There appears to be a general realization in the Southwest that the fact that English is not the mother tongue for large numbers of American Indian children has implications for the method and materials by which English should be taught to these children. TESL (teaching English as a second language) methods are generally considered superior but, in places where TESL has been practiced to date with Indian children, it is apparent that English is still learned very slowly in spite of the great effort and the emphasis on TESL. The nature of the problem for the researcher would seem to be a comparative study to test the validity of various assumptions that are currently being made about the mental processes involved in second language learning and to test the relative efficiency of a number of plausibly suggested methodological implications. The validity of the concepts of competence and performance for second language learning is the object of needed research. Also worthy of research is the validity of the principles of (1) teaching units for mastery and (2) the spiral curriculum approach. Arguments in favor of a particular linguistic sequence in contrast to other sequences invite research, as do arguments that stress the importance of the semantic content of the language lessons. Proposed short-term and long-term research projects are detailed in the paper. (JH)
NEEDED RESEARCH AS A CONTRIBUTION
TO THE PROBLEM OF TEACHING ENGLISH
TO AMERICAN INDIANS

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By
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Urgency, Depth, and Scope of the Problem

The urgency and depth of the problem of teaching English to Indian students are well known and hardly need elaboration. Both are enormous. The apparent and persistent difficulty for Indians to learn English and the importance of an adequate command of English for success in school and in adult life should keep the educator alert to any possible improvement of his teaching. The researcher should help the educator.

To give an indication of the scope of the problem, it may suffice to state that it pertains to the educational problem of at least, by conservative estimate, 100,000 Indian students. The contribution to the solution of the problem of teaching English to Indian children that the Laboratory may make by its research may have a much wider application, however. It may be of value to the teaching of standard English to all non-standard-English speaking students in the United States. Such students can be counted by the millions.
Nature of the Problem for the Researcher

TESL. There appears to be a general realization in the schools of education of universities and colleges in the Southwest that the fact that English is not the mother tongue for large numbers of Indian children has implications for the method, including materials, by which English should be taught to these children. TESL, as opposed to the older, non-TESL, method of teaching English, is generally believed, in academic circles, to be superior (Board of Education of the City of New York, Brière, Morris, Willink).

Non-TESL Method of Teaching English to Indian Children. The actual practice in most public, federal, and mission school classrooms, unfortunately, cannot appropriately be called a TESL method. What goes on in the way of teaching English in most classrooms with Indian children is explicitly or implicitly based on the assumption that English will be learned most efficiently by Indian children if it is presented in the manner and through materials designed for use with Anglo children (i.e., children whose mother tongue is English). This method can be described as experiential and centered around content vocabulary, used in frequently occurring phrases and expressions. It uses Anglo-aimed teaching materials. It attempts to provide for "experiences," by which is commonly meant contrived events and activities that the middle class Anglo child is assumed to have had, and to continue to have, in school and in his home life. It often states its concern for concept development,
but it assumes that concepts are primarily developed through first-hand experience by itself and with the relationship between an object and its label. The much more complex formative role that language plays in conceptualizing (structuring of experience) is all but ignored. This method attempts to duplicate the conditions and the mental processes of mother tongue learning, not heeding the fact that English is the second language for most Indian children and the generally accepted-as-fact observation that learning a second language does not constitute the same mental task as learning the mother tongue.

Regrettable as this actual state of affairs may be, there would seem to be no point in researching the superiority of TESL over the older, non-TESL, method. Academic consensus on the basis of theory and the results of what little specific research has been done (Board of Education of the City of New York, Brière, Morric, Willink) point to a more urgent research need: to validate or invalidate the assumptions underlying variations in TESL methods. This need seems to be especially urgent because in those places where TESL has been emphatically practiced to date with Indian children (for example at the Chuska Boarding School on the Navajo Reservation in New Mexico and in the Rock Point Boarding School on the Navajo Reservation in Arizona) it is apparent that English is still learned very slowly in spite of the great effort and the emphasis on TESL.
The accurate conclusion to be drawn from this experience with TESL with Indian children to date may turn out to be that the limits of what can be expected have been reached; that the inherent difficulty and magnitude of the task of learning English for Indian children, under the conditions that presently prevail in schools for Indian children, is such that eight, ten, or twelve years have to be allocated for this task.

