

6-10-1963

Listening Lessons in Connected Speech for Puerto Rican College Students for the Purpose of Improving Aural Comprehension in English

Margaret F. Tucker

Follow this and additional works at: https://digitalrepository.unm.edu/shs_etds



Part of the [Speech and Hearing Science Commons](#)

Recommended Citation

Tucker, Margaret F.. "Listening Lessons in Connected Speech for Puerto Rican College Students for the Purpose of Improving Aural Comprehension in English." (1963). https://digitalrepository.unm.edu/shs_etds/20

This Thesis is brought to you for free and open access by the Electronic Theses and Dissertations at UNM Digital Repository. It has been accepted for inclusion in Speech and Hearing Sciences ETDs by an authorized administrator of UNM Digital Repository. For more information, please contact disc@unm.edu.

UNIVERSITY OF NEW MEXICO-UNIVERSITY LIBRARIES



A14429 089642

LISTENING LESSONS FOR THE PURPOSE OF IMPROVING AUDIAL COMPREHENSION IN ENGLISH

TUCKER

78.789
Jn30tu
1963
cop. 12

THE LIBRARY
UNIVERSITY OF NEW MEXICO



Call No.

378.789
Un30tu
1963
cop.2

Accession
Number

308394

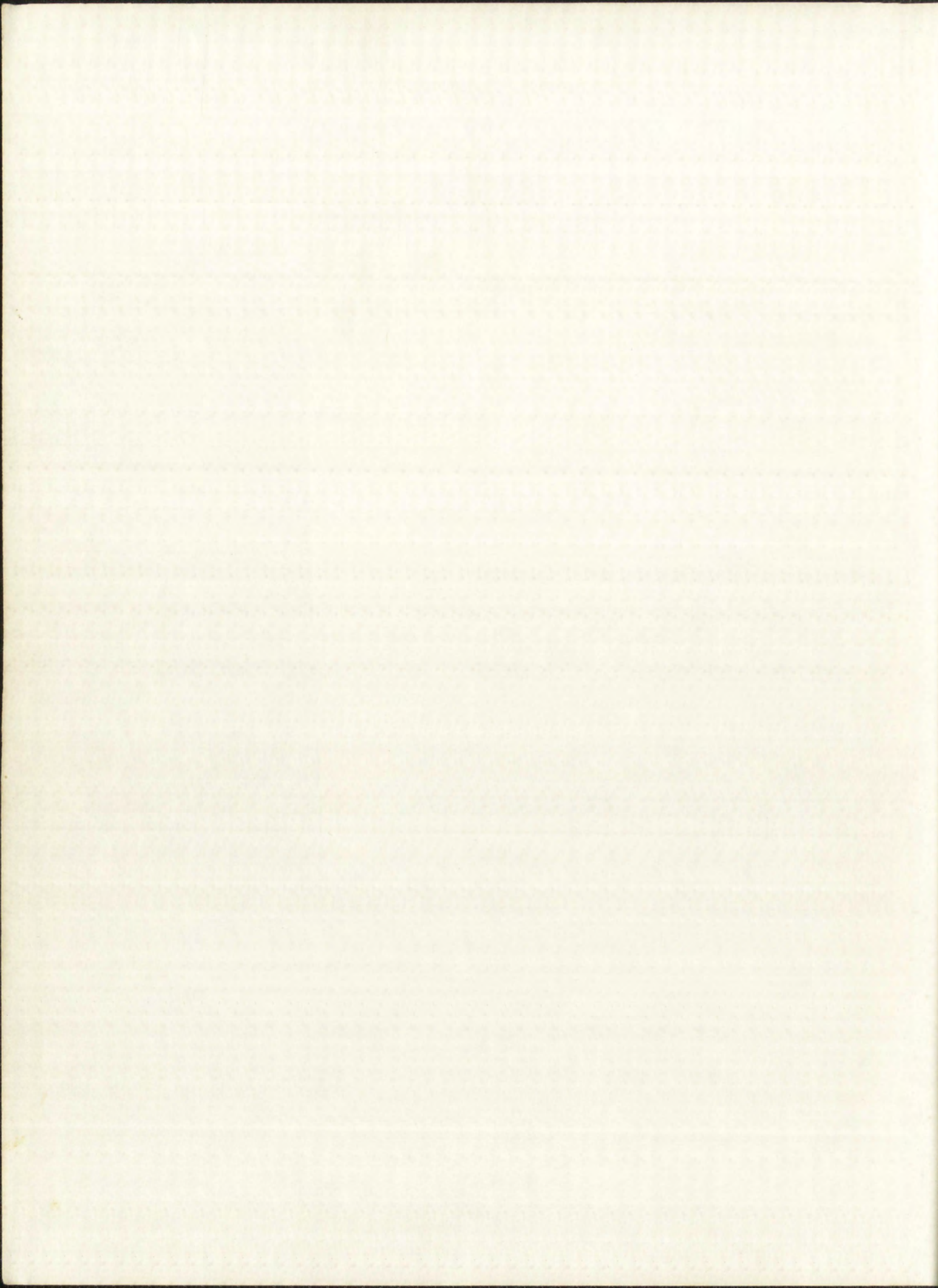
AL4416 413379

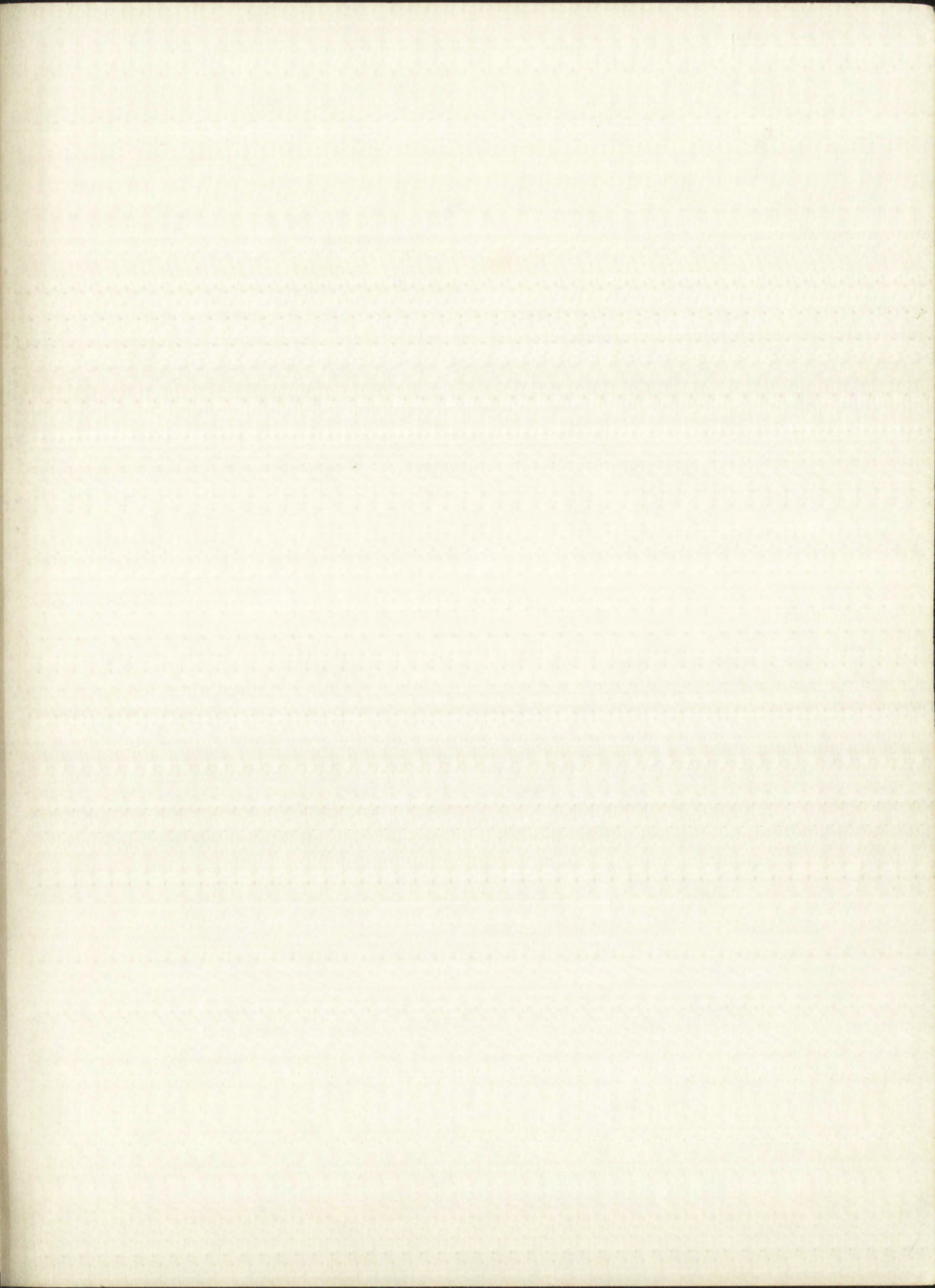
IMPORTANT!

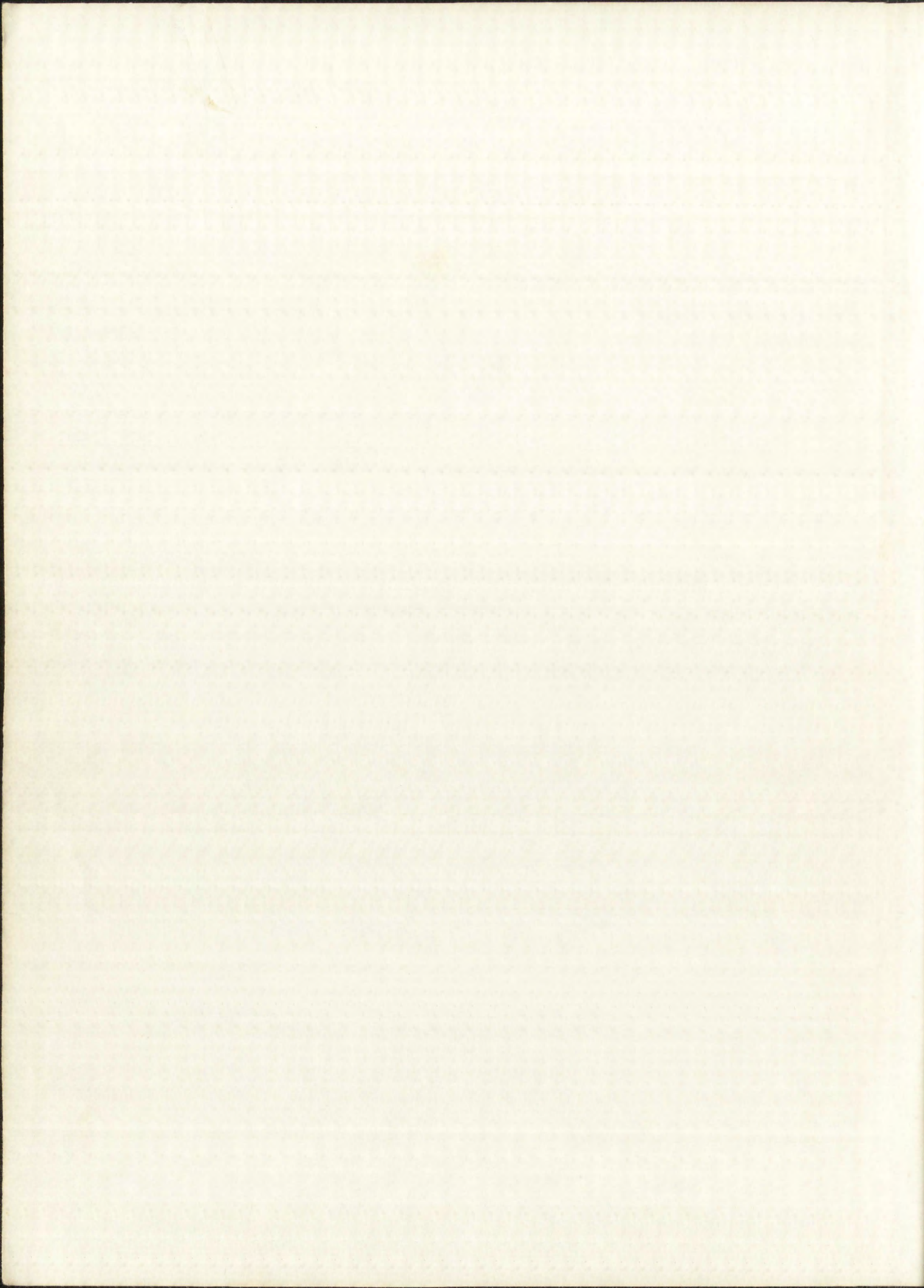
Special care should be taken to prevent loss or damage of this volume. If lost or damaged, it must be paid for at the current rate of typing.

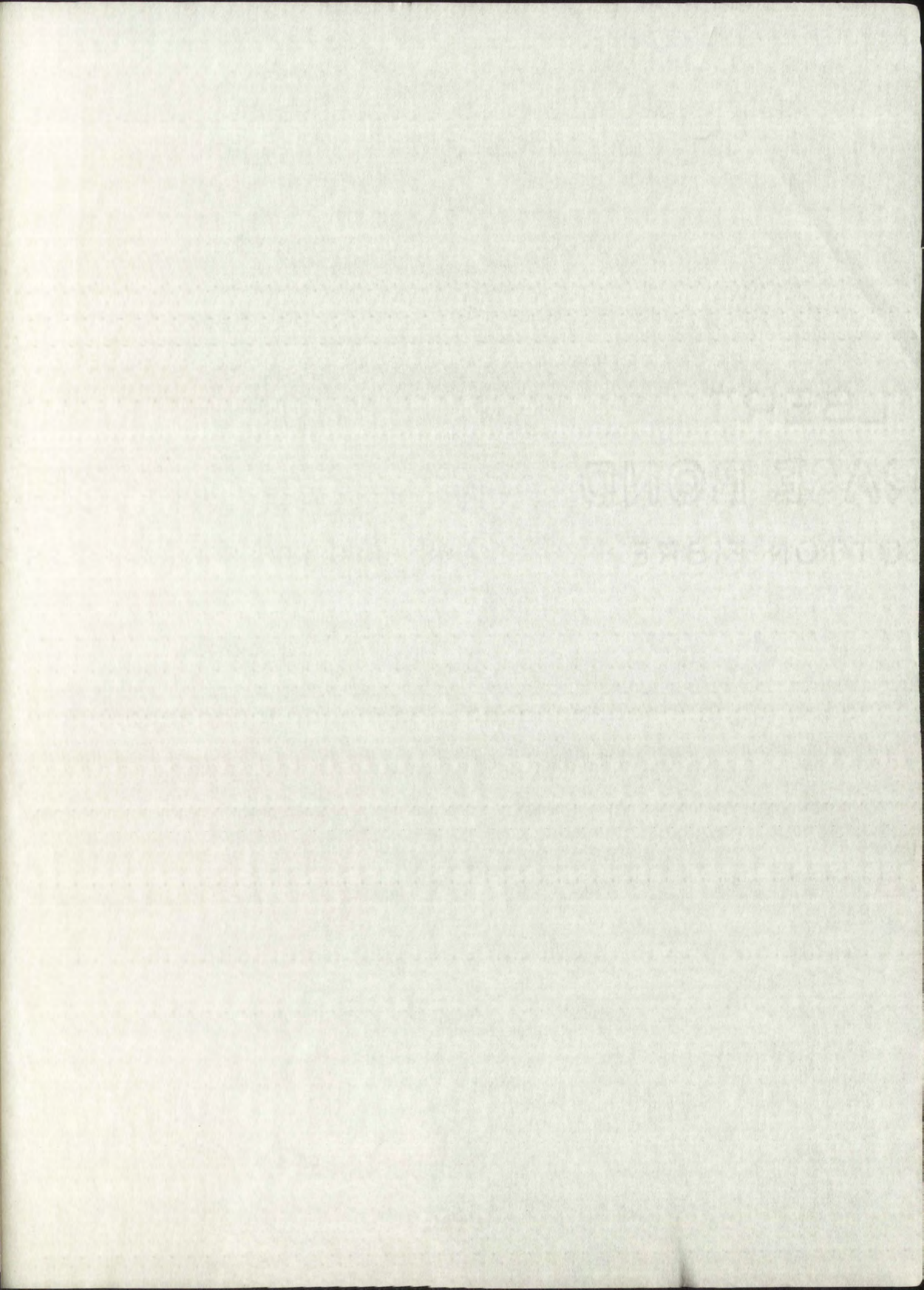
DATE DUE	
DEC 30 '71 UNM 24	AUG 8 '72
NOV 17 '71	DEC 20 '72
NOV 27 '73 UNM 24	JUL - 8 '77
RECD UNM NOV 19 73	
MAR 26 1974	
RECD UNM MAR 25 74	
JUL - 8 '74 UNM 24	
RECD UNM JUN 28 '74	
AUG 15 '75 UNM 24	
RECD UNM AUG - 3 '75	
APR 23 '77	
RECD APR - 4 '77	
DEC 20 '78	
GAYLORD UNM NOV 22 '78	

PRINTED IN U.S.A.









SEPT

WALL BOND

CONCRETE FIBRE

UNIVERSITY OF NEW MEXICO LIBRARY

MANUSCRIPT THESES

Unpublished theses submitted for the Master's and Doctor's degrees and deposited in the University of New Mexico Library are open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but passages may be copied only with the permission of the authors, and proper credit must be given in subsequent written or published work. Extensive copying or publication of the thesis in whole or in part requires also the consent of the Dean of the Graduate School of the University of New Mexico.

This thesis by Margaret F. Tucker
has been used by the following persons, whose signatures attest their acceptance of the above restrictions.

A Library which borrows this thesis for use by its patrons is expected to secure the signature of each user.

NAME AND ADDRESS	DATE
<i>Margaret F. Tucker</i> <i>Brockton College</i>	<i>12/26/64</i>
<i>Charles Petie</i> <i>SUNY at Buffalo</i>	<i>11/17/66</i>
<i>Charlotte Fuller</i> <i>Tcu</i>	<i>3-19-74</i>

MANUSCRIPT THESIS

Unpublished theses submitted for the M.A. and Ph.D. degrees and deposited in the University of New Mexico Library are open for inspection, but are to be used only with due regard for the rights of the author. Bibliographical references may be made, but passages may be copied only with the permission of the author, and proper credit must be given in subsequent written or published work. Extensive copying or publication of the thesis is prohibited. Part requires also the consent of the Dean of the Graduate School of the University of New Mexico.

This thesis by _____ has been read by the following persons, whose signatures and position acceptance of the above restrictions:

A Library which borrows this thesis for use by its patrons is expected to secure the signature of each user.

NAME AND ADDRESS	DATE
Charles Peter 2001 S. ... Albuquerque, N.M.	11/15/68
Charles Peter 2001 S. ... Albuquerque, N.M.	11/15/68

LISTENING LESSONS IN CONNECTED SPEECH FOR PUERTO RICAN
COLLEGE STUDENTS FOR THE PURPOSE OF IMPROVING
AURAL COMPREHENSION IN ENGLISH

By

Margaret F. Tucker

A Thesis

Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts in Speech

The University of New Mexico

1963



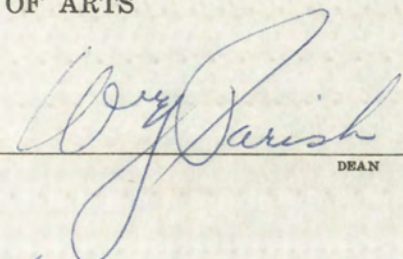
UNITED STATES DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

OFFICE OF THE SECRETARY OF STATE

UNITED STATES DEPARTMENT OF STATE
WASHINGTON, D. C. 20520

This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Committee of the University of New Mexico in partial fulfillment of the requirements for the degree of

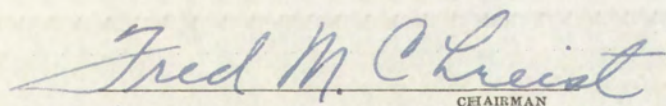
MASTER OF ARTS

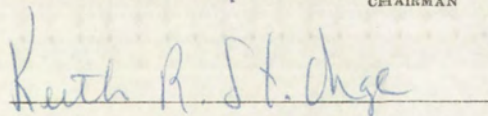

DEAN

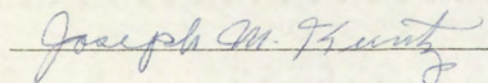
DATE

June 10, 1963

Thesis committee


CHAIRMAN





This thesis, having been approved by the candidate's committee, has been accepted by the Graduate Committee of the University of New Mexico in fulfillment of the requirements for the degree of

MASTER OF ARTS

[Signature]

DEAN

[Signature]

DATE

Thesis Committee

[Signature]

CHAIRMAN

378.789
Un 30 tu
1963
Cop 2

ACKNOWLEDGMENTS

The author wishes to express her deep appreciation to members of the Speech and English Departments of the University of New Mexico for their never-failing interest, stimulation, and helpful counsel, given during the research and preparation of this thesis. Especially helpful have been Professors Fred M. Chreist (the author's major adviser), Keith R. St. Onge, and Joseph M. Kuntz.

Appreciation is also due the teachers in speech at the University of Puerto Rico, who assisted in the gathering of data for the study.

The author states that the...
of the British and...
for their...
given during the...
hospital have been...
view, both...
associated with...
of British... and...

TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM AND RELATED LITERATURE	1
The Problem	1
The Purpose	3
Review of the Literature	3
The Importance of Listening	3
Listening in a Second Language	7
Testing for Listening Comprehension	10
Methods of Presenting Listening Experience	14
Listening Materials for Special Teaching Situations	19
Summary	24
II. TERMS AND DEFINITIONS	26
Aural Comprehension	26
The Phoneme and the Allophone	27
Minimal Pair	28
Sound Discrimination	28
Language Sound Systems	29
Puerto Rican Spanish and General American English Compared	31
Phonemes of Puerto Rican Spanish	31
Phonemes of General American English	32
Significant Phonemic Differences	33
Population and Sample	34
Summary	35

I.

THE PROBLEM AND ITS SCOPE

The Problem

The Purpose

Review of the Literature

The Importance of the Study

Methodology

Limitations of the Study

Organization of the Study

Summary

II.

THEORY AND CONCEPTS

General Concepts

The Framework and the Model

Key Concepts

Operational Definitions

Measurement

Validity and Reliability

Statistical Concepts

Assumptions of the Model

Operationalization

Measurement

Population and Sample

Summary

III. LOCATING PROBLEM AREAS	36
Testing Procedures	36
Testing Conditions	40
Handling of Results	40
Procedure in Gathering Basic Material for Proposed Listening Lessons from Test Results	41
IV. AUDITORY TRAINING MATERIALS: THEIR CHOICE AND PREPARATION	51
The Puerto Rican Situation	51
Types of Auditory Material for Listening Lessons	53
Sentence Reading	53
Paragraph Reading	54
Short Stories	54
Informative Articles	54
Best Choice for Puerto Rican Situation	55
Development of Paragraph Studies	57
Studies Based on Phonemic Problems	57
Sequence of Presentation	59
V. SUMMARY AND CONCLUSIONS	62
BIBLIOGRAPHY	66
APPENDIXES	
A. Listening Lessons	71
1. Listening Lessons	72
2. Techniques for Insuring Comprehension	94
B. The Regional Spanish of Puerto Rico	97
C. Test and Tables	100
Aural Perception Test	101
Table 1A: Vowels in Minimal Pairs	107
Table 1B: Vowels in Minimal Pairs in Sentences	108
Table 1C: Consonants in Minimal Pairs	109
Table 1D: Consonants in Minimal Pairs in Sentences	110

III. VOCATIONAL PROGRAM

Testing Procedures

Testing Conditions

Handling of Results

Procedures in relation to the program
Learning to use the program

IV. AUDITORY PERCEPTION

The Auditory System

Types of auditory perception

Language Perception

Speech Perception

Sound Perception

Intonational Analysis

Best Conditions for Perception

Development of Language

Speech Perception in the Child

Perception of Prosody

V. SUMMARY AND CONCLUSIONS

BIBLIOGRAPHY

APPENDIX

A. Listening Experiments

1. Listening Experiments

2. Conditions for Listening Experiments

B. The Natural Speech of Children

C. Test and Tables

Final Experiment

Table I: Test Results

Table II: Results in Natural Speech

Table III: Conditions for Experiments

Table IV: Conditions for Experiments

TABLES

Tables in the Text:

Table I: Incidence of Vowel and Consonant Errors,
Aural Perception Post-test 43

Table II: Incidence of Error, Part V, Aural Per-
ception Post-test 48

Tables in Appendix C: Test and Tables: 100

Table IA: Vowels in Minimal Pairs 107

Table IB: Vowels in Minimal Pairs in Sentences 108

Table IC: Consonants in Minimal Pairs 109

Table ID: Consonants in Minimal Pairs in Sentences 110

TABLES

Tables in the text:

43	Table I: Incidence of Vowel and Consonant Errors in the Perception Post-test
44	Table II: Incidence of Errors, Part V, in the Per- ception Post-test
100	Tables in Appendix C: Test and Tables
107	Table IA: Vowels in Minimal Pairs
108	Table IB: Vowels in Minimal Pairs in Sentences
109	Table IC: Consonants in Minimal Pairs
110	Table ID: Consonants in Minimal Pairs in Sentences

LISTENING LESSONS IN CONNECTED SPEECH FOR PUERTO RICAN COLLEGE STUDENTS
FOR THE PURPOSE OF IMPROVING AURAL COMPREHENSION IN ENGLISH

Chapter I

THE PROBLEM AND RELATED LITERATURE

The Problem

Accurate aural comprehension of English is a difficult problem for Puerto Rican college students. Listening in a second language is quite different from listening in one's native language. Comprehension of what one hears can come quickly in the native tongue, but slowly in a new, or second, language. Breakdowns in the communication process involving aural comprehension can occur frequently in a second language when one fails to recognize a single phoneme or a series of phonemes. This point is made clear by Harold B. Dunkel in his book Second-Language Learning¹ when he analyzes the reasons for this failure. "... the student must get an accurate impression of the sounds he hears. He must be ... familiar with the phonemic system of the language; he must not hear feu as fou." According to Crawford and Leitzell "one unfamiliar word or phrase may completely block or prevent the understanding of the entire sentence or paragraph."²

¹Harold B. Dunkel, Second-Language Learning (Boston: Ginn & Co., 1948), pp. 36-39.

²Claude C. Crawford and Edna Mable Leitzell, Learning A New Language (Los Angeles: C. C. Crawford, University of So. Calif., 1930), p. 107.

LISTENING RECORD IN A SPEECH CLASS FOR THE YEAR 1942-43

FOR THE PURPOSE OF IMPROVING LISTENING ABILITY
 THIS RECORD IS TO BE KEPT AS A RECORD OF THE STUDENT'S
 LISTENING ABILITY IN THIS CLASS
 THE STUDENT'S NAME IS _____
 HIS GRADE IS _____
 HIS TEACHER IS _____
 HIS CLASS IS _____
 HIS SCHOOL IS _____
 HIS CITY IS _____
 HIS STATE IS _____
 HIS ZIP CODE IS _____
 HIS HOME PHONE NUMBER IS _____
 HIS SCHOOL PHONE NUMBER IS _____

¹ Harold A. Smith, *Speech Training for the Deaf*, 1948, pp. 26-30.
² Vinson C. ...
 (Los Angeles, C. E. ...)

