic principles underlying the theory which support this method may be briefly mentioned as follows:-

- Since speech is primary and writing is secondary, the habits to be learned must be learned first of all as auditory discrimination responses and speech responses.

- Habits must be automatized as much as possible, so that they can be called forth without conscious attention.

The automatization of habits occurs chiefly by practice, that is, by repetition. 13

A general statement of effective principles enumerated from this point of view of language learning as suggested by Decany (1967) and others, may be summarized as follows:

- Only after a reasonable mastery of the spoken forms has been achieved, should the other skills be taught? It may further be mentioned that the oral activities should continue to occupy a considerable portion of class-time.

- It is an accepted fact among linguists and language teachers that language learning is not concerned with the problem solving but with the formation and performance of habits.

- Language in use is characterized by speed, fluency and appropriateness of utterances in response to the stimulus presentation, procedures, drills and follow-up exercise sessions for structural and lexical items so that they can be produced without conscious effort when situations call for them.

- The teachers should set the quality of speech by being a good model striving for naturalness of

expression in the language. This can be done by presenting language in meaningful and realistic communicative situations.

- The socially accepted forms spoken by native speakers comprise the language to be taught. Formal, literary, archaic or illiterate levels of usage should be replaced by colloidal forms, if a conversational level of speech is being taught.

- The selection, sequencing and levels of entry of structures and vocabulary are important. Language is cumulative and real proficiency is developed on the basis of skills built earlier.

- The habits with regard to content skills: listening, speaking, reading and writing have to be automatized as much as possible, so that they may be called forth without conscious control.

From the foregoing discussion of the principles and assumptions with regard to Audio-lingual method, it seems that all the basic formulations of the S-R theory have been so incorporated as to suggest a suitable procedure for classroom teaching operations.

It may be, further, observed that it is also related to the Skinnerian model of learning and teaching. In this
method, the natural order of learning a language is followed to establish a habit pattern of structures of a target language under the assumption that

- Language is speech and not writing.
- Language is a behaviour and it is a matter of habit.
- Language is developed by following a stimulus response reinforcement contingency involving patterns, drills, mimicry - memorization and controlled and spaced repetition.
- Language has to become automatic.

Taking the cue from the model, George Scherer and Michael Wertheimer (1964) have categorically stated that the "Audio-lingual method is characterized by intensive drills in speaking and listening through dialogues which are memorized and pattern drills which are thoroughly learned by the student. Instead of encouraging free-conversation at first, the teacher uses directed dialogues which employ the learned patterns. . . . . Although grammar is not taught as an end in itself, the materials are constructed so that the students can arrive at its comprehension by induction. After the examples are drilled, the grammar is discussed and clarified.\textsuperscript{14}

Thus, in this method, the language material which is

\textsuperscript{14} John P. DeCecco, op. cit., p. 380.
to be taught is drilled in various situations. The effort is to establish the habits by repetition. Conceived thus, it becomes a very dynamic and sensitive system of communication.

A further significant point to be noticed here is that it implies the patterned arrangements of the units of utterances, so that these units and patterns of cultural meanings can be understood and responded by those who learn, hear or speak them. These units include the words themselves, their inflections and sometimes complex entities that consist of two or more words. We talk in sentences: words are parts of sentences. These patterns of expression are associated with the sentence meaning such as "question", "report", "request" and "call". The other meaning is called the structural meaning signalled by the relationship of the units as they are arranged in patterns. It appears logical to agree with Charles Fries who unambiguously states that "the total linguistic meaning of an utterance is the lexical meaning of the separate words PLUS the structural meaning."\(^{15}\)

The following example will point out that words in a sentence, with no change in their individual meaning, can

be re-arranged in the following way:

Sentence: The captain considered Wiley poor.
2. The Captain considered poor Wiley.
3. Wiley considered the captain poor.
4. Wiley considered the poor captain.
5. The poor captain considered Wiley.
6. Poor Wiley considered the captain.
7. Captain Wiley considered the poor.
8. The poor considered captain Wiley.
9. The poor captain Wiley considered.

Thus, it is obvious from the above example that linguistic meaning does not convey the true meaning of the utterance. "Pattern viewed in this context is an intrinsic and indispensable part of an utterance and until all the areas of meaning indicated by the pattern, are mastered, the student can not be expected to use fully the language for communication. Mastery of pattern signals should be so complete that pattern practice or structural drills are devised. The students have to practice patterns of arrangement until they become so familiar that their use becomes largely automatic." 16

For automatizing the necessary habit responses, some special drills are to be conceived in the form of pattern practice, memorization, substitution and many other types of

drills. Structural points are exercised in various situations and in various ways. In learning a language, a student must listen to good models. Random listening helps, but selective listening following instruction is more effective. Action responses to show understanding of commands and statements in the target language, are a useful variation. Oral repetition, substitution, simple substitution, multiple substitution, question and answer exercises, conversation practice, transformation, addition, exercises, synthesis and composition etc. are the various kinds of exercises and drills which help in developing unconscious catch over the structure.