It behooves the educator, and the researcher, however, to heed recent observations pertaining to the mental processes involved in learning, in language learning in particular, to pay attention to modern theory about the nature of language, and to test various plausible implications that these observations and this theory may suggest for second language and TESL methodology. Any suggested variation in methodology that holds the promise of accelerating and qualitatively improving the learning of English by Indian students seems worthy of testing in research.

**TESL and SESD.** The majority of the more than 40,000 Navajo children in school did not, and do not, know English when entering school. Many other Indian children, on the other hand, come to school with some knowledge of English. This appears to be quite common for the Pueblo Indian children, for Eskimo children, and for Sioux children, for example. Most of these English speaking children, however, are bilingual, in the sense that they use the language of their tribe as well
as English. It is not known how well they speak their tribe’s language, but their English is usually a non-standard dialect and their command of it is usually extremely limited.

It may well be that there are differences between the mental processes involved in learning standard English as a second dialect (SESD) and those involved in learning ESL. Current SESD methodology, however, tends to borrow TESL techniques (Robinett), even for children who are non-standard English speaking monolinguals. It is apparently presently assumed that the differences between learning SESD and learning ESL are quantitative rather than qualitative, that the rate of learning SESD may be faster, in places, than that of learning ESL, but that the manner of presentation and the teaching/learning activities should be essentially similar. In the absence of a distinct, developed, SESD methodology, then, there would seem to be no need, at present, to research contrastive methodological traits for teaching SESD and for TESL.

**Summary.** The nature of the problem for the researcher would seem to be then a comparative study to test the validity of various assumptions that are currently being made about the mental processes involved in second language learning and to test the relative efficiency of a number of plausibly suggested methodological implications.
Recommendation for Research Emphasis

1. Competence-Performance. In current discussions of TESL methodology a major trend is discernable in various ideas that are brought to the fore. This trend is a partial or total rejection of two major and related assumptions underlying what may now be termed traditionally established TESL methodology, also referred to by "audio-lingual method."

One of these assumptions is that language is essentially a set of speech habits. The other assumption, rooted in behaviorist and associative learning psychology, is that the second language is best learned through repeated reinforced oral performance in response to repeatedly presented, specific stimuli. The method is characterized by a deemphasis of explanation of systematic variations and by a heavy emphasis on almost exclusively aural-oral activities in the early stages of teaching/learning new material, such as memorization of dialogues and oral drills. Reading and writing are included but less importance is ascribed to these language arts than to the oral practice as a means for learning the language.

The rejection of this method stems from the modern concepts of "competence" as distinguished from "performance" in language. These concepts have been derived from observations of language acquisition by young children and in particular from Noam Chomsky's "generative transformation grammar" which attempts to explain the phenomenon
of language as language being, in essence, a system of rules for the development and acquisition of which humans have an innate capacity. This rule system gives the language user the means by which, and the scope of freedom, or power, within which, to create and to comprehend novel sentences. "Competence" refers to the conscious or unconscious knowledge of this rule system. Even though this rule system that is language is extremely complex, the knowledge of it is very rapidly acquired by the growing child. So rapidly, in fact, that the observing psycholinguists found themselves obliged to reject the explanation of this rapid learning as habit formation. They postulate an innate human capacity instead of the bond-formation postulates of behaviorist and associative psychology. They observed that the young child learns his mother tongue from exposure to relatively few examples of well formed sentences in the speech of the language users around him and to relatively much more numerous examples of deficient performance by those language users: to sentences that, as actually spoken, are not well formed.