Observation and experimentation have convinced experienced teachers of English as a second language that low level comprehension and failure to make progress are closely related to listening problems. These, in turn, are largely due to sound discrimination difficulties encountered in moving from one language to another. The student learns a special set of language habits in his native tongue which he must set aside whenever he shifts into the second language that is controlled by a different set of language habits. These differences concern not only a changing sound system and structured pattern, but also the important features of stress, rhythm and intonation which have an especially strong influence on meaning in English. It is obvious that most of these features can be learned best through the listening-learning process. Robert Lado stresses this point throughout his book Linguistics Across Cultures.³

Improvement in the listening process and consequent improvement in comprehension are vital to a student's advancement in learning English in Puerto Rico, where bilingualism in Spanish and English is highly important. As citizens of the United States, the Puerto Ricans are closely connected with the English-speaking world and therefore need a practical knowledge of English. However, the English speech course designed for trainees in elementary education at the University of Puerto Rico is deficient in providing listening training to improve sound discrimination in connected speech. A search for material for classroom auditory training suitable for use in the Puerto Rican situation has been nonproductive. There appears to be a lack of adequate contextual material to provide auditory

³Robert Lado, Linguistics Across Cultures (Ann Arbor: University of Michigan Press, 1957).

... of English as a second language ...
... to make progress ...
... are largely ...
... having ...
... language ...
... shifts ...
... language ...
... system and ...
... rhythm and ...
... in English ...
... through ...
... throughout ...
... movement ...
... copy ...
... parts ...
... as ...
... with ...
... of English ...
... elementary ...
... thing ...
... speech ...
... for use ...
... appears ...

Robert ...
Michigan Press, 1971

training in sound discrimination areas needing emphasis in the English speech course for Puerto Rican university students.

The Purpose

The University of Puerto Rico English staff members who are preparing teachers for the Island school system are concerned about the lack of effective training techniques which will develop the student's listening ability and thereby sharpen his comprehension of spoken English. Appropriate listening lessons to improve their understanding of connected speech are needed. The purpose of this study is to investigate the following hypothesis:

That additional materials for listening discrimination are needed for teaching English to Puerto Rican college students, and that paragraph listening lessons will provide varied auditory experience for sound discrimination training in learning English as a second language.

With the Puerto Rican problem in mind the following review of the literature was made.

Review of the Literature

The Importance of Listening

In 1954, Dr. Ralph C. Nichols of the University of Minnesota and Dr. Thomas R. Lewis of Florida State University published a significant book on the subject of communication, Listening and Speaking. The opening paragraph gives a definition of listening which is pertinent to this study.

At the outset it seems desirable to determine just what is meant by the term listening. In a sense it is a combination of what we hear, what we understand, and what we remember.

training in sound educational theory...
speech course for future teachers...

THE UNIVERSITY OF TORONTO

The University of Toronto...
having teachers for the future...
of effective training...
ability and theory...
private teaching...
are needed. The purpose of this study is to determine the...
thesis:

That additional training...
for teaching...
private teaching...
for sound educational...
teaching.

With the thesis...
literature was used.

THE UNIVERSITY OF TORONTO

The Importance of...

In 1954, Dr. John R. Elliott...
Dr. Thomas A. Davis...
book on the subject of...
the program gives a...
study.

At the outset...
many of the...
of what we have...

Obviously hearing and listening are not identical. They are most clearly conceived as two distinguishable phases, the hearing of sound and the interpreting of sound, of a total process usually called aural assimilation. If the first phase, hearing, is identified as the perception of sound only, then it is the second phase of the process--the attachment of meaning to the aural symbols perceived--which has come to be widely accepted as the definition of listening.⁴

The authors divide listening into three types: appreciative, critical, and discriminative. This third type, listening to understand ideas, is the chief emphasis of the authors. The term discrimination as used in this thesis, however, refers to a different type of discrimination--that of sound discrimination, identifying and recognizing phonemic distinctions. This ability comes automatically in the native language. A basic feature of the listening process, sound discrimination (defined in Chapter II) must be mastered in the second language before the discriminative comprehension to which Nichols refers can be achieved. It is hoped that the Puerto Rican student will eventually realize this comprehension.

Although Nichols' book is not concerned with listening in English as a second language, some of its fundamental principles are applicable. In discussing the lack of scientific research in the field of listening, the authors state that until 1947 only fourteen scientific researches related to classroom listening comprehension had been published. In comparison, approximately 2500 scientific studies in reading had been completed. Since listening is basic to speaking and is also a most useful communicative art, it is indicated that more time should be devoted

⁴Ralph G. Nichols and Thomas R. Lewis, Listening and Speaking (Dubuque: Wm. C. Brown Co., 1954), p. 1.

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...
...the ... of ...

to training for effective listening. Dr. Nichols has supported his contention, that listening can be taught, with the results of research conducted at the University of Minnesota. Some of these studies are described in his book. This is an important treatise on listening in a field lacking such scholarly material. Nichols collaborating with Stevens also published Are You Listening?⁵ in 1957, a book on the same subject written in the popular vein.

Experienced teachers who have written on the subject of teaching a foreign language, and the few who have written comprehensive works on the teaching of English as a second language, recommend the following sequence for teaching the four language divisions: listening, speaking, reading, writing. In discussing the objectives of language teaching, Nelson Brooks says, "The first is training in listening comprehension. ... it is the ear that dominates the learning and use of speech sounds. Ear training must come first."⁶ Hubener in his recent book, How to Teach Foreign Languages Effectively, stresses the importance of recognition of the sounds of a language in the following passage:

The basis of all language is sound. Words are merely combinations of sounds It is in these sound sequences that the ideas are contained. The hearing of a given word calls for the acoustic and the visual image of that word, from which meaning is obtained. ... it is only through accurate acoustic images that meanings can be derived and that language becomes a reliable means of communication.⁷

⁵Ralph G. Nichols and Leonard A. Stevens, Are You Listening? (New York: McCraw-Hill Book Co., Inc., 1957).

⁶Nelson Brooks, Language and Language Learning (New York: Harcourt, Brace & World, Inc., 1960), p. 107.

⁷Theodore Hubener, How to Teach Foreign Languages Effectively (New York: New York University Press, 1959), p. 12.

to training low ability children. This study was conducted in
controlling, that the results are as follows: The first study
conducted at the University of Chicago, which is described
described in his book. This is an important study because
a field testing was conducted in a school setting. The results
Stevens also published a book in 1977, which is a study
subject which is the present study.
Experiments were done and have shown that the use of
a foreign language, and the results are as follows: The first
on the teaching of English as a second language, the results
the sequence for reading the first language. The results
speaking, reading, writing, and the results are as follows:
teaching, before reading, and the results are as follows:
grammar, ... it is in the first language, and the results
second language. The results are as follows: The first
book, How to Teach Foreign Languages, which is the
case of recognition of the words of a language. The results
The basis of all learning is a word. The results are as follows:
them to words and the results are as follows: The first
them are contained. The results are as follows: The first
the results are as follows: The first language, and the results
learning in English. The results are as follows: The first
language that contains the results are as follows: The first
a reliable means of learning.

² Ralph G. Nicholas, How to Teach Foreign Languages,
York: Holt, Rinehart & Winston, 1977.
³ Ralph G. Nicholas, How to Teach Foreign Languages,
York: Holt, Rinehart & Winston, 1977.
⁴ Theodore S. Brown, How to Teach Foreign Languages,
York: Holt, Rinehart & Winston, 1977.

In addition to the importance of recognizing sounds, listening must be an active process. Buehler and Linkugel argue that listening is an "active, holistic process." They point out that effective listening cannot be achieved without concentration of our senses, and that the foremost barrier to effective listening is lack of training.⁸

J. N. Hook explains that until the middle 1940's little attention was paid to problems of teaching listening. "It was generally taken for granted that everyone knows how to listen. During the forties, though, English teachers became increasingly aware of the fact that their students, and adults too, frequently fail to listen purposefully and critically." He says that English teachers have but recently recognized this challenge which is actually not new, but a variation of the old responsibility--the teaching of communication. Then he points to P. T. Rankin's pioneer study, rating the relative importance of the communicative arts. This study showed that people spend 9 per cent of their time in writing, 16 per cent in reading, 30 per cent in speaking, and 45 per cent in listening.⁹

Recognizing the importance of listening, Brooks thinks that time should be given to each of the four skills in approximately the following proportions:

Listening	50 per cent
Speaking	30 per cent
Reading	15 per cent
Writing	5 per cent

⁸E. C. Buehler and Wil A. Linkugel, Speech, A First Course (New York: Harper & Brothers, Pub., 1962), pp. 93-4.

⁹J. N. Hook, The Teaching of High School English (New York: The Ronald Press Co., 1950), p. 33.

In addition to the... must be an active... as an "active... the court be... the foremost... J. H. Bond... was paid to... for granted... though... their... and... used this... old... I. J. Bond's... communicative... of their... ing, and... Regarding... should be... ing...

Yours truly,
J. H. Bond
Bond Bros. Co., Inc.

He makes this allotment for students at the early level, and suggests that the listening period may be gradually reduced as the student becomes more proficient.¹⁰

Listening in a Second Language

Articles and reports of experimental studies written by language teachers and linguists indicate problems encountered by the learner when he attempts to gain facility in a new language. Most of these writings are concerned with English-speaking people learning a second language, whether it be Russian, Italian, or Japanese. Also, most of them are concerned with production from the standpoint of structure or articulation and not with aural comprehension; the listening factor is not emphasized. A limited number of the studies are concerned with the person who is learning English as a second language and the majority of these deal with factors other than aural comprehension, though the importance of adequate and accurate listening is often mentioned.

Language Learning, A publication of the University of Michigan Linguistics Department, regularly publishes results of research in teaching English as a second language. Critical articles on the same subject evaluate problems encountered by teachers and students in the classroom or in the field. Among the significant articles are those of Dalbor, Weir, Haugen and Wolff. John Dalbor discusses the problem of the Spanish-speaking learner who has the difficulty of hearing and

¹⁰Brooks, op. cit., pp. 122-23.

He notes this difference... that the... comes some problem.

... in a person...

articles and reports of... teachers and... when he attempts to... studies are... language, whether it is... they are concerned with... attention and not with...

not... given who is... of these... appearance of... language learning...

language... teaching English as a... subject... or in the... of labor, etc....

producing the two English phonemes /ʃ/ and /tʃ/.¹¹ This problem is found in Puerto Rican English language learners use of such words as share and chair. Ruth Hirsch Weir discusses the fact that the student tends to over-differentiate or under-differentiate his perception and production in terms of the phonemic system of his native language.¹² This is a difficulty encountered by the Puerto Rican student in transferring to the English language which has more numerous vowel distinctions than his native Spanish. Einar Haugen describes a problem similar to the one presented by Weir and uses the term diaphone, which is a hybrid sound produced when the second language contains a phoneme not found in the native language. These diaphones can be heard in the Puerto Rican production of English. Haugen says that our goal as teachers is that the learner shall turn the diaphones into phonemes, distinguishing them precisely from his own.¹³ Hans Wolff provides an "appraisal of some of the problems and difficulties likely to arise in the teaching of English phonemes to speakers of Puerto Rican Spanish."¹⁴ The phonemic difficulties described here will be referred to in Chapter II.

The advantage of the diagnostic method in dealing with deficiencies in aural comprehension is the subject of various studies by

¹¹John B. Dalbor, "The English Phonemes /ʃ/ and /tʃ/: A Hearing and Pronunciation Problem for Speakers of Spanish Learning English," Language Learning, IX (1959), pp. 67-73.

¹²Ruth Hirsch Weir, "The Phoneme in Language Teaching," Language Learning, VIII (1958), p. 16.

¹³Einar Haugen, "The Phoneme in Bilingual Description," Language Learning, VII (1956-57), pp. 17-23.

¹⁴Hans Wolff, "Partial Comparison of the Sound Systems of English and Puerto-Rican Spanish." Language Learning, III (1950), pp. 38-40.

producing the two British specimens...
found in Puerto Rican...
Spain and Italy...
leads to over-interpretation...
production in terms of the...
This is a difficult...
leading to the English...
than that the native...
far to the one...
a hybrid...
not found in the native...
Puerto Rican...
specimens...
distinguishing...
"apical" of some of the...
the teaching of English...
The phonetic...
for II.

The advantage of...
also in actual...

¹¹ John B. Gair, *The British...*
and Phonological...
Language Learning, 12 (1959), p. 177.

¹² *With French...*
Language, VIII (1952), p. 1.

¹³ *Spain...*
Language, VII (1951), pp. 15-20.

¹⁴ *Spain...*
and Puerto Rican...

linguists and language teachers. Dalbor makes the following statement:

One of the best ways to handle these linguistic stumbling blocks is to predict them beforehand by means of a scientific comparison of the sound systems of the native language and the new language. Thus the most serious difficulties are isolated, given special attention and prepared for easier learning by the student. And to solve only a carefully-chosen and deliberately limited number of such pronunciation problems is to make a great advance toward a complete mastery of the sound system of English.¹⁵

In his book, Teaching and Learning English as a Foreign Language, Charles C. Fries of the English Language Institute of the University of Michigan, makes the following assertion: "The most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner."¹⁶

It is on this theory that Lado based his book Linguistics Across Cultures. Under the topic "Perception blind spots," he says, "Much less known, and often not even suspected, may be the fact ... that the speaker of one language listening to another does not actually hear the foreign language sound units—phonemes. He hears his own. Phonemic differences in the foreign language will be consistently missed by him if there is no similar phonemic difference in his native language."¹⁷

The teacher should be aware of this linguistic problem faced by the student. A comparison of the two languages involved will reveal

¹⁵ Dalbor, op. cit., p. 73.

¹⁶ Charles C. Fries, Teaching and Learning English as a Foreign Language, (Ann Arbor: University of Michigan Press, 1945), p. 9.

¹⁷ Lado, op. cit., p. 11.

language and language behavior. (Linguistics and language behavior)

One of the most important aspects of language is its function in society. This is the study of how language is used in different contexts and how it changes over time. The study of language is a complex one, involving many different fields of knowledge. It is a study of the human mind and how it processes language. It is a study of the social and cultural context in which language is used. It is a study of the way in which language is learned and how it is taught. It is a study of the way in which language is used in different cultures and how it changes over time.

In his book, *Language and Language Behavior*, the author discusses the relationship between language and behavior.

Charles O. Frisk of the University of Michigan, in his book *Language and Language Behavior*, discusses the relationship between language and behavior. He argues that language is not just a set of words and sentences, but a system of communication that is shaped by social and cultural factors. He suggests that language is a tool that is used to achieve certain goals and that it is therefore a behavior. He also suggests that language is a social activity and that it is therefore a behavior that is learned from others.

It is on this view that the author of this book has based his theory of language.

Behavior. Under the term "behavior" the author means any action that is observable and measurable. This includes not only physical actions, but also mental actions such as thinking and feeling. The author argues that language is a behavior because it is an action that can be observed and measured. He suggests that language is a social behavior and that it is therefore a behavior that is learned from others. He also suggests that language is a tool that is used to achieve certain goals and that it is therefore a behavior that is shaped by social and cultural factors.

by his if these same as the behavior of language. (Language and language behavior)

The author of this book, Charles O. Frisk, discusses the relationship between language and behavior. He argues that language is not just a set of words and sentences, but a system of communication that is shaped by social and cultural factors. He suggests that language is a tool that is used to achieve certain goals and that it is therefore a behavior. He also suggests that language is a social activity and that it is therefore a behavior that is learned from others.

the student. (Language and language behavior)

Charles O. Frisk, *Language and Language Behavior*, University of Michigan Press, 1965.

Label, *Language and Language Behavior*, University of Michigan Press, 1965.

the similarities and differences. Efficient teaching will concentrate on overcoming problems related to the differences, affording the student an opportunity to make better progress.

Testing for Listening Comprehension

While it is not the purpose of this thesis to closely examine and evaluate existing tests for aural perception, yet it is concerned with the structure and application of these tests as they may be applicable to the projected listening lessons.

Tests in Print. A Comprehensive Bibliography of Tests for Use in Education, Psychology and Industry, edited by Oscar K. Buros, lists eleven English tests in print for non-native speakers of English. Most of these are devised to test applicants for admission to American colleges. Only three of them, all by Robert Lado, are devised specifically to test aural comprehension or perception. One of the three is especially for Japanese students, one is for non-English applicants in general, and the third is for Latin American students. The third publication, revised in 1957, has not yet been reviewed.¹⁸

In The Fifth Mental Measurements Yearbook, also edited by Oscar K. Buros, there are two comprehensive reviews of the test for applicants from non-English language countries. Prof. Herschel Manuel's review explains that the test takes about 40 minutes and consists of 60 three-choice items. The examiner reads a sentence (sometimes two or more), and the student marks a picture, phrase or sentence to indicate his understanding of what is read. This test contains constructed items

¹⁸Oscar K. Buros, ed., Tests in Print (Highland Park, N. J.: Gryphon Press, 1961), pp. 86-88.

the inclusion of ...
on overlying ...
should an ...
Testing for ...
While it is ...
evaluate existing ...
the structure and ...
to the proposed ...

Tests in ...
Bioscience ...
shown ...
of these ...
layers. ...
only to ...
especially for ...
general, and ...
location, ...

In the ...
A. ...
could ...
review ...
three-choice ...
more), and ...
the ...

Mr. ...
Gypton ...

which present speech comprehension difficulties to foreign students, instead of taking samples of English at random. Thus a foreign student might have difficulty distinguishing between sounds "sixty" and "sixteen." Manuel believes that Lado's approach to testing through comparative analysis of the different languages is a promising one. However, he questions the fairness for speakers of different tongues, and is dubious about the length of the last ten items. Nevertheless, he feels that it is a useful test to judge ability of foreign students planning to work in English-speaking colleges.

Prof. Clarence E. Turner evaluates the test as superior and says "... anyone requiring an instrument to determine whether a handicap exists in the aural comprehension of English need look no further."¹⁹

Robert Lado reviews seven groups of tests himself in "Survey of Tests in English as a Foreign Language," Language Learning, Vol. III, 1950. One of these tests is a U. S. Dept. of State, English Proficiency Examination which includes a section for aural comprehension. This test consists of two anecdotes read twice in natural style. The student writes short answers to ten questions asked orally after each anecdote. Answers are graded according to whether or not they show that the anecdotes and questions were understood.²⁰ This method would be adaptable for classroom listening lessons.

Another test reviewed by Lado was the Villareal Test for Aural Comprehension of Native Speakers of Spanish. Ten selections and five

¹⁹Oscar K. Buros, ed., The Fifth Mental Measurements Yearbook (Highland Park, N. J.: The Gryphon Press, 1959), pp. 396-98.

²⁰Robert Lado, "The Survey of Tests in English as a Foreign Language," Language Learning, III (Jan.-June 1950), pp. 51-65.

which proceed... instead of... dont right... "sixty... comparative... however, he... and as... he feels... planning... Prof. G... "... anyone... exists in... Robert... Tests in... 1950. One... agency... This test... student... anecdote... that the... be adaptable... Another... Comparison...

19
20
21

dialogues read by Villareal in phonograph recordings make up the test. Students listen and indicate responses by means of 75 multiple choice answers. There are five choices each and the questions and choices are on answer sheets in both Spanish and English. Lado decided the passages were too long. Native speakers themselves found it not easy and none made a perfect score.²¹

The Princeton series of "Sequential Tests of Educational Progress" includes one to measure listening ability. This is a well-controlled test for aural perception. It is timed, and the examiner reads both the selection and the answers from which a choice is made by the students. It is devised for students whose native tongue is English and therefore would not be suitable for Puerto Ricans.

An English Proficiency Test used at the University of the Philippines was examined. Part I for aural recognition contains the following:

- (1) A choice of minimal pairs for sound discrimination within sentences read by the examiner.
- (2) Matching of statements for meaning; the examiner reads a sentence aloud and student must choose a statement on his test paper that is similar in meaning. One word of a minimal pair is contained in the examiner's sentence.
- (3) The examiner reads three different selections. After each selection the student marks multiple choice answers that deal with the meaning of the passage.

The testing methods used in the different parts of this test would be applicable to check comprehension of listening lessons.

²¹ Lado, op. cit., pp. 51-65.

The first part of the paper is devoted to a description of the test material and the results of the test. The second part is devoted to a description of the test material and the results of the test. The third part is devoted to a description of the test material and the results of the test.

The first part of the paper is devoted to a description of the test material and the results of the test. The second part is devoted to a description of the test material and the results of the test. The third part is devoted to a description of the test material and the results of the test.

- (1) A choice of material was made on the basis of the following criteria:
- (2) The material was chosen on the basis of the following criteria:
- (3) The material was chosen on the basis of the following criteria:

The testing method was applied to each component of the test material.

Some of the foregoing tests suggest methods that could be applied as practices in evaluating sound discrimination within context. Based on such similar suggestions, the University of Puerto Rico Speech Department developed the aural perception test used in its program. This test described in Chapter III has served also as a means for locating the students' deficient areas in sound discrimination, and these deficiencies in turn have suggested the preparation of the listening materials embodied in this thesis.

A useful book for teachers on the construction and use of foreign language tests has been written by Robert Lado. This book, Language Testing, is based on years of experience in the field. Like Ralph Nichols' books on listening, Language Testing is the first comprehensive treatise in its field.²²

Another book based on experimental research is Manual of American English Pronunciation, by Clifford H. Prator, Jr. For three years the author and his staff recorded the speech and counted the "errors" of their students. Analysis indicated "a sort of frequency count of the pronunciation difficulties of a group of several hundred average students from abroad. The Manual was built around this count."²³ In explaining the structure of the text, Prator says, "We have adopted an order of arrangement based primarily on simple numerical frequency, considering first and at greatest length those difficulties most prevalent in our

²²Robert Lado, Language Testing (London: Longmans, Green and Co. Ltd., 1961).

²³Clifford H. Prator, Jr., Manual of American English Pronunciation (rev. ed.; New York: Rinehart & Co., Inc., 1957), p. xii.

Some of the foreign...
as produced in...
on which similar...
Department developed...
This test described...
ing the students'...
relationships in...
materials embedded...

Another book...
language tests...
Testing is based...
Nichols' book...
five testlets...

Another book...
English translation...
author and his...
their students...
promotes...
from abroad...
the structure...
arrangement...
first and at...

about 1960...
1961...
William H. Porter...
for... New York...

classes."²⁴ The author makes use of a "Diagnostic Passage" which is recorded at the beginning of the training course. In analyzing this passage for each individual student, he prepares an "accent inventory" which serves as a training guide. The passage may be used again at the end of the course to measure the progress made. Alternate forms are not available. Prator includes a limited number of sample passages of connected speech in his Manual, which the students can practice, record, and then listen to themselves. This is a usable technique yet it does not apply listening strictly to oral speech without the use of printed material.

Methods of Presenting Listening Experiences

Nichols states that there are three methods of presenting listening improvement feasible for use in our schools:

1. The direct approach—depends upon setting aside classroom time for specific courses in listening.
2. The integraved approach—requires coordination of listening instruction with other subjects—especially those concerned with the language arts.
3. The listening laboratory. This method of listening improvement does not preclude²⁵ the use of the above two approaches, but supplements them.

In teaching English as a second language, all three of these approaches may be used, adding variety and extra practice in the new language.

Since the advent of the language laboratory, interest has been high in the production and procuring of suitable material for laboratory

²⁴Prator, op. cit., p. xv.

²⁵Nichols, op. cit., Are You Listening?, pp. 209-10.

recorded at the beginning of the lesson, the teacher
 passage for each individual student, in order to
 which comes as a result of the lesson. The teacher
 the end of the lesson. The teacher should be
 and not available. The teacher should be
 of connected speech in the lesson, and the teacher
 record, and then listen to himself. The teacher
 it does not apply to the lesson, but to the
 printed material.

Methods of Presentation in the Classroom

Wholistic states that there are two main methods of
 the improvement possible for the teacher in the classroom.

1. The direct approach - teacher speaks and students listen.
2. The indirect approach - teacher speaks and students listen, but with the teacher's help.
3. The indirect approach - teacher speaks and students listen, but with the teacher's help, but with the teacher's help.

In teaching English as a foreign language, the teacher
 may be used, either written or spoken, in the classroom.
 Since the result of the lesson is the teacher's
 high in the classroom, the teacher should be

Teacher, pp. 100-105

Wholistic, pp. 100-105

training. Though this involves listening, the idea of production is usually of primary significance. Furthermore, laboratory work stresses drill work in new sounds and words, with much pattern practice. Opinions expressed by speech teachers on the use of the laboratory are revealed in a survey of practices and procedures in teaching English as a second language authorized in 1959 by the Speech Association of America. In tabulating the responses to the survey questionnaire, the investigators found that a vigorous minority exception was taken to the effectiveness of laboratory aids. "No teacher prefers the laboratory technique as a substitute for himself. Recordings cannot evaluate, or criticize, or answer questions, but teachers can."²⁶

An unpublished research paper evaluates the effectiveness of English speech training at the University of Puerto Rico.²⁷ This comparative study is based on test results of trained and non-trained students during the academic year 1961-62. It presents evidence that the trained students improved in sound discrimination without exception, improvement scores ranging from 17 to 76 per cent. The non-trained students showed no consistent pattern of improvement; some scored lower on the retest. More experimental studies should be undertaken in the field of remedial speech dealing with linguistic problems for the general purpose of improving training methods and selecting more effective course materials.

²⁶ Cj Stevens, et al., "English as a Second Language—Practices of Speech Departments," Quarterly Journal of Speech, XLVIII (Oct. 1962), pp. 285-90.

²⁷ Margaret F. Tucker, "Analyzing Effectiveness of English Speech Training" (Unpublished paper, prepared for Speech 251, Univ. of New Mexico, 1962).

Research in general concentrates on language learning for the beginner, or at least the person studying a new language for the first time. Very little is designed for the student who needs remedial speech in the second language. Numerous authors furnish casual suggestions, but few have recommendations for specific training lessons aimed at improvement of listening in the second language, yet all point to listening as the first step in the process of developing skill in a new language.

Several authors recommend dictation as a means of developing aural comprehension as well as checking for accuracy. Crawford and Leitzell point out the disadvantages:

1. Dictation is a test of recognition of foreign words, but not a test of recognition of their meanings.
2. Writing is usually rather slow, the method time-consuming.
3. It is likely to be unnatural and not typical of ordinary conversational speech.²⁸

Dictation, however, serves a useful purpose when it employs transcription of the sounds of the language into I. P. A. symbols. This experience affords training in perceiving the sounds and recording what is heard. This process supplies basic training in sound perception.

The use of connected material in the form of informational paragraphs or short stories to be read by the teacher is advocated by Nichols, Brooks and Finocchiaro as a good means of supplying aural comprehension material. Brooks and Nichols both offer a list of suggestions for aural comprehension activities and some of these would be useful in a classroom devoted to teaching English as a second language. Brooks supplies a long list of ideas and subjects which would be very usable as the bases for listening lessons, or short discussions to give the

²⁸Crawford, *op. cit.*, p. 109.

Research in general...
beginner, or at least the period...
also. Very little is known...
in the second language...
few have recommendations...
next of listening in the second...
the first step in the process...

Several authors...
must comprehend as well...
helpful point out the...
I. Dictation is a test...
not a test of technical...
2. Writing is a test...
3. It is likely to...
conventional tests...