It has been asserted by a number of experts that pattern practice drills help a lot in forming automatic habits. As Lado puts it: "The pattern-practice drills consist of the conscious substitution of some elements other than the chief elements being taught so that primary attention is drawn away from it, while the entire pattern is being repeated."[17]

PATTERN PRACTICE

Pattern practice is the key concept used in Audio-lingual method. This method reduces the naturally differentiated system of every day language to linguistically attested certain patterns and it is this pattern rather than

the particular sentence which is driven intensively into the learner's habit reflexes. Pattern practice drills have been very frequently used for developing mastery of the structure of a language in the classroom.

PROCEDURES FOLLOWED IN PATTERN PRACTICE DRILL

The pattern practice drills are supposed to accomplish the substitution of one item for another in the structure of immediate constituent boundaries. These are three points which must be defended if it is to be demonstrated that the concept of pattern practice is consistent with current theory and the logical tool to use in overcoming the practice problems faced by the learner. Pattern practice drills aid in overcoming negative transfer from the native language.

The drill procedure for pattern practice has three elements: a model, a cue, and a response. The teacher gives a model, then provides a cue with a kind of short instruction that indicates that the student has to follow the model. The response is the student's attempt to follow the instruction. If he fails to do so, the teacher supplies him with the correct utterance and continues with the drill.

"Drill procedure almost follows a pattern or a symmetrical arrangement which can be compared to mathematical
formula of proportion."\textsuperscript{18}

Once the pattern of the first drill sentence is exemplified, it is followed in the sentence. This can be expressed by formula -

$$A : B :: C : X$$

The relationship between 'A' model and 'B' response of the first sentence of the drill is continued in the other sentence. Thus, from the next model 'C' the response 'X' can be inferred. For example\textsuperscript{19}

\begin{tabular}{ll}
Model & Cue \\
'A' Do you understand? & Hear 'B' Do you hear? \\
'C' Do you see? & Believe 'X' Do you believe?
\end{tabular}

The substitution drills, transformation drills, question-answer drills and various other types of drill are used in pattern practice.

**COGNITIVE-CODE METHOD**

The other method is captioned as Cognitive-code. This method has been derived from the Cognitive-field theories.

\textsuperscript{18} R. Gunter, 'Proportional Drills as Technique for Teaching Grammar.' Learning Language, Volume X, Nos. 3 and 4, 1960, p. 123.

of learning receiving their support from Gestalt-Field Psychology and Lewinian formulations. The basic assumption of this theory is that learning is a relativistic process and it occurs by the development of cognitive-structure, understanding, explanation and insight.

In the recent years, cognitive psychologists have begun to challenge the basic tenets of behavioristic theories of learning. Research in the theoretical field provides the bases for following formulations:

- Language is not behaviour, it is a rule governed creativity.
- Any behaviour is controlled by cognitive processes; skills are actions which are originally voluntary and which later become automatic.
- There should be meaningful learning, and practice without understanding the underlying principles will be useless.
- To teach is to select and to create appropriate conditions for learning, and to learn is to learn the valid generalizations and the discriminations.
- Constant repetition tends to weaken understanding.20

This theory also rests upon neuro-psychological bases

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of thought and language, and as such, is said to be mentalistic. Learning is not viewed as an array of conditioned-response to previously met stimuli, but as the acquisition and storage of knowledge. Behavioristic psychologists focus on the individual's response while Cognitive-code psychologists emphasize the mental process underlying that response. Here the main emphasis is on the conscious control of structure and analysis is attempted with a view to fixing up the language items with adequate clarity.

The model for learning as suggested by Ausubel (1968) is quite different from behavioristic techniques. He feels that learning must be one of "meaningful learning." Information acquired in rote fashion i.e. "arbitrarily and verbatim" is of little use to the learner and quickly forgotten.21

The learner relates new material to what he has learned previously. This material must be relatable to the structures of knowledge on a non-arbitrary and non-verbatim basis. John B. Carroll is of the view that language behaviour is "a rule governed behaviour and language learning is accomplished by internalizing the rules which govern language behaviour unless these rules are already inherent in the mental faculties and processes of human individual's innate language

21 Kenneth Chastain, op. cit., p. 50.
acquisition system. Therefore, conditioning plays no part in the learning of a language.  

