A COMPARISON OF TWO METHODS OF TEACHING SPANISH TO NON-Spanish-SPEAKING FOURTH-GRADE STUDENTS WITH THE AID OF NON-SPECIALIST TEACHERS

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The problem of this study is concerned with a comparison of two methods of teaching Spanish by non-specialist teachers in grade four. The experiment was conducted from October 12, 1970, to May 3, 1971, at Woodrow Wilson Elementary School, Denton, Texas. There was a total of 111 children involved in four participating sections. Section 1 students were taught with ITV (Channel 13, KERA educational television, Dallas, Texas) by teacher A. Section 2 students were taught EBF (a self-contained Spanish language course, *The Adventures of Miguelito*, produced by Encyclopaedia Britannica Films, Inc.) by teacher A. Section 3 students were taught ITV by teacher B, and section 4 students were taught EBF by teacher C. The teacher designated as "A" had a limited knowledge of Spanish, i.e. two years of high school Spanish, and approximately six months' experience conversing in Spanish while residing Torreon, Coahuila, Mexico. The other two teachers designated as "B" and "C" had no knowledge of Spanish, but had comparable background and experience in classroom teaching. The Spanish programs were presented on the educational television
station for fifteen minutes twice a week. Teachers A and B followed up each program with fifteen minutes of instruction. Teachers A and C taught the EBF approach the same length of time. Both methods were taught during comparable time periods.

The subjects used in this study were assigned to section by chance through dealing shuffled cards. Even though the four sections could have been assumed to be equivalent, I.Q. scores from the California Short Form Level II Test of Mental Maturity were used as a covariant in order to give additional assurance of equivalent groups. A second use of these I.Q. scores was to determine which subjects in each section would be categorized as the upper and lower third. The criterion measure used to determine the listening achievement levels of the four sections was the Common Concepts Foreign Language Test, Spanish; Form 1. The results of the analysis of covariance at the .05 level was used to test for significant difference between adjusted means for each of the sixteen null-stated hypotheses.

From the findings, it was concluded that 1) the EBF approach is superior to the ITV method when used by teachers with no proficiency in Spanish; 2) the EBF method and the ITV approach are about equally effective when used by teachers with a limited proficiency in Spanish; 3) the ITV method used by teachers with limited knowledge of Spanish is superior to the ITV approach used by teachers with no knowledge of Spanish; and 4) when teaching Spanish to students
of the upper third, the EBF approach is superior to the ITV method.

There are implications that 1) teachers with limited proficiency in Spanish appear to be more capable of providing adequate follow-up to an ITV Spanish program than are teachers without knowledge of Spanish, and 2) different results might have been obtained in this experiment if the EBF approach had been compared to other ITV programs.

One of the recommendations for future study is that research in the area of listening achievement of students taught by the EBF approach by non-specialist teachers be compared to listening achievement of students taught by other ITV programs by non-specialist teachers.
A COMPARISON OF TWO METHODS OF TEACHING SPANISH TO NON-SPANISH-SPEAKING FOURTH-GRADE STUDENTS WITH THE AID OF NON-SPECIALIST TEACHERS

DISSERTATION

Presented to the Graduate Council of the North Texas State University in Partial Fulfillment of the Requirements

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CHAPTER I

INTRODUCTION

The teaching of foreign languages in the elementary schools has grown with phenomenal rapidity and has now established itself as a well accepted practice today. Perhaps a neurophysiologist (8) pioneered the most cogent appeal for foreign languages in the elementary schools (hereafter referred to as FLES) by proposing that the child's mind seems to have greater plasticity and specialized capacity for acquiring a new language than does the mind of an adult, and that superior performance can be expected at ages eight, nine, and ten. To exclude FLES from the curriculum would deprive the child of an apparent opportunity for learning a new language during his optimum age.

Probably the most pressing problems FLES is confronted with are 1) the lack of competent language teachers, and 2) the need to establish an efficient program due to this teacher shortage (12, p. 217). It follows that if FLES is to be part of the curriculum, there are two possible courses of action: A) postpone FLES until teachers can be adequately trained, or B) develop materials that can be utilized by the non-specialist teacher (1 p. 130). If the former course of action were adopted, much teaching of English as a foreign language in the countries of Asia and Africa, quite apart
from many FLES programs, would have to be eliminated (12, p. 277). As to the latter course, much optimism exists in the development of FLES audio-linguistic materials that can be utilized by the non-specialist teacher.

Statement of the Problem

The problem of this study was to compare the effectiveness of two methods of teaching Spanish by non-specialist teachers in grade four.

Purpose of the Study

This study was planned to investigate the effectiveness of two programs designed to teach Spanish to non-Spanish-speaking fourth grade students. The programs compared were A) Channel 13, KERA educational television, Dallas, Texas, and B) a self-contained Spanish language course, The Adventures of Miguelito, produced by the Encyclopedia Britannica Films, Incorporated.

A secondary aspect of this study was to compare the listening achievement levels of the students when taught by two teachers with no proficiency in Spanish in contrast to a teacher with limited proficiency in Spanish.

Definition of Terms

For the purpose of this study, the following definitions were formulated:

1. ACTFL refers to the American Council on the Teaching of Foreign Languages.
2. **FLES** refers to foreign languages in elementary schools.

3. **FLES Specialist** refers to an elementary foreign language teacher with twenty semester or thirty quarter hours of foreign language study, two semesters or three quarter hours of a special FLES methods course, and two semesters or three quarter hours of student teaching in FLES.

4. **ITV** refers to instructional television.


6. **Upper Third and Lower Third** refers to subjects in the upper and lower third in each fourth-grade class as determined by I.Q. scores from the *California Short-Form Test of Mental Maturity, S Form, Level Two*.

7. **Target Language** refers to the foreign language under study.

### Hypotheses

The construction of the hypotheses was facilitated by using the symbols appearing below to identify the four different sections and teachers.

**Section I**, *(ITV) A.* Section taught by teacher with limited knowledge of Spanish using ITV: KERA Channel 13, Dallas, Texas.
Section 2, (EBF) A. Section taught by teacher with limited knowledge of Spanish using *Adventures of Miguelito*, produced by *Encyclopedia Britannica Films, Incorporated*.

Section 3, (ITV) B. Section taught by teacher with no knowledge of Spanish, using ITV.

Section 4, (EBF) C. Section taught by teacher with no knowledge of Spanish, who taught *Adventures of Miguelito*.

To carry out the purposes of this study, the following hypotheses were formulated:

1. There will be no significant difference in listening achievement between students in

   A. Section 1 (ITV) A and Section 2 (EBF) A,
   B. Section 1 (ITV) A and Section 3 (ITV) B,
   C. Section 1 (ITV) A and Section 4 (ITV) C,
   D. Section 2 (EBF) A and Section 3 (ITV) B,
   E. Section 2 (EBF) A and Section 4 (EBF) C,
   F. Section 3 (ITV) B and Section 4 (EBF) C,
   G. Section 1 (ITV) A combined with Section 3 (ITV) B, and Section 2 (EBF) A combined with Section 4 (EBF) C,
   H. Section 1 (ITV) A combined with Section 2 (EBF) A, and Section 3 (ITV) B combined with Section 4 (EBF) C.

2. There will be no significant difference in listening achievement between students of the upper third in
A. Section 1 (ITV) A combined with Section 3 (ITV) B, and Section 2 (EBF) A combined with Section 4 (EBF) C;
B. Section 1 (ITV) A combined with Section 2 (EBF) A, and Section 3 (ITV) B combined with Section 4 (EBF) C.

3. There will be no significant difference in listening achievement between students of the lower third in
A. Section 1 (ITV) A combined with Section 3 (ITV) B, and Section 2 (EBF) A combined with Section 4 (EBF) C;
B. Section 1 (ITV) A combined with Section 2 (EBF) A, and Section 3 (ITV) B combined with Section 4 (EBF) C.

4. There will be no significant difference in listening achievement between boys and girls in
A. Boys in Section 1 (ITV) A combined with Section 3 (ITV) B, and girls in Section 1 (ITV) A combined with Section 3 (ITV) B;
B. Boys in Section 2 (EBF) A combined with Section 4 (EBF) C, and girls in Section 2 (EBF) A combined with girls in Section 4 (EBF) C.