"Performance" refers to the productive or receptive application of the rule system that is language to its realization in speech or in writing. In actual language usage there is more often than not a one-directional discrepancy between one's competence and one's performance: normally people do not use language as well as they might, considering their knowledge of it, their competence. On the other hand, their performance can never outreach their competence.
These concepts of competence and performance have led to, or are derived from, assumptions that are very different from the assumptions on which the traditional TESL method is based: language is a system of rules, not a set of habits; it is learned, not by repetition, as habits are acquired, but by a grasp of the conditions under which certain rules operate, an insight or understanding of how the system works. This grasp, or insight, is acquired in a mental process of a more unitary nature, perhaps "in a flash," as the saying goes, than the process of habit formation.

It is noteworthy that these modern observations of language acquisition have been made with young children learning their mother tongue. It is not known how valid the concepts of competence and performance are for second language learning. This, then, would be the object of needed research.

The fact remains that the degree of language competence in the learner can only be measured by some act of performance on the part of the learner. This forces the educator, and the researcher, to formulate a number of hypotheses implied in, or derived from, the concepts of language competence and performance. There are, possibly among others, these hypotheses:

1. The attainment of a certain amount of competence precedes the development of skill in productive performance.
2. It is easier to attain a certain degree of competence, measured on a scale from zero to perfection, than it is to become a productive performer to the same degree.

3. Productive performance is likely to evidence competence to a larger extent than the performing act directly shows.

4. Performance on the receptive level, a show of comprehension, suffices to evidence competence.

5. Competence may be consciously or unconsciously attained.

6. Competence may be attained from written language as well as from spoken language.

7. The very frequent exposure to, and practice in uttering of, well formed sentences of certain patterns in certain contrasts, which practice in the early stages of learning new material is the cornerstone of the traditional audio-lingual method, is of questionable value for learning the language; rather, competence is acquired, the language is learned, when the learner grasps the rules. This may take place with the perception of only a few exemplifications of the rules.

Some of the implications for methodology that suggest themselves from the above assumptions would be:

a. To place greater confidence in a show of comprehension as a sign of language acquisition than is usually done in the traditional audio-lingual method. The trust is that skill in performance will develop with relative ease once competence has been acquired. Productive drills,
especially oral drills, may serve the purpose of acquiring performance
skills, but they are not regarded as the most efficient means for
acquiring competence, for learning the rule system that is language.
The teacher would spend much more time on activities that constitute
a non-verbal show of comprehension than is usually done in the traditional
audio-lingual method. Such non-verbal show of comprehension may be
the indication of a choice, by pointing or by marking a picture, for
example, or by evaluating (right or wrong) heard or read language.

b. To increase the emphasis on explanation of rules (Slager).
(This does not necessarily imply, however, that the teacher or the
learner should always be able to give a perfect verbalization of the rules.
The students' attention should be drawn, however, to the change in
conditions which generates a change in language so that by visual and
aural observation they can grasp the rules.)

c. To modify the role of pattern and transformation drills: they
would be less extensive, would lag behind the receptive program, and
the learner would understand that their purpose is purely to attain
fluency, facility in producing orally what he already knows, not to
teach him new language, new rules.

d. To place more emphasis on application activities than is usually
done in the traditional audio-lingual method. The teacher would spend
relatively more time on them and evaluate them more seriously.
(Cf. Rivers' suggestion for "conversation lessons" about broadly
assigned topics and the suggested technique for evaluating the conversers' performances.)

II. **Unit Mastery--Spiral Curriculum.** Arguments are often made in favor of the principle of teaching units for mastery or in favor of a so-called "spiral curriculum" approach. The validity of these principles would also seem worthy of research.

III. **Linguistic Sequence.** Arguments in favor of a particular linguistic sequence in contrast to other sequences invite research, too.

IV. **Semantic Content.** Arguments that stress the importance of the semantic content of the language lessons would likewise seem very worthy of research, especially the value of the assumed motivational factor growing out of content that is assumed to be felt as "meaningful," or relevant, by the learners.