Chomsky (1966) also questions the behavioristic interpretation of language learning. He very astutely observes: "... it seems to me impossible to accept the view that linguistic behaviour is a matter of habit, that it is slowly acquired by reinforcement, associations and generalizations ...."  

Thus, the Cognitive-code method which is built upon the Cognitive-code theory, is based upon the cognitive interpretation of a learned behaviour. Here primary emphasis is laid on mentalistic process in which principal objective is understanding rather than drilling. The Cognitive-code may be characterized by the introduction of all the four language skills from the beginning of the courses by a deductive explanation of grammatical structures prior to any assignments and practice involving that structure and by the study and preparation of exercises designed to teach comprehension rather than the development of automatic responses to oral or written stimuli.

It may be evident from a close scrutiny of the postulates


23 Kenneth Chastain, op. cit., p. 53.
of Cognitive-code theory that it is a modified and up-to-date version of the old translation-grammar approach. Learning a language is perceived as a process of acquiring conscious control of phonological, syntactic, and lexical patterns of a second language, largely through study and analysis of these patterns as a body of knowledge. Conscious control over the structure of a language will develop automatically with the use of the language in meaningful situation.

Thus, in the Cognitive-code method repetition is not ruled out. Here it is assumed that repetition strengthens the formation of structures. Koffka, an arch proponent of the Cognitive field theory approach to learning and thinking, suggested that practice or repetition makes possible the consolidation of 'Trace System' which is equivalent to the concept of responses becoming fixed by repetition. Understanding of the structure of a language implies the perceiving of relationships between parts and whole. This method is prescriptive and less prone to drills of mechanical type.

**DIFFERENTIAL FEATURES OF AUDIO-LINGUAL AND COGNITIVE CODE METHODS**

Some of the outstanding features of both the methods may be briefly put as follows:

- Audio-lingual method is based on 'Audio-lingual Habit Theory', which lays emphasis on the unconscious, non-
deliberate control over the structures, whereas Cognitive-code method is based on 'Cognitive-code Theory', which stresses forming of the relations after understanding, perceiving and analysing the established relations of the subject matter (linguistic material) presented to the learner.

- In Audio-lingual method, teacher has to plan for sufficient and meaningful drills and exercises, which are necessary to bring a fair amount of unconscious control over the structure of a target language but in Cognitive-code method, careful analysis and interpretation of the structure of a target language is given weightage just to achieve a conscious control of target language patterns.

- Milgard has indicated some of the problems with regard to teaching patterns through this Cognitive-code method. Because learning requires differentiation and restructuring, the higher forms of learning with regard to language skills, very much depend upon natural capacities of reacting in various situations; ineffective and inadequate methods of instruction may be responsible for blockage in the formation of Cognitive-structures.

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In Cognitive-code, repetition is not totally ignored but it is of a different form and nature and is exercised only to help the learner in developing a cognitive-map of what is to be taught. In Audio-lingual, on the other hand repetition and exercises are very important. This method tends to play down meaningfulness in favour of producing automaticity.

Language learning is a skill and conscious attention to its critical features and understanding of them will facilitate learning. This principle is totally ignored by Audio-lingual method, whereas cognitive-code method considers it as a basic to its formulations.

In cognitive-code, understanding is the central point which is emphasized in the presentation of structures. It includes the perceiving of relationship between parts and whole, means and consequences. When learning occurs at the level of understanding, some of the problems are solved sensibly and structurally rather than mechanically.

Thus, it is obvious that Cognitive-code method corresponds more closely to a mentalistic interpretation. The language exercises are arranged in a way that tend to stress the analysis and interpretation for enabling the student to get firm control over the structural patterns of a language.
- The gradation of language items are contingent on the basic consideration of the particular target language. Cognitive-code method is less prone to mechanical drills and exercises where audio-lingual is totally mechanical. The unique characteristic of drills in the Cognitive-code method is not to develop a definite fixation of the language items as is sometimes considered to be.

- Both the methods differ in their presentation of language items. One follows an inductive approach and the other follows a deductive type of approach in teaching. In one method, listening and speaking are given priority, whereas, in the other reading and writing.

PROBLEM OF THE STUDY

A brief exposition of the two methods - Audio-lingual and Cognitive-code which form the significant treatment variables in the present study, should enable us to describe the scope of the present investigation in a proper perspective. In the following paragraphs, the effort is made to place the main formulations with regard to our problem in unambiguous terms.