Dictation, however, serves...
tion of the sounds of...
since efforts writing...
heard. This process...
The use of...
paragraphs or short...
Nichols, Brooks and...
preparation material...
for such comprehension...
in a classroom devoted...
supplies a long list...
as the basis for...

class experience in aural comprehension.²⁹ Brooks makes it clear that such topics should be presented from the point of view of a young person of the age and status of the students being addressed, and the perspective should be that of such a person as he goes about his daily tasks.³⁰

Mary Finocchiaro includes advice about aural comprehension in her recent book, Teaching English As A Second Language. She recommends the use of passages for aural comprehension "of about ten lines, such as an anecdote, a short poem, a passage from a reader, or an original passage prepared by the teacher to illustrate a structural item or some cultural concept. ... following listening (and one repetition) questions are asked and answers are written. Each question is repeated." Certain suggestions are good, for instance: "Review question words before aural comprehension exercise. With more advanced pupils, give practice in answering 'why' questions."³¹ This type of listening recommended by Brooks and Finocchiaro strengthens listening comprehension in contextual material and resembles normal listening experience in the native language.

The advantage of contextual material over isolated words, phrases and disjointed sentences is pointed out in several sources. Crawford says, "It is well to practice on fairly long sentences or on paragraph

²⁹ Brooks, op. cit., pp. 87-92.

³⁰ Ibid., p. 86.

³¹ Mary Finocchiaro, Teaching English as a Second Language (New York: Harper & Brothers, 1958), pp. 155-159.

... in the native language. The advantage of constant repetition of words and phrases is that it helps to fix them in the mind. It is well to practice the use of phrases in the native language. The advantage of constant repetition of words and phrases is that it helps to fix them in the mind. It is well to practice the use of phrases in the native language. The advantage of constant repetition of words and phrases is that it helps to fix them in the mind. It is well to practice the use of phrases in the native language.

30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

units of expression and the ability to adjust the expression of one part of the sentence to the ideas that are expressed in other and more remote parts." He recommends further that sentences should be connected in thought and content. The use of isolated sentences involves starting at the zero point each time.³²

Nichols says we "listen with our experience,"³³ and to give an abundance and variety of listening experiences, Finocchiaro, Brooks and Hubener favor the teacher constructing material suitable for his own class and situation. Finocchiaro believes that the eclectic approach is best suited to the teaching of English as a second language and therefore recommends flexibility in the selection and use of teaching materials.³⁴ Brooks suggests that the teacher spend the first five minutes of the class period talking in the foreign language on a subject not previously announced. He is a firm believer in class discussion following a listening period. "Getting the student to talk is very important."³⁵ His grasp of the material in the listening lesson can be observed during the discussion period. Hubener believes that the teacher should not depend too much on the textbook. "Lively, improved, spontaneous exercises are preferable to the sentences in the book. ... The verisimilitude of the situation will be enhanced by the teacher's freedom from the textbook."³⁶ What has been achieved in listening in

³² Crawford and Leitzell, op. cit., pp. 55-56.

³³ Nichols, op. cit., Listening and Speaking, p. 12.

³⁴ Finocchiaro, op. cit., p. 310.

³⁵ Brooks, op. cit., pp. 189-90.

³⁶ Hubener, op. cit., p. 187.

UNITS OF EXPRESSION AND THE UNITARY METHOD

part of the sentence is the unit of expression.

units of expression.

in thought and content.

at the same point with the

units of expression and the unitary method.

and therefor favor the unitary method.

one class and situation.

approach is best suited to the teaching of English.

and therefore favor the unitary method.

the material.

minutes of the class.

not necessarily essential.

following a faculty method.

laboratory.

be observed during the presentation.

teacher should not depend on a list of words.

unpleasant exercises and drills.

the verbatim, in the laboratory.

method from the textbook.

- 35
- 36
- 37
- 38
- 39
- 40

a second language is also discussed by Hubener as he furnishes background material on the best methods of presentation.

Listening Materials for Special Teaching Situations

Printed materials devised for training in aural comprehension in English as a second language are also available in the literature. A series of four volumes entitled Intensive Course in English has been prepared and published by the English Language Services, Inc., of Washington, D. C. This series is designed as a training program in English as a second language for those who have had some previous, but limited, training in English. The emphasis throughout the course is on oral-aural training. The majority of the materials are recorded on tape. The reading selections are followed by comprehension check-up questions. In the volume for advanced students, some of the reading selections are on tape only, thus depriving the student of the printed word. The topics treated have interesting content, but are too long for beginners or semi-skilled. There is an attempt to unify the different parts of each lesson. No special attempt to emphasize sound discrimination is evident in the paragraphs. Each section seems to be graded for structure and vocabulary, however. These lessons represent a forward step in teaching English as a second language. The lesson materials offer flexibility in application and a teacher with imagination could vary the lessons to suit the teaching situation. For example, the reading selections could be reduced in length at the teacher's discretion.³⁷ While these lessons would be useful in several respects, they are not designed to teach sound discrimination in context except as gained indirectly.

³⁷Intensive Course in English, I, II, III, IV (Washington, D. C.: English Language Services, Inc., 1961).

a second language in that it is a second language in the sense that it is learned after the first language and is not the native language. The term "second language" is used in a broad sense to include any language other than the native language. This includes languages learned in school, through immersion, or in any other way. The term "foreign language" is used to refer to a language that is not the native language and is learned in a classroom setting. The term "foreign language" is used in a narrower sense than "second language". The term "foreign language" is used to refer to a language that is not the native language and is learned in a classroom setting. The term "foreign language" is used in a narrower sense than "second language".

The listening lessons of Language and Life in the U. S. A., American English for Foreign Students, occur at the beginning of each lesson in Part I, and they emphasize both sound and structure. They are graduated in length and vocabulary difficulty as the lessons progress. There are questions following each selection to check comprehension. Listening is practiced with and without the text. The questions for comprehension are answered after the first reading. Since the selections and questions are part of the textbook, any good student could read ahead and prepare himself for the "listening" lesson, thus greatly reducing the value of the aural comprehension section for him. To have value for the student, the aural comprehension lesson should be provided in a controlled situation.³⁸

Numerous investigators and teachers in the field of second-language instruction have realized the importance of having specially-prepared materials to fit local needs. The following are some examples:

Brong, in a pertinent study evaluating ear training as a pedagogical technique in improving sound discrimination, states:

It appears that an ear training program of almost any type has value in improving sound discrimination. However, (a) a program directed specifically toward the skill to be improved seems to have greater efficacy than a broad program of ear training; (b) a program including an emphasis upon both listening and production experience seems to be more potent than a program of ear training which emphasizes training the ear only or production only.³⁹

³⁸Gladys J. Doty and Janet Ross, Language and Life in the U. S. A. (New York: Harper & Row, Publishers, 1960).

³⁹Clara Cordelia Brong, "An Evaluation of Ear Training as a Pedagogical Technique in Improving Sound Discrimination" (unpublished Ph. D. dissertation, Northwestern University, 1948), p. 96.

The literature review...
American English for...
located in Part I...
and graduated in...
There are questions...
listening to...
comprehension...
those and questions...
read these...
repeating the value...
value for the...
vided in a...
These...
language...
prepared...
found...
Global...
It appears...
value in...
from...
to have...
(2) ...
fiction...
can...
this only.

20
Global...
New York...
20
Global...
fiction...

Listening lessons directed toward hearing certain sounds, then, should be more effective than those containing a general vocabulary. Furthermore, brief oral discussion following the listening period should increase the effectiveness of the lesson.

An analogous situation is described by Ryan whose doctoral dissertation examines "Common Errors in English Language Usage Made by Spanish-Speaking Pupils." She says, "Errors persist because pupils hear and use the incorrect forms outside of school more frequently in vital situations than they hear and use the correct forms in school. If they have ample opportunities for hearing the correct forms in interesting and vital context in school, the correct forms will begin to 'sound right' to them. ... If the teacher knows in advance what errors are likely to occur, she may plan to use the correct forms frequently"⁴⁰ She advocates the following activities for oral use of correct forms:

- a. The teacher may read to the class stories which contain the correct forms she wishes to stress.
- b. The pupils may listen to recordings of stories or to sound films which use the desired language forms.
- c. Imitation of the teacher both in concert and individually.
- d. The teacher or another pupil asks questions which require the use of the correct form as an answer.⁴¹

These suggestions are in line with the projected listening lessons to fill the need in the Puerto Rican situation.

Coleman completed an extensive survey which attempted to analyze and evaluate the materials and techniques that had been proposed for

⁴⁰Louise T. Ryan, "Common Errors in English Language Usage Made by Spanish-Speaking Pupils" (unpublished Ph. D. dissertation, New York University, 1949), p. 85.

⁴¹Ibid., p. 86.

... the effectiveness of the ...

... in ...

... the ...

... contact in school, the ...

... advocates the following ...

... The teacher ...

... The results ...

... These suggestions ...

... will the need in the ...

... Chinese ...

teaching English to young Spanish-speaking children in the United States. He stated in conclusion that "it is impossible to apply without modification to the Southwestern situation the findings and the recommendations of investigators themselves. Moreover, the particular needs of the Spanish-speaking child make it imperative that special textual materials be prepared or adapted for him, and that special curricular arrangements and procedures be devised for his benefit."⁴²

Cornelius declares: "Teaching is always experimental. The teacher of a foreign language is one who 'experiments' in language teaching."⁴³

"The objective of the foreign-language teacher is to expose his students to the language as it is spoken by the native speakers of that language."⁴⁴

"... the student of a foreign language, studying in a school in his own country may hear the language only during the time he is in class. Consequently, these 'situation equivalents' must be arranged for him by someone."⁴⁵

Under the heading of "Preparing new teaching materials," Iado says that "more and more the teacher is faced with the need to prepare textbooks and other teaching materials that are up to date and meet the needs of the particular students he is interested in. ... The teacher who has systematically compared the two languages will be able to prepare supplementary exercises on those patterns which are important or difficult and have been overlooked or treated inadequately in the book."⁴⁶

⁴² Algernon Coleman, English Teaching in the Southwest (Washington, D. C.: American Council on Education, 1940), p. 123.

⁴³ Edwin T. Cornelius, Jr., Language Teaching (New York: Thomas Y. Crowell Co., 1953), p. 162.

⁴⁴ Ibid., p. 92.

⁴⁵ Ibid., p. 126.

⁴⁶ Iado, p. 3.

...the objective of the foreign-language program is to provide the student with a functional knowledge of the language as it is spoken in the country where the language is used. This is in contrast to the traditional approach of teaching foreign languages as a purely academic exercise. The student is expected to be able to understand and use the language in real-life situations. This approach is based on the principle that language is a means of communication and should be taught as such. The student should be able to understand and use the language in real-life situations. This approach is based on the principle that language is a means of communication and should be taught as such.

Under the heading of "Foreign Language Instruction," the report states that "more and more attention is being given to the study of foreign languages in our schools. This is a very desirable trend, for the study of a foreign language is not only a valuable educational experience, but it also provides the student with a means of communication with other peoples. The study of a foreign language is a means of communication with other peoples. The study of a foreign language is a means of communication with other peoples.

Foreign Language Instruction
Foreign Language Instruction
Foreign Language Instruction

1944, p. 92
1944, p. 100
1944, p. 100

The importance of materials especially prepared to meet the local situation is emphasized by Dr. Pauline Rojas, who was for many years the supervisor of the English program in the Puerto Rico Department of Public Instruction as well as being the person in charge of adapting the Fries program of instruction to the Island schools. She states: "The basic principles underlying the program are the following:

- (1) that instruction should begin with the colloquial aspects of the language;
- (2) that the initial presentation should be oral;
- (3) that the materials should be based on a structural analysis of the grammar and sound system of English as compared to the grammar and sound systems of the student's native tongue.
...

The central feature of the program is the specially prepared materials; without them it could not operate."

"Those materials give the students the opportunity to master the distinguishing sound features of English and its structural patterns in a minimum of time."⁴⁷

Thus, we have seen the importance which various investigators have attached to the need for having available specifically applicable teaching materials; and they feel that often these materials, to meet the local needs, must be prepared by the teacher himself. The teachers in the speech program at the University of Puerto Rico agree with this

⁴⁷ Pauline N. Rojas, "The Teaching of English as a Modern Foreign Language," College English, IX (Oct. 1947-Oct. 1948), p. 324.

The importance of this study is that it provides a local situation in which the study of the history of the movement of the people is being made. The study is being made in a way that is not only interesting but also useful. The study is being made in a way that is not only interesting but also useful.

- (1) that the study is being made in a way that is not only interesting but also useful.
- (2) that the study is being made in a way that is not only interesting but also useful.
- (3) that the study is being made in a way that is not only interesting but also useful.

The central feature of the study is that it provides a local situation in which the study of the history of the movement of the people is being made.

These materials give the student a good opportunity to study the distinguishing characteristics of the study of the history of the movement of the people.

Thus, we have seen the importance of the study of the history of the movement of the people. We have seen that the study is being made in a way that is not only interesting but also useful. We have seen that the study is being made in a way that is not only interesting but also useful.

Richard E. Butler, Jr.
College of Education, University of Illinois at Chicago

viewpoint, since they have found a need for such special materials to meet specific local conditions.

Review of the pertinent literature and examination of materials available for teaching English as a second language in the Puerto Rican situation demonstrate that there is a scarcity of suitable lesson material for the purpose of training in aural perception. As a teacher of English as a second language at the University of Puerto Rico, the investigator became aware of the need for specific types of auditory discrimination materials for use in the classroom. The problem of this thesis evolved from this realization.

Summary

In summary, the following points have been realized from the review of the literature:

1. The importance of listening when learning a language is clearly demonstrated in the literature.
2. It has also been demonstrated that listening when learning a second language is even more important than in the native tongue.
3. Tests have been devised to evaluate the listening discrimination and comprehension of various types of students, and the University of Puerto Rico has established its own for evaluative purposes.
4. Investigators recommend preparation of special materials for special language learning situations.
5. There is a demonstrated lack of material suitable for teaching listening discrimination and comprehension to Puerto Rican university students.

viewpoint, since they have found a number of...
to meet specific local conditions...
review of the present literature and...
available for teaching...
from attention...
lesson material for the purpose of...
a teacher of English as a second...
Also, the investigator...
of...
problem of this...
in...
review of the literature...
1. The...
clearly demonstrated in the...
2. It has also been...
a second language is even...
3. Tests were...
ration and...
of...
4. Investigator...
for special language...
5. There is a...
the...
university...

Therefore, the problem of this thesis is to develop materials appropriate to fill part of the present needs for additional listening experiences in the Puerto Rican situation. Chapter III will illustrate the method of determining the points to be emphasized in the preparation of such materials. There is general agreement in the literature that aural comprehension is dependent upon the perception of the distinctive sounds of a language and that improvement in listening ability comes with additional experiences which should be supplied in the training program.

Therefore, the first
apparatus to this part of the program
experiences in the laboratory
the period of receiving the
of such activities. There
actual comparison in a
counts of a language
with additional experiments
program.

Chapter II

TERMS AND DEFINITIONS

For the purpose of this study it is necessary to have a clear understanding of certain terms and concepts that will occur throughout the thesis, and are basic to the problem involved.

Aural Comprehension

Basic to language development is adequate aural comprehension. It is an activity which can be divided into three parts: perceiving, recognizing, and comprehending. The order is fixed. Perceiving the sound, the actual hearing of it, comes first. Recognizing the sound, identifying it as to source and type, is next. Then comes the understanding of the sound, comprehension of the meaning it embodies within a given situation.¹ This process of aural comprehension is generally assumed to take place progressively in one's native language.

Auditory comprehension in a second language varies somewhat from the foregoing definition. Robert Lado defines auditory comprehension of a foreign language thus:

Auditory comprehension of a foreign language means recognition control of the signaling elements of the language in communication situations.²

¹Giles Wilkeson Gray and Claude Merton Wise, The Bases of Speech (3rd ed., New York: Harper Bros., Pub., 1959), pp. 51-62.

²Robert Lado, Language Testing (London: Longmans, Green and Co. Ltd., 1961), p. 206.

For the purpose of this study, the understanding of certain areas and areas of the brain, the chest, and the brain, the chest, and the brain.

It is an activity which can be defined as a process of recognizing, and comprehending, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

Identifying is as to words, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

standing of the sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

a given situation. The actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

needed to help those who are unable to hear, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

activity, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

the foreign language, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

a foreign language, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

activity, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

control of the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound, the actual meaning of a sound.

Office of the Director, Department of Education, New York State Education Department, Albany, New York.

Robert J. Lippman, Director, Department of Education, Albany, New York.

Ed., 1961, p. 20.

This means that recognition of the phonemic elements of the language, or sound discrimination, leads to auditory comprehension in speech situations. The second step in the comprehension process--recognition--is the one for concern in teaching English as a second language. Recognizing the sounds of the new language is vital to accuracy and progress. This becomes a problem area when the sounds are not accurately recognized. Lack of recognition can mean lack of comprehension.

The Phoneme and the Allophone

Basic to the understanding of sound discrimination and this study is the concept of the phoneme. A clear and workable definition of the phoneme is given by Eisenson:

A phoneme, ... may be defined as the smallest distinctive group or class of sounds in a language. Each phoneme includes a variety of closely related sounds which differ somewhat in production and in acoustic result because of context or conditions of speech.³

The words tin and din illustrate phonemic distinction. The initial sounds /t/ and /d/ differentiate the two words and give meaning to each. Thus /t/ and /d/ are separate phonemes within the English language system. The /t/ in tin, however, differs from the production of t in stem, or lets, or later. These variations of the phoneme /t/ are called allophones. They do not represent significant differences in the basic sound unit, but as a group belong to the phoneme /t/ which is a distinctive linguistic element of the language system.

³Jon Eisenson, Basic Speech (New York: The Macmillan Co., 1950), p. 68.

This scene takes place...
The second step in the...
occurs in teaching...
of the new language...
problem after which...
theoretical can now...

leads to the...
in the context of the...
phases is given...
A phoneme...
of class or...
of closely related...
in acoustic...
The words...
/v/ and /b/...
/v/ and /b/...
The /v/ in...
/v/ or /b/...
they do not...
but as a...
the element of...

An allophone of one language may be a distinctive sound unit, and therefore a phoneme, in another language. For instance, the Thai language makes a phonemic distinction between aspirated and unaspirated /p/.⁴ In English this difference is allophonic in the production of p in pin, or apple, or spend. A problem arises when the phonemic unit of one language is carried into another language where it may be only an allophonic sound.

Minimal Pair

One of the ways of testing phonemic distinctions is with minimal pairs. A minimal pair is a pair of words that are alike except for one difference in sound; for example, reach and rich are phonemically alike except for the vowel sounds /i/ for reach, and /ɪ/ for rich. The difference could be in a consonant instead of a vowel; for example, hit and pit differ in the initial sound, one being /b/ and the other /p/.

Sound Discrimination

Ability in sound discrimination is necessary to hear the phonemic distinctions. This develops with maturation in the native language, but must be acquired in the second language. Sound discrimination is related to the second phase of the aural comprehension process, that of recognition. Since this study concerns sound discrimination in a second language, in a remedial speech setting, Van Riper's definition of sound discrimination is appropriate:

Discrimination of sounds involves ... recognition, identification, association with symbols, and differential bodily reactions.⁵

⁴Iedo, op. cit., Linguistics ..., p. 11.

⁵Charles Van Riper, Speech Correction (3rd ed., Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1954), p. 222.

an analysis of the... therefore a... groups... /p/... in the... of one... allophonic...

One of the ways... A minimal pair... difference is... except for the... ference could be... and yet differ...

Apply to... distinctions... must be... to the second... tion. Since... groups, in a... realization is...

Labels... Changes... New Jersey...

Within the retraining program, the characteristics of discrimination are listed as: comparing the correct sound with the error, hearing the difference between the two sounds, and recognizing the contrasts involved.⁶ These characteristics were recognized in planning this study.

Language Sound Systems

Each language has its own distinctive sound system. This study is concerned with the sound systems of two languages--Spanish and English. While it is not the purpose of the study to analyze the sound systems of these two languages, we must recognize certain general features which are significant to the learning process as the student moves from Spanish to English.

Spanish. Spanish is one of the languages in which the spelling indicates the sounds of the letters.⁷ Consonants and vowels are distributed about equally and are pronounced with relatively the same duration. The five vowels are pure in sound quality, and two or more frequently occur in consecutive arrangement; and there is no vowel /ɜ/. There are fourteen diphthongs. A few consonant clusters are in the system. Aspiration is not strongly applied to either consonants or vowels. There are nineteen consonant phonemes. /t/ and /f/ are lowest in frequency count. Of the vowels, /i/ and /u/ have the lowest frequency count.⁸

⁶Van Riper, op. cit., p. 224.

⁷Dorothy Mulgrave, et al., Speech (New York: Barnes & Noble, Inc., 1954), p. 171.

⁸Tomás Navarro Tomás, Manual de Pronunciación Española (5th ed., New York: Hafner Publishing Co., 1961), passim.

within the remaining groups. The first group is the one
labeled as 'consonants' and the second as 'vowels'.
The difference between the two groups is that the
first group consists of letters which are
characterized by the fact that they are

Each language has its own system of letters and
is concerned with the same system of letters.
While it is not the purpose of this paper to discuss
these two languages, we will point out certain features
are significant to the learning process of the
English to Spanish.

Spanish. Spanish is one of the languages in which the
the sounds of the letters are the same in both
equally and are pronounced with the same force.
vowels are pure in sound quality, and the same
consonants are arranged in the same order in
alphabets. A few consonant clusters are not
not strictly applied to the English alphabet.
consonant phonemes. /s/ and /z/ are the only
the vowels /e/ and /o/ have the same quality.

Van Dyke, G. L.
Dorothy Winters, *Spanish Grammar*,
1954, p. 177.
Dorothy Winters, *Spanish Grammar*,
New York: McGraw-Hill, 1954.

In dealing with Spanish pronunciation, Wise points out "it is necessary to understand a linguistic concept important in all Romance languages, that of open and closed syllables. An open syllable is a syllable ending in a vowel or diphthong. A closed syllable is a syllable ending in a consonant." He explains further that the change from closed to open syllable, or vice versa, induces a change in vowel value. Also, he points out that every syllable is carefully spoken. Though there is some unstressing of vowels in unaccented syllables, each vowel retains its identity.⁹

English. English, compared with Spanish, is a relatively unphonetic language. It is not always possible to determine the sound from the spelling. The consonant distribution exceeds that of the vowels and there is a variation in the duration applied as each is pronounced. There are eleven vowels.¹⁰ Authorities differ on the exact number of diphthongs. The vowels are not pure in sound quality and there is a tendency to lengthen them into diphthongs, particularly in some regions. Two vowels may occur in consecutive arrangement. The frequency of weak, or unstressed, vowels is typical. There are 25 consonant phonemes,¹¹ and consonant clusters are typical with many occurring in final position.

It can be seen from examining the general features of Spanish and English that there are a number of dissimilarities which may cause teaching and learning problems. If the reader desires to consult a detailed

⁹Claude Merton Wise, Applied Phonetics (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1957), pp. 454-470.

¹⁰Clifford H. Prator, Jr., Manual of American English Pronunciation (rev. ed., New York: Rinehart & Co., Inc., 1957), p. 5.

¹¹Ibid., p. 4.

In dealing with the...
necessity of...
language, that of...
syllabic ending in...
ending in a...
to open syllable...
its points out...
some...
the identity...
English...
language. It is...
spelling. The...
is a variation...
other words...
The words are...
language than...
any...
attached, vowel...
consonant...
It can be...
English that...
the end...

⁹Charles...
London: ...
¹⁰...
(rev. ed., New York...)
¹¹ibid., p. 4.

treatment of the differences between English and Spanish, he will find such an analysis in the books by Wise¹² and Lado.¹³

Puerto Rican Spanish and General American English Compared

Puerto Rican Spanish is characterized by certain features that together identify it as Puerto Rican. Some of these features are outlined by Hans Wolff, formerly a linguist at the University of Puerto Rico.¹⁴ It is pertinent to this thesis to list the phonemes of Puerto Rican Spanish as given by Dr. Wolff, as well as the phonemes of General American English which are taught in the Speech Department of the University of Puerto Rico. A summary of the principal allophones of Puerto Rican Spanish as outlined by Wolff can be found in Appendix B.

Phonemes of Puerto Rican Spanish:

Vowels - i e a o u

Consonants - stops p t tʃ k b d g

fricatives f s

nasals m n ñ

lateral l

trills r r'

glides w y

and h

Spanish /ñ/ is formed by the blending of n and y as in can you.

¹²Wise, op. cit., pp. 454-470.

¹³Robert Lado, Linguistics Across Cultures (Ann Arbor: University of Michigan Press, 1957), pp. 13-50.

¹⁴Hans Wolff, "Partial Comparison of the Sound Systems of English and Puerto-Rican Spanish," Language Learning, III (Jan. 1950), pp. 38-40.

treatment of the different forms of the verb 'to be' in Spanish and English. The analysis shows that the two languages differ in the way they handle the copula. In Spanish, the copula is a verb, while in English, it is a particle. This difference is reflected in the way the two languages handle the copula in different contexts. The analysis also shows that the copula in Spanish is more flexible than in English, and that it can be used in a wider range of contexts. This flexibility is due to the fact that the copula in Spanish is a verb, and therefore it can be conjugated and used in a variety of ways. In English, the copula is a particle, and therefore it is more restricted in its use. The analysis also shows that the copula in Spanish is more prominent than in English, and that it is more likely to be used in a variety of contexts. This prominence is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts. The analysis also shows that the copula in Spanish is more likely to be used in a variety of contexts than in English. This is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts.

Examples of the copula in Spanish and English. The examples show that the copula in Spanish is more flexible than in English, and that it can be used in a wider range of contexts. The examples also show that the copula in Spanish is more prominent than in English, and that it is more likely to be used in a variety of contexts. This is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts. The examples also show that the copula in Spanish is more likely to be used in a variety of contexts than in English. This is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts.

Conclusion: The analysis shows that the copula in Spanish is more flexible than in English, and that it can be used in a wider range of contexts. This flexibility is due to the fact that the copula in Spanish is a verb, and therefore it can be conjugated and used in a variety of ways. In English, the copula is a particle, and therefore it is more restricted in its use. The analysis also shows that the copula in Spanish is more prominent than in English, and that it is more likely to be used in a variety of contexts. This prominence is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts. The analysis also shows that the copula in Spanish is more likely to be used in a variety of contexts than in English. This is due to the fact that the copula in Spanish is a verb, and therefore it is more likely to be used in a variety of contexts. In English, the copula is a particle, and therefore it is less likely to be used in a variety of contexts.

The tongue must be placed in the y position and the n and ɲ sounded at the same time. Examples: cañon, año.¹⁵

The symbol /·/ indicates half-long, which differentiates the two trills. The first one, /r·/, according to Wolff is a "single flap apico-alveolar."¹⁶

Although American English speech may be divided into three main regional types, Eastern, Southern, and General American, the latter is the most widespread. A knowledge of the phonemes of General American English provides the Puerto Rican student with a foundation for the understanding and recognition of variations due to regional speech, such as Eastern and Southern. Furthermore, the Puerto Ricans are encountering General American Speech more as their contacts with the people of the United States continually broaden. Therefore their ability to communicate in General American English should be most satisfactory. The International Phonetic Alphabet symbols representative of General American Speech which are taught to all students in Speech 105, are listed below:

Phonemes of General American English:¹⁷

Vowels - i e ε o a u u o o ʌ ɜ

Diphthongs - ai au oi

Consonants - stops p b t d k g tʃ dʒ

fricatives f v θ ð h s ʃ z ʒ

nasals m n ŋ

lateral l

glides w hw j r

¹⁵ Carlos Castillo and Otto F. Bond, The University of Chicago Spanish-English, English-Spanish Dictionary (New York: Washington Square Press, Inc., 1961), p. xiii.