Conceivably each of the listed methodological and content traits might be singled out and tested separately. It would seem more theoretically consistent, however, to combine the methodological traits deriving from the competence-performance concepts in a method as they are all related by this common derivation. The effectiveness of this method would then be compared with that of the traditional audio-lingual method. Such a comparison would then, by implication, constitute a test of the validity of the concepts of competence and performance in their assumed relationship.
A simple research design could be used that would minimize the common difficulty in educational research of dealing with the teacher variable. For a project at the beginners level such a design will be described here in some detail, as an example. Projects at other levels could be patterned on this example or more complex designs could be followed in which, by more sophisticated statistical manipulation of the data, the influence of more than one variable, simultaneously allowed to operate, could be measured. It should be kept in mind, though, that for such more complex designs the variables should clearly be independent from each other. (Cf. the criticisms on the conclusions from the Coleman Report.)

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I. SHORT TERM RESEARCH PROJECTS

A. Beginners Level (pre-reading).

As large a group of teachers as can be obtained and is manageable, for example 20, is divided into two groups. These groups are as nearly equivalent as far as teacher competence is concerned as it is possible to establish such competence. The groups of classrooms to be taught by these teachers are also roughly equivalent in such aspects as pupil-teacher ratios, children's background, geographical area, etc. All teachers are asked to teach a specific unit of English such as is commonly placed early in the linguistic sequence of TESL materials. For example, a unit might be selected based on the Noun Phrase, Be, Noun Phrase
pattern, with It, This, That, They, These, Those for subjects and specified nouns for the predicates. The unit might include the positive statements as initial statements or as answers to questions, the negative statements, the What-question transforms, and the Yes/No-question transforms.

All teachers are asked to spend a specified period of time per day on the TESL lessons, for example two times 20, 25, or 30 minutes per day.

All teachers receive equivalent amounts of training in the method they are asked to follow.

The teachers of one group teach this unit by the traditional audio-lingual method as exemplified, for example, by the SWCEL materials, the Michigan materials (Robinett), and many commercial materials. The teachers of the other group teach the unit by the experimental method which, in comparison with the traditional audio-lingual method, is characterized by an emphasis on explanation, by including perhaps even some requirement of the children to account for the choices they are making, by relatively long stages of requiring only non-verbal

1 This technique tends to make the learner conscious of what he is learning. Normally, of course, much learning takes place while the learner is not conscious of it. In general, however, deliberate educational efforts are quite often made on the assumption that conscious learning will be more effective than unconscious learning, though there are acknowledged variations with the age and the maturity of the learners and the types of learning that are supposed to take place.
shows of comprehension before oral production is required, and by reducing oral drills and timing and conducting them in such a way that the children understand that fluency acquisition is the purpose, not the learning of new material.

Regardless of how much formal or informal intermediate testing the teacher has done as part and parcel of the teaching/learning activities, a simple test of the entire unit, directly based on the vocabulary used in the lessons, is given as soon as the teacher estimates that the group is likely to do well on it. A crude class score of a set percentage (the total of correct responses divided by the total of elicited responses), for example 85% or 90%, is determined as the goal to be reached. As soon as this goal has been achieved, a "method test" is administered. This "method test" should include nouns with the singular form of which the children are familiar--or made familiar--but which have not been used in the teaching/learning activities. Such nouns should be included because the application of rules to new material constitutes the ultimate test by which the efficiency of a method can be measured.

This method should be partly a test of comprehension only, which could be administered as a group test, partly one of production. Besides the syntactical features to be tested, the test should have a phonological component, if feasible.

The data obtained in this procedure include, besides the test scores, the time spent to obtain the scores. This time factor should be considered
in the interpretation of the data: scores obtained after six weeks speak stronger for the efficiency of a method than similar scores obtained in eight weeks.

When all teachers have completed this assignment, their roles are reversed: the teachers who have taught by the traditional audio-lingual method are now asked to teach the next unit by the modified method and vice versa.

The next unit should, by preference, be as independent of the previous unit as possible. For example, after the unit described before, a unit might be selected on the third person singular form of the verb in the simple present tense in contrast to other person verb forms.

But for the linguistic content and the reversed method assignment, the procedure is the same as for the first unit, including a unit test followed by a method test at the end.