India is a multi-lingual nation. There are so many languages in vogue and spoken over the States. In a particular
state or region, dialects are used in daily informal communication, but the people of a particular state have to use a language for literature, law and science etc. They have to use either the national language or the regional language. For example; in the South, Tamil, Kannada, Malayalam and Telagu languages are used for their official purposes. In U.P., Khari-boli is used for such purposes whereas in the state of Punjab, Punjabi is used all over the state for all functional purposes.

All these languages are, thus, the regional languages, representing the main characteristic features of that region. The structure of each language is different.

There are differences in language at phonological, morphological, grammatical, structural and semantic levels. If one has to learn Tamil or Telagu languages, he will have to start with the phonemes and will go on for learning words and their association in a structure of a sentence. Thus, learning a language of other region in a situation like this is learning a second language and not a foreign language.

Hindi is a national language for India. Therefore, it is expected that every citizen of India should be able to read, write and speak Hindi to some extent. For this purpose, efforts are being made to explore some suitable methodology for teaching Hindi to non-Hindi speaking people. If we consider
Statewise, it will be obvious that each state has its own spoken language and Hindi is a second language for them. Many non-Hindi speaking states are trying to learn Hindi for their daily or official purposes. Viewed in this context, it was thought essential to conduct an experimental study using sentence patterns of Hindi through two methods viz. Audio-lingual and Cognitive-code.

The scope of the study was delimited to examining the effectiveness of Audio-lingual and Cognitive-code methods at different levels of intelligence and socio-economic status. Much work has been reported in the current literature on language learning wherein the effectiveness of Audio-lingual and Cognitive-code methods is being studied. But so far, no experimental study has been conducted in India to evaluate the effectiveness of these methods with regard to the teaching of Hindi sentence patterns as a second language. The present investigation is the first attempt of its kind and is an humble beginning for launching a systematic probe into the workability of methods and procedures for teaching Hindi to non-Hindi speakers.

**SCOPE OF THE STUDY**

For teaching Hindi sentence-patterns, lesson-plans containing all the desired aspects of sentence-patterns have been prepared separately for Audio-lingual and Cognitive-code methods.
Three levels (High, Average and Low) of intelligence and socio-economic status have been studied in relation to achievement in both the methods.

The achievement test, representing the criterion behaviours to be shaped through the teaching in the present experiment, has been constructed and used as pre-test and post-test.

A factorial design has been employed with a view to ascertain the main effects of Method, Intelligence and Socio-economic Status and also their interaction effects.

**JUSTIFICATION AND SIGNIFICANCE OF THE PROBLEM**

In learning a language, linguist plays a prominent part in describing and classifying language with regard to segmental phonemes viz. vowels and consonants and their sequence in the languages. What morphemes and morpheme sequence are typical of each? What is their nature of structure? A person knows how to use a language when he can use its structures accurately for easy communication. The syntax is, thus, the back-bone of every language. If language is to be learned, structure of that language is to be mastered.

Syntactic aspect of a language provides the set organised pattern of the language. In this study, eleven Hindi
sentence-patterns have been developed for non-Hindi speaking students on the basis of analysis of Hindi grammar.

Linguistic analysis plays an important role in organizing the language material. It is now being realized that in the presentation of a language, phonological, morphological, syntactic and semantic descriptions have a considerable utility. The foreign languages viz. English, Spanish, French and German, have been studied in a very great depth from the linguistic point of view. The teaching of a foreign language as well as that of a second language has been suitably amended in view of the linguistic insights obtainable from their studies. Little or no research has been done on Hindi language from the point of view of contributions of contemporary linguistic theories. There is a great need for developing appropriate linguistic analysis, so that the presentation of Hindi language for foreigners as well as for those who have to study it as a second language in our country, may be given a second frame work.

The present study has some relevance in this context. The choice of material in this study has been restricted to Hindi sentence-patterns for effecting proper control. The linguistic analysis has been conducted with regard to eleven Hindi-patterns selected for this study. It is assumed that a study of this type will provide some basis for arriving at valid principles, procedures and generalizations in organizing teaching of Hindi as a second language.
The teaching of Hindi to non-Hindi speaking areas has been so far conditioned by procedures which are largely adhoc and casual. They lack a scientific basis which is so essential for making the teaching and learning effective. The principles of teaching Hindi and the methodology, which should be followed, are not clearly formulated. The method of presentation for different aspects of Hindi-language have not been studied in a systematic manner. The choice of the two treatment variables viz. Audio-lingual and Cognitive-code was made mainly due to the fact, they have the necessary support of the contemporary theories in language learning and linguistics. The necessity for a scientific probe into the relative effectiveness of these two methods can, therefore, be readily seen.