¹⁶ Wolff, op. cit., p. 39.

¹⁷ The International Phonetic Alphabet symbols are used throughout this thesis. John S. Kenyon and Thomas A. Knott, Pronouncing Dictionary of American English (2nd ed., Springfield: G. & C. Merriam, Publishers, 1953).

The paper was prepared by the author at the time of the conference on the subject of "The Role of the State in Economic Development" held in London in 1954. The author is indebted to the members of the conference for their helpful criticisms and suggestions. The paper is published with the permission of the International Labour Office, Geneva.

Although the paper is primarily concerned with the role of the state in economic development, it also touches upon other aspects of the economic system, such as the role of the market, the role of the private sector, and the role of the public sector. The author believes that a comprehensive understanding of the economic system requires a study of all these aspects.

The author is grateful to the International Labour Office for its generous support of his research. He is also indebted to the members of the conference for their helpful criticisms and suggestions. The paper is published with the permission of the International Labour Office, Geneva.

Bibliography of General Economic Papers

- 1. The Role of the State in Economic Development, International Labour Office, Geneva, 1954.
- 2. The Role of the Market in Economic Development, International Labour Office, Geneva, 1954.
- 3. The Role of the Private Sector in Economic Development, International Labour Office, Geneva, 1954.
- 4. The Role of the Public Sector in Economic Development, International Labour Office, Geneva, 1954.

15. The International Labour Office, Geneva, 1954. The International Labour Office is a specialized agency of the United Nations, established in 1919. Its primary concern is the promotion of decent work and social justice, and it does this by setting international labour standards, promoting their observance, and providing technical assistance to governments, employers, and workers.

16. The International Labour Office, Geneva, 1954. The International Labour Office is a specialized agency of the United Nations, established in 1919. Its primary concern is the promotion of decent work and social justice, and it does this by setting international labour standards, promoting their observance, and providing technical assistance to governments, employers, and workers.

Significant Phonemic Differences

In comparing these two sound systems, definite areas of conflict as well as similarities are observed. These areas of conflict produce problems that are difficult to overcome. The following differences indicate some of the problems:

1. Because of the larger number of vowels in English, the Spanish-speaking person has an immediate problem in learning to hear and produce the unfamiliar English vowels, namely: /i e æ u o ʌ ɜ/.
2. English /w/ before high back vowels /u/ or /ʊ/ is difficult for the Spanish-speaking person to produce or hear in English because this distribution does not occur in Spanish. A common substitute for /wu/ or /wʊ/ is /u/ in such words as woman, and wool.
3. The back allophone of /l/ in English is hard to acquire, especially in distribution in final clusters in such words as field, called, and world. Spanish /l/ is produced further forward and does not occur in final sound clusters.
4. Lip closure in Spanish on both y and b make English /v/ and /b/ difficult to acquire since their production in English is distinctly different, /v/ being a fricative and /b/ a stop, with lip closure only on /b/. The Spanish-speaking student must learn to hear two sounds instead of one.
5. /m/ in Spanish is restricted in final distribution and therefore requires emphasis as a final sound in English.

In carrying out the work described in this paper, as well as in other work, the following methods and apparatus were used. The results of the work are given in the following sections.

1. The apparatus used in the work consisted of a specially designed apparatus for the measurement of the rate of reaction between the reactants and the products. The apparatus was described in detail in a previous paper.

2. The reaction was carried out in a specially designed apparatus for the measurement of the rate of reaction between the reactants and the products. The apparatus was described in detail in a previous paper.

3. The reaction was carried out in a specially designed apparatus for the measurement of the rate of reaction between the reactants and the products. The apparatus was described in detail in a previous paper.

4. The reaction was carried out in a specially designed apparatus for the measurement of the rate of reaction between the reactants and the products. The apparatus was described in detail in a previous paper.

5. The reaction was carried out in a specially designed apparatus for the measurement of the rate of reaction between the reactants and the products. The apparatus was described in detail in a previous paper.

6. The substitution of /t/, /d/, and sometimes /s/ for /θ/ and /ð/ creates confusion. The Puerto Rican's tendency to produce /t/ and /d/ in a dental position makes it difficult for him to hear, as well as produce, the fricatives /θ/ and /ð/.
7. The final occurrence of /b, d, g, f, and tʃ/ in Spanish is limited and therefore leads to difficulties in hearing these sounds accurately in final position in English. The voiceless correlatives of /b, d, and g/ are often substituted.
8. Since consonant clusters are limited in Spanish, they present a problem in hearing English sound sequences, particularly in endings which generally lead to unfamiliar sound clusters.

The foregoing lists of problems present a challenge in the teaching of English to the Spanish-speaking students at the University of Puerto Rico.

Population and Sample

Two terms employed in this study dealing with the testing procedure need definition. In a descriptive or experimental study population refers to "any group with at least one specified characteristic in common." Sample refers to "any group smaller than the total number in the population from which it is drawn."¹⁸ In this thesis, the population is a total of 942 English speech students at the University of Puerto Rico. The sample of this population is a group of 62 students (four sections) which became available for individual study.

¹⁸J. Jeffery Auer, An Introduction to Research in Speech (New York: Harper & Brothers, Pub., 1959), p. 157.

6. The purpose of this investigation is to determine the

effectiveness of the program in the various areas.

7. The findings of this investigation will be reported in a

final report to be submitted to the Department of Health.

8. It is hoped that the results of this investigation will

be helpful in the development of a more effective program.

9. The investigation is being conducted in cooperation with

the various agencies and organizations concerned.

10. The results of this investigation will be made available

to the public through the publication of a report.

11. The investigation is being conducted in accordance with

the provisions of the Act of October 3, 1917, and the

Regulations thereunder.

12. The investigation is being conducted in accordance with

the provisions of the Act of October 3, 1917, and the

Regulations thereunder.

13. The investigation is being conducted in accordance with

the provisions of the Act of October 3, 1917, and the

Regulations thereunder.

14. The investigation is being conducted in accordance with

the provisions of the Act of October 3, 1917, and the

Regulations thereunder.

15. The investigation is being conducted in accordance with

the provisions of the Act of October 3, 1917, and the

Regulations thereunder.

The method of sampling the population may be either restricted or random. When sampling is subjected to certain controls according to the purpose of the investigation, it is restricted. For instance, selective sampling may choose subjects that have a single characteristic in common, such as ex-servicemen, or music majors. Random selection, theoretically, produces an unbiased sample which is more truly representative of the population, such as choosing every tenth person on a list, thus allowing for the operation of chance. Also, the sample selected should be large enough to be representative of the total population.

Summary

Chapter II has sought to define in turn the following terms of significance to the understanding of this thesis: aural comprehension, the phoneme and allophone, minimal pair, and sound discrimination. The two language sound systems involved in this thesis are described, the phonemes of each are listed, and some of the significant phonemic differences are pointed out. Also, the terms population and sample as used in this study are defined.

The Spanish-speaking Puerto Rican student encounters problems in discriminating the sounds of American English. The method of locating these weak areas by means of a testing program will be described in the next chapter.

The nature of learning is a complex process involving the interaction of various factors. It is not merely the acquisition of information, but the development of skills and attitudes. This process is influenced by the environment, the individual's characteristics, and the quality of instruction. The purpose of this study is to investigate the factors that influence learning and to develop effective strategies to enhance it. Theoretical models of learning provide a framework for understanding the underlying processes. These models suggest that learning is a change in knowledge or behavior that results from experience. The process of learning is often described as a cycle of acquisition, retention, and retrieval. The role of the teacher is to facilitate this process by providing a supportive environment and using a variety of instructional methods. The role of the learner is to actively engage in the learning process and to seek out opportunities for practice and feedback. The results of this study will be used to inform the development of instructional materials and to guide the practice of teachers.

CHAPTER II

Chapter II presents a review of the literature related to the study. It begins with a discussion of the theoretical models of learning and the factors that influence it. This is followed by a review of the empirical research on learning and instruction. The review is organized into three main sections: (a) the role of the environment, (b) the role of the individual, and (c) the role of the teacher. The first section discusses the influence of the physical and social environment on learning. The second section discusses the influence of individual characteristics such as intelligence, motivation, and prior knowledge. The third section discusses the influence of instructional methods and teacher characteristics. The review concludes with a summary of the findings and a discussion of the implications for the study.

Chapter III

LOCATING PROBLEM AREAS

Part of the remedial program in sound discrimination is the location of each problem area and the isolation of words and sounds within that area which are inaccurately perceived or not perceived at all. Progress in improving aural perception will depend upon knowledge of the specific sounds to be emphasized in the training program.

Testing Procedures

Two types of diagnostic tests are administered at the beginning of each semester to all students taking the English Speech course in the College of Humanities at the University of Puerto Rico. This course is especially designed for students training for elementary school teaching. One of the tests is devised to measure auditory perception, the other oral production. Each test is repeated at the end of the semester. Results of the first test, which will be known as the pre-test, and results of the last test, which will be known as the post-test, are compared, and the rate of progress determined for each student. The investigation for this thesis is concerned with the results of the auditory perception tested over a two-year period for the academic years 1960-61 and 1961-62.

Subjects. The subjects to whom the auditory test was given were students in the College of Education at the University of Puerto Rico. The total

Text of the report...

of each problem... was that... in addition... again to be...

Two types of...

each semester to all... College of Humanities...

expected... One of the...

oral... results of the last...

concern... investigation for...

history presented... 1950-51 and 1951-52.

Abstract. The subject...

in the College of...

number of students tested over the first four semesters was 942 or 59 sections of the English Speech course. Four sections during the second year were available for study. This sample constituted a fair representation of the population, i.e., four out of approximately thirty sections, or 62 out of 484 students. Eighty-seven per cent of these students were sophomores who would soon be receiving a special temporary teaching certificate which would allow them to teach in the elementary schools of the Island; 12.9% were juniors or seniors who were earning a degree; 66% were women; 34% were men. Thirty-eight per cent of the men were ex-servicemen, commonly called veterans. Of the total number of students 96.8% were from the public schools, and only 3.2% received their elementary and high school education in private schools.

A study of the four available sections, totalling 62 students showed that:

- 54 were second-year students
- 7 were third-year students
- 1 was a fourth-year student
- 41 were women
- 21 were men
- 8 of the men were veterans
- 60 were graduates of public high schools
- 2 were graduates of private high schools

Four of these students, or 6.5%, were suspected of having a hearing loss, but there was no available audiometer to measure the exact loss.

They were not excluded from the study since other students with hearing losses were undoubtedly present in the number tested. Information as

to the time that these students began the study of English was as follows:

1st grade	32
2nd grade	11
3rd grade	11
4th grade	7
5th grade	1

number of students...
 section of the...
 year was available...
 generation of the...
 section, on 25...
 statistics were...
 primary teaching...
 elementary...
 examine a...
 of the...
 number of...
 received their...
 A study of...

above said:

- 24 first...
- 7...
- 1...
- 41...
- 21...
- 8...
- 80...
- 2...

four of these...
 fact, but there...
 they were not...
 losses were...
 to the... that...

- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade

Inquiry into the English-speaking background of the families revealed that only one set of parents spoke English; in three cases one of the parents spoke English; in one case the family spoke some English in the home; and 57 reported that neither of the parents spoke English. Believing that experience in the States might have some influence on aural perception ability, the author inquired as to the length of time each student had been in the States. Answers to this question revealed the following:

No experience in the States	48
Several months in the States (2 to 6)	6
1 to 3 years in the States	4
4 to 9 years in the States	3
10 to 11 years in the States	1

A summary of the above information reveals that 87% of the students who were questioned were second-year students, and all except two were graduates of public high schools. Approximately half, or 51.6%, began to study English in the first grade, and 35.5% began such study in either the second or third grade. Seventy-seven per cent had had no experience in the States. Six had been there only a few months, while the balance of eight, or 12.9% who were army veterans, had lived in the United States one or more years. One young man had been born in the States and lived there eleven years, but was a graduate of a Puerto Rican high school. There were approximately twice as many women as men in the sample described on page 37.

Test Material. The test material used for this investigation was the diagnostic perception test regularly given to students at the University of Puerto Rico; a copy of this test is included in the appendix. This test was prepared and revised over a period of more than six years by

... into the ...
that only one ...
parents ...
and 27 ...
finding that ...
perceptive ability ...
which has been ...

following:

- 10 to 11 years
- 4 to 9 years
- 1 to 3 years
- 2 years

A summary of the above ...
who were ...
grades of public ...
to study English in the ...
either the second or third ...
experience in the ...
the balance of eight ...
United States one or more ...
states and lived there ...
Black high school ...
in the sample described on page 10.

Test Manual. The test ...
diagnostic ...
of ...
test was prepared and ...

members of the speech staff of the University of Puerto Rico. The test items are representative of the sound system of English and correspond to words found in the manual¹ used in the speech course, which is based in part on graduated word lists established by the Island Department of Public Instruction. These word lists are based on the vocabulary used in the Fries series of elementary English textbooks. The present test was revised in 1961. This revision added some words and eliminated others. The effect of these changes is noted in the results, which indicate that a few minimal pairs were tested only three semesters instead of four.

Not all sections of the test are pertinent to this investigation. Part II, pertaining to stress, and Part VI, pertaining to intonation, have been eliminated, since the study concentrates on phoneme discrimination. Parts I and III test sound discrimination in minimal pairs. Part I tests vowel and consonant discrimination, while Part III tests consonant discrimination exclusively. Parts IV and VII test minimal pairs for sound discrimination within sentences. Part IV tests vowel discrimination while Part VII tests consonant discriminations. In taking the test, the student is told that only one word of each minimal pair will be read and he is to mark the word he thinks he hears read. Part V tests ability to hear sounds that are alike in groups of three words pronounced by the examiner. There are no printed words in this

¹Puerto Rico, University, Speech Committee of the Dept. of English, Manual of Oral English Exercises, English 105 (2 vols.; Rio Piedras, P. R., 1959-60). The manual was prepared by seven members of the Speech staff, including the author.

number of the specimens...
these are...
to which found in the...
in part is...
Public...
in the...
was revised in 1901...
others. The effect of...
indicate that a...
instead of four...

Not all...
Part II, containing...
have been...
action. Part II...
Part I...
component...
pairs for...
classification...
taking the...
pairs will be...
Part V...
were prepared by...

Part I...
Part II...
Part III...
Part IV...
Part V...
Part VI...
Part VII...
Part VIII...
Part IX...
Part X...

Part XI...
Part XII...
Part XIII...
Part XIV...
Part XV...
Part XVI...
Part XVII...
Part XVIII...
Part XIX...
Part XX...

section. The examinee must rely strictly on what is heard. Instructions are given to him to put a check mark in the boxes corresponding to the words which are alike in sound.

The test material used in this study, then, contains 160 items, covering all the speech sounds of English in a variety of distributions: initial, medial, and final.

Testing Conditions. The departmental aim is to administer the aural perception test in surroundings to provide optimum listening conditions. Each item is read only once unless some unusual noise reduces standard acoustical conditions; then the teacher rereads the item. Since classes are limited to sixteen students and seats can be arranged quite far apart, each student is consequently forced to work independently. In order to secure maximum uniformity in administration of the test the following rules are issued to all teachers by the head of the speech program:

- Be sure that all students understand the instructions.
- Pronounce each word correctly and distinctly at the normal speaking rate.
- Give no particular or unnatural stress or length to any sound or part of a word.
- Read each item only the number of times indicated—if classroom conditions are normal.
- Use normal sentence stress.

Although many sections of speech students are tested, testing conditions are kept substantially the same for all students. This tends to increase the reliability of test results.

Handling of Results. Under direction of the departmental chairman, all teachers follow the same scoring system. Papers are scored according to the total number of errors. Each teacher tabulates the results for

The method proposed by ... is ...
The first part of the ... is ...
The second part of the ... is ...

The first part of the ... is ...
The second part of the ... is ...

The third part of the ... is ...
The fourth part of the ... is ...

The fifth part of the ... is ...
The sixth part of the ... is ...

The seventh part of the ... is ...
The eighth part of the ... is ...

The ninth part of the ... is ...
The tenth part of the ... is ...

The eleventh part of the ... is ...
The twelfth part of the ... is ...

The thirteenth part of the ... is ...
The fourteenth part of the ... is ...

The fifteenth part of the ... is ...
The sixteenth part of the ... is ...

his students, submitting a composite report of total errors made by the students on each test item. The teachers' reports were summarized, resulting in a grand total of errors for all items. A percentage rating was given to the total error count for each item on the basis of the total number of students taking the test. For example, if 200 students were tested and there were 150 errors on one item, then the resulting percentage would be 75%. In other words, the percentage is figured on the number of students taking the test and not on the number of test items. So at all times the percentage figure refers to the per cent of students missing a certain item.

The testing procedure described above and the scoring and tabulating of results led to the observation of high frequency count of certain items, indicating difficulty in mastering sound discrimination involved. An analysis of errors became desirable to improve teaching techniques and reduce students' failure in these areas.

Procedure in Gathering Basic Material for Proposed Listening Lessons from Test Results

In order to ascertain the items which are difficult to master and therefore require additional concentrated study, an analysis has been made of the discrimination errors in the diagnostic perception post-tests administered during the two-year period. The first step in this analysis was to observe the tabulated results of four different categories: vowel discrimination in minimal pairs in isolation and also in sentences; and consonant discrimination in minimal pairs in isolation and also in sentences. Results of tabulations in the four categories were combined

his students, which had previously been...
students as well as that of the...
writing in a general sense of...
was given to the...
total number of...
were tested and there were...
percentage would be...
on the basis of...
last...
of students...

The...
of results...
certain...
involved...
techniques...

Results in...
In order to...
therefore...
also of the...
tests...
analysis was to...
vowel...
and...
sentences. Results...

into one summary table for the two-year period---TABLE I. The separate tables for each of the four categories basic to TABLE I may be found in Appendix C. The numerical error count for each item and its percentage are given in TABLE I. An arbitrary cut-off point of 17% was established for this table.

The items in TABLE I are listed in descending order of frequency of error. This table exhibits the highest incidence of error in the 942 papers examined over the four-semester period. As explained on page 39, some items were tested for three semesters only. This is indicated by a star and footnote giving the base of 650 students. A few items were tested only two semesters with a base of 484 students, indicated by two stars in footnote.

In comparing the four parts of TABLE I, certain significant observations can be made on the results as a whole. In the first place, it must be realized that the errors represented here were present in the post-test after a full semester of training for the purpose of eradicating such errors. It is apparent that improvement in sound discrimination among the consonants is more easily effected than among the vowels. Whereas only five consonant pairs show a frequency of error rating of 17% or above, 14 vowel pairs, almost three times as many, are 17% or above. This is a wide difference. The greater difficulty in vowel discrimination is to be expected, however, since the Spanish-speaking person has a larger number of new vowel distinctions than consonant distinctions to learn in English. This comparative feature is noted in Chapter II.

into one primary table for the purpose of the present study. The data were
 taken from each of the four primary tables. The data were then
 analyzed by the method of the present study. The results are given
 in Table I. In this table the data are given in the form of
 for this table.

The data in Table I are given in the form of a table of
 of error. This table exhibits the distribution of error in the
 200 papers included over the 100 papers included. The results are
 given in Table I. In this table the data are given in the form of
 divided by a mean and standard deviation of the data. The
 data were tested only for the purpose of the present study. The
 data by the data in Table I.

In analyzing the data in Table I, the following
 results can be seen on the part of the data. It was
 it was noticed that the data were not normally distributed.
 the post-test data a full analysis of the data was made. The
 data were tested. It is apparent from the data that the
 data among the data is not normally distributed. The data
 shows only five normal distributions. The data shows that
 IV or above, in vowel pairs, is not normally distributed.
 above. This is a wide distribution. The data shows that
 distribution is to be expected. The data shows that the
 data has a larger number of the data. The data shows that
 distributions to learn in Table I.

in Chapter II.

TABLE I
INCIDENCE OF VOWEL and CONSONANT ERRORS -- AURAL PERCEPTION POST-TEST
Four Semesters, 1960-61 and 1961-62

VOWELS				CONSONANTS							
Order	Phoneme	Minimal Pair	Test Item	Base #	%	Order	Phoneme	Minimal Pair	Test Item	Base #	%
1.	o-r		worm	401	43	1.	s-z		loose	302	32
2.	A-o		come	256	27	2.	v-b		*covered - cupboard	159	24.5
3.	i-i		beads	230	24	3.	ŋ-n		thing - thin	188	20
4.	o-o		*sew	147	23	4.	ŋ-n		*long - lawn	126	19
5.	i-i		list	204	22	5.	n-ŋ		ran - rang	162	17
6.	æ-d		battle - bottle	199	21						
7.	i-e		*we're - wear	136	21						
8.	o-A		dawn	189	20						
	ɜ-er		her	178	19						
	i-i		*fit	126	19						
9.	o-A		not	175	19						
	o-A		doll	166	18						
10.	u-o		tour	155	17						
	o-A		*bought - but	112	17						
Minimal Pairs in Sentences				Minimal Pairs in Sentences							
1.	A-o		*lunch - launch	248	38	1.	z-s		raise - race	239	35
2.	i-i		*scene - sin	222	32	2.	ks-kst		*mix - mixed	196	30
3.	u-u		stood - stewed	298	31	3.	m-n		warm - worn	272	29
	u-u		*pull - pool	199	31	4.	rd-rld		*word - world	182	28
4.	A-d		colors - collars	291	31	5.	d-ð		ladder - lather	245	26
5.	o-A		boss	260	28	6.	t-d		hit - hid	226	24
6.	i-i		*bit - beat	128	26		f-v		*leaf - leave	156	24
	i-i		live	237	25	7.	n-ŋ		ton - tongue	221	23.5
7.	o-o		*cost - coast	160	25	8.	n-m		scene - seam	186	20
	i-i		slip - sleep	219	23		vd-v		saved - save	185	20
8.	i-i		heat - hit	218	23	9.	m-n		firm - fern	180	19
	ju-A		*tube - tub	127	20	10.	m-n		combs - cones	172	18
	i-i		*peel - pill	134	20		ʃ-z		price - prize	171	18
	u-u		*foot - food	130	20		tj-tjst		watch - watched	168	18
9.	i-i		*this - these	132	20	11.	ʒ-θ		either - ether	164	17.5
	er-ʃ		fares - furs	178	19	12.	ʒ-θd		bathe - bathed	162	17
	ai-e		*paint - paint	123	19		ʃ-ʃt		finish - finished	160	17
	o-ɜ		map - map	171	18						

*Base 650 for 3 semesters
**Base 484 for 2 "

Base 942 for 4 semesters
Refer to page 41 for method of calculating percentage

INCIDENCE OF AMYOTrophic LATERAL SCLEROSIS IN THE
 UNITED STATES - 1950-1959

Year	Age Group	Sex	Number of Cases		Rate per 100,000	Standard Error	95% Confidence Interval
			Observed	Expected			
1950	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1951	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1952	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1953	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1954	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1955	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1956	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1957	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1958	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
1959	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0
Total	15-19	M	0	0	0.0	0.0	0.0
		F	0	0	0.0	0.0	0.0

It must be realized that some of the sound discrimination problems are involved with spelling problems as in words like loose-lose and sew-saw. Yet these words must be learned because they are common and important to English comprehension.

In comparing the frequency distribution of minimal pairs in isolation with that of minimal pairs in sentences, the students' difficulty in recognizing consonant sounds in sentences is more than three times that of recognizing consonant sounds in isolation. The same difficulty exists in vowel recognition but not to such a great extent; there are 18 items on which students made errors in sentences, and 14 in isolation. These findings bear out the contention that training for sound discrimination in context should be emphasized in the training program. If we assume that additional training in discrimination is necessary, the next question to be answered is: What sounds need added emphasis?

Examination of the sounds involved shows that the /i-ɪ/ pair has a high incidence in both isolated pairs and within sentences. In fact, it occurs seven times in the sentence list. This distinction is one of the most troublesome for the Spanish-speaking person to hear and therefore more experience is desirable with this pair in a variety of sound environments. The neutral vowel /ʌ/ is confused with /o/, /ɔ/, and /ɑ/ within five pairs in isolation; and in the sentences it is confused again with /ɔ/ and /ɑ/, as well as /ju/. This vowel, /ʌ/, which does not occur in Spanish, presents a difficult problem in aural perception because of the high incidence of confusion with several other sounds. Such confusion calls for extra training in listening to differentiate /ʌ/ in context from /o/, /ɔ/, and /ɑ/.

It must be realized that...

and involved with...

section. Let these words...

important to write...

In addition the...

factor with that of...

in presenting a...

that of recognizing...

exists in every...

in fact as which...

these things than...

needs in order...

means that additional...

most questions to...

location of the...

a high incidence...

it occurs even...

the most problems...

now experience as...

note. The initial...

five pairs in...

/s/ and /z/ as...

perhaps, present...

high incidence...

only for some...

from /s/ /z/...

The high back vowels /u/ and /ʊ/ are difficult to recognize in context. Since /u/ does not occur in Spanish as a phoneme and the incidence of /u/ in Spanish is low, it is reasonable to expect a discrimination problem here. Noticeable in the sentences, also, /ɔ/ presents difficulty as a discriminated vowel in five minimal pairs in isolation; it is confused with /o/, /ʌ/, /ɑ/, and /u/, and before /r/ it is confused with /ɜ/. As noted previously, in sentences /ɔ/ is confused with /ʌ/. This vowel /ɔ/ likewise needs emphasis in the aural training program. There are other scattered errors of a miscellaneous nature and among these is the problem of vowel recognition before /r/. The highest incidence of error, 43%, occurs in the pair warm-worm, /ɔr-ɜ/. Because /ɜ/ does not occur in Spanish, it is hard for the Puerto Ricans to hear this English phoneme; but the chief perplexity in this pair of words is attempting to relate the sound /ɜ/ to the spelling ar or or of warm and worm. The or choice would be the least likely from the standpoint of a Spanish-speaking person. Also difficult is the pair /ɜ-er/ as in her-hair, and furs-fares. Practice in hearing these distinctions in a variety of contexts is desirable to strengthen experience.