Significance of the Study

FLES Related to Achievement

A great deal of criticism has been made of FLES programs in past years; i.e., there was no real evidence to
support the introduction of foreign languages in the elementary schools. This is not the case today, because there now exists a great deal of experimental evidence available to support the theory that foreign language study should be included in elementary curricula.

First, studies have shown that FLES has had no deleterious effects on achievement in other subject areas and, in some instances, there is evidence that FLES programs may increase achievement in other subject areas.

Lapto (6) reported in 1963 that the daily introduction of fifteen-minute FLES lessons for one year showed a significant increase in achievement for groups studying a foreign language over groups not studying a foreign language in seven out of eight instances on the Stanford Achievement Test. Gaarder and Richardson (5) found in a study in Florida that no significant difference existed on Stanford Achievement Tests between primary FLES and non-FLES students. A similar study (11) in Albuquerque, New Mexico, showed fourth and sixth grade FLES students made significantly better gains on the California Test of Mental Maturity than did the non-FLES control group.

Second, there is now evidence that supports the theory that FLES students perform better in foreign language study in high school than do non-FLES students. In Fairfield, Connecticut, a study (2) was designed to compare high school foreign language students with a FLES background to high
results from the Modern Language Association Cooperative Foreign Language Tests were as follows:

1) FLES-Group sophomores significantly excelled non-FLES sophomores in all foreign language skills; 2) FLES-group sophomores significantly excelled non-FLES juniors in audio-lingual skills and equaled them in visual-graphic skills; 3) FLES-group sophomores were equal to or better than non-FLES seniors in audio-lingual skills but were poorer in visual-graphic skills; 4) FLES-group juniors excelled their non-FLES peers in all language skills and were equal to or better than non-FLES seniors in these skills; 5) FLES-group seniors excelled their non-FLES peers in a majority of all language skill measures.

In three high schools in Buffalo, New York, Vocolo (13) matched an experimental FLES group with a control non-FLES group on several variables. The post-test results on the Modern Language Association Cooperative French Test Battery showed the FLES group average mean scores to be significantly better at the .05 level in listening, speaking, and writing French than the non-FLES group.

In Somerville, New Jersey, a study (14) completed in 1962 compared 1,530 FLES and non-FLES high school graduates' foreign language grade averages. The results showed that FLES students' grade averages were ten per cent higher than were the non-FLES students.

Based on the above evidence, it seems that the introduction of elementary languages in elementary schools has no detrimental effects on educational development, and in some cases, has been shown to enhance development. Though further
evidence is needed for an unqualified declaration for teaching foreign language in elementary schools, the evidence is sufficient to recommend experimental studies to determine the effectiveness of the various programs of instruction already in use when taught by non-specialist teachers.

The Need to Compensate for the Shortage of Language Specialists

Scarcity of Competent Teachers

According to two recent surveys (4, 7), FLES programs have been increasing at a phenomenal rate, while on the other hand, certification requirements for FLES teachers have been shown to be lagging in comparison to the increase.

In an N.E.A. report (7), December, 1967, 95 per cent of the large school systems with 100,000 or more students included foreign languages in the elementary schools. In school systems of 50,000 to 99,999 students, 75 per cent offered FLES programs. In small school systems, 50 per cent included foreign languages in elementary schools.

Although the N.E.A. survey showed FLES to be offered quite extensively throughout the United States, a questionnaire (4) sent in 1968 to the educational departments of fifty states and to those of Washington, D. C., and Puerto Rico indicated no real concerted efforts to set up standard requirements for FLES teachers.

All fifty-two departments of education responded to the questionnaire and it was found that
A) In fifteen educational subdivisions, provision exists only for secondary foreign language teachers and no provision for elementary foreign language is available. B) In four states, there are no restrictions on what an elementary teacher may teach, including foreign languages. C) Twenty-four departments indicate that a foreign language teacher may be certified to teach all levels, elementary and secondary. D) Eight departments indicate both all-level and elementary provisions for certification.

Authorities (e.g. 1, 3, 9, 10, 12) are in agreement that FLES programs suffer from a shortage of competent foreign language teachers. The same authorities agree that much use of media such as ITV, tape and disc recordings, audio visual materials, printed guides, etc., must be used to compensate for non-specialist teachers until the shortage is eliminated. Several studies show that non-specialist teachers can do an adequate job of teaching foreign languages with the aid of ITV, and tape and disc recordings, and reports on these studies are included in Chapter II under the section of ITV and multi-media approaches.

Limitations

This study was limited to those fourth grade students enrolled at Woodrow Wilson Elementary School, Denton, Texas. It could not be assumed that the subjects were from a representative sample of all fourth grade students, because Woodrow Wilson serves what is considered to be a relatively affluent area in Denton. Ninety-five per cent of the subjects lived in houses that were estimated to range in value
from twenty to fifty thousand dollars. Five per cent of the subjects were Negroes who were bussed to the school from a somewhat lower socioeconomic neighborhood. This limitation was imposed because 1) it was the only school in the Denton area equipped with both ITV and EBF multi-media systems instruction, and 2) the limitation ensured better control of methods and closer contact with teachers.

The second limitation was that the relative effects of the two programs being compared were limited to listening achievement as measured by the Common Concepts Test of Foreign Languages, because it was the only standardized test in Spanish available for use with fourth grade non-Spanish-speaking students.

Basic Assumptions

It was assumed that the two teachers without any knowledge of Spanish were sufficiently equal, and that any difference in pupils' test scores was not attributable primarily to the difference in the two teachers.

Summary

This chapter has provided an introduction, a statement of the problem, and the purpose for which the study was undertaken. It also has provided a definition of the terms, presented the hypotheses formulated for the study and the significance of the study. The limitations and the basic
assumptions are also included in this chapter. A review of the literature is presented in Chapter II.


CHAPTER II

REVIEW OF THE LITERATURE

The ideas behind the FLES movement have been the object of a great deal of controversy among influential curriculum planners in achieving its present status. The movement has stimulated healthy debate in trying to determine if the public schools would be justified in its adoption.

The greatest obstacle to the FLES movement has been the lack of qualified foreign language teachers. In view of this shortage, it is surprising that FLES is gaining in strength throughout the United States.

One approach to the problem of a shortage of specialized foreign language teachers is the use of non-specialists with the aid of audio-visual materials. Presented in this chapter are some authoritative polemics aimed at FLES, and research pertaining to the audio-lingual method, the use of ITV, and studies related to multi-media instructional systems. Some of the studies interspersed in this chapter show that these approaches can be used successfully by non-specialist teachers.

Foreign Languages and the Curriculum

Arguments in Favor of FLES
In the early 1950's, the FLES movement gained valuable support in Earl McGrath, then U. S. Commissioner of Education, and James B. Conant, an internationally known and respected scholar. McGrath (43) proposed that in order for the United States to maintain its leadership in international relations, foreign language study at an early age should be given first priority by elementary teachers and administrators. Conant (18, p. 26) listed the reform of instructional methods and materials in foreign language at the lower grade level as one of the ten major problems that faced education in the fifties.

The impetus provided by the two above authorities was culminated when modern foreign languages were included in the National Defense Education Act of 1958. Curriculum planners outside the foreign language field began to devote more attention to the FLES movement; i.e., they began to question and analyze the need for early foreign language instruction.

Ragan (47) contended that an early introduction of FLES programs was practical, because of the increasingly interdependence among nations necessitates the reduction of language barriers. Several others (37, 44, 46, 57) saw the need to develop understanding and appreciation of other cultures which could best be achieved through FLES programs. Stendler, Klausmeier, and Dresden (60, 37) supported this position, and further emphasized that for language study to
be truly effective, it must be begun at an early age and continued over a long period of time.

A second factor considered in the desirability of FLES was that children apparently learn languages easily. Several (35, 41, 47, 53, 60) agreed with Peterson and Hayden (46, p. 221) that psychological development of the child's brain and the flexibility of speech organs enables the child to speak the target language with more facility than does the adolescent or adult. The psychological advantage lies with the child in that he experiences fewer inhibitions, and is therefore less restricted in the imitation of sounds required in foreign language study.

Third, authorities (41, 46, 53) pointed to the fact that an additional language would enable probable future leaders, such as gifted children, the opportunity to communicate more effectively with others.