From a study of this type conducted under the framework of the present investigation, it will be easier to lay down the rationale of methods and procedures to be followed for the teaching of Hindi as a second language. It is the hope of the investigator that sound methodology for teaching of Hindi in such cases can be developed only by a systematic experimental research and hence, this effort. The researches conducted on the use of Audio-lingual and Cognitive-code methods add further strength to the propositions relating to the choice of methodology in this experimental study.
Theodore H. Mueller (1969) in a study on Audio-lingual and Cognitive-code methods of teaching a language, observed a significant difference on the amount of learning.\textsuperscript{25}

Kenneth Chastain, Woerdehoff and Frank of Perdue University (1968) made a comparative study of Audio-lingual and Cognitive-code methods on the teaching of Spanish language. They found a significant difference between the achievement of Audio-lingual and Cognitive-code groups and established that Cognitive-code group was superior to Audio-lingual group in learning.\textsuperscript{26}

Kenneth Chastain (1969) carried out a study on the prediction of success in Audio-lingual and Cognitive-code classes. The Audio-lingual group studied the writing of modern Spanish whereas the Cognitive-code group studied beginning Spanish. He found the results significant in favour of cognitive group for all the language skills as compared to Audio-lingual.\textsuperscript{27}

A research team at the University of Colorado, consisting


of a foreign language professors, George A.C. Schorer, and a psychologist, Michael Wertheimer (1964) conducted an experiment contrasting the Audio-lingual method, based largely on the Audio-lingual habit theory, with a bilingual grammar-translation method of the traditional sort, based on some variety of the Cognitive-code theory and found a significant difference between the two on the amount of learning.

These references indicate that either these methods have been studied in relation to the teaching of a foreign language material only or with reference to few more variables such as student-motivation, language aptitude, mathematical ability, school records etc. In view of the results available on the teaching of foreign or second language, the researcher proposed to study the effectiveness of the methods in the teaching of Hindi with reference to sentence-patterns at three levels - High, Average and Low of intelligence and socio-economic status.

In more specific terms following features become the special vantage points of this study:

- Audio-lingual method may serve the purpose of

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acquiring mastery over the learnt material for students of low level of intelligence.
- Cognitive-code may be utilized for enrichment material for the gifted and students of high level of intelligence.
- This study may also be useful for evaluating suitable methods for children belonging to different levels of socio-economic status.
- The teaching procedures followed in each method may become the basis for further inquiry into the difficulties encountered by the learner in learning a second language.

OBJECTIVES OF THE STUDY

The following objectives have been formulated for the present study:

- To analyse the relative merit of Audio-lingual and Cognitive-code methods in the presentation of Hindi sentence-patterns.
- To find out the comparative effect of Audio-lingual and Cognitive-code methods at different levels of intelligence.
- To ascertain the comparative effect of Audio-lingual and Cognitive-code methods for different levels of socio-economic status.
HYPOTHESES

Considering the formulations as above, the hypotheses formulated and tested in the present study are as follows:

- There is a significant difference between Audio-lingual and Cognitive-code methods with regard to the achievement test scores pertaining to Hindi sentence-patterns.

- There is a significant difference between Audio-lingual and Cognitive-code methods for different intelligence levels.

- 'Audio-lingual' method is more effective at low level of intelligence as compared to Cognitive-code method.

- 'Cognitive-code' method is more effective at high level of intelligence as compared to that of Audio-lingual method.

- The levels of socio-economic status may account for significant variation with regard to achievement in both the methods.
DELIMITATION OF THE PROBLEM

The present study has been delimited in respect of content of teaching, methods, sampling, tools and techniques at various stages.

- Eleven Hindi sentence-patterns, developed by the researcher, have been taken as the subject-matter for presentation through Audio-lingual and Cognitive-code methods.

- The teaching of these sentence-patterns covers the following transformations:

  (i) Semantic transformations:
      - Assertive
      - Negative
      - Interrogative

  (ii) Tense transformations:
      - Present indefinite
      - Present continuous
      - Present perfect

- The experiment was conducted on a sample of 500 students, and the demarcation of levels was further made according to intelligence and socio-economic status in order to procure at least
10 replications for each cell. Thus, the final sample consists of 180 students of IX standard from Higher-Secondary Schools of Tamil Association in Delhi.

- The study has been conducted with a $2 \times 3 \times 3$ factorial design.

- The achievement test includes completion, re-arrangement, matching, multiple choice and transformation type items.

- The eleven sentence-patterns selected as the core-material have been taught as a second language and not as a foreign language.