The consonant problems in discrimination are of two main types: lack of recognition of nasal distinctions, and inability to recognize various other distinctions in final position. Three of the five problem items in isolated minimal pair discrimination concern the /n-ŋ/ phonemes in final position. There are seventeen problem items within the sentences, five of which concern nasals; one of the five is /n-ŋ/ in final position, and the other four show failure to discriminate /m-n/, three

The first part of the paper is devoted to a discussion of the
concepts of the first part of the paper. It is shown that
the concepts of the first part of the paper are closely
related to the concepts of the second part of the paper.
The second part of the paper is devoted to a discussion of the
concepts of the second part of the paper. It is shown that
the concepts of the second part of the paper are closely
related to the concepts of the first part of the paper.
The third part of the paper is devoted to a discussion of the
concepts of the third part of the paper. It is shown that
the concepts of the third part of the paper are closely
related to the concepts of the first and second parts of the paper.
The fourth part of the paper is devoted to a discussion of the
concepts of the fourth part of the paper. It is shown that
the concepts of the fourth part of the paper are closely
related to the concepts of the first, second, and third parts of the paper.
The fifth part of the paper is devoted to a discussion of the
concepts of the fifth part of the paper. It is shown that
the concepts of the fifth part of the paper are closely
related to the concepts of the first, second, third, and fourth parts of the paper.
The sixth part of the paper is devoted to a discussion of the
concepts of the sixth part of the paper. It is shown that
the concepts of the sixth part of the paper are closely
related to the concepts of the first, second, third, fourth, and fifth parts of the paper.
The seventh part of the paper is devoted to a discussion of the
concepts of the seventh part of the paper. It is shown that
the concepts of the seventh part of the paper are closely
related to the concepts of the first, second, third, fourth, fifth, and sixth parts of the paper.
The eighth part of the paper is devoted to a discussion of the
concepts of the eighth part of the paper. It is shown that
the concepts of the eighth part of the paper are closely
related to the concepts of the first, second, third, fourth, fifth, sixth, and seventh parts of the paper.
The ninth part of the paper is devoted to a discussion of the
concepts of the ninth part of the paper. It is shown that
the concepts of the ninth part of the paper are closely
related to the concepts of the first, second, third, fourth, fifth, sixth, seventh, and eighth parts of the paper.
The tenth part of the paper is devoted to a discussion of the
concepts of the tenth part of the paper. It is shown that
the concepts of the tenth part of the paper are closely
related to the concepts of the first, second, third, fourth, fifth, sixth, seventh, eighth, and ninth parts of the paper.

of which are finals. A problem with the nasals was anticipated in Chapter II when comparing the two languages, Puerto Rican Spanish and American English. The sentences contain thirteen errors in discriminating sounds in final position. Four of these errors indicate a lack of ability to hear past tense endings, and two concern the voiced-voiceless pair /s-z/. Also, several other voiced-voiceless pairs are not discriminated: /t-d/, /f-v/, /θ-ð/, and /d-ð/. The problem of hearing /l/ in world is difficult because of the strange sound sequence. Part of the Spanish listener's problem in hearing past tense endings is the resulting consonant cluster which is unfamiliar to Spanish ears. Examples are: watched, finished, mixed, and saved.

Of the sounds most prevalent in frequency of error in TABLE I, the first five in the two vowel groups include the /i-ɪ/ and /u-u/ pairs, and the phoneme /ʌ/ in combination with /ɔ/, /o/, or /ɑ/. The advisability of improved aural perception of words involving these sounds is indicated. Among the consonants, the /s-z/ pair ranks first on the list of errors. Other problem pairs are /v-b/, /d-ð/, /n-ŋ/ and /m-n/. Hearing the /l/ in world and the past tense ending of mixed are also problematical. The aural perception training program should plan to emphasize the vowel sounds specified above, improving the student's opportunity for ample practice and experience in hearing these sounds in a variety of phonological environments.

Additional information is gained about the aural perception ability of the education students enrolled in the English Speech course at the University of Puerto Rico by examining TABLE II. This table presents a tabulation of the errors found in Part V of the aural perception

of which are listed.

Chapter II then considers the various methods of statistical analysis of experimental data.

The various methods of statistical analysis are discussed in detail in the following chapters.

The first five chapters of the book are devoted to the study of the various methods of statistical analysis.

and the phrase 'the phrase' is used in the following chapters.

analysis of the various methods of statistical analysis is discussed in detail in the following chapters.

is discussed in detail in the following chapters.

list of errors. The various methods of statistical analysis are discussed in detail in the following chapters.

Having the 'the phrase' is used in the following chapters.

probabilities. The various methods of statistical analysis are discussed in detail in the following chapters.

emphasize the various methods of statistical analysis are discussed in detail in the following chapters.

opportunity for the various methods of statistical analysis are discussed in detail in the following chapters.

in a variety of probabilities are discussed in detail in the following chapters.

Additional information is given in the following chapters.

ability of the various methods of statistical analysis are discussed in detail in the following chapters.

at the University of London are discussed in detail in the following chapters.

contains a reproduction of the various methods of statistical analysis are discussed in detail in the following chapters.

test for a three-semester period of time, January 1961 to May 1962. The student listens to groups of three words for each item with no printed stimulus to furnish sound discrimination clues. Tabulations for this section of the test were available for only three semesters and the base on which percentages are figured is 584.

The summary tabulation for the three semesters indicates the highest deficiency in discriminating /v-b/; this pair of phonemes is in two sets of words: marvel-marble ranks first in error incidence, and vest-best ranks third. In second place are the phonemes /ʃ-ʒ/, and in fourth place the three nasals /n-m-ŋ/ at 23% frequency level. The next two items descend to the 13% level, showing lack of discriminating /A/ with /o/ and /a/. The two lowest items on the descending frequency of error list indicate the lack of discrimination in final sounds.

The marvel-marble group appears at the top of the three lists when the semester results are examined separately. While the Confucian-confusion group is in second place on two lists, it is in seventh place on the third list. This may indicate a better command of the /ʃ-ʒ/ pair which some of the teachers may have been emphasizing in the training program at that time. Though there is a shift in the order of error from one semester to another, substantially the same discrimination problems exist among the more frequent errors. This tabulation indicates higher error frequencies among the consonants in comparison with the vowels. Removal of the printed words could have produced more concentrated, accurate listening and therefore improved discrimination among vowel sounds.

The quantity measured in the experiment is the number of particles per unit volume, which is proportional to the square of the distance from the source. The data points are plotted on a semi-logarithmic scale, showing a linear relationship between the logarithm of the particle count and the distance squared. This confirms the inverse square law for the distribution of particles. The error bars represent the statistical uncertainty in the counting process, which is typically proportional to the square root of the number of counts. The overall fit to the data is very good, indicating that the theoretical model accurately describes the experimental observations.

TABLE II
 INCIDENCE OF ERROR - PART V - AURAL PERCEPTION POST-TEST
 Three Semesters, 1960-61 and 1961-62

Order	May 1961		Base 100		Dec. 1961		Base 284		May 1962		Base 200	
	Item	#	%	Item	#	%	Item	#	%	Item	#	%
1.	marvel-marble-marble	66	66	marvel-marble-marble	149	52	marvel-marble-marble	83	41.5			
2.	Confucian-confusion- confusion	59	59	Confucian-confusion- confusion	71	30	vest-vest-best	61	30.5			
3.	use(n)-use(v)-use(v)	41	41	sun-sum-sung	58	20	sun-sum-sung	46	23			
4.	vest-vest-best	37	37	vest-vest-best	57	20	shut-shut-shot	39	19.5			
5.	sun-sum-sung	35	35	rum-run-rum	50	17	use(n)-use(v)-use(v)	35	17.5			
6.	pay-paid-paid	35	35	pay-paid-paid	46	16	cuff-cough-cuff	34	17			
7.	prove-proof-proof	25	25	cuff-cough-cuff	45	16	Confucial-confusion- confusion	33	16.5			
8.	peck-pack-pack	19	19	shut-shut-shot	39	14	Lived-lived-lived	26	13			
9.	grin-green-grin	17	17	rip-rib-rip	28	10	Lend-lend-land	25	12.5			
10.	been-been-being	17	17	failed-fade-failed	24	8½	bowl-bowl-ball	24	12			

Refer to page 41 for method
 of calculating percentage.

SUMMARY		Base 584
1.	marvel-marble-marble	298
2.	Confucian-confusion- confusion	163
3.	vest-vest-best	155
4.	sun-sum-sung	139
5.	cuff-cough-cuff	79
6.	shut-shut-shot	78
7.	use(n)-use(v)-use(v)	76
8.	pay-paid-paid	46

Failure to discriminate consonant sounds in final position is apparent in the results of this section of the test. This finding is significant because it is in agreement with results of section I, III, IV, and VII, shown in Table I. These results are summarized on page 43. It is obvious that training in aural perception should be directed toward improved sound discrimination in final position since there is such a high degree of inaccuracy in recognizing final sounds. Present materials and methods are not improving listening ability for the students. Experimentation with materials, modes of practice, teaching techniques, and various means of enlarging the students' experience with final sounds could lead to a better training program which would enable them to understand more thoroughly what is being heard; and this would improve their comprehension. Concentrated effort to improve the aural training program in one direction should not preclude equal effort in other important areas. A study of the test results discussed indicate the main problems in discrimination to be:

Vowels

Front vowels: /i-i/

Back and central vowels: /u-u/, /ʌ-a-o-o/, /ɛɪ-ɜ/

Problem words: warm-worm, sew-saw, come-comb, this-these,
pint-paint

Consonants

Stops and fricatives: /v-b/, /s-z/, /ʃ-ʒ/, /θ,-ð-d/, /f-v/

Nasals: /m-n-ŋ/, especially in final position

Fast tense endings, and voiced-voiceless pairs in final position.

Problem words: world, loose-lose, use(n)-use(v)

Failure to characterize...
agreement in the results...
is significant because...
III, IV, and V...
page 431...
directed toward...
there is also a high degree...
Recent materials and methods...
the standard...
teaching techniques...
experiment with...
which would enable...
hands) and this...
to improve the...
of the...
of the...
discussed indicate...

Yours

Front view - 1/2

Back and central view - 1/2

Profile view - 1/2

Conclusions

It was found...
results...
but some...
results...

It may be concluded, then, that certain sounds, words, and certain types of sound sequence patterns should be given increased attention in the form of patterned lessons and additional experiences that would promote accuracy of perception of contrasting vowel and consonant differences. Better perception in turn should improve comprehension. Peter Hagboldt says that "foreign sound becomes meaningful through frequent adequate use. ...By frequently identifying sound with meaning and meaning with sound, the mother-tongue is excluded and comprehension by ear becomes spontaneous and direct."²

Because a weakness was shown in testing sound discrimination within sentences, it is indicated that experience in connected material is needed. To hear the sounds of the language as they appear in normal speech patterns necessitates listening to contextual material. For these purposes paragraphs will be developed which will give the Puerto Rican college students experience with sound discrimination in context.

²Peter Hagboldt, Language Learning (Chicago: University of Chicago Press, 1935), p. 112.

It may be concluded that the present study has shown that the type of social organization which is most common in the form of natural selection is that of the individual. This is the case in the majority of cases, and it is the only case in which the individual is the unit of selection. In the other cases, the individual is not the unit of selection, but the group or the species. This is the case in the case of the social insects, and in the case of the plants. In the case of the social insects, the individual is the unit of selection, but the group is the unit of selection. In the case of the plants, the individual is the unit of selection, but the species is the unit of selection. In the case of the social insects, the individual is the unit of selection, but the group is the unit of selection. In the case of the plants, the individual is the unit of selection, but the species is the unit of selection.

From *Proc. R. Soc. Lond. B*, 1951, 44, 1-11.

Chapter IV

AUDITORY TRAINING MATERIALS: THEIR CHOICE AND PREPARATION

Since increased training in listening is a good method for the improvement of sound discrimination and aural comprehension, the choice of material and mode of presenting it to the students is vital. This chapter is concerned with the choice and preparation of auditory training materials which will meet the needs of the Puerto Rican university students. These needs were located through examination of test results as described in Chapter III.

The Puerto Rican Situation

Auditory training is especially important in a remedial speech program such as that conducted at the University of Puerto Rico for education students. These students have a limited knowledge of English, and they enter the training program with a repertoire of distorted English sounds. Most of them have had very little experience in listening to accurate English speech and consequently have had no basis upon which to draw a comparison between the accurate and the inaccurate sounds of the language. But the ability to judge the difference between accurate and inaccurate speech sounds is not easy to acquire. Intensive work in hearing and producing the sounds of a language increases this ability.

After three weeks of training, the students in the Speech program at the University of Puerto Rico begin to hear speech errors made by

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

REPORT ON THE PROGRESS OF RESEARCH

BY

DR. J. H. VAN VLECK

CHICAGO, ILLINOIS

their classmates. By mid-semester, most of the students recognize errors made by themselves. These two types of recognition mark the beginning of functional aural perception, and from this point on strides can be made in the remedial speech program, since it begins as a remedial hearing program. Examination of aural perception test results (described in Chapter III) suggests that some areas in the training program for these young people have not been adequately taught. When there is an aural perception deficiency, it is apparent that the retraining program must be strengthened to cope with the situation. To realize improvements in aural perception calls for additional listening training that will produce the results desired.

The literature provides few listening lessons which the teacher of English as a second language can draw upon for classroom use as the occasion demands. Because available sources for such lessons are lacking, the teachers who feel the need must prepare their own appropriate materials for the teaching of sound discrimination. The literature indicates that a number of experienced instructors in this field of teaching recommend that the classroom teacher construct materials suitable for his own class and situation. The successful experience of these teachers is encouraging to others who wish to pursue the same course. The Puerto Rican situation is somewhat analagous to that found in the Hawaiian Islands. Eleanor M. Buell reports that in the Hawaiian Islands a type of "pidgin" English is spoken that is "very easy to learn." This situation necessitates the teaching of English in the public schools as a remedial course. She says, "...speech improvement is paramount with us, and in order to obtain it we have included more remedial speech

activities than the ordinary English program necessitates."¹ The Hawaiian program includes a variety of English and speech activities, such as conversation, discussion, reports, and stories, all of which enlarge the student's experiences in hearing and using English.

Listening lessons to expand student experiences in hearing accurately spoken English are lacking in the speech course for Education students at the University of Puerto Rico. Therefore, part of the purpose of this thesis is to explore the possibilities of devising a number of lessons appropriate for auditory discrimination and comprehension training in the Puerto Rican situation. Types of contextual auditory material will now be considered.

Types of Auditory Material for Listening Lessons

Types of connected material available for listening lessons will be judged from the standpoint of Puerto Rican conditions and needs. Such consideration will include the type and age of the student, general level of the student's ability in English, length and suitability of material, and the flexibility and potential effectiveness of the material.

Sentence reading. Sentence material for auditory discrimination purposes is already in use. A certain amount of sentence reading is necessary in introducing and teaching the phonemes in English. Sentence hearing is necessary, but it loses effectiveness when the students have advanced.

¹Eleanor M. Buell, "Speech Improvement for Bilingual Children in Hawaii," The National Elementary Principal, XXV (June 1946), pp. 36-39.

activities than the hallway...
 Hawaiian program...
 such as...
 enlarge the student's...
 laboratory...
 directly...
 students as the...
 purpose of...
 a number of...
 program...
 total...

THE HAWAIIAN PROGRAM

Types of...
 be judged from...
 Good...
 level of...
 material...
 practice...
 is already...
 in...
 is necessary...

Hawaii, "The...
 Hawaii, "The...

to where they are ready for connected material involving ideas that require several sentences. Crawford discourages the use of disconnected sentences for listening material, as noted in Chapter I.²

Paragraph reading. Paragraphs are used in the Manual for the University of Puerto Rico speech course but they are rarely read for listening training. Paragraph reading would fit well into the classroom program if the paragraphs were not lengthy and contained sound discrimination material which would relate to the lesson being studied. Paragraph reading would be ideal if the vocabulary material, sentence structure, and subject matter were not beyond average difficulty, and if the paragraphs were graduated from easy to difficult in sound discrimination.

Short stories. A few short stories and dialogues are in the University of Puerto Rico Speech Manual for reading purposes. These materials are related to the lessons in speech sound development. Short stories would provide listening material if the length, the interest value, and the phonemic structure were suitable. Stories contain idiomatic expression, however, and care in the selection would be required.

Informative articles. The informative type of listening material must be carefully chosen for vocabulary, suitability, subject matter, and length of selection. The script could furnish data of special interest related to the home, the garden, the car, the food we eat, the weather, and other everyday subjects about which people like to talk. Lessons

²Claude C. Crawford and Edna Mable Leitzell, Learning a New Language (Los Angeles: C. C. Crawford, Univ. of So. Calif., 1930), pp. 14-15.

to show that one may be...
regards several...
sentences for...
Paragraph reading...

of...
Paragraph reading...
If the paragraph were not...
material which would...
reading would be...
and subject matter...
graphs were conducted...

Short stories...
of...
are related to the...
would provide...
the phonetic structure...
also, however, and...
information...

be...
length of...
related to the...
and other...

of this type would be an aid in the acquisition of a vocabulary having a practical value. If too long, this type of selection might be condensed to digest form. In the rewording process, choice of words should be made according to sound discrimination needs.

In choosing the right type of listening lesson, several general questions should be considered. Will the material of the lesson fit the time limit available? Does the content material provide needed sound discrimination patterns? Will the content material evoke questions and discussion which will provide the desirable auditory experience? Can auditory comprehension of the passage be checked satisfactorily? Application of these questions may help to select useful material for listening lessons.

Thus the four types of listening material discussed (the reading of sentences, paragraphs, short stories, articles) afford useful approaches to the improvement of listening lessons. Each could be adapted to the problem and needs of groups being taught.

Best Choice for Puerto Rican Situation

The value of the listening lesson will depend on its appropriateness for the situation. Within the Puerto Rican university environment, the choice of listening lessons based on the use of paragraph material would be preferable. Paragraph material itself is flexible as to subject matter and could encompass some of the features noted in other types of listening material. Paragraphs can be varied easily in length and subject matter to fit the interests of students or a special area. The

of this type would be an all right specimen of a...

a practical value. It has been found that...

desire to obtain form. In the event of...

should be made according to the following...

In choosing the type of material to be used...

questions should be considered. It is...

The first thing to be considered is the...

about classification criteria. It is...

class and character which will be used...

length. On ordinary occasions it is...

usually Application of the following...

for the following reasons.

From the four types of material the...

of materials, paragraphs, form is used...

to the improvement of form. It is...

plan and needs of groups being...

Best Method for...

The value of the following form is...

best for the situation. It is...

the choice of material is based on...

would be preferable. Paragraphs...

rather and could therefore be of the...

interesting material. It is...

best matter to fit the purpose of...

preparation of paragraphs can be adjusted to the linguistic needs for certain sounds and words which are representative of sound discrimination problems found in the population.³

Short listening lessons constructed as paragraphs would be adaptable within the present program in the University of Puerto Rico Speech Department. Teachers in the Department have expressed the need for the addition of listening lessons to the instructional program. Such listening lessons permit variation at the discretion of the teachers, a further incentive in selecting the paragraph type. Connected material would be of greater interest to the students than isolated sentences. Puerto Ricans enjoy discussions and are quite vocal about their beliefs and opinions. The listening experience would give them more confidence and enable them to participate in a brief discussion following the presentation, allowing the teacher to find out how much they comprehended. Furthermore, these students have not had the opportunity of listening to accurate General American English in a speech situation and are therefore in need of such experience.

The limited number of students within each class provided a suitable environment for listening lessons read by the teacher. Equipment is available for the teacher who wishes to record the listening lesson for classroom use, and the language laboratory is available for listening lessons, also. A listening lesson in the laboratory would provide

³Population here refers to the 942 Puerto Rican students tested in the two-year period.

propagation of parasites of the ...
certain kinds and ...
the problem found in the ...
about ...
adaptable within the ...
Speech Department ...
need for the addition of ...
from ...
the teachers, a ...
Connected material would be ...
isolated sentences ...
vocal about their ...
give them more confidence and ...
discussion following the ...
out how much they ...
not had the opportunity ...
in a speech situation ...
the listed number ...
able environment for ...
is available for the ...
for classroom use, and ...
log lessons, also. A ...

Population here refers to the ...
in the two-year period.

a stimulating change for the students, and alert them for more discriminative listening. Flexibility in the length of paragraph studies would enhance their usefulness in the instructional program.

Of the possible types of connected auditory material discussed, the paragraph has been selected as the best single type for University of Puerto Rico students.

Development of Paragraph Studies

Studies Based on Phonemic Problems

Training material that is devised for use in a remedial speech program must be centered around linguistic elements that need correction. Effectiveness of the material will be determined by how well it succeeds in reaching the core of the problem and reducing or eradicating the difficulty. The conclusion was reached (Chapter III) that in discriminating the sounds of American English Speech, students in the University of Puerto Rico Speech course had deficiencies. This conclusion was determined by examination of the results of 942 aural perception tests administered during a period of two years. The same test results showed that this deficiency reduced comprehension in connected speech. Various forms of connected speech material applicable for listening lessons were considered in this chapter. It was concluded that paragraph material is adaptable for listening lessons in the Puerto Rican situation.

To be effective in the remedial speech program, the content of the paragraphs to be designed for listening lessons should be based on the sound discrimination problems revealed by appropriate tests. The study described in Chapter III provided the basis for development of a group of paragraphs. Chapter III concludes with a list of the main problems

a stimulating change for the students and a more active role in the learning process. The results of the study indicate that the students' self-efficacy and motivation were significantly higher in the experimental group than in the control group. The results also show that the students in the experimental group had a better understanding of the material and were able to apply their knowledge to solve problems more effectively. The study was conducted over a period of six weeks, and the results were analyzed using a pre-test and post-test design. The pre-test was administered to all students in both groups, and the post-test was administered at the end of the six-week period. The results of the pre-test and post-test were compared to determine the effect of the intervention. The results of the post-test showed that the students in the experimental group had a significantly higher score than the students in the control group. This indicates that the intervention was effective in improving the students' self-efficacy and motivation, and in enhancing their understanding of the material and their ability to apply their knowledge to solve problems. The study has several limitations, including the small sample size and the lack of a control group. Future research should investigate the effectiveness of this intervention in a larger sample and with a control group. In conclusion, the study shows that the intervention was effective in improving the students' self-efficacy and motivation, and in enhancing their understanding of the material and their ability to apply their knowledge to solve problems. This suggests that the intervention could be a valuable tool for improving student learning outcomes in the future.

in discrimination which will serve as the basic elements of the paragraph studies. These problems are divided into two general areas--vowels and consonants. Although more consonant than vowel problems were revealed, the vowel discrimination problems are more difficult to eliminate. This is evidenced by the fact that although intensive study of the vowels begins early in the semester and although there is continuous review until the end of the semester, some of the same inaccuracies still exist in the post-test that were present in the pre-test. Listening lessons based on vowel material could be presented first in the series to parallel the arrangement of the earlier course material. Paragraph listening lessons are needed for the following vowel groups and words:

/i-ɪ/, /u-ʊ/, /ʌ-ɑ-ɔ-ɒ/, /ɛɪ-ɛɪ/

warm-worm, sew-saw, come-comb, this-these, pint-paint

Intensive consonant study comes in the second half of the semester, and listening lessons should be prepared to give the students auditory experience in the following consonant groups and words:

/v-b/, /s-z/, /ʃ-ʒ/, /θ-ð-d/, /f-v/, /m-n-ŋ/

world, loose-lose, use(n)-use(v)

The nasal sounds should be given emphasis in final position as well as the voiced-voiceless pairs. Past tense endings need emphasis, also.

Word selection for the paragraph studies is important not only to provide sound discrimination listening, but also to insure frequent hearing of common English words that are linguistically difficult, such as Spanish-English cognates. Such words need additional listening practice because there is usually a difference in syllable stress, as well as in

In disarticulation, the vocal tract is divided into segments.

These segments are the individual phonemes which are the

elements of the spoken language. The vocal tract is divided into

segments by the vocal tract, and the segments are the individual

phonemes which are the elements of the spoken language.

The vocal tract is divided into segments by the vocal tract, and

the segments are the individual phonemes which are the elements

of the spoken language. The vocal tract is divided into segments

by the vocal tract, and the segments are the individual phonemes

which are the elements of the spoken language. The vocal tract

is divided into segments by the vocal tract, and the segments are

the individual phonemes which are the elements of the spoken

language. The vocal tract is divided into segments by the vocal

tract, and the segments are the individual phonemes which are

the elements of the spoken language. The vocal tract is divided

into segments by the vocal tract, and the segments are the

individual phonemes which are the elements of the spoken

language. The vocal tract is divided into segments by the vocal

tract, and the segments are the individual phonemes which are

the elements of the spoken language. The vocal tract is divided

into segments by the vocal tract, and the segments are the

individual phonemes which are the elements of the spoken

language. The vocal tract is divided into segments by the vocal

vowel sounds; for example, animal is /a ni 'mal/ in Spanish, but /'ænəml/ in English. Whenever a word of this type can be used in composing the paragraph material, it would be preferable to another synonymous word. Idiomatic usages common to English are desirable for listening practice. The flow of English words and sequences should be as natural as possible. The student needs extended experience in hearing natural connected speech in English. Eventually, then, he will realize that the inaccurate speech sounds strange and abnormal, according to Ryan whose recommendations are quoted in Chapter I.⁴

Sequence of Presentation

An arrangement of paragraph material in the order of graduated length and difficulty will be advantageous since the average student's ability in English speech is initially at a low level. For this reason also the reading pace should be adjusted to the level of the students. An easy vocabulary and simple sentence structure are indicated. Any unusual words included in the paragraph could be written on the board for advance explanation. As the semester proceeds, the paragraphs can be lengthened and the vocabulary strengthened. Review words and phrases can be part of every lesson in listening. By degrees more idiomatic material and more difficult sentence structure can be introduced. This pedagogical technique of moving from the simple to the complex is discussed by Billows in relation to "systematic and thorough training of the ear" in language teaching.⁵ He advocates that the teacher read

⁴Louise T. Ryan, "Common Errors in English Language Usage Made by Spanish-speaking Pupils" (unpublished Ph. D. dissertation, New York University, 1949), p. 85.

⁵F. L. Billows, The Techniques of Language Teaching (London: Longmans, Green and Co., Ltd., 1961), p. 41.

viewed simply for its own sake, but as a means of
in English. However, a very good example of this is
paragraph material, it will be found in the
literature which is available on this subject.
The flow of material should not be too rapid, and
the student needs exercise in reading and understanding
in English. Actually, this is a very important
source of material and should be used as a
source in Chapter 1.

Progress of Instruction

An attempt to measure the progress of a student
length and difficulty will be a very good one, and
ability in English is a very important factor in
also the reading pace should be a very important
An easy vocabulary and a list of words to be
various words included in the text should be
for advance explanation. The student should be
be furnished with the vocabulary material and
can be part of every lesson in that area. It
material and word lists, and should be
pedagogical technique of teaching, and
covered by a list in relation to progress and
the one in language teaching. The first

⁴ Baker, J. W. "The Progress of Instruction in
English-speaking Countries." University of
California, 1943, p. 10.

⁵ J. L. Sullivan, "The Progress of Instruction in
Language Teaching." University of California,
Berkeley, 1943, p. 10.

passages aloud to his students to give them "as much experience as he can in listening to the spoken word, or to the 'read' word with books shut."⁶ He moves from simple paragraph material to that which is narrative in nature.

Because many of the Puerto Rican students have had a limited background, lacking many of the cultural experiences of the students in the United States, at least some of the paragraphs should add to their knowledge of the world. Geographical facts have been included for this reason. Education students at the University of Puerto Rico are not to be compared with the foreign students who come to the United States for training at the university level. Often, the foreign student coming to the United States was especially selected from among other students in his country for his ability. He usually has a good background of knowledge relative to subjects beyond those in his chosen field. Thus the Puerto Rican students in the speech course need exposure to many facts, some very elementary. Paragraphs of graduated difficulty will promote the improvement of comprehension on a progressive basis also.

In conclusion experience in listening to connected English speech in normal sequence patterns will provide training in sound discrimination. This type of training has been lacking in the speech program for the University of Puerto Rico education students. If added, such experiences as outlined would give the students an opportunity to improve their aural perception and general comprehension of spoken English.