Fourth, curriculum planners (6, 35, 53) stressed the fact that FLES should improve relations in certain communities and areas with varied cultural backgrounds and ethnic groups.

**Arguments Against FLES**

FLES has had to cope with a certain amount of skepticism. Probably the most valid criticism aimed to discredit FLES was, and is, the lack of competent foreign language specialists. Curriculum-designers (6, 41, 44, 47) have been
dubious about the ability of FLES to overcome such a formidable obstacle.

Second, authorities (41, 44, 46) have questioned if FLES would help to eliminate animosity among people with differing backgrounds and ethnic identities. Lee and Lee (41, p. 356) noted specifically that many European countries share common languages, yet war and hatred have been more rampant than admiration and respect. Peterson and Hayden (46) reasoned that if peace was to be the specific objective of FLES, then FLES should concentrate on the language of potential adversaries.

Third, curriculum planners (6, 44, 46) have shown concern about an overcrowded curriculum. It is felt that the elementary curriculum has already been overstretched, and perhaps a valuable subject might need to be sacrificed in order to make room for foreign language study.

Fourth, several authorities (e.g. 44, 46, 53) have raised the question whether or not FLES would be of value in an artificial classroom environment. Unless the child has need to communicate in the second language, it is doubtful if the acquired knowledge would have any permanence (46).

Curriculum planners have presented valid arguments in trying to determine if foreign language study in public schools is worthwhile. Probably the strongest argument in favor of FLES is that children seem to have the ability to acquire a second language with more ease than do an
adolescent or adult, and, therefore, the elementary schools should take advantage of the opportunity. One of the strongest arguments against the FLES movement is the lack of competent foreign language teachers. If an effective approach to teaching FLES with non-specialist teachers could be found, teaching FLES would be much more feasible.

Research Related to the Audio-Lingual Approach in Foreign Language Instruction

The inclusion of modern foreign languages in the National Defense Education Act of 1958 has led to increased efforts to improve methods and materials incorporated in FLES. Since that time, considerable experience and research has resulted in FLES advocates (e.g. 2, 10, 23, 24, 30, 63) becoming strongly committed to the audio-lingual approach, which has practically eliminated the earlier traditional method of grammar-translation.

The audio-lingual approach is a derivative of the linguist-informant method used in the Army Specialized Training Program during World War II to train American soldiers to communicate in foreign languages within a few months time (2). This was accomplished by use of native informants, explanations of structure by linguistic experts, and long hours of drill and active practice (48, p. 35). This approach was found to be highly successful in that American service personnel achieved a high degree of
oral-aural skill in the situations for which the training was intended (48, p. 3).

After World War II, foreign language teachers and educational authorities began to study techniques developed by the "Foreign Service Institute, the Defense Forces Language Schools, and institutions like the Hartford Seminary Foundation for Missionaries" (8, 48, p. 263; 35). Techniques were developed and tried out experimentally in schools, and the earliest materials of this type appeared on the American market in the late fifties (48, p. 35). The audio-lingual approach, which is the outgrowth of these efforts, has now been adopted as a technique throughout the world.

The ACTFL (33, pp. 191-2) states some specific guidelines as to what constitutes the audio-lingual method of teaching a foreign language. Listed and referred to as the eight basic tenets of the audio-lingual approach, they are as follows:

1. Learning proceeds in this order: (a) hearing and understanding; (b) speaking; (c) usually much later--reading; (d) writing. The tendency is, therefore, away from "book-centered" materials, and toward extensive audio-lingual practice to develop a new set of habits.

2. Instruction proceeds in the initial stages without reference to the printed word.

3. Teaching pronunciation requires extensive hearing of the new sounds, preferably contrasted with similar sounds both in the foreign language and the language of the learner, followed by careful drill in their production.

4. Spoken language is initially presented and practiced in what are called pattern sentences or
model sentences. Each pattern sentence contains a productive structure, i.e., one which, when mastered, will permit the generation of new utterances by substituting new vocabulary; e.g., subject-verb-object in English. Pattern sentences are subsequently manipulated in drills designed to highlight changes in form or order which occur within the structures. Such drills are called pattern drills or structure drills.

5. Pattern sentences may or may not be presented originally in dialogue form.

6. Pattern sentences are practiced to the point of "overlearning", i.e., until they become reflex-like habits.

7. The amount of vocabulary which must be acquired is severely restricted until a large number of structures have been mastered.

8. Translation back and forth between the foreign language and the native language is avoided. (32, pp. 191-192)

As illustrated by the preceding description, the audiolingual method of teaching languages initially stresses the use of the ear and tongue. Although the delay of reading and writing is widely accepted, the advocates of this approach make the assumption that students trained by this method will not only learn to speak and understand the target language, but will also gain comparable skills in reading and writing.

Perhaps one of the most comprehensive studies to support this claim was conducted by Scherer (49). This two-year study included all beginning students of German at the University of Colorado in the fall semester of 1960. The control group was approximately 130 students taught traditionally with the use of text books. The experimental group
had approximately 150 students taught by the audio-lingual method without text books. The results of this study showed that the experimental group proved superior in the ability to speak and understand German in contrast to the traditional group, and could read at the same level of competence.

In two reports (55, 56), three studies conducted in Pennsylvania compared students taught traditionally in contrast to students taught audio-lingually with the aid of language laboratory equipment. The first study involved 2,171 students randomly assigned to classes of French and German. The findings produced no significant differences between the traditional and audio-lingual students in the areas of listening, speaking, reading, and writing. A replica of this study was undertaken that eliminated the audio-lingual use of the tape recorder and laboratory equipment. Although speaking and writing measures were not analyzed because of the small sample involved, the study did confirm all other results of the original study.

In a continuation of the study, the second year included 1,090 students. The findings after two years of instruction showed no significant differences between the traditional and audio-lingual approach in the areas of listening, speaking or writing. However, a significant difference did exist in favor of the traditional group in reading.
Other than the traditional, the audio-lingual method has been contrasted with the cognitive code learning theory. As defined by Carroll (14, p. 278), the cognitive code theory may be thought of as a "modified, up-to-date grammar-translation theory." Chastain and Woerdhoff (16, p. 269), describe it as: "1) exercise activities designed to teach grammatical understanding; 2) deductive explanation prior to practice with structural patterns; 3) practice with all language skills from the beginning of the course."

In two reports on the same study (15, 16), ninety-nine Spanish students at Purdue University were randomly assigned to four sections, two cognitive and two audio-lingual. The findings produced no significant differences between the two methods in listening and speaking, but a significant difference did exist in favor of the cognitive code approach in reading.

Sprague (58) designed a study that contrasted the audio-lingual, traditional, and eclectic approaches to teaching Spanish. Subjects were tenth grade students drawn from two high schools in California. The findings revealed significant differences for speaking in favor of the eclectic group and reading by the audio-lingual group.

A study by Lusetti (142) utilized subjects from seven seventh grade classrooms in order to compare the audio-lingual method of teaching Spanish in contrast to the
cognitive code approach. The findings did not produce any significant differences between the two methods.

According to Scherer (49), course objectives should determine methodology in teaching foreign languages. If the ability to speak the target language is to be the major objective, then the audio-lingual approach would seem to be the most appropriate method. He goes on to say that research evidence points to the fact that the audio-lingual method provides a good foundation for acquiring skills in listening and reading.

However, if writing the target language is to be the predominate objective, then the traditional approach would seem to be the likely choice (49).

Research Related to Foreign Language Instruction Via Instructional Television

The FLES emphasis on listening and speaking skills, coupled with the lack of foreign language teaching specialists, has led to a more extensive use of instructional television. In a poll taken in 1965 (45), a 4 per cent sampling of 16,000 school administrators in 50 states with 42 per cent responding, showed that 43 per cent of the school systems used ITV in elementary schools. In January 1965, a questionnaire (1), sent to 46 large school systems, showed that 21 districts used ITV with untrained teacher follow-up in foreign language instruction. In 1967 (7), the subject distribution for the intermediate grades listed science as
the only subject that outranked foreign language in the number of hours schedules. Two-thirds of the large cities’ schools used ITV for elementary grades.

There is now enough research evidence that supports the claim that ITV is at least as effective as is the traditional classroom approach to education. In 1961, Tanner (62) reported that out of 281 studies, almost 90 per cent of the gross comparisons between ITV and conventional classrooms revealed no substantial difference in achievement or informational gain. In 1962, Schramm (50) reported that out of 393 studies comparing ITV with conventional classroom teaching methods, 21 per cent of the studies learned significantly more from ITV and 14 per cent learned significantly less.