The data, again, have to be interpreted in terms of scores and of time spent. Teachers stated and observed preference for one method or the other also have to be included in the data to be considered.

From all the obtained data it may then be possible to draw reasonable conclusions about the relative efficiency of the two methods and, by implication, about the validity of the underlying assumptions.

B. Levels at which the students have acquired at least some skill in reading and writing.

1. The same basic design as outlined under A is followed. One
more modification of the traditional audio-lingual method is added as a trait of the experimental "competence-performance" method: the teacher resorts to writing, and thus the students are required to read, quite early in the presentation of the unit and reading and writing are included in the exercises before, or not later than, oral drills. The general sequence of the language arts through which the unit is taught/learned is then: listening and reading (early explained materials), writing, speaking, with overlaps of these activities once the unit is underway.

2. It might be of interest to attempt to measure the influence of this one variable, the early resort to reading and writing, as an isolated variable. For this purpose the project of B1 could be modified so that the only difference with B1 would be that writing and reading are postponed, as in the traditional audio-lingual method. The sequence in which the language arts are used is then: listening (in a relatively long stage with only non-verbal shows of comprehension), speaking (in drills), reading and writing. The differences with the traditional audio-lingual method remain then, as in A, the early resort to explanation and holding the students accountable for their choices and/or evaluations, the long phase of merely non-verbal shows of comprehension and the amount, timing and student-understood purpose of the oral drills.

II. LONG TERM RESEARCH

A. Mastery-Spiral Curriculum, combined with Competence-Performance.
In longer term research yet one more variable might be researched, namely the validity of the principle of teaching a unit for mastery before moving on to the next unit versus the principle of the spiral curriculum. In the "competence-performance" experimental method, as outlined before, there would seem to be ample inducement and opportunity for operating on the spiral curriculum idea, at least as far as performance is concerned: when the teacher is satisfied that a certain unit of language has been learned on the receptive level and that thus the time for oral performance drills has arrived, it may be advisable not to spend all the following lesson time on these drills, but to keep students' motivation as high as possible, through a sense of progress, by introducing new material for learning on the receptive level part of the time, while giving oral drills on the already learned material part of the time. The question is whether such simultaneous work on various material is confusing to the students—and perhaps the teacher, too—or whether, on the contrary, the varied activities with the different materials is so motivating as to offset possible confusion.

Research on this question would need a two, three, or four year run of the methods to be compared, it would seem. The linguistic sequence followed and the semantic content should be the same, of course. The teacher variable would be taken care of in such long term research by the involvement of many teachers. The ultimate method test in such a research project would have to be based on the linguistic
material presented, but include the use of this material in application activities, such as, for example, relatively loosely structured conversation and writing assignments by more or less broadly assigned topics. Reading might also be included in the method test.

B. **Linguistic Sequence.**

Arguments in favor of a particular linguistic sequence in contrast to other sequences might be researched in long term projects. Laboratory as well as commercial materials might be used in such research. To date, most materials have been developed with the traditional audio-lingual method in mind. As mentioned above, the influence of a particular linguistic sequence might conceivably be singled out for research in a design of simple comparison or measured by the application of more complex statistical operations in a design that combines more than one independent variable.

C. **Semantic Content.**

The influence of semantic content, and thereby the value of the assumed motivational factor that is expected to become operative as soon as students are presented with material that they feel to be relevant, might be researched, too. It would appear that a long term rather than a short term project would be indicated for such research. Initial motivation through appealing content may not be sustained over a longer period. (See further what has been said under II, B.)
D. Reading Instruction.

The questions of methods and materials in reading instruction, especially in the primary and intermediate grades, would seem very worthy of research. This should merely be mentioned here, though, since an attempt at even a rough outline of the design that such research might suitably take, would far exceed the limits set for this paper.

Reference should be made here to the attempt by Hayes, Lambert, and Tucker at arriving at other means of evaluation of methods and materials than by trial and test (Hayes, Lambert, and Tucker). To date, however, this attempt has not been concluded.
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