⁶ Billows, op. cit., p. 39.

Because many of the...
background, leading...
in the United States...
their knowledge of...
for this reason...
are not to be...
United States for...
students coming to...
other students in...
background of...
field. The...
points to many...
difficulty will...
again also.

In conclusion...
in normal...
tion. This...
the University...
experiences...
their annual...

Blaine, W. J.

Four possible types of connected auditory material were discussed (sentence reading, paragraph reading, short stories, informative articles), and the paragraph was selected as the best single type for University of Puerto Rico students.

This chapter has pointed out the practicability of arranging paragraph listening lessons of graduated difficulty which permit coordination with the regular classroom lessons. Each listening lesson is based on certain vowel and consonant deficiencies indicated in the results of tabulation of errors of aural perception post-tests for 942 speech students at the University of Puerto Rico.

A series of paragraphs to be used as listening lessons in the University of Puerto Rico speech classes for the education students is presented in Appendix A of this thesis. The sound or sounds emphasized in the lesson are indicated just below the title. There is more than one lesson for those sounds having the highest incidence of error, assuming that more than one listening lesson will be needed to improve auditory perception in the more problematical areas.

The coming academic year, 1963-64, will serve as an experimental period when the author can test the effectiveness of the listening lessons and revise them as experience indicates.

Four possible types of transcription errors were identified in the
some reading, paragraph reading, and dictation tests. The first type
and the paragraph was related to the copy error. The second type
of errors was related to the copy error.

This chapter has outlined the experimental design and the
paragraph dictation lesson. It also describes the experimental
design with the regular dictation lesson. The design was
based on certain vowel and consonant relationships. The design
was of the type of errors of vowel transcription and consonant
speech students at the University of the Pacific.

A series of paragraphs to be read and transcribed were
University of the Pacific. Also speech errors were identified and
presented in Appendix A of this thesis. The errors were identified
in the lesson and indicated by the letter 'X' in the margin.
one lesson for those words that were identified in the margin.
meaning that more than one transcription error was made in the
auditory perception in the lesson.

The copying methods were 10-15, 15-10, and 10-10. The copying
period was the entire copy text. The transcription of the
lessons and revise them as errors were identified.

Chapter V

SUMMARY AND CONCLUSIONS

Accurate aural comprehension of English is difficult for Puerto Rican college students. Therefore, improvement in discriminative listening and resulting improvement in comprehension are vital to the student's progress in learning English as a second language in Puerto Rico, where bilingualism is highly important.

There is a lack of suitable contextual material for training Puerto Rican students in sound discrimination of English as a second language. The purpose of this study was to investigate the assumption that additional materials for listening discrimination are needed for teaching English to Puerto Rican college students, and that paragraph listening lessons could provide the auditory experience in sounds difficult for Puerto Ricans to discriminate.

A survey of the literature revealed the following:

1. Effective listening which is basic to aural comprehension can be achieved by purposeful training of the listening skill.
2. Linguistic problems create difficulties for the person who is listening in a second language.
3. Various listening comprehension tests have been developed, but none are suitable for the Puerto Rican situation.
4. Diagnostic testing of aural perception helps to locate the student's problems in advance of the training period, thereby establishing points to emphasize in training the student who is learning a second language.
5. Experimental studies in remedial speech in a second language are limited.

1960

There is a lack of...
This is a...
The purpose of this study was to...
The materials for...
The results of the study are...
The following are the...
The first...
The second...
The third...
The fourth...
The fifth...

1. Effective...
2. Ineffective...
3. Various...
4. Different...
5. Different...

1. Effective...
2. Ineffective...
3. Various...
4. Different...
5. Different...

6. Listening to the sounds of the new language in context provides normal listening experience in a training program.

7. Experimental procedures are needed to supply adequate teaching materials in special situations.

8. Those in charge of teaching English Speech to education students at the University of Puerto Rico report a pressing need for contextual material in the listening-learning program.

With these findings as a basis, the writer attempted to locate the problem areas in sound discrimination encountered by the Puerto Rican university student. The following steps were taken:

1. Specific attention was directed toward the phonemes of Puerto Rican Spanish and the phonemes of General American English in order to observe the features of the languages in contact and linguistic difficulties involved.

2. Tabulations were prepared, showing the results of the University of Puerto Rico auditory perception test as administered to 942 students over a two-year period.

3. The auditory test results were analyzed to determine sound discrimination problems needing increased attention in the training program.

Methods of providing additional auditory experience in sound discrimination training were investigated for the purpose of selecting the most appropriate choice for the Puerto Rican student. Listening lesson techniques considered were: reading of sentences, paragraphs, short stories, and brief informative articles. Paragraph listening lessons were chosen as the most suitable type to fit the Puerto Rican needs.

A series of paragraphs, presented in Appendix A of the thesis, was developed on the basis of the sound discrimination problems revealed. When the results of tabulation of errors of aural perception tests for 942 English speech students at the University of Puerto Rico were analyzed on the basis of percentage of error, certain vowel and consonant errors appeared. Each listening lesson is based on vowel and/or consonant

6. In order to be able to compare and contrast the results
provide general information about the results of the study.

7. Theoretical background and general information about the
teaching materials in general and in particular.

8. The purpose of the study is to investigate the effect of
students of the University of ... on the ...
for ...

With these ...
the problem ...
Hence university ...

1. ...
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. ...
9. ...
10. ...

discrimination deficiencies needing additional auditory experience in the training program for education students in the University of Puerto Rico speech classes. These paragraphs will serve as listening lessons during an experimental period when the author will test their effectiveness and revise them as experience indicates.

The following major conclusions were reached in this study:

1. Tabulation of errors in aural perception tests for 942 speech students at the University of Puerto Rico indicated problem areas in sound discrimination of certain vowels, consonants, and sound sequences.
2. Test results seemed to indicate greater difficulty in discriminating sounds in context rather than in isolation.
3. There is demonstrated lack, in the literature, of contextual material for sound discrimination listening training in English as a second language.
4. To provide the materials needed to extend listening training in contextual sound discrimination for Puerto Rican college students, the development of special listening lessons was indicated.

Therefore, appropriate paragraph studies based on Puerto Rican sound discrimination weaknesses were developed to give the Puerto Rican university student opportunities for additional listening experience. Future study will be required to determine the adequacy of these materials in the actual teaching situation.

discrimination between the two words in the
in the testing procedure. The results of the
Phonics tests showed that the children were
in some cases in error. The results of the
effectiveness and performance tests were also
discussed.

The following table shows the results of the
1. Evaluation of the children's performance on the
speech samples at the beginning and end of the
course in terms of the number of words which were
sound responses.

2. The results of the tests of the children's
discriminating ability in terms of the number of
3. There is a marked improvement in the children's
actual material for each of the two groups
which is a good example.

4. To provide the teachers with a means of
testing in experimental work the results of the
children's work, the development of the children's
was included.

Therefore, appropriate research should be
shown with the experimental work. The results of the
Phonics tests showed that the children were
in some cases in error. The results of the
effectiveness and performance tests were also
discussed.

32% COTTON COMB

OFF OF HOLLAND

BIBLIOGRAPHY

24% COTTON FRONT

Franklin D.

BIBLIOGRAPHY

BIBLIOGRAPHICAL GUIDES

- Buros, Oscar K., ed.
The Fifth Mental Measurements Yearbook (Highland Park, N. J.: The Gryphon Press, 1959)
- Tests in Print (Highland Park, N. Y.: The Gryphon Press, 1961)
- Coleman, Algernon
An Analytical Bibliography of Modern Language Teaching (3 vols.; Chicago: University of Chicago Press, 1958)
- Haugen, Einar
Bilingualism in the Americas: A Bibliography and Research Guide (University, Alabama: University of Alabama Press, 1956)
- Lado, Robert
"The Survey of Tests in English as a Foreign Language," Language Learning, III (January-June 1950) pp. 51-65
- Mulgrave, Dorothy I., et al
Bibliography of Speech and Allied Areas, 1950-1960 (Philadelphia: The Chilton Co., 1962)
- Thonssen, Lester, et al, eds.
Bibliography of Speech Education (New York: H. W. Wilson Co., 1939-)
- : Supplement: 1939- , 1948-
- Whittenberg, C. T., and Sanchez, George I.
"Materials Relating to the Education of Spanish-Speaking People: A Bibliography," Inter-American Education, Occasional Papers (Austin: University of Texas Press, 1948)

BOOKS AND MONOGRAPHS

- Abercrombie, David
Problems and Principles: Studies in the Teaching of English as a Second Language (London & New York: Longmans, Green & Co., 1957)
- Auer, J. Jeffrey
An Introduction to Research in Speech (New York: Harper and Brothers, 1959)

Brown, Oscar L., ed.

The Great Lakes and the St. Lawrence
Chicago Press, 1929

--- Tests in Polar Regions

Colman, William

A Statistical Study of the Great Lakes
Chicago University of Chicago Press, 1929

Hagen, Hans

Glaciology in the Great Lakes Region
(Minneapolis, Minnesota: University of Minnesota Press, 1929)

Iedo, Robert

The Survey of Lakes in the Great Lakes Region
Lansing, Michigan: Michigan State University, 1929

Kilgus, George L., ed.

Hydrology of the Great Lakes
The Chicago Press, 1929

Thomson, Lester, ed.

Hydrology of the Great Lakes
1929

--- Hydrology

Wittneber, C. T., ed.

Water Resources in the Great Lakes Region
A Hydrological Study of the Great Lakes Basin
(Austin: University of Texas Press, 1929)

Zborovskic, David

Problems and Principles of the Great Lakes
A Second Language, Volume 1, Part 1, 1929

Zur, J. Jeffrey

An Introduction to the Great Lakes
1929

- Billows, F. L.
The Techniques of Language Teaching (London: Longmans, Green and Co., 1961)
- Brooks, Nelson
Language and Language Learning (New York: Harcourt, Brace, and World, Inc., 1960)
- Buehler, E. C., and Linkugel, Wil A.
Speech, a First Course (New York: Harper & Brothers, 1962)
- Carrell, James, and Tiffany, William R.
Phonetics: Theory and Application to Speech Improvement (New York: McGraw-Hill Book Co., 1960)
- Castillo, Carlos, and Bond, Otto F.
The University of Chicago Spanish-English, English-Spanish Dictionary (New York: Washington Square Press, 1961)
- Coleman, Algernon
English Teaching in the Southwest (Washington, D. C.: American Council on Education, 1940)
- Cornelius, Edwin T., Jr.
Language Teaching (New York: Thomas Y. Crowell Co., 1953)
- Crawford, Claude C., and Leitzell, Edna Mable
Learning a New Language (Los Angeles: C. C. Crawford, University of Southern California, 1930)
- Doty, Gladys J., and Ross, Janet.
Language and Life in the U. S. A. (New York: Harper & Row, Publishers, 1960)
- Dunkel, Harold B.
Second-Language Learning (Boston: Ginn & Co., 1948)
- Eisenson, Jon
Basic Speech (New York: MacMillan Co., 1950)
- Finocchiaro, Mary
Teaching English as a Second Language (New York: Harper & Brothers, 1958)
- Fries, Charles C.
Teaching and Learning English as a Foreign Language (Ann Arbor: University of Michigan Press, 1945)
- Gordon, Morton J., and Wong, Helene H.
A Manual for Speech Improvement (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1961)

1951
The University of Chicago Press
Chicago, Illinois

Book 1, Part 1
The University of Chicago Press
Chicago, Illinois

Book 1, Part 2
The University of Chicago Press
Chicago, Illinois

Book 1, Part 3
The University of Chicago Press
Chicago, Illinois

Book 1, Part 4
The University of Chicago Press
Chicago, Illinois

Book 1, Part 5
The University of Chicago Press
Chicago, Illinois

Book 1, Part 6
The University of Chicago Press
Chicago, Illinois

Book 1, Part 7
The University of Chicago Press
Chicago, Illinois

Book 1, Part 8
The University of Chicago Press
Chicago, Illinois

Book 1, Part 9
The University of Chicago Press
Chicago, Illinois

Book 1, Part 10
The University of Chicago Press
Chicago, Illinois

Book 1, Part 11
The University of Chicago Press
Chicago, Illinois

Book 1, Part 12
The University of Chicago Press
Chicago, Illinois

Book 1, Part 13
The University of Chicago Press
Chicago, Illinois

- Gray, Giles Wilkeson, and Wise, Claude Merton
The Bases of Speech (3rd ed.; New York: Harper & Brothers, 1959)
- Hackett, Charles F.
A Course in Modern Linguistics (New York: MacMillan Co., 1958)
- Hagboldt, Peter
Language Learning (Chicago: University of Chicago Press, 1935)
- Hook, J. N.
The Teaching of High School English (New York: Ronald Press, 1950)
- Hubener, Theodore
How to Teach Foreign Languages Effectively (New York: New York University Press, 1959)
- Intensive Course in English, I, II, III, IV (Washington, D. C., English Language Services, Inc., 1961)
- Kantner, Claude E., and West, Robert
Phonetics (rev. ed.; New York: Harper & Brothers, 1960)
- Kenyon, John S., and Knott, Thomas A.
Pronouncing Dictionary of American English (2nd ed., Springfield: G. and C. Merriam, 1953)
- Lado, Robert
Language Testing (London: Longmans, Green and Co., 1961)
- Linguistics Across Cultures (Ann Arbor: University of Michigan Press, 1957)
- Mulgrave, Dorothy, et al.
Speech (New York: Barnes & Noble, Inc., 1954)
- Navarro Tomás, Tomás
Manual de Pronunciación Española (5th ed.; New York: Hafner Publishing Co., 1961)
- Nichols, Ralph G., and Lewis, Thomas R.
Listening and Speaking (Dubuque, Iowa: Wm. C. Brown Co., 1954)
- Nichols, Ralph G., and Stevens, Leonard A.
Are You Listening? (New York: McGraw-Hill Book Co., 1957)
- Prator, Clifford H., Jr.
Manual of American English Pronunciation (rev. ed.; New York: Rinehart & Co., 1957)
- Puerto Rico. University. Speech Committee of the Dept. of English
A Manual of Oral English Exercises, English 105 (2 vols.; Rio Piedras, P. R., 1959-60)

Gray, Oliver Wilson, and ...
The ...
Hackett, Charles J.
A ...
Hagelin, Peter
...
Hook, J. E.
The ...
Hubner, Theodore
The ...
...
Ingram, Charles A.
...
Kantner, Charles E., and ...
...
Keyser, John B., and ...
...
G. and C. ...
Lado, Robert
...

...
Murray, Dorothy, et al.
...
Nevins, James
...
Nichols, Ralph B., and ...
...
Nichols, Ralph B., and ...
...
Prater, Clifford E., et al.
...
Prater, Eric
...
Prater, Eric
...

- Thomas, Charles Kenneth
Handbook of Speech Improvement (New York: Ronald Press Co., 1956)
- Van Riper, Charles
Speech Correction (3rd ed; Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1954)
- Wise, Claude Merton
Applied Phonetics (Englewood Cliffs, N. J., Prentice-Hall, Inc., 1957)

PERIODICAL MATERIALS

- Buell, Eleanor M.
 "Speech Improvement for Bilingual Children in Hawaii," The National Elementary Principal, XXV (June 1946), pp. 36-39
- Dalbor, John B.
 "The English Phonemes /s/ and /c/: A Hearing and Pronunciation Problem for Speakers of Spanish Learning English," Language Learning, IX (1959), pp. 67-73.
- Haugen, Einar
 "The Phoneme in Bilingual Description," Language Learning, VII (1956-57), pp. 17-23.
- Rojas, Pauline M.
 "The Teaching of English as a Modern Foreign Language," College English, IX (1947-48), p. 234.
- Stevens, Cj, et al.
 "English as a Second Language -- Practices of Speech Departments," Quarterly Journal of Speech, XLVIII (October 1962), pp. 285-90.
- Weir, Ruth Hirsch
 "The Phoneme in Language Teaching," Language Learning, VIII (1958), p. 16.
- Wolff, Hans
 "Partial Comparison of the Sound Systems of English and Puerto Rican Spanish," Language Learning, III (1950), pp. 38-40.

THESES AND OTHER MANUSCRIPT MATERIALS

- Brong, Clara Cordelia
 "An Evaluation of Ear Training as a Pedagogical Technique in Improving Sound Discrimination" (unpublished Ph.D. dissertation, Northwestern University, 1948)

Thomas, Charles
Handbook of the ...

Van Riper, Charles
Speech ...
Jan., 1932

Wise, David
Anglican ...
1931

Bull, Eleanor
Speech ...
National ...

Jaeger, John
The English ...
Public ...
January, 1931

Haugen, Ellen
The ...
(1932-37), pp. 15-16

Hogan, Pauline
The ...
College ...

Stevens, C. J.
English ...
Quarterly ...

Walt, Ruth
The ...
(1932), p. 16

Walt, Ruth
The ...
Knox ...

Brown, Clara
The ...
Improving ...
Northwestern ...

Dudding, Christine Glass

"An Investigation into the Bilingual Child's Comprehension of Antonyms" (unpublished M. A. thesis, University of New Mexico, 1960)

Mead, Donald Fred

"The Relationship Between Bilingualism and Verbal Test Performance" (unpublished M. A. thesis, University of New Mexico, 1957)

Ryan, Louise T.

"Common Errors in English Language Usage Made by Spanish-Speaking Pupils" (unpublished Ph.D. dissertation, New York University, 1949)

Tucker, Margaret F.

"Analyzing Effectiveness of English Speech Training" (unpublished paper, prepared for Speech 251, University of New Mexico, 1962)

Booked, Charlotte, N.C.
The University of North Carolina
Library, Raleigh, N.C.
1963

Book, Louis T.
The University of North Carolina
(unpublished)

Book, Louis T.
Common Law of North Carolina
Southern Bell Telephone and Telegraph
University, 1964

Book, Margaret E.
Analyzing the Law
paper, prepared for the

APPENDIX A: LISTENING LESSONS

1. Listening Lessons 72
2. Techniques for Insuring Comprehension 94

APPENDIX I: STATISTICAL DATA

1. General Statistics
2. Detailed Statistics

LISTENING LESSONS

The following paragraphs are examples of the types of materials which a teacher can prepare for use to meet a specific local situation and need, such as the Puerto Rican university situation, where the need is for materials to teach sound discrimination in context. The listening lessons which follow are in the order of sounds corresponding to classroom lessons. Not all problem sounds are represented in this group of lessons, but they comprise the first part of a continuing project.

1. Sheep in Australia	73
2. Ships Around the World	74
3. The World's Most Useful Metal	75
4. Languages of the World	76
5. Strange Occupations	77
6. The Curse of Cancer	78
7. Automatic Things	79
8. Mr. Hull and His Dog	80
9. Be Ready by Dawn	81
10. Two Kinds of Sugar	83
11. Useful Worms	84
12. The Family Pet	86
13. Water and Life	87
14. Marble	89
15. A Universal Food	90
16. The Meaning of Names	91
17. Poems and Things	92
18. An International Language	93

The following paragraphs are taken from the report which a teacher has prepared for his class and need to be read in order to obtain a clear idea of the nature of the project. The following paragraphs are taken from the report which a teacher has prepared for his class and need to be read in order to obtain a clear idea of the nature of the project.

1. Study in detail
2. Study in detail
3. The world's most beautiful
4. Language of the world
5. Strange languages
6. The Queen of the South
7. Ancient languages
8. The world's most beautiful
9. The world's most beautiful
10. The world's most beautiful
11. Useful languages
12. The world's most beautiful
13. Water and life
14. Maps
15. A Universal Language
16. The meaning of language
17. From one language to another
18. An International Language

Sheep in Australia

[i-i]

One of the most useful animals in the world is the sheep. Different breeds of sheep are raised all over the world for two important products: wool and meat. Woolen material is used for clothes and blankets, and because it is considered very warm it is used a great deal in colder countries. Some sheep are raised for their fine quality wool while others are raised especially for meat.

Australia is the leading country in the world in the production of sheep. But the population of Australia is so small that the people do not have use for all the sheep products; therefore they ship them to many parts of the world. Most of the shipments go to England and Scotland, where the situation is the reverse of that in Australia. They have a small amount of land with a large population and not much room for grazing sheep. Australia is an entire continent with vast stretches of land for grazing sheep, so it is not surprising that they can ship a large quantity of wool and various sheep products to other countries.

1. Why is such a large quantity of sheep products shipped from Australia to England and Scotland?
2. What routes or directions might the ship travel in going from Australia to England?
3. Is a shipment always sent on a ship?
4. Name two or more synonyms for the words shipment and ship.
5. Are there any synonyms for sheep?
6. Is the sheepskin an important product also?

One of the most difficult things to do is to get the sheep to graze on the rough and hard ground. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze. The sheep will graze on the soft and green grass, but when the ground is hard and dry, they will not graze.

1. Why is such a large quantity of wool produced each year?
2. How is the wool produced?
3. How is the wool produced?
4. How is the wool produced?
5. How is the wool produced?
6. How is the wool produced?

Ships Around the World

[1]

The word ship has many applications. Its first important meaning was that of a large boat—a sea-going vessel—that travelled on the great seas and waterways of the world, transporting people and material things from one place to another. These ships became divided into two types: passenger ships and freighters, which are cargo boats.

As travel by air developed, airplanes were often called airships, and now we have space ships that are exploring in outer space.

So we have ships on the water, in the air and in outer space. Are there any ships on the land? Yes, that wonderful animal, the camel, is often called "the ship of the desert." What is the reason for this? The vast deserts of the world look like great inland seas from a distance, and as the camel walks steadily on across the desert, he looks like a ship moving across a sea. He is the ship of the desert transporting people and things across a dry sea.

The islands of the world, like Puerto Rico, are dependent on sea-ships and airships to connect them with the continental mainlands. Both seaships and airships at the end of their trips come into port, though the airport is on land sometimes far from water.

1. What different kinds of ships come to Puerto Rico?
2. Has the extensive use of the airship reduced the size of the world?
3. Compare a trip from Puerto Rico to New York in 1920 with one you would take today.
4. Compare the journey of two letters mailed in Puerto Rico, both addressed to Chicago; one has an air mail stamp, the other a regular surface mail stamp.

REPORT

Investigation of the

The word "ship" has many meanings. It can refer to a large vessel that carries people or goods across a large body of water. It can also refer to a smaller boat used for recreation or fishing. In this report, we will focus on the large vessels used for transportation.

As travel by air has become more common, ships have become less popular. However, ships still play an important role in global trade. They carry goods from one part of the world to another. In addition, ships provide a means of transportation for people who live in coastal areas.

The most common type of ship is the cargo ship. These ships carry goods such as food, clothing, and electronics. They are built to be large and sturdy, so they can carry a lot of weight. Another common type of ship is the passenger ship. These ships carry people across the ocean. They are usually larger than cargo ships and have many amenities, such as restaurants and entertainment.

The balance of the world's shipping industry is shifting. More and more goods are being shipped by air, which is faster but more expensive. This has led to a decline in the number of cargo ships. However, passenger ships are still popular, and their numbers are growing. This is because people are taking more vacations and traveling more often.

1. What different kinds of ships are there?
2. How do the different kinds of ships differ?
3. Compare a trip from New York to London by ship and by air.
4. Compare the journey to Chicago by ship and by air. How do they differ?

The World's Most Useful Metal

[i-i]

What do you think is the strongest, most useful and leading metal in the world today--the one most important to modern civilization? Yes, the answer is Steel. The history of steel is fascinating to read. Its development probably began in the year 500 when the Chinese discovered the use of cast iron.

There are various kinds of steel, depending on the ingredients used in its manufacture. Each different kind of steel has a special use; for example, the type used in constructing tall buildings, bridges, and ships differs a great deal from that used in making surgical instruments or precision machinery.

The basic ingredient for the manufacture of steel is iron ore; consequently, the big steel mills are generally situated as near the iron ore deposits as feasible. Also, nearby coal deposits are necessary to heat the big steel furnaces, because great heat must be used in the manufacture of steel. Other forms of heat, such as gas and electricity, are used also today, but coal is still most important in steel production.

Although Russia has made a big increase in the production of its steel mills in recent years, the United States is still the leading steel producer of the world. Do you believe that steel will still be the world's most useful metal in the year 2,000?

1. Listen while the passage is read again. How many times do you hear the word still?
2. What people probably discovered the first step in the production of steel?
3. Name several important uses of steel.
4. Why aren't steel mills located in Puerto Rico?

The world's steel mills have been producing steel at a rate of about 100 million tons a year.

What do you think is the biggest reason for the increase in the use of steel in the world today—the one that has had the most effect on the answer is steel. The history of steel is a long one. Development probably began in the year 500 B.C. when the Chinese discovered the use of cast iron.

There are various kinds of steel, some of which are used in the manufacture of machinery. Some of the most important uses of steel are in the construction of bridges, ships, and other large structures. For example, the type used in the construction of ships is called ship steel and ships often have a great deal of steel in their hulls.

The basic ingredient for the production of steel is iron. Iron ore deposits are found in many parts of the world. In the United States, iron ore is mined in Michigan, Minnesota, and Wisconsin. To heat the pig steel furnace, coke is used. Coke is a hard, porous material made from coal. Other raw materials used in the manufacture of steel are limestone and manganese. These are used also today, but coke is still the most important raw material.

Although Russia has had a big industry in the production of steel since the first world war, it has not been the world's largest producer of steel until in recent years. The United States has been the world's largest producer of steel since the first world war.

1. What are the main reasons for the increase in the use of steel in the world today?
2. What people probably discovered the first use of steel?
3. Name several important uses of steel.
4. Why aren't steel mills located in every part of the world?

Languages of the World

[1-1]

People seem to think that the language they speak is the most important in the world. This is true for each person as he communicates with other individuals by means of his speech. But he must respect the fact that there are many other languages in the world—actually there are 2,796, according to Mario Pei, author of All About Languages. This is hard to believe, but there are over one thousand American Indian languages alone in North, Central, and South America. In Africa, where there are hundreds of native languages, a similar situation exists, and in Australia there are over a hundred different tongues among the natives. Most of these native languages have only a few hundred speakers apiece.

At the other extreme are the languages which have over fifty million people speaking them. Of these, the leading one is Chinese which has over 500 million speakers, but communication is difficult within China since there are so many dialectal differences. Next is English, with almost 300 million scattered all over the world. The third biggest language is Hindustani, spoken in India and Pakistan, with over 200 million people. Russian has 167 million and Spanish 155 million speakers. These are recent figures taken from The World Almanac for 1963. Of interest to us, English and Spanish are spoken in a number of countries scattered over the world.

1. What is the leading language of the world?
2. How many people speak it? What are its limitations?
3. Where are hundreds of languages spoken that have only a few hundred speakers each?
4. Why are you fortunate in knowing both English and Spanish?

Strange Occupations

* [a-A]

There are many strange occupations in this world, and one of the strangest is that of Mrs. Dunn, who operates a hospital for dolls. She started her business as a hobby in her home while her husband was in the army. After his return he enlarged their home by adding a new room for the hospital. Mrs. Dunn says so many little girls bring their broken dolls to be repaired that she never has a dull day at her doll hospital. She considers her job to be fun instead of work. Many people have hobbies that become full-time jobs. They are usually the happiest people because they are doing what they want to do. These people always like their work and never find it dull and uninteresting.