Grades three through nine experienced the greatest productivity via ITV, i.e., 33 per cent learned significantly more from ITV and 11 per cent learned significantly less. A later report (6) showed the same equivalence for ITV and classroom instruction.

In 1963, Stickell (61) reported that the experimental design of many of the studies that compared ITV with the conventional classroom approach made the interpretation of the over-all results difficult. Upon examination of 250 comparisons, Stickell claimed that 217 were "uninterpretable," and ten as "interpretable." All 10 of the "interpretable" comparisons and 20 of the partially "interpretable" studies failed to produce significant results.
In Alabama (40), 181 ITV high school students with non-qualified teachers were compared with students who received face-to-face instruction by qualified Spanish teachers. The experimental groups used ITV programs in Spanish taught by a university professor. The classes were supplemented with face-to-face follow-up by qualified or non-qualified teachers. The control groups were taught entirely by face-to-face methods. The results showed that students taught the audio-lingual Spanish skills by ITV and supplemented by non-qualified teachers were as proficient in those skills as students taught by qualified teachers in a face-to-face situation. Students taught by ITV and qualified teachers did learn the audio-lingual skills better than did the non-ITV students taught by qualified teachers, or ITV students taught by non-qualified teachers.

In a similar study (17), no significant differences were exhibited when seventy-two high school and college students received ITV audio-lingual Spanish instruction without qualified teachers compared to face-to-face instruction with qualified teachers. The results showed that the ITV group with qualified teachers performed significantly better than did the ITV group with non-qualified teachers, and better than the face-to-face group with qualified teachers at the .05 level of confidence. There were no significant differences between the ITV groups without qualified teachers and the face-to-face groups.
In Nebraska (58), 23 high school and 14 college students were taught Spanish vocabulary via ITV compared with a control of 127 high school students taught face-to-face. The results showed that ITV students had significantly lower achievement scores at the end of the course than did the control group. However, the author reported that "a number of the ITV students said flatly that they did not like the teacher."

A study by Bundy (13) contrasted an experimental ITV presentation with a face-to-face control group in Elementary Spanish at the University of Detroit. The same instructor taught both groups. The results showed that twenty-three out of twenty-four comparisons favored the ITV presentation over the conventional method.

An extensive study (26) in Florida compared ITV with face-to-face instruction in Spanish and ten other subject areas. The sample involved 30,000 elementary and secondary students. The results favored face-to-face instruction in the elementary schools, and were almost equally divided between ITV and face-to-face taught groups in the secondary schools.

In a study (59) that included third grade French, fourth grade Spanish and fifth grade Spanish, science, and health, pupils felt that they were learning as much on ITV as they would in a face-to-face situation. They also felt that ITV helped to make their lessons more understandable.
Himmler (28) designed a study that involved a total of 1,351 fifth grade pupils taught reading, arithmetic, and French via ITV compared with face-to-face presentation. The results showed that no significant differences existed in scores of pupils in the ITV and face-to-face groups on the standardized tests.

Similar results (34) were found in a study that involved a total sample of 10,266 students of which there were 973 fifth grade and 1,047 sixth grade Spanish students. The author concluded that the number of comparisons made showed that ITV was as effective as the face-to-face approach.

Shepherd (52) designed a study that compared the achievement of aural recognition in Spanish by third-year primary pupils taught by radio in contrast to ITV. The same language specialist presented the radio and ITV programs and both groups were taught by the same classroom teacher. The findings between the radio and ITV groups produced no significant differences.

Research Related to the Multi-Media Package as a Systems Instructional Approach

The multi-media package as a systems instructional approach is described by Norton (12, p. 506) as a set of instructional materials with specific purposes and objectives. The kits often include paperback books, filmstrips, realia, phonograph records, or tapes, etc. The kit is
accompanied by a manual which suggests how the resources should, or might, be deployed.

The most important facets of the systems approach to learning are the purposes. Banathy (3), Brown, et al., (11), list the following procedures that describe the necessary steps to the system approach to learning.

1. Objectives.—Define the specific tasks which the learner is expected to perform at the conclusion of the program.

2. Methods.—Choose the most promising methodology, or teaching strategy, that will insure students will learn what is set forth in the objectives.

3. Components.—The audio-visual aids, resources, and tools required for the program.

4. Define Roles.—What tasks are students and teachers expected to perform?

5. Implementations or Input Systems.—Put the program into operation.

6. Evaluation.—The output system designed to determine if objectives are being met.

7. Planned Change.—Revise as necessary, i.e., introduce changes in function and components in order to improve the performance of the student.

Such a program which conforms to the above outlined procedures is The Adventures of Miguelito, a multi-media instructional system, produced by Encyclopedia Britannica.
Films, Incorporated. This EBF kit is described (30) as a core course in Spanish which can be used by non-specialist teachers. The procedures are as follows (4, 30):

1. Objectives.--The first objective is to promote good listening habits. The second objective is to progress from listening-comprehension to speaking.

2. Methods.--The audio-lingual method of teaching Spanish is used.

3. Components.--The components are comprised of disc records and matching illustrated lesson books.

4. Defined Roles.--The guide explains that the teacher's role is to discuss the pictures accompanying each lesson before the recording is put into operation. The student's role is to follow the story in the illustrated lesson book.

5. Implement the Program.--Put the program into operation by playing the record.

6. Evaluation.--The records call for simple step-by-step responses. The children are asked to relate meanings to the keyed lesson book illustrations. The teacher provides the correct answers so that the student can check his progress.

7. Planned Change.--The teacher must judge when students have acquired good habits in listening-comprehension. After successful listening-comprehension is established, the teacher may introduce the speaking part of the recording.
The speaking practice is divided into repetition and pattern practice.

Expansion and adaption of the program by the teacher is permissible and encouraged. However, the course is designed to provide adequate instruction without any expansion or adaptation.

By definition, the multi-media package as a systems instructional approach could include the gamut of available audio-visual aids. Paperback books, realia, opaque and overhead projectors, silent and sound filmstrips are but a few of the audio-visuals included in such kits. However, the EBF kit under investigation in this study utilizes the phonograph as its basic audio component. Therefore, the subsequent research in this section will be narrowed to relevant studies in foreign language teaching that incorporates the use of tape and phonograph recordings.

The current emphasis of the audio-lingual approach has encouraged the widespread use of tapes and disc records. These materials provide the student with a) first-hand experiences of listening to native voices and pronunciation, and b) pattern drills that enable the student to utilize his newly discovered vocabulary in the structure of the target language.

Brown and Fiks (11) reported in 1967 that 75 per cent of nineteen leading language training programs used tape recorders. The NEA (21) reported in 1968 that 79 per cent
of elementary and secondary teachers of foreign languages used phonographs, and that 53.8 per cent used tape recorders.

According to a survey of studies by Birkmaier and Lang (9), research supports the theory that language laboratories which include tape recorders are a definite asset in foreign language teaching. Numerous authorities (e.g., 21, 29, 36, 38, 51) concur that recordings are a vital ingredient of the audio-lingual program.

In a study conducted by Larew and Lotten (39) four third grade classes employing the audio-lingual approach were divided into two groups. The control group consisted of thirty-seven pupils and was taught by a foreign language specialist. The experimental group was taught by a non-specialist who operated the tape recorder and displayed the same visuals as were displayed in the control group. The tapes used in the experimental group were recorded by the specialist teacher in the control group. Results were obtained from a mid-test and a post-test that measured vocabulary, comprehension, and articulation. The mid-test favored the control group, but the post-test resulted in no significant differences between the two groups. The authors concluded that tapes are a good substitute for foreign language specialists when teaching Spanish to primary students.

Gibson (25) found in a similar study that achievement of sixth and seventh grade students in conversational
Spanish taught by a non-specialist teacher who used tapes was equal to that of other students taught by a specialist.

In Fayetteville, White (64) designed a study that contrasted the conventional Spanish teacher with an experimental type of instruction by electronic tapes. The experimental groups were taught the same material by electronic tapes which was prepared by the Spanish teacher and transmitted to the classrooms by the school intercommunication system. The findings produced no significant difference between the control group and experimental group I, but both of these groups performed at a much higher level than did experimental groups II and III.