1. Listen carefully as the passage is read again. How many times do you hear the word dull?
2. Name two synonyms for the word dull.
3. Do you know anyone who has a very unusual, uncommon type of job or occupation? If so, what is it?

* Though there are variant pronunciations for the vowel of doll,

/ o / and / ɔ /, / a / is preferable for this lesson.

There are many ways to improve your writing skills. One way is to read a lot of books. Another way is to write every day. You can also take a course in writing. It is important to practice writing often. This will help you to become a better writer. You should also pay attention to grammar and punctuation. These are the basics of good writing. If you are not sure about something, look it up in a dictionary or grammar book. Writing is a skill that can be learned and improved. So, keep practicing and you will see the results.

1. Listen carefully as the speaker reads the text.
2. Write two answers for the word 'listen'.
3. Do you know anyone who has a job related to listening or communication? If so, what is it?

* Though there are various meanings for the word 'listen', it is always used in the same way.

The Curse of Cancer

[3-0-A]

A great curse to mankind is the disease called cancer. The exact cause of this serious disease is not known. It attacks both young and old but most cases are found among the older people. It can strike any part of the body. Some people are ill a long time; others are sick only a short time. In some cases an operation will cure the disease, but in others an operation may be impossible. Today there is an increase in lung cancer, especially among those who smoke. Lung cancer is difficult to cure, and causes a long illness. What course must people take to avoid cancer? Doctors advise regular physical examinations. This is most important. Also, everyone ought to contribute to the cancer fund which supports study of the cause and cure of cancer.

1. What is the cause of cancer?
2. How long does the disease usually last?
3. Name one form of cancer that apparently is increasing.
4. Tell what a person should do to avoid cancer.

A recent case to illustrate the cause of cancer.

Case of this nature is not infrequently met with.

Old his case was found when he was 60 years of age.

One part of the body, the lungs, was found to be

very much enlarged, and the other parts of the

body in general were found to be in a state of

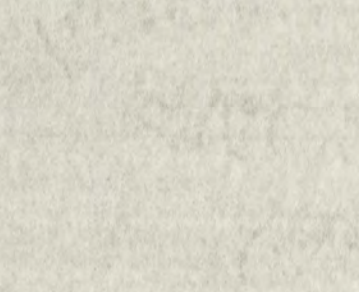
inflammation, and the lungs were found to be

very much enlarged, and the other parts of the

body in general were found to be in a state of

inflammation, and the lungs were found to be

very much enlarged, and the other parts of the



1. What is the cause of cancer?

2. How long does the disease usually last?

3. How can the cause of cancer be removed?

4. Will such a person, should he recover, be

Automatic Things

Initial [ɔ]

and Vowel Review

Many English words are derived from other languages, such as Latin and Greek. One such word, automatic, is derived from the Greek word automatos which means self-moving, or self-thinking; autos means self, matos means thinking. Automatic things operate or move by themselves, but someone usually has to press a button or put a coin in a slot before the machinery will work. For example, the automat is a type of self-serving restaurant where the food is in small compartments with doors which are opened by putting coins into slots. And there are different types of automatic vending machines which sell everything from stamps to hot coffee.

Some English words begin with the prefix "auto"; for instance, an autobiography is a self-written biography. An autograph is a handwritten signature. An autocrat is a person who dominates others. Automobile, the original name for the modern car, really means self-moving. When you understand the derivation of a word, the entire meaning ought to be clearer.

1. From what language is the word auto derived?
2. Name and define two words beginning with the prefix "auto."
3. What is the value of studying the derivation of words?

any English words are... Latin and Greek... word... self, give... selves, but... also before... type of... words with... there are... everything...

Some English words... an autobiography... written... middle, the... when you... to be clearer.

1. How many languages...
2. How and...
3. What is the value...

Mr. Hull and His Dog

[o-A] [k-g] [e-o]

Mr. Hull has a small dog named Doc. His erect ears and sharp whiskers make him look very alert and intelligent. Perhaps this is the reason why Mr. Hull calls his dog Doc, which is a short form for doctor, of course. Mr. Hull and his wife live in a four-family apartment on the second floor. Doc often sits in the hall to protect the Hull's apartment. Whenever anything unusual happens in the hall, he notifies the Hulls by barking sharply.

Doc has a friend who lives in the apartment next door. Her name is Sylvia. Sometimes Doc and Sylvia play together all day long and have a lot of fun. Do you think Sylvia is a little girl or a little dog? She is neither one. Sylvia is a cat—a lovely white cat who has one green eye and one blue eye. When Sylvia was a kitten and Doc was a puppy, they became friends and began playing together. Their friendship proves that some dogs and cats can get along together very well, but some people think that all dogs and cats are natural enemies.

1. Is Doc a good name for a dog?
2. What did Doc consider his work to be?
3. When did Doc and Sylvia begin playing together?
4. Is it a sign of intelligence when dogs and cats show friendship for each other?

Mr. Hill has a...
...the reason why...
...book of...
...went on the...
...Hill's apartment...
...noticed the...
...has a friend...
...is...
...have shot...
...dog...
...has one...
...was a...
...friendship...
...well, but...

1. Is Joe a good name for a dog?
2. What did Joe do when he was a puppy?
3. When did Joe and Sylvia begin playing together?
4. In what ways is Joe different from other dogs?

Be Ready By Dawn

[A-O-U]

(loose-lose)

Everybody was told to prepare for the hurricane. Instructions were given over the radio by the weatherman, who said the hurricane would come at dawn. He announced that he would broadcast the location of the storm every thirty minutes. The first broadcast indicated that the hurricane was moving in a northwesterly direction at the rate of a hundred miles per hour. Unless the course of the wind changed to another direction, the radio reported that the storm would hit the south shore of the island and move inland toward Humacao.

All members of the family worked hard to make everything secure about the house and yard. The windows were shut and covered with boards, and everything that was loose around the house or yard was securely tied down. It is possible to lose many things in the wind if they are not securely fastened. A loose object might be thrown by the wind and cause serious damage. The farm animals and family pets were all put in safe places and food and water were stored in a central place in the house. When dawn came, everything was done--all preparations were finished. But the atmosphere was still calm. A change in direction had caused the hurricane to lose its force. So the family opened the windows and doors and let the pets and other animals loose. All was normal once more.

Everybody was told to remain in his quarters, and no one was to move about the ship. The captain had ordered that the ship should be kept as quiet as possible, and that the crew should be ready for any emergency. The passengers were also told to stay in their cabins and not to go out. The ship was moving slowly, and the water was calm. The sky was clear, and the sun was shining brightly. The ship was heading towards the east, and the land was visible in the distance. The passengers were all looking out of their windows, and some were taking pictures. The ship was a large passenger liner, and it was carrying many people. The crew was all dressed in uniform, and they were all looking towards the front of the ship. The ship was moving slowly, and the water was calm. The sky was clear, and the sun was shining brightly. The ship was heading towards the east, and the land was visible in the distance. The passengers were all looking out of their windows, and some were taking pictures. The ship was a large passenger liner, and it was carrying many people. The crew was all dressed in uniform, and they were all looking towards the front of the ship.

1. When was the hurricane expected?
2. How often did the weather man say he would report on the progress of the hurricane?
3. What was the rate of the hurricane winds?
4. What had to be done by dawn?
5. Complete the following sentences with lose or loose:
 - a. A _____ object can cause damage in the wind.
 - b. It is possible to _____ things in the wind when they are not securely fastened.
 - c. A change in wind direction caused the hurricane to _____ its force.
 - d. Finally, they let the pets and animals _____.

1. What was the purpose of the experiment?
2. How often did the subjects perform the task?
3. What was the state of the subjects at the end of the experiment?
4. What led to the observed results?
5. Complete the following statements with appropriate words.
 - a. A _____ subject was used.
 - b. It is possible to _____ the results.
 - c. A change in the _____ of the subject was observed.
 - d. Finally, they had the same results.

Two Kinds of Sugar

[ʃ] [u]

The two most important kinds of sugar produced in the world are cane sugar and beet sugar. The words cane and beet indicate the type of plant from which the sugar is derived.

The sugar cane plant is a tall tropical grass from which sugar is extracted by crushing the stem of the plant. Several warm islands like Puerto Rico, Cuba, and Hawaii raise a great deal of sugar cane. The leading producer of sugar was formerly Cuba, but first position has been taken by Russia, according to the most recent world production figures. Probably Russia's production is chiefly in beet sugar.

The sugar beet is a vegetable that has a thick white root from which sugar is extracted when it is crushed. Sugar beets are raised in the temperate zone, chiefly in Europe and the United States.

Sugar is added to many foods to make them sweet. It is the main ingredient for candies and syrups.

1. Which of the following words has the same initial sound as sugar; share, chair, jar, yard?
2. Which of the following words has the same vowel in the first syllable as sugar: butter, mover, cocker, talker.
3. Is sugar an essential food?
4. What could cause the decrease in per capita consumption of sugar?

The two most important things I want to mention is the fact that
once again and best ever... the work is done in the best
of spirit from which the water is derived.

The water comes from a tall, cylindrical tank...
is extracted by running the water...
like fresh air, light, and heat...
the feeding process of water...
been taken by plants, animals...
figures. Probably...
The water...
which water is extracted...
in the separate case, clearly...
Given its added to many...
with...
1. Which of the following...
2. Which of the following...
3. Is water an essential...
4. What could cause the...

Useful Worms

[3]

Worm is an unpleasant word to some people who think that all worms are bad. They are thinking about worms in unsanitary places like dirty garbage pails. When the weather is warm, worms of this kind propagate rapidly in unclean places. This condition creates a serious problem in sanitation.

But there are other worms, like the earthworm, that are of benefit to mankind. These worms crawl around in the top soil, especially when the weather is warm, keeping the soil loose so that it will hold more air and moisture. Not only do worms help mankind but also other living creatures. Earthworms serve as the main food of many birds. Have you ever seen a bird pulling a worm out of the earth and then taking it to its baby birds that are eagerly waiting for their food?

Another useful worm is the silkworm that works all the time producing silk. It lives in the mulberry tree and feeds on the leaves; then it spins a cocoon around itself, made of very thin but strong fiber sometimes more than one-half a mile long. This cocoon is unwound and woven into silk material for all kinds of clothes. The culture of the silkworm is very, very old. It began in the Orient in China about 2,000 years ago and spread from there to Turkey and other parts of the world. Most of the work with silkworms is done in the warmer climates in Asia and Africa.

1. In what two ways is the earthworm useful?
2. In what part of the world and when did the silkworm industry begin?

This is an important part of the work of the
 various departments. The first part of the
 work is to determine the nature of the
 problem to be solved. This is done by
 the various departments. The second part
 is to determine the method of solution.
 This is done by the various departments.
 The third part is to determine the
 results of the solution. This is done
 by the various departments. The fourth
 part is to determine the value of the
 solution. This is done by the various
 departments. The fifth part is to
 determine the cost of the solution. This
 is done by the various departments. The
 sixth part is to determine the time
 required for the solution. This is done
 by the various departments. The seventh
 part is to determine the quality of the
 solution. This is done by the various
 departments. The eighth part is to
 determine the quantity of the solution.
 This is done by the various departments.
 The ninth part is to determine the
 location of the solution. This is done
 by the various departments. The tenth
 part is to determine the date of the
 solution. This is done by the various
 departments.

1. In what way is the work done?
2. In what part of the work is the most time spent?

3. Listen while the paragraphs are read again. Listen for the word warm, and then be able to tell how many times you heard it.
4. Is the product of the silkworm in as great demand now as in former years?

3. In the presence of the witness, the defendant shall be sworn to tell the truth, the whole truth, and nothing but the truth, so help him God.

4. In the presence of the witness, the defendant shall be sworn to tell the truth, the whole truth, and nothing but the truth, so help him God.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Court at _____, this _____ day of _____, 19____.

The Family Pet

(Vowel Review)

Do you have a pet in your family? Most families that have a pet choose a dog or a cat. But if you live on a farm you might have a pet duck instead of a dog, or you might have a little lamb or a pony. The advantage of having dogs or cats for pets is that they adjust to household and family life and learn how to live indoors. It would be hard to teach a duck how to live indoors, and a pony would be much too large in the living room.

Whether dog or cat, the family pet should be treated with respect. Each dog and cat has its individual personality. If trained with patience and affection, the animal can be taught good behavior so that it will fit nicely into the family routine. Good behavior under pressure should always be rewarded. The intelligent pet will appreciate this.

Dogs and cats don't speak our language, but they can be taught to react to the sound of certain words and phrases. They will learn quickly if some activity is related to the word or phrase to be learned. Tone of voice and facial expression are very important in conveying meaning to your pet. Treat him as you would a good friend, and he will always be a loyal, devoted friend to you.

Instructions: Number from 1 to 10 on a piece of paper to hand in. Listen carefully as the passage is read again. I will stop ten times. Each time I stop, write on your paper the last word you heard, followed by the symbol for the vowel sound in the stressed syllable.

(Choice of words at teacher's discretion, depending upon class problems. However, the selection should furnish a good coverage of the vowel sounds.)

CHAPTER III

It has been a long time since I have seen you. I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy. I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy.

I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy. I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy. I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy.

I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy. I have been very busy with my work, but I have not forgotten you. I have been thinking of you often and wondering how you are getting on. I hope you are well and happy.

Water and Life

[~~3-21-31~~]

Were you aware that water is very important for life and growth on earth? Water is necessary for plant, animal, and human life. Water is found where certain geologic formations appear. Springs, for example, come from underground drainage areas and rise to the surface where the rock formations permit. Here the springs turn into streams or rivers, or perhaps lakes. Streams and rivers travel downhill, sometimes dropping over waterfalls in the course of their journey. Some streams and rivers run more rapidly than others. Generally their journeys end at the shores of lakes or oceans. Others, however, may dry up before reaching their destinations.

Wandering tribes that live in the deserts, like the Sahara, travel more than most people to obtain their water. They ride over burning sands for very long ways to the oases, which are really springs surrounded by green palm trees and other varieties of plant growth. Desert peoples learn to share their water fairly, so that everyone may have a portion. They drink some water and store more for carrying to places that are without water.

People in some other parts of the world have water to spare and don't have to conserve every drop. Nevertheless, they should learn to take better care of their water resources. For instance, whenever the lumber companies cut great masses of trees out of our national forests, they have to replant with new trees. This is called reforestation. The roots of the trees on mountains and hillsides help to hold the earth in place when heavy rains come. Rain, of course, is a very important water

and you have also seen in your travels...
 on earth. Water is necessary for life, and it is...
 in fact, water is the most abundant substance...
 some of the most important...
 and the most common...
 over the world...
 in more than half...
 of the earth's...
 distribution...
 and the...
 more than half...
 for very long...
 moon...
 learn to know...
 they drink...
 without water...
 people in some...
 don't have to...
 take better care...
 number...
 they have to...
 parts of the...
 place when...

source. Rain turns the dry dirt into rich and fertile earth, ready for the farmer to plant his yearly crops. Elsewhere there are great stretches of grasslands where herds of animals may graze. Men and animals are very dependent on water.

1. What are springs?
2. What are oases?
3. Explain the effect of trees on water and earth.

source. Heat from the dip stick and other parts of the engine
the former to plant his teeth upon...
of conditions where heat is...
dependent on water.

1. What are the parts?
2. What are the parts?
3. Explain the effect of the parts.

Marble

[v=b]

One of the most useful types of stone is marble. It is made of limestone which is a product of volcanic action. When it is snow white, people marvel at the beautiful statues made from it. Other types of marble vary greatly in color. Tombstones made of marble may be placed at the head of a grave when a person is buried in the cemetery. Among the most cherished pieces of antique furniture are marble-topped tables. Because it has two marvelous qualities, beauty and durability, monuments and public buildings are very often made of marble. England, Belgium, France, Germany, Greece, and Italy are foreign countries that produce much of this fine stone. In the United States, some of the finest marble comes from Vermont; but some other states are also large producers of this hard beautiful stone.

1. What are some of the uses of marble?
2. What regions produce the best marble?
3. Can the game marbles be related to the stone called marble?
4. What does marvelous mean?

One of the first things I noticed when I entered the
classroom was in a room of about 20 people. The
people were all of the same age and were all
very friendly. I felt like I had found a home.
As the days went by, I found that the people
the most interesting thing about them was their
because it has the same kind of people and
and public buildings are very nice and
France, Germany, Italy, and other countries.
end of the line. It is a very nice place
the same kind of people but they are all
of this beautiful scene.

1. What are some of the things you like?
2. What do you think about the people there?
3. Can you describe the place where you live?
4. What are some of the things you do for fun?

A Universal Food

[s-z]

Do you know what the most universal food is—the food that is eaten by more people around the world than any other? It is rice. Some people consider it a vegetable, but it is really a grain like wheat and oats, and is grown mainly in the lowlands of countries having warm climates.

Rice is the main food in some parts of the world, especially in the Orient. It is a very adaptable food because it can be used in many different kinds of dishes. In many parts of the world it is the staple food. For instance, the Chinese and Japanese eat rice and fish every day. When there is a rise in the price of rice or a crop failure, many people go hungry. To prevent a rise in the price and to protect the poor people, some countries establish a maximum price.

Farmers are encouraged to raise high quality rice that produces a good yield. Those who raise the best rice win prizes at State and National Fairs. Also, prizes are given at the World Expositions for the finest exhibits of rice. China produces more rice than any other country and is sometimes called the "rice bowl" of the world. In the Occident Brazil is one of the largest producers and consumers of rice.

1. In what part of the world is rice most important? Why?
2. Where does rice grow best?
3. What is the purpose of giving prizes to farmers who raise the most superior grade of rice?
4. Is rice an important food in the Western Hemisphere?

Do you know what that means? It means that we are not only
crossed by some people who are not only not only not only
Some people are not only not only not only not only not only
viewed and dated, but also dated and dated and dated and dated
having been dated.
Rice is the main food in the diet of the people of the
in the Orient. It is very important in the diet of the
in many different parts of the world. It is the main food
the staple food. It is the main food of the people of the
fish every day. It is the main food of the people of the
believe, many people of the world. It is the main food of the
to protect the poor people. It is the main food of the
factors and conditions which are the main factors in the
a good yield. It is the main food of the people of the
National Diet. It is the main food of the people of the
the most important of them. It is the main food of the
country and is essential to the health and well-being of the
continent Brazil is one of the largest producers of rice in the

1. In what part of the world is rice most important?
2. Where does rice come from?
3. What is the reason for the importance of rice in the diet of the people of the Orient?
4. Is rice an important food in the diet of the people of the world?

The Meaning of Names

[m]

A man has to keep his family name for life unless he has it legally changed; but a woman has the opportunity to change her name when she gets married. Sometimes it seems that her new name is not as pleasing as her maiden name. For example, if her married name became Smith, would that probably be better or worse than her maiden name? Let's examine the facts. There are over 1,500,000 people in the United States with the family name of Smith. A large number of the men are named John, since John is the most common given name in the English-speaking world. The new Mrs. John Smith would have a problem immediately, explaining which Mrs. John Smith she is. The telephone directory in any large city has many columns of Smiths and many of them are John Smith. What, then, is the solution to such a problem? An unusual middle name would identify John Smith; for instance, J. Loren Smith. Also, in naming their children, parents whose surname is Smith should choose given names that are seldom heard.

Smith is a name derived from an occupation, like Taylor and Farmer. A smith is a person who makes things out of metals. Examples are the silversmith and the goldsmith.

1. Are you familiar with a poem by Longfellow about a smith?
2. What are some unusual names that might combine well with Smith?

A man has to have a certain amount of...
logically...
than the...
as...
come...
man...
in the...
of the...
in the...
a...
telephone...
any of...
a...
instance...
whose...
hand.

- With...
former...
rules...
1. No...
2. That...

Poems and Things

[m--n--o]

"The world is so full of a number of things,
I'm sure we all should be as happy as kings."

This little poem was written by Robert Louis Stevenson who also wrote such exciting stories as Kidnapped and Treasure Island. For a long time he was not able to do much traveling around the world, because he was ill and had to stay at home in Scotland. When he had to remain in bed, he would think and dream about distant places. Instead of being unhappy because of his condition, he spent his time thinking about all the wonderful things in the world.

At last he was able to leave home and travel to other parts of the world, where he continued his writing. He finally settled in the Samoan Islands, where his health became better. The natives loved him and named him Tusitala, "The teller of tales." When he died, the natives buried him there on top of a great mountain peak.

1. Why did Stevenson think everyone should be "as happy as kings?"
2. Name a book or a poem written by Stevenson.
3. Do you think his state of mind improved his state of health?

The world is full of a million things
 I'm sure you'll find them all
 This little poem was written by Robert
 also wrote each and every line
 for a long time he was not able to
 because he was ill and had to
 to remain in bed, he would think
 instead of being angry because
 thinking about all the things
 at least he was able to
 the world, where he received
 Samson Leland, whom his
 and named his "Leland", the
 buried him there on top of a

1. My old Stevens' thing
2. Have a look on a page
3. Do you think his

An International Language

[n-1]

If any one language should have a chance to become nearly universal, which do you think it might be? Chinese would have little chance because of dialectal differences which are so great that people from different regions of China can't understand each other. English might have a chance because it has the second largest speaking population and is already widely spread over the earth, covering over one-fifth of the earth's land surface. Among international business men, it is recognized as the language of commerce. English-speaking people own over half of the world's economic wealth and means of communication: telephones, radio stations, newspapers, motion pictures, automobiles, railroads. It is one of the leading scientific languages, and nearly half of the world's scientific reports are written in English. The extensive literature of English is read around the world. Someone has said that the sun never sets on the English language because it is spoken by people of almost every color and race under the sun. One of the marvels of modern times has been the expansion of English around the world in only a few centuries. If English or another language developed into a universal tongue, it could bring nations closer together and result in greater unity and harmony among them.

1. Do you think that English has a chance to become a universal tongue?
2. How could a language help bring about world peace?

1. Do you think that English is the most important language in the world?

2. How could a language help to solve world problems?

Techniques for Insuring Comprehension

The phonetic elements in each lesson emphasize at least one pair of contrasting sounds. In some cases a third or fourth sound has been added. To avoid confusion for the student, no lesson should undertake to teach several sounds at once. The listening lesson will follow the textbook and laboratory lessons involving the same sound or sounds. This system will produce a coordinated effort in teaching the sound. When new words or phrases are introduced, it is well to write them on the board. Some students who are visual-minded have a keener grasp of the sound if they can associate sound and visual image. The meaning of the new word or phrase can be discussed before the paragraph is read. It may be feasible to discuss one or two review words which might prove to be stumbling blocks to some students. The teacher's judgment would determine the necessity for such supplementary work, depending upon the ability of the class members.

The teacher might ask the students to listen for certain sounds or certain words carrying the sound being studied. This latter activity would be a good teaching device for detecting sound discriminations. The subject matter of the paragraph may indicate the desirability of questions suggesting ideas for which to listen. Questions of this type will aid in alertness and concentrated attention. After comprehension of ideas has been checked following the first reading, the paragraph could be read a second time for the experience of listening for certain sounds only.

The following is a list of the names of the persons who have been named in the above mentioned report, and who are believed to be connected with the same.

1. [Name]

2. [Name]

3. [Name]

4. [Name]

5. [Name]

6. [Name]

7. [Name]

8. [Name]

9. [Name]

10. [Name]

11. [Name]

12. [Name]

13. [Name]

14. [Name]

15. [Name]

16. [Name]

17. [Name]

18. [Name]

19. [Name]

20. [Name]

21. [Name]

22. [Name]

23. [Name]

24. [Name]

25. [Name]

26. [Name]

27. [Name]

28. [Name]

29. [Name]

30. [Name]

31. [Name]

32. [Name]

33. [Name]

34. [Name]

35. [Name]

36. [Name]

37. [Name]

38. [Name]

39. [Name]

40. [Name]

41. [Name]

42. [Name]

43. [Name]

44. [Name]

45. [Name]

46. [Name]

47. [Name]

48. [Name]

49. [Name]

50. [Name]

51. [Name]

52. [Name]

53. [Name]

54. [Name]

55. [Name]

56. [Name]

57. [Name]

58. [Name]

59. [Name]

60. [Name]

61. [Name]

62. [Name]

63. [Name]

64. [Name]

65. [Name]

66. [Name]

67. [Name]

68. [Name]

69. [Name]

70. [Name]

71. [Name]

72. [Name]

73. [Name]

74. [Name]

75. [Name]

76. [Name]

77. [Name]

78. [Name]

79. [Name]

80. [Name]

81. [Name]

82. [Name]

83. [Name]

84. [Name]

85. [Name]

86. [Name]

87. [Name]

88. [Name]

89. [Name]

90. [Name]

91. [Name]

92. [Name]

93. [Name]

94. [Name]

95. [Name]

96. [Name]

97. [Name]

98. [Name]

99. [Name]

100. [Name]

Four steps are desirable in presenting the listening lesson:

1. All possible distractions should be reduced to a minimum when the time approaches for the listening lesson, so that the teacher will have the students' undivided attention. If written answers are required immediately after the reading, then the students should have paper and pen in readiness before the reading.
2. Questions may be asked immediately after the reading. However, these are only suggestions to be used by the teacher at his discretion for checking comprehension of the reading. If the teacher desires, he may ask pertinent questions. If written answers are desired, the questions should be phrased so that they can be answered with one or two words or a short phrase. Writing at any length will take away from the prime purpose of the listening lesson, which is aural activity. However, the written answers do check the student's understanding of what he just heard and are therefore valuable. In evaluating students' answers, the instructor will discover the degree of student comprehension achieved, and whether the passage really served its purpose.
3. The teacher may wish to ask questions which will evoke oral responses and promote brief discussion. Questions should provoke answers which will require the use of sounds and words being emphasized in the lesson. Using oral responses, the teacher can immediately recognize whether accurate sound discrimination is taking place. If necessary, misconceptions may be cleared up. Questions should stimulate thinking and discussion in English. Each question is guided in the direction of the sounds and words of the lesson. Ideas might profitably be included in the discussion that were not in the paragraph. This could be an educational experience requiring listening and spontaneous discussion that would improve both listening and speaking.
4. As a possible fourth step, rereading the passage after discussion may prove profitable. Weaker students may understand the reading better after the discussion. A third reading might permit students to recheck their ability with the sound discrimination items. Regular review of the passage may strengthen its remedial effect.

Flexibility in the use of the paragraph listening method is one of its main advantages. Each teacher can adjust the lesson to satisfy the time schedule and ability of the students. In fact, with a little ingenuity, the teacher can prepare additional paragraph lessons to supply extra

Four steps are described in the following paragraphs:

1. All possible dimensions of the problem are identified. The first step is to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem.

2. The student is asked to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem.

3. The student is asked to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem.

4. The student is asked to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem.

Flexibility in the use of the problem-solving process is a key to success. The student should be able to identify the problem and to determine what the student should know about the problem. The student should be able to identify the problem and to determine what the student should know about the problem.

auditory training in sound areas that might be particularly stubborn and demand more training and review.

and they are in the same way as the other two
and they are in the same way as the other two

APPENDIX B:

The Regional Spanish of Puerto Rico

ATTEST:

The Regional Council of the State

The Regional Spanish of Puerto Rico

The Puerto Rican form of Spanish has regional features distinct from other Spanish dialects and those features must be recognized as speech habits which bring about special problems in learning English. Hans Wolff, formerly linguist at the University of Puerto Rico, lists the following allophones of Puerto Rican Spanish:*

Principal allophones are:

Vowels - /e/ and /o/ and [ɛ] and [ɔ[^]] when stressed;
somewhat higher when unstressed.