In the Detroit public high schools, Dostal (22) conducted a study with first year high school French students that contrasted an experimental audio-visual group of 282 pupils with a control group of 283 pupils that used standard materials and teaching procedures. The experimental group had the disadvantage of having more pupils in the lower scale of intelligence quotient, but had the advantage of listening experiences in the language laboratory beyond the regular class period on a voluntary basis. The findings based on the Cooperative French Test showed the control group achieved significantly better in reading, vocabulary, and grammar. However, the experimental group achieved significantly better at the .01 level of confidence on the audio-visual French test in the ability to understand and speak
the target language. The experimental group maintained significantly better achievement in the ability to speak at the end of the second semester; however, they lost their significant advantage in understanding the target language.

At the University of Washington, Creore and Hanzeli (20) contrasted an experimental audio-visual approach based on the Borghum Salvan and Mueller text, *Images de France*, with a conventional method that used the Harris and Leveque text, *Basic Conversational French*. The experimental group used a set of 35 mm color slides which complimented the text, a pre-recorded tape for each lesson to which students listened in the language laboratory, and several other textual materials. The conventional group used a set of pre-recorded tapes supplemented by readers, and nine locally-recorded tapes. The audio-lingual method was stressed, and the language laboratory was attended for the same length of time by both groups. The experimental audio-visual group used slides for each lesson introduction, again for pattern drill, and for review in the period the following day. The conventional group used dialogues, and some of the exercises included translation. The results produced significantly greater achievement in the ability to speak the target language in favor of the experimental group. However, the control group performed significantly better in reading and writing skills. The authors concluded that a college teacher would achieve a better balance of skills by using the
conventional method over the audio-visual experimental method which was used in this particular study.

Summary

The idea that foreign language study should be included in our elementary schools has generated a great deal of controversy among curriculum authorities. Most authorities agree that children seem to have a greater facility for learning a second language than do adolescents or adults. However, it was also pointed out that there is a scarcity of competent foreign language teachers in the elementary schools. Therefore, it would appear feasible to include FLES if instructional materials and methods can be found, making it possible for the non-specialist teacher to do an adequate teaching job.

Although the limited research has not shown the audio-lingual approach to teaching foreign languages to be the panacea, it has demonstrated its effectiveness in the areas of speaking and understanding. The audio-lingual approach has garnered a great deal of support from FLES authorities, because development of the ability to speak and understand the target language is the primary goal of most FLES programs.

Studies have shown ITV to be at least as effective as the conventional method of teaching foreign languages. Research has supported the idea that ITV increases in strength
as an effective teaching instrument where adequate follow-up is provided without the specialist teachers.

In most cases, tapes and disc recordings have been shown to enhance the effectiveness of foreign language programs. These tools are usually incorporated in the programs to provide students the opportunity to hear the foreign language spoken by a specialist and for pattern drill practices.

The results of several studies have provided some evidence that non-specialist teachers can do an adequate job of teaching foreign languages in the elementary schools with the aid of audio-visual equipment when compared to specialist teachers who used conventional methods.
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42. Lusetti, Walter I., "A Comparison of Approaches to Beginning Spanish Instruction in Grade Seven," *Dissertation Abstracts*, XXVIII (1968), 3190-A.


CHAPTER III

METHODS AND PROCEDURES

The purpose of this chapter is to describe the experimental study which was conducted. The study was designed to investigate the effectiveness of two programs used to teach Spanish to non-Spanish-speaking fourth grade students. A secondary aspect of this study was to compare the listening achievement levels of the students when taught by two teachers with no proficiency in Spanish with a teacher having limited proficiency in Spanish.

This chapter is divided into five sub-sections: the description of the subjects and teachers involved in the study, a description of the two methods used in the study, the instruments used to evaluate the relative effectiveness of the two methods, the procedures used in collecting the data, and the procedures used in analyzing the data.

Description of Subjects and Teachers

The subjects of this study were the non-Spanish-speaking members of four fourth grade classrooms at Woodrow Wilson Elementary School, Denton, Texas. The area served by the school was considered to be relatively affluent in the community, and it was estimated that ninety-five percent of the subjects lived in houses that ranged in value...
from twenty to fifty thousand dollars. Approximately five per cent of the subjects were Negroes who were bussed to the school from a somewhat lower socioeconomic neighborhood.

When the study was initiated, there was a total of 120 subjects, and each of the four intact groups consisted of thirty students. The membership of each class was determined by chance. Nine students transferred from the school while the study was in progress. Of the remaining 111 students, section 1 contained 27 students; section 2, 28; section 3, 26; and section 4, 30.

Three teachers participated in the experiment. The teacher designated as "A" had a limited knowledge of Spanish, i.e., two years of high school Spanish, and approximately six months' experience conversing in Spanish while residing in Torreon, Coahuila, Mexico. The other two teachers had no knowledge of Spanish, but had comparable backgrounds and experience in classroom teaching. The teacher designated as "B" had a Bachelor of Science degree with twenty years teaching experience, and teacher "C" had a Master of Education degree with nineteen years teaching experience.

The four sections used in this study were assigned the following treatment: Section 1 students were taught ITV by teacher A, section 2 students were taught EBF by teacher A, section 3 students were taught ITV by teacher B, and section 4 students were taught EBF by teacher C.

Description of the Methods
The ITV course used in this study was Conversational Spanish II, which utilized the audio-lingual method, and was taught by a language specialist. The program was presented by an educational television station, Channel 13, KERA-TV, Dallas, Texas. The Televiewing Guide (9) states the responsibilities of theteachers and the concepts of the program as

The burden of the technical presentation lies with the television teacher; the responsibility of the classroom teacher is the direction of the drills and repetition necessary for retention on the part of the children. It is hoped that this can be accomplished regardless of the teacher's background in the language.

The above instructions were followed throughout the program by teachers A and B, and every effort was made to follow up each program as was recommended by the Guide.

The other program used in this study was The Adventures of Miguelito, (hereafter referred to as EBF), a multi-media instructional system kit produced by Encyclopaedia Britannica Films, Incorporated. The kit is described (5) as a core course in Spanish that can be used by non-specialist teachers. The catalogue (6) states that the students follow the adventures of a little Mexican boy very much like themselves. The components consist of disc records and matching illustrated lesson books of 150 lessons. The students follow the matching illustrations in the lesson books as they listen to the records. The records call for simple step-by-step responses, and the students relate meaning to the keyed lesson books.
Teachers A and C decided when students had acquired good habits of listening-comprehension. After listening-comprehension was established, the teachers introduced the speaking part of the recording. The speaking practice was divided into repetition and pattern practice.

Instruments

The **California Short Form Level II Test of Mental Maturity** (hereafter referred to as CSTMM) was used to obtain a total intelligence quotient. The test is comprised of two sections, Non-Language and Language. The Non-Language Section is composed of tests one through four, and it stresses the recognition of logical analysis of abstract relationships. The Language Section is made up of tests five through seven, and is designed to sample the ability to comprehend verbal and numerical reasoning, and accuracy of recall.

According to Hawes (4, p. 15), the CSTMM is "one of testings 'Big Six,' and is taken by more than five million pupils a year throughout the U. S. in its regular and short form editions." According to Stanley (3), teachers with little or no formal background in measurements should be able to administer the test with little difficulty.

The CSTMM, as reported in the California Test Bureau "Reliability Report," has established a reliability coefficient of .89 with the Kuder Richardson No. 21 formula. The correlation between the CSTMM Short Form and the CSTMM Long Form was reported to be .74.
The Common Concepts Foreign Language Test, Spanish, Form 1 (hereafter referred to as CCFLT), was used to test the listening comprehension of all students. According to the authors (2, p. 7), the test was specifically designed to measure basic language achievement of students taught by the audio-lingual approach. Valette (11, p. 361) states that "the test provides a measurement of overall language proficiency," and several other FLES authorities (e.g. 2, 4, 7, 11) recommend this type of test be used to evaluate and measure listening comprehension for pupils with one to three years of foreign language instruction. The authors (1, p. 7) recommend the CCFLT for students who have had enough foreign language to be placed at achievement level 1.

The CCFLT Form 1 reported a reliability coefficient of .92 Kuder-Richardson formula No. 21 from a sample of 1,800 elementary subjects who had one to three semesters of Spanish. The test has construct validity, i.e., it was written by experts in foreign languages and was reviewed and evaluated by other experts. The correlation between the CCFLT Form 2 and students' grades was reported to be .72 from a sample of 172 elementary students (1, pp. 8-9).

The authors (1) recommend that the CCFLT be administered to students by a tape recorder. A native voice reads each of the stimulus sentences carefully and distinctly, and the students indicate their understanding from sets of four colored pictures, the one that has been described. The test
is comprised of eighty questions and takes approximately one hour to administer.

Collection of the Data

Permission to pursue this study was granted by school administrators in the Denton Independent School District in the fall of 1970. Afterwards, the proposed study was discussed with teachers who would later be designated as B and C, and both exhibited a favorable attitude toward the experiment. It was decided that the teacher with a limited amount of Spanish would be designated as "A", and would teach both methods used in this study. A flip of a coin determined that teacher "B" would use the ITV method, and teacher "C" would use the EBF approach.

The teaching program was initiated when Channel 13, KERA-TV, Dallas, Texas, began broadcasting the Spanish lessons on October 12, 1970. The Spanish programs were presented for fifteen minutes twice a week.

Teachers A and B followed up each program with fifteen minutes of instructions. Teachers A and C taught the EBF approach the same length of time. Both methods were taught during comparable time periods.

Although the sample cannot be assumed to be representative of populations in other geographical areas, students used in this study were assigned to sections by chance through dealing shuffled cards. Even though the four sections could have been assumed to be equivalent, the CSTMM was administered
to all participating students on October 15, 1970 to further insure equivalency. The IQ scores taken from the CSTMM were considered unlikely to be changed or influenced by the study, and were therefore used as a covariant to equate the sections on a statistical basis.

Since the study was undertaken in one building, it was possible to exercise caution in regards to the faithful following of the procedures and time periods.

The experiment was terminated on May 3, 1971, when the criterion variable, the CCFLT, was administered to all sections by the investigator. The recommended tape recording was used, and each student was provided a listening station in order to eliminate outside noise contamination.

Procedures for Analysis of Data

The sixteen hypotheses formulated for this study were tested by the analysis of covariance (8). The results of the IQ scores taken from the CSTMM were used as the covariant to further insure that the four sections were equivalent. Results of the listening achievement scores taken from the CCFLT were used as the criterion variable.

All data were collected on May 3, 1971, and taken to the Computer Center at North Texas State University. All calculations were performed on a digital computer.

The two-tailed test arbitrarily selected at the .05 level of significance was used to accept or reject the sixteen null-stated hypothesis formulated for this study.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The primary purpose of this study was to investigate the effectiveness of two programs designed to teach Spanish to non-Spanish-speaking fourth grade students. A corollary purpose was to compare the results of listening achievement levels of students when taught by two teachers with no proficiency in Spanish with a teacher having limited proficiency in Spanish.

The subjects used in this study were assigned to sections by chance through dealing shuffled cards. Even though the four sections could have been assumed to be equivalent, I. Q. scores from the CSTEM were used as a covariant in order to insure further equivalency. A second use of these I. Q. scores was to determine which subjects in each section would be categorized as the upper third and lower third.

Results of the listening achievement scores taken from the CCFIT were used as the criterion variable. These scores were used to investigate the differences between the various groups and/or sections.

The statistical technique used to determine the significance between groups or sections was the analysis of covariance. Significant differences between groups or sections were arbitrarily set at the .05 level of significance.
The data collected for this study will be presented and discussed in this chapter. Results for individual sections, combined sections, the upper third and lower third subjects, and boys and girls will be treated separately.

Findings for Individual Sections

The first eight hypotheses formulated for this study predicted there would be no significant differences between students in individual or combined sections. The construction of the hypotheses was facilitated by using the symbols appearing below to identify the four different sections, teachers, and methods.

Section 1, (ITV) A. Section with teacher having limited knowledge of Spanish who taught with ITV.

Section 3, (EFB) A. Section with teacher having limited knowledge of Spanish who taught Adventures of Miguelito.

Section 2, (ITV) B. Section with teacher having no knowledge of Spanish who taught with ITV.

Section 4, (EFB) C. Section with teacher having no knowledge of Spanish who taught Adventures of Miguelito.

Hypothesis 1-A stated that there would be no significant difference in listening achievement between students in Section 1 (ITV) A and Section 2 (EFB) A. Data related to hypothesis 1-A are reported in Table 1.
TABLE I

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF SECTION 1 (ITV) A AND SECTION 2 (EBF) A

<table>
<thead>
<tr>
<th>Section 1 (ITV) A Adjusted Mean</th>
<th>Section 2 (EBF) A Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.7216</td>
<td>24.3756</td>
<td>0.2322</td>
<td>0.6372</td>
<td>NS</td>
</tr>
</tbody>
</table>

Examination of Table I shows no significant difference between adjusted means of Section 1, (ITV) A, and Section 2, (EBF) A. The research hypothesis 1-A was accepted.

Hypothesis 1-B stated that there would be no significant difference in listening achievement between students in Section 1 (ITV) A and Section 3 (ITV) B. Data related to the hypothesis 1-B are reported in Table II.

TABLE II

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF SECTION 1 (ITV) A AND SECTION 3 (ITV) B

<table>
<thead>
<tr>
<th>Section 1 (ITV) A Adjusted Mean</th>
<th>Section 3 (ITV) B Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.8730</td>
<td>21.1703</td>
<td>4.9480</td>
<td>0.0289</td>
<td>S</td>
</tr>
</tbody>
</table>

Table II shows a significant difference between adjusted means of Section 1 (ITV) A and Section 3 (ITV) B. The research hypothesis 1-B was therefore rejected in favor of Section 1.
Hypothesis 1-C stated that there would be no significant difference in listening achievement between students in Section 1 (ITV) A and Section 4 (EBF) C. Data related to the hypothesis 1-C are recorded in Table III.

**TABLE III**

**SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF SECTION 1 (ITV) A AND SECTION 4 (EBF) C**

<table>
<thead>
<tr>
<th>Section 1 (ITV) A Adjusted Mean</th>
<th>Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.1890</td>
<td>24.1632</td>
<td>.0003</td>
<td>.9835</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table III shows no significant difference between adjusted means of Section 1 (ITV) A and Section 4 (EBF) C. The research hypothesis 1-C was retained.

Hypothesis 1-D stated that there would be no significant difference in listening achievement between students in Section 2 (EBF) A and Section 3 (ITV) B. Data related to the hypothesis 1-D are recorded in Table IV.

**TABLE IV**

**SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF SECTION 2 (EBF) A AND SECTION 3 (ITV) B**

<table>
<thead>
<tr>
<th>Section 2 (EBF) A Adjusted Mean</th>
<th>Section 3 (ITV) B Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.5139</td>
<td>21.1389</td>
<td>6.4206</td>
<td>0.0138</td>
<td>S</td>
</tr>
</tbody>
</table>
Table IV shows a significant difference between adjusted means of Section 2 (EBF) A and Section 3 (ITV) B. The research hypothesis 1-D was rejected in favor of Section 2.

Hypothesis 1-E predicted that there would be no significant difference in listening achievement between students in the Section 2 (EBF) A and Section 4 (EBF) C. The data related to the hypothesis 1-E are recorded in Table V.

**TABLE V**

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF SECTION 2 (EBF) A AND SECTION 4 (EBF) C

<table>
<thead>
<tr>
<th>Section 2 (EBF) A Adjusted Mean</th>
<th>Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
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<tbody>
<tr>
<td>24.8143</td>
<td>24.1399</td>
<td>0.1893</td>
<td>0.6691</td>
<td>NS</td>
</tr>
</tbody>
</table>

Table V shows no significant difference between adjusted means of Section 2 (EBF) A and Section 4 (EBF) B. The research hypothesis 1-E was accepted.

Hypothesis 1-F predicted that there would be no significant difference in listening achievement between students in Section 3 (ITV) B and Section 4 (EBF) C. The data related to the hypothesis 1-F are recorded in Table VI.
TABLE VI

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS
OF SECTION 3 (ITV) B AND SECTION 4 (EBF) C

<table>
<thead>
<tr>
<th>Section 3 (ITV) B Adjusted Mean</th>
<th>Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.4896</td>
<td>24.9090</td>
<td>4.2574</td>
<td>0.0415</td>
<td>S</td>
</tr>
</tbody>
</table>

Table VI reveals a significant difference between adjusted means of Section 3 (ITV) B and Section 4 (EBF) C. The research hypothesis 1-F was therefore rejected in favor of Section 3.

Findings for Combined Sections

Hypothesis 1-G predicted that there would be no significant difference in listening achievement between students in Section 1 (ITV) A, combined with Section 3 (ITV) B, and students in Section 2 (EBF) A, combined with Section 4 (EBF) C. The data related to hypothesis 1-G are recorded in Table VII.

TABLE VII

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS
OF SECTION 1 (ITV) A, COMBINED WITH SECTION 3 (ITV) B, AND SECTION 2 (EBF) A, COMBINED WITH SECTION 4 (EBF) C

<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 3 (ITV) B Adjusted Mean</th>
<th>Section 2 (EBF) A combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.6530</td>
<td>24.3688</td>
<td>3.0453</td>
<td>0.0800</td>
<td>NS</td>
</tr>
</tbody>
</table>
The data from Table VII show no significant difference between adjusted means of students in Section 1 (ITV) A, combined with Section 3 (ITV) B, and students in Section 2 (EBF) A, combined with Section 4 (EBF) C. The research hypothesis 1-G was retained.

The hypothesis 1-H stated that there would be no significant difference in listening achievement between students in Section 1 (ITV) A, combined with Section 2 (EBF) A, and students in Section 3 (ITV) B, combined with Section 4 (EBF) C. The data related to this hypothesis are reported in Table VIII.

### TABLE VIII


<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 2 (EBF) A Adjusted Mean</th>
<th>Section 3 (ITV) B combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.3668</td>
<td>22.7468</td>
<td>2.6242</td>
<td>0.1042</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data recorded in Table VIII show no significant difference between adjusted means of students in Section 1 (ITV) A, combined with Section 2 (EBF) A, and students in Section 3 (ITV) B, combined with Section 4 (EBF) C. The research hypothesis 1-H was retained.
Findings for Students in the Upper Third

Research hypotheses 2-A and 2-B predicted that there would be no significant difference between students in the upper third of their section. The students described as upper third were determined from the results of their I.Q. score taken from the CSTMM.

Hypothesis 2-A stated that there would be no significant difference in listening achievement between students of the upper third in Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. Data related to this hypothesis are recorded in Table IX.

<table>
<thead>
<tr>
<th>TABLE IX</th>
</tr>
</thead>
<tbody>
<tr>
<td>---------------------------------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 3 (ITV) B Adjusted Mean</th>
<th>Section 2 (EBF) A combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.9402</td>
<td>27.6153</td>
<td>4.9735</td>
<td>0.0308</td>
<td>S</td>
</tr>
</tbody>
</table>

Examination of the data as reported in Table IX shows a significant difference between the adjusted means of students in the upper third in Section 1 (ITV) A, combined...
with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. The research hypothesis 2-A was rejected in favor Sections 2 and 4.

Hypothesis 2-B stated that there would be no significant difference between students of the upper third in Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. The data related to this hypothesis are reported in Table X.

**TABLE X**


<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 2 (EBF) A Adjusted Mean</th>
<th>Section 3 (ITV) B combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>p</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.9760</td>
<td>25.5795</td>
<td>0.0557</td>
<td>0.8097</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data as recorded in Table X reveal no significant difference between the adjusted means of students in the upper third in Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. Therefore, the research hypothesis 2-B was accepted.

Findings for Students in the Lower Third

Research hypotheses 3-A and 3-B predicted that there would be no significant differences between students in the lower
third of their sections. The students described at lower third were determined from the results of their I. Q. scores taken from the CSTMM.

Hypothesis 3-A stated that there would be no significant difference in listening achievement between students of the lower third in Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. The data related to this hypothesis are recorded in Table XI.

**TABLE XI**

<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 3 (ITV) B Adjusted Mean</th>
<th>Section 2 (EBF) A combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.2453</td>
<td>23.9769</td>
<td>3.0581</td>
<td>0.0861</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data as recorded in Table XI show no significant difference between adjusted means of students in the lower third in Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. The research hypothesis 3-A was accepted.

Hypothesis 3-B stated that there would be no significant difference in listening achievement between students of the lower third in Section 1 (ITV) A, combined with Section 2
(EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. The data recorded for this hypothesis are in Table XII.

### TABLE XII

**SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF LOWER THIRD STUDENTS IN SECTION 1 (ITV) A, COMBINED WITH SECTION 2 (EBF) A, AND SECTION 3 (ITV) B, COMBINED WITH SECTION 4 (EBF) C**

<table>
<thead>
<tr>
<th>Section 1 (ITV) A combined with Section 2 (EBF) A Adjusted Mean</th>
<th>Section 3 (ITV) B combined with Section 4 (EBF) C Adjusted Mean</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.6435</td>
<td>21.5786</td>
<td>1.5176</td>
<td>0.2247</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data in Table XII show no significant difference between the adjusted means of students in the lower third in Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. The research hypothesis 3-B was accepted.

**Findings for Boys and Girls**

The next two research hypotheses predicted that there would be no significant differences between boys and girls in their combined sections.

Hypothesis 4-A stated that there would be no significant difference in listening achievement between boys in Section 1 (ITV) A, combined with Section 3 (ITV) B, and girls in
Section 1 (ITV) A, combined with Section 3 (ITV) B. The data related to this hypothesis are recorded in Table XIII.

**TABLE XIII**

SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS
OF BOYS IN SECTION 1 (ITV) A COMBINED WITH
SECTION 3 (ITV) B, AND GIRLS IN SECTION 1 (ITV) A COMBINED WITH SECTION 3 (ITV) B

<table>
<thead>
<tr>
<th>Boys in Section 1 (ITV) A combined with Section 3 (ITV) B Adjusted Means</th>
<th>Girls in Section 1 (ITV) A combined with Section 3 (ITV) B Adjusted Means</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.4833</td>
<td>24.7400</td>
<td>0.8388</td>
<td>0.6330</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data as recorded in Table XIII reveal no significant difference between the adjusted means of boys in Section 1 (ITV) A, combined with Section 3 (ITV) B, and girls in Section 1 (ITV) A, combined with Section 3 (ITV) B. Therefore, the research hypothesis 4-A was retained.

The hypothesis 4-B predicted that there would be no significant difference between boys in Section 2 (EBF) A, combined with Section 4 (EBF) C, and girls in Section 2 (EBF) A, combined with Section 4 (EBF) C. The data as related to this hypothesis are recorded in Table XIV.
### TABLE XIV

**SIGNIFICANCE OF THE DIFFERENCE BETWEEN ADJUSTED MEANS OF BOYS IN SECTION 2 (EBF) A COMBINED WITH SECTION 4 (EBF) C, AND GIRLS IN SECTION 2 (EBF) A COMBINED WITH SECTION 4 (EBF) C**

<table>
<thead>
<tr>
<th>Boys in Section 2 (EBF) A combined with Section 4 (EBF) C Adjusted Means</th>
<th>Girls in Section 2 (EBF) A combined with Section 4 (EBF) C Adjusted Means</th>
<th>F-Ratio</th>
<th>P</th>
<th>S or Not S</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.3027</td>
<td>24.6658</td>
<td>0.1565</td>
<td>0.8080</td>
<td>NS</td>
</tr>
</tbody>
</table>

The data in Table XIV show no significant difference between the adjusted means of boys in Section 2 (EBF) A, combined with Section 4 (EBF) C, and girls in Section 2 (EBF) A, combined with Section 4 (EBF) C. The research hypothesis 4-B was accepted.

### Summary

Consistent with the purposes of this study and based on the results of testing the hypotheses, these findings are presented with reference to the population studied.

1. The results indicate that non-Spanish-speaking fourth grade students perform about equally well on listening achievement from both the ITV program and the EBF approach when taught by a teacher with limited proficiency in Spanish.

2. The results indicate that non-Spanish-speaking fourth grade students perform significantly better on listening
achievement from the ITV program when taught by a teacher with limited proficiency in Spanish, than when taught by a teacher with no knowledge of Spanish.

3. Non-Spanish-speaking fourth grade students perform about equally well on listening achievement when taught the EBF approach by a teacher with limited proficiency of Spanish and when taught by a teacher with no knowledge of Spanish.

4. Non-Spanish-speaking fourth grade students perform significantly better on listening achievement when taught the EBF method by a teacher with no knowledge of Spanish than with the ITV program taught by a teacher with no knowledge of Spanish.

5. Non-Spanish-speaking fourth grade students in the upper third perform significantly better on listening achievement when taught by the EBF approach than when taught by the ITV method.

6. There are no significant differences on listening achievement between non-Spanish-speaking fourth grade students in the lower third when taught the EBF approach or when taught by the ITV method.

7. There are no significant differences between non-Spanish-speaking fourth grade boys or girls on listening achievement when taught the EBF method or when taught the ITV program.

8. In each instance when the EBF program is compared with the ITV program, even when the difference is not significant, the difference favors the EBF program.
CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

The problem of this study was the comparison of the effects of two methods of teaching Spanish by non-specialist teachers in grade four. The purpose of the study was the investigation of the effects of two programs designed to teach Spanish to non-Spanish-speaking fourth grade students. The programs contrasted were A) Channel 13, KERA educational television, Dallas, Texas, and B) a self-contained Spanish language course, The Adventures of Miguelito, produced by Encyclopaedia Britannica Films, Incorporated. A corollary purpose of the study was to compare the listening achievement levels of the students when taught by two teachers having no proficiency in Spanish with a teacher having limited proficiency in Spanish.

The subjects that participated in the investigation were 111 of the original 120 non-Spanish-speaking members of four fourth grade classrooms at Woodrow Wilson Elementary School, Denton, Texas. Although the sample cannot be assumed to be representative of populations in other geographical areas, students used in this study were assigned to sections by chance through dealing shuffled cards. Even though the four...
sections could have been assumed to be equivalent, the California Short Form Test of Mental Maturity was administered to all students to further insure equivalency. The I. Q. scores taken from this test were considered unlikely to be changed or influenced by the study, and were therefore used as a covariant to equate the sections on a statistical basis. The I. Q. scores were also used to determine the upper third and lower third students in each of the four sections.

Three teachers participated in the investigation. The teacher designated as "A" had a limited knowledge of Spanish, i.e. two years of high school Spanish, and approximately six months' experience conversing in Spanish while residing in Torreon, Coahuila, Mexico. The other two teachers had no knowledge of Spanish, but had comparable backgrounds and experience in classroom teaching. The teacher designated as "B" had a Bachelor of Science degree with twenty years' teaching experience, and teacher "C" had a Master of Education degree with nineteen years' teaching experience.

The four sections used in this study were assigned the following treatments:

Section 1 students were taught ITV by teacher A, Section 2 students were taught EBF by teacher A, Section 3 students were taught ITV by teacher B, and Section 4 students were taught EBF by teacher C.

The teaching program was initiated when Channel 13, KERA-TV, Dallas, Texas, began broadcasting the Spanish
lessons on October 12, 1970. The Spanish programs were presented for fifteen minutes twice a week.

Teachers A and B followed up each ITV program with fifteen minutes of instructions. Teachers A and C taught the EBF approach the same length of time. Both methods were taught during comparable time periods.

The criterion measure used to determine the listening achievement levels of the four sections was the Common Concepts Foreign Language Test, Spanish: Form I. The results of the analysis of covariance was used to test for significant difference between adjusted means for each of the sixteen null-stated hypotheses. The two-tailed test arbitrarily selected at the .05 level of significance was used to accept or reject the hypotheses formulated for this study.

The construction of the hypotheses was facilitated by using the symbols below to identify the four different sections and teachers.

Section 1, (ITV) A. Section with teacher having limited knowledge of Spanish who taught with ITV.

Section 2, (EBF) A. Section with teacher having limited knowledge of Spanish who taught The Adventures of Miguelito.

Section 3, (ITV) B. Section with teacher having no knowledge of Spanish who taught ITV.

Section 4, (EBF) C. Section with teacher having no knowledge of Spanish who taught The Adventures of Miguelito.
The first eight hypotheses formulated for this study were related to individual and combined sections. The manner in which the hypotheses were stated and the findings are as follows:

**Hypothesis 1.** -- There will be no significant difference in listening achievement between students in:

A. Section 1 (ITV) A and Section 2 (EBF) A. There was no significant difference between adjusted means and the hypothesis was accepted.

B. Section 1 (ITV) A and Section 3 (ITV) B. There was a significant difference in the adjusted means in favor of Section 1 (ITV) A and the hypothesis was rejected.

C. Section 1 (ITV) A and Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

D. Section 2 (EBF) A and Section 3 (ITV) B. There was a significant difference between adjusted means in favor of Section 2 (EBF) A, and the hypothesis was rejected.

E. Section 2 (EBF) A and Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

F. Section 3 (ITV) B and Section 4 (EBF) C. There was a significant difference between adjusted
means in favor of Section 4 (EBF) C, and the hypothesis was rejected.

G. Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

H. Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

Hypothesis 2.--There will be no significant difference in listening achievement between students of the upper third in:

A. Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section 4 (EBF) C. There was a significant difference between adjusted means in favor of Section 2 (EBF) A, combined with Section 4 (EBF) C, and the hypothesis was rejected.

B. Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

Hypothesis 3.--There will be no significant difference in listening achievement between students of the lower third in:

A. Section 1 (ITV) A, combined with Section 3 (ITV) B, and Section 2 (EBF) A, combined with Section
There was no significant difference between adjusted means and the hypothesis was accepted.

B. Section 1 (ITV) A, combined with Section 2 (EBF) A, and Section 3 (ITV) B, combined with Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

Hypothesis 4.—There will be no significant difference in listening achievement between boys and girls in:

A. Boys in Section 1 (ITV) A, combined with Section 3 (ITV) B, and girls in Section 1 (ITV) A, combined with Section 3 (ITV) B. There was no significant difference between adjusted means and the hypothesis was accepted.

B. Boys in Section 2 (EBF) A, combined with Section 4 (EBF) C, and girls in Section 2 (EBF) A, combined with Section 4 (EBF) C. There was no significant difference between adjusted means and the hypothesis was accepted.

Conclusions

Consistent with the purposes of this study and based on the interpretation of the results of this experiment, certain conclusions are offered with reference to the population studied.

1. When teaching Spanish to non-Spanish-speaking fourth grade students, the EBF approach is superior to the
ITV method when used by teachers with no proficiency in Spanish.

2. When teaching Spanish to non-Spanish-speaking fourth grade students, the EBF method and the ITV approach are about equally effective when used by teachers with a limited proficiency in Spanish.

3. When teaching Spanish to non-Spanish-speaking fourth grade students, the ITV method used by teachers with limited knowledge of Spanish is superior to the ITV approach used by teachers with no knowledge of Spanish.

4. When teaching Spanish to students of the upper third, the EBF approach is superior to the ITV method.

Implications

The following statements based on the findings of the study seem to qualify as implications:

1. Teachers with limited proficiency in Spanish appear to be more capable of providing adequate follow-up to an ITV Spanish program than are teachers without knowledge of Spanish.

2. Teachers without knowledge of Spanish are probably just as effective in teaching Spanish to non-Spanish-speaking fourth grade students with the EBF approach as are teachers with limited proficiency in Spanish.

3. Teachers without knowledge of Spanish could probably be just as effective in teaching Spanish to non-Spanish-
speaking elementary students with the EBF program for two years as could a teacher with limited proficiency in Spanish.

4. Different results might have been obtained in this experiment if the EBF approach had been compared to other ITV programs.

Recommendations

Further research is recommended in several areas relative to the effectiveness of teaching Spanish to non-Spanish-speaking elementary students.

1. Further testing is suggested in the area of listening achievement of students taught by the EBF approach by non-specialist teachers compared with students taught by other ITV programs by non-specialist teachers.

2. Further evaluation of the effectiveness of the EBF program should be made before it is recommended for use on a large scale.

3. A study similar in design to the present study is suggested in which changes in student attitudes toward the EBF approach are compared with changes in student attitudes toward other methods.

4. A study similar in design to the present study is suggested in which changes in student attitudes toward Spanish speaking people taught the EBF approach are compared with changes in student attitudes toward Spanish speaking people when taught by other methods.
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