Stressed /a/ is fronted [a<];

/i/ and /u/ are semivocalic ... further back.
[i_^] and [u_^] before stressed vowels.

All vowels may occur slightly nasalized; especially close distribution with nasal consonants.

Consonants - /p, t, k/ voiceless unaspirated stops;

/b, d, g/ voiced stops initially, voiced fricatives intervocalically, but [g] preferred in all positions.

/tʃ/ palatal affricate, voiceless, unaspirated

/f/ sometimes heard as a bilabial /s/, blade alveolar and voiceless.

/m/ and /ñ/ labial and palatal nasals respectively.

Wolff makes use of the phonetic symbols [ʰ], [<], and [ʌ] to indicate production which is high, fronted, and back, respectively.

An awareness of the following characteristics of Puerto Rican Spanish is helpful in preparing effective teaching materials:

* Hans Wolff, "Partial Comparison of the Sound Systems of English and Puerto-Rican Spanish," Language Learning, III, (Jan. 1950), pp. 38-40.

The first line of the document is a header or title, which is mostly illegible due to the low contrast and blurriness of the scan. It appears to be a formal document, possibly a report or a letter, given the structured layout and the presence of a signature block at the bottom.

The main body of the text consists of several paragraphs. The first paragraph discusses the purpose and scope of the document, mentioning various stakeholders and the objectives of the project. The second paragraph provides a detailed overview of the current status, highlighting key findings and challenges. The third paragraph outlines the proposed solutions and the next steps to be taken. The fourth paragraph concludes the document with a summary of the key points and a call to action.

The text is written in a formal, professional tone, using clear and concise language. The use of bullet points and numbered lists is minimal, suggesting a more narrative or descriptive style. The overall structure is logical and easy to follow, despite the technical nature of the content.

Very truly yours,
[Signature]

[Name]
[Title]

1. In final position /n/ becomes [ŋ], an allophonic difference, which makes it difficult for the students to hear the distinction between thin and thing in English.
2. Dropping final s in most Spanish words causes difficulties in teaching third person singular and plural words in English. Possessives and contractions formed by adding s create the same problem. The Puerto Ricans aspirate the final s which is not sufficiently strong to be heard by a native of English. From the standpoint of the native English listener, the substitution of an aspirated s for the English /s/ is tantamount to omitting it.
3. Most Puerto Ricans use a soft form of /tʃ/ which is more like /ʃ/ since it is "a palatal affricate, voiceless and unaspirated," according to Wolff. This difference in phonemes produces such problems as English chair sounding like share when spoken by a Puerto Rican who is unaware of the distinction. The problem is further augmented in that English possesses an abundance of words containing these two sounds, and many of them are minimal pairs.
4. The letters y and ll, generally /j/ in Spanish, are either [j] or [dʒ], sometimes [ʒ], in free alternation in Puerto Rico. This presents a difficult situation since [j] and [dʒ] are allophonic in Puerto Rican Spanish but are distinct phonemes in English, differentiating such words as yellow and jello, year and jeer, use and juice.

The above problems are due especially to Puerto Rican dialect.

1. In this world, the only way to survive is to be the best. This is the law of the jungle, and it applies to all of us. We must be the best, or we will be eaten. This is the only way to survive in a world where everyone is trying to outdo you.

2. The only way to survive is to be the best. This is the law of the jungle, and it applies to all of us. We must be the best, or we will be eaten. This is the only way to survive in a world where everyone is trying to outdo you.

3. The only way to survive is to be the best. This is the law of the jungle, and it applies to all of us. We must be the best, or we will be eaten. This is the only way to survive in a world where everyone is trying to outdo you.

4. The only way to survive is to be the best. This is the law of the jungle, and it applies to all of us. We must be the best, or we will be eaten. This is the only way to survive in a world where everyone is trying to outdo you.

APPENDIX C: TEST AND TABLES

Aural Perception Test	101
Table IA: Vowels in Minimal Pairs	107
Table IB: Vowels in Minimal Pairs in Sentences	108
Table IC: Consonants in Minimal Pairs	109
Table ID: Consonants in Minimal Pairs in Sentences	110

CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL

Date _____ Section _____

ENGLISH 105

Name _____ 101

PART I

One word from each of the following pairs will be read. Mark X before the word read.

(50 points)

Example: () reach () rich

- | | |
|---------------------------|------------------------------|
| 1. () let () late | 26. () men () man |
| 2. () add () odd | 27. () bought () but |
| 3. () look () luck | 28. () wore () were |
| 4. () fit () feet | 29. () list () least |
| 5. () voice () vice | 30. () height () hate |
| 6. () tin () ten | 31. () walk () work |
| 7. () must () most | 32. () should () shoot |
| 8. () stir () steer | 33. () fear () feel |
| 9. () not () nut | 34. () I () high |
| 10. () ship () sheep | 35. () ax () asks |
| 11. () cut () caught | 36. () pull () poor |
| 12. () bed () bad | 37. () back () bag |
| 13. () warm () worm | 38. () lose () loose |
| 14. () come () comb | 39. () rang () ran |
| 15. () we're () wear | 40. () town () down |
| 16. () doll () dull | 41. () guests () gets |
| 17. () woman () women | 42. () Yale () jail |
| 18. () battle () bottle | 43. () half () have |
| 19. () ounce () once | 44. () sue () zoo |
| 20. () tour () tore | 45. () berry () Betty |
| 21. () beads () bids | 46. () cane () came |
| 22. () cart () court | 47. () ill () will |
| 23. () her () hair | 48. () bear () pear |
| 24. () dawn () done | 49. () eyes () ice |
| 25. () sew () saw | 50. () Thursday () thirsty |

One word from each of the following pairs will be read. Mark X before the word read. (50 points)

Example	read	not read
for	<input type="checkbox"/>	for
add	<input type="checkbox"/>	add
look	<input type="checkbox"/>	look
tic	<input type="checkbox"/>	tic
voice	<input type="checkbox"/>	voice
tin	<input type="checkbox"/>	tin
was	<input type="checkbox"/>	was
exit	<input type="checkbox"/>	exit
not	<input type="checkbox"/>	not
ship	<input type="checkbox"/>	ship
cut	<input type="checkbox"/>	cut
bed	<input type="checkbox"/>	bed
warm	<input type="checkbox"/>	warm
corn	<input type="checkbox"/>	corn
we're	<input type="checkbox"/>	we're
doll	<input type="checkbox"/>	doll
woman	<input type="checkbox"/>	woman
battle	<input type="checkbox"/>	battle
ounce	<input type="checkbox"/>	ounce
cost	<input type="checkbox"/>	cost
bands	<input type="checkbox"/>	bands
cart	<input type="checkbox"/>	cart
her	<input type="checkbox"/>	her
down	<input type="checkbox"/>	down
see	<input type="checkbox"/>	see



PART II

Place an accent mark above the vowel in the syllable that is pronounced most forcefully. Use only one accent mark in each item. (30 points)

Example: character; in the middle; I saw you.

- | | | |
|----------------|--------------------------|------------------------------|
| 1. canal | 11. at 2 o'clock | 21. He couldn't hear you. |
| 2. recognize | 12. a friend of mine | 22. May I see them? |
| 3. February | 13. come on | 23. You must write with ink. |
| 4. determine | 14. this one | 24. Get along without it. |
| 5. mail box | 15. just a moment | 25. She likes the red ones. |
| 6. individual | 16. the first time | 26. I'll see you next week. |
| 7. laboratory | 17. very definitely | 27. Tell me about it. |
| 8. hamburger | 18. under the mango tree | 28. We can help him with it. |
| 9. govern | 19. the end of the month | 29. Take your coat off. |
| 10. themselves | 20. What time is it? | 30. What else do you have? |

PART III

One word from each of the following pairs will be read. Mark X before the word read. (24 points)

- | | | | |
|--------------------------------------|---------------------------------|--------------------------------------|-----------------------------------|
| 1. <input type="checkbox"/> thin | <input type="checkbox"/> thing | 13. <input type="checkbox"/> tap | <input type="checkbox"/> tab |
| 2. <input type="checkbox"/> curl | <input type="checkbox"/> girl | 14. <input type="checkbox"/> den | <input type="checkbox"/> then |
| 3. <input type="checkbox"/> cheap | <input type="checkbox"/> jeep | 15. <input type="checkbox"/> field | <input type="checkbox"/> feed |
| 4. <input type="checkbox"/> long | <input type="checkbox"/> lawn | 16. <input type="checkbox"/> mine | <input type="checkbox"/> nine |
| 5. <input type="checkbox"/> very | <input type="checkbox"/> bury | 17. <input type="checkbox"/> six | <input type="checkbox"/> sick |
| 6. <input type="checkbox"/> zone | <input type="checkbox"/> sown | 18. <input type="checkbox"/> caused | <input type="checkbox"/> cost |
| 7. <input type="checkbox"/> test | <input type="checkbox"/> text | 19. <input type="checkbox"/> cheese | <input type="checkbox"/> she's |
| 8. <input type="checkbox"/> scream | <input type="checkbox"/> screen | 20. <input type="checkbox"/> pick | <input type="checkbox"/> pig |
| 9. <input type="checkbox"/> pass | <input type="checkbox"/> path | 21. <input type="checkbox"/> hard | <input type="checkbox"/> heart |
| 10. <input type="checkbox"/> weighed | <input type="checkbox"/> weight | 22. <input type="checkbox"/> wing | <input type="checkbox"/> win |
| 11. <input type="checkbox"/> curve | <input type="checkbox"/> curb | 23. <input type="checkbox"/> breeze | <input type="checkbox"/> breathe |
| 12. <input type="checkbox"/> row | <input type="checkbox"/> low | 24. <input type="checkbox"/> covered | <input type="checkbox"/> cupboard |

Place an accent mark above the vowel in the syllable that is pronounced most forcefully. Use only one accent mark in each item.

Example: character; in the syllable; I saw her

1. about
2. recognize
3. February
4. determine
5. mail box
6. individual
7. laboratory
8. hamburger
9. govern
10. transverse
11. at 2 o'clock
12. a strand of wine
13. come on
14. this one
15. just a moment
16. the first class
17. very definitely
18. under the mango tree
19. the end of the month
20. What time is it?
21. we couldn't find it
22. May I see them?
23. You must write with her
24. Get along without it
25. She likes the red one
26. I'll see you next week
27. Tell me about it
28. We can help the city
29. Take your coat off
30. What time do you leave?

PART III

One word from each of the following pairs will be read. Mark X before the word read.

1. () thin () thin
2. () curl () curl
3. () cheap () cheap
4. () long () long
5. () easy () easy
6. () none () none
7. () oat () oat
8. () screen () screen
9. () pass () pass
10. () weighed () weighed
11. () curve () curve
12. () row () row
13. () rap () rap
14. () dam () dam
15. () field () field
16. () nine () nine
17. () six () six
18. () canoe () canoe
19. () check () check
20. () pick () pick
21. () hard () hard
22. () wing () wing
23. () dress () dress
24. () curved () curved

PART IV Circle the word read to complete the sentence.

(25 points)

Example: There are some (socks - sacks) in the drawer.

1. The old (bell - bill) wasn't so large.
2. Sally bought some new (pens - pans) the other day.
3. The very high (cost - coast) surprised him.
4. What a terrible (scene - sin) that was!
5. The meat (stood - stewed) for an hour.
6. How many (colors - collars) do you need?
7. His (course - curse) was terrible.
8. I thought he couldn't (live - leave) with her.
9. Wasn't the (boss - bus) late today?
10. Did you find the (mop - map) you needed?
11. She put the orange (peel - pill) in her mouth.
12. They decided not to (pull - pool) it.
13. Push that big (rock - rack) to the side.
14. Why did he (beat - hit) it?
15. Put one (pint - paint) can on the table.
16. There was a rat in the (hall - hole) just now.
17. Can't you persuade her to (sell - sail) it?
18. The new (fares - furs) are very expensive.
19. Where did you (slip - sleep) last night?
20. The city had very (poor - pure) water.
21. The captain's (lunch - launch) is ready.
22. Don't put your (foot - food) on that chair.
23. Put some water in the small (tube - tub) very carefully.
24. Please take (this - these) to the secretary.
25. I saw when he (bit - beat) you.

A review of these items will be sent to you. Please refer to the items listed below. Please check the boxes corresponding to those items that are applicable.

(15 points)

Exhibit:

- 14.
- 15.
- 16.
- 17.
- 18.
- 19.
- 20.
- 21.
- 22.
- 23.
- 24.
- 25.

PART VI

The first of each pair of items is punctuated as a statement; the second is punctuated as a question. If the item is read as a statement, make a check mark in the first box. If it is read as a question, make a check mark in the second box. (10 points)

Examples: Good Good?
 In the hall. In the hall?

- | | |
|---|---|
| 1. <input type="checkbox"/> Right. | <input type="checkbox"/> Right? |
| 2. <input type="checkbox"/> Full. | <input type="checkbox"/> Full? |
| 3. <input type="checkbox"/> Finished. | <input type="checkbox"/> Finished? |
| 4. <input type="checkbox"/> Another. | <input type="checkbox"/> Another? |
| 5. <input type="checkbox"/> O.K. | <input type="checkbox"/> O.K? |
| 6. <input type="checkbox"/> Too late. | <input type="checkbox"/> Too late? |
| 7. <input type="checkbox"/> For many years. | <input type="checkbox"/> For many years? |
| 8. <input type="checkbox"/> In the library. | <input type="checkbox"/> In the library? |
| 9. <input type="checkbox"/> She was afraid. | <input type="checkbox"/> She was afraid? |
| 10. <input type="checkbox"/> He needs some money. | <input type="checkbox"/> He needs some money? |

PART VII

Circle the word read to complete the sentence. (36 points)

- There's a statue of an Indian (god - guard) at the entrance.
- I couldn't find it in the (word - world) book.
- Who (hit - hid) it this morning?
- That (rope - robe) is too heavy.
- You need a long (leaf - leave) for that arrangement.
- The second (car - card) was green.
- Just a few (votes - boats) were lost.
- He didn't want to use the (time - dime) for coffee.
- The entire (surface - service) needs improvement.

The first of each pair of items is presented as a statement, the second as a question. The first is read as a statement, the second as a question. The first is read as a statement, the second as a question.

- 1. The first of each pair of items is presented as a statement, the second as a question.
- 2. The first of each pair of items is presented as a statement, the second as a question.
- 3. The first of each pair of items is presented as a statement, the second as a question.
- 4. The first of each pair of items is presented as a statement, the second as a question.
- 5. The first of each pair of items is presented as a statement, the second as a question.
- 6. The first of each pair of items is presented as a statement, the second as a question.
- 7. The first of each pair of items is presented as a statement, the second as a question.
- 8. The first of each pair of items is presented as a statement, the second as a question.
- 9. The first of each pair of items is presented as a statement, the second as a question.
- 10. The first of each pair of items is presented as a statement, the second as a question.

PART VII

- 1. Circle the word that completes the sentence. (30 points)
- 2. Circle the word that completes the sentence.
- 3. Circle the word that completes the sentence.
- 4. Circle the word that completes the sentence.
- 5. Circle the word that completes the sentence.
- 6. Circle the word that completes the sentence.
- 7. Circle the word that completes the sentence.
- 8. Circle the word that completes the sentence.
- 9. Circle the word that completes the sentence.
- 10. Circle the word that completes the sentence.

10. That's a good (ladder - lather) you have.
11. The yellow (cap - cab) is better.
12. We have a few (racks - rags) in the store room.
13. That's my (share - chair) you have.
14. We found some good (jams - yams) in the supermarket.
15. They used to (raise - race) horses.
16. Did you (cash - catch) it this morning?
17. You can have (either - ether) if you want.
18. Does it have any (use - juice) at all?
19. He said the (price - prize) was five dollars.
20. When did the (major - mayor) call?
21. Don't (sip - zip) it now.
22. The others (harm - harmed) it.
23. You knew the (truth - truce) would be terrible.
24. I always (save - saved) a little each week.
25. Wasn't Mr. Brown (sinking - thinking) ?
26. I'm sure she (bathes - bathed) every day.
27. That's the biggest (firm - fern) I've ever seen.
28. Are you sure you (need - needed) a dollar for that?
29. She was wearing a (warm - worn) coat.
30. I never (finish - finished) on time.
31. Isn't that (scene - seam) too long?
32. We often (mix - mixed) up the drinks.
33. They did order a (ton - tongue) for themselves.
34. I certainly (watch - watched) him carefully.
35. How many (combs - cones) do you want?
36. They never (wait - waited) for us at the corner.

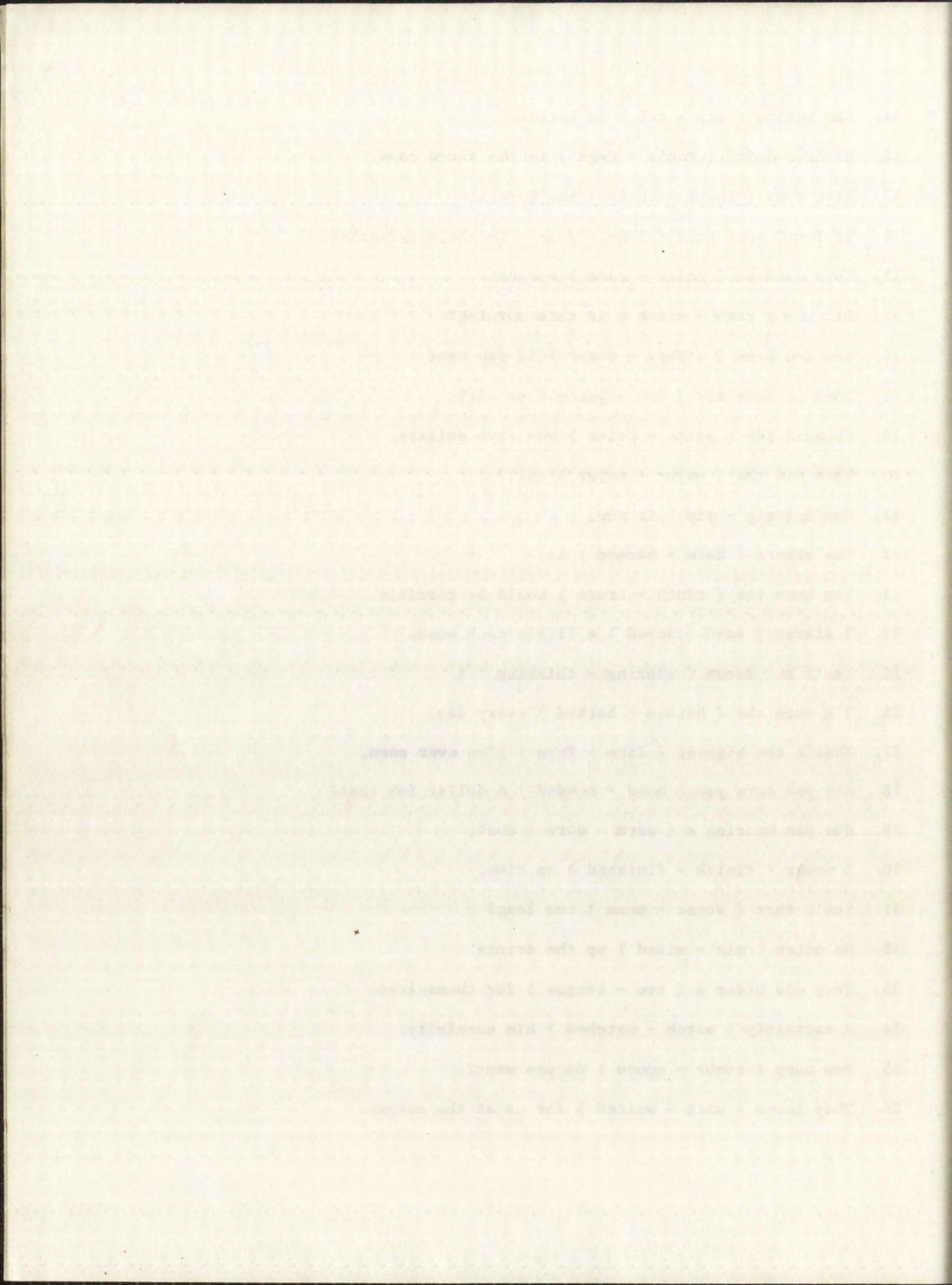


TABLE IA
 INCIDENCE OF ERRORS - AURAL PERCEPTION POST-TEST
 Comparative Table, Four Semesters, 1960-61 and 1961-62
 Vowels in Minimal Pairs

Order	Phoneme	Minimal Pair	Test Item	Dec. 1960		May 1961		Dec. 1961		May 1962		Grand Total	
				#	%	#	%	#	%	#	%	#	%
1.	er-ɜ	warm	- worm	78	26.5	111	67	82	29	130	65	401	43
2.	ʌ-o	come	- comb	80	27	47	28	76	27	53	26.5	256	27
3.	i-i	beads	- bids	8	3	84	50	129	45	9	4.5	230	24
4.	o-o	sew	- saw	--	--	39	23	49	17	59	29.5	147	*23
5.	i-i	list	- least	17	6	12	7	147	52	28	14	204	22
6.	æ-u	battle	- bottle	31	10.5	59	35	41	14	68	34	199	21
7.	ɔ-a	dawn	- done	45	**17	24	14	90	32	29	14.5	189	20
8.	ɜ-ɛr	her	- hair	37	13	39	23	21	7	51	25.5	178	19
	i-i	fit	- feet	--	--	35	21	56	20	35	17.5	126	*19
9.	ʊ-a	not	- nut	53	18	53	32	51	18	18	9	175	19
	ʊ-a	doll	- dull	40	14	24	14	62	22	40	20	166	18
10.	ɔ-a	bought	- but	--	--	33	20	23	8	56	28	112	*17
	u-or	tour	- tore	21	7	48	29	49	17	37	18.5	155	17
11.	u-a	look	- luck	50	17	24	14	20	7	55	27.5	149	16
12.	ʊ-wa	ounce	- once	--	--	9	5	78	27.5	10	5	97	*15
	i-i	ship	- sheep	--	--	34	20	25	9	38	19	97	*15
13.	ʌ-o	must	- most	12	4	9	5	62	22	11	5.5	94	10
14.	ɔr-ɜ	wore	- were	--	--	14	8	2	1	39	19.5	55	*8
Number of students tested				292	166	264	200	942					

* Percentage based on 650
 ** " " " 264

TABLE 1B
 INCIDENCE OF ERRORS - AURAL PERCEPTION POST-TEST
 Comparative Table, Four Semesters, 1960-61 and 1961-62
 Vowels in Minimal Pairs in Sentences

Order	Phoneme	Minimal Pair	Test Item	Dec. 1960		May 1961		Dec. 1961		May 1962		Grand Total	
				#	%	#	%	#	%	#	%	#	%
1.	Λ-ɔ	lunch	- launch	—	—	92	55	53	19	103	51.5	248	*38
2.	i-i	scene	- sin	—	—	64	38	111	39	47	23.5	222	*32
	U-u	stood	- stewed	95	32	34	20	124	44	45	22.5	298	32
3.	U-u	pull	- pool	—	—	81	49	32	11	86	43	199	*31
	Λ-θ	colors	- collars	104	35	26	16	127	45	34	17	291	31
4.	ɔ-Λ	boss	- bus	60	20	43	26	93	33	64	32	260	28
5.	i-i	bit	- beat	—	—	—	—	27	9.5	101	50.5	128	**26
6.	i-i	live	- leave	73	25	61	37	44	15.5	59	29.5	237	25
	ɔ-ɔ	cost	- coast	—	—	34	20	86	30	40	20	160	*25
7.	i-i	slip	- sleep	49	17	48	29	66	23	56	28	219	23
	i-i	heat	- hit	36	12	24	14	137	48	21	10.5	218	23
8.	ju-Λ	tube	- tub	—	—	36	21	23	8	68	34	127	20
	i-i	peel	- pill	—	—	27	16	75	26	32	16	134	*20
	ut-ud	foot	- food	—	—	21	13	86	30	23	11.5	130	*20
9.	is-iʒ	this	- these	—	—	18	11	99	35	15	7.5	132	*20
	ai-e	pint	- paint	—	—	30	18	54	19	39	19.5	123	*19
10.	er-ʒ	fares	- furs	70	24	27	16	42	15	39	19.5	178	19
	θ-θ	mop	- map	53	18	20	12	56	20	42	21	171	18
11.	θ-θ	rock	- rack	—	—	33	20	30	11	40	20	103	*16
12.	ɔr-ʒ	course	- curse	26	9	18	11	43	15	46	23	133	14
13.	ɔ-ɔ	hall	- hole	17	6	9	5	59	21	10	5	95	10
Number of students tested				292	166	284	200	942					

* Percentage based on 650
 ** " " " 484

TABLE IC
 INCIDENCE OF ERRORS - AURAL PERCEPTION POST-TEST
 Comparative Table, Four Semesters, 1960-61 and 1961-62
 Consonants in Minimal Pairs

Order	Phoneme	Minimal Pair	Dec. 1960		May 1961		Dec. 1961		May 1962		Grand Total	
			#	%	#	%	#	%	#	%	#	%
1.	z-s	loose - lose	83	28	70	42	75	26	74	37	302	32
2.	v-b	covered-cupboard	—	—	23	15.6	107	37.7	29	14.5	159	*24.5
3.	ŋ-n	thing - thin	70	24	22	13	67	23.6	29	14.5	188	20
4.	ŋ-n	long - lawn	—	—	40	24	53	18.7	33	16.5	126	*19
5.	n-ŋ	ran - rang	25	8.5	39	23	42	14.8	56	28	162	17
6.	f-v	half - have	56	19	31	18.6	20	7	29	14.5	136	14
7.	tʃ-ʃ	cheese- she's	31	10.5	32	12.6	23	8	42	21	128	13.6
8.	ks-aks	ax - asks	—	—	7	4	63	22	14	7	84	*13
9.	j-dʒ	Yale - jail	19	7.8	16	9.6	41	14.4	45	22.5	121	12.8
10.	d-ð	doze - those	57	19.4	—	—	—	—	—	—	—	—
Number of students tested			292		166		284		200			

* Percentage based on 650.

Case	Year	Month	Day	Hour	Minute	Second	Latitude	Longitude	Altitude	Remarks
1001	1951	10	10	10	10	10	10	10	10	10
1002	1951	10	10	10	10	10	10	10	10	10
1003	1951	10	10	10	10	10	10	10	10	10
1004	1951	10	10	10	10	10	10	10	10	10
1005	1951	10	10	10	10	10	10	10	10	10
1006	1951	10	10	10	10	10	10	10	10	10
1007	1951	10	10	10	10	10	10	10	10	10
1008	1951	10	10	10	10	10	10	10	10	10
1009	1951	10	10	10	10	10	10	10	10	10
1010	1951	10	10	10	10	10	10	10	10	10
1011	1951	10	10	10	10	10	10	10	10	10
1012	1951	10	10	10	10	10	10	10	10	10
1013	1951	10	10	10	10	10	10	10	10	10
1014	1951	10	10	10	10	10	10	10	10	10
1015	1951	10	10	10	10	10	10	10	10	10
1016	1951	10	10	10	10	10	10	10	10	10
1017	1951	10	10	10	10	10	10	10	10	10
1018	1951	10	10	10	10	10	10	10	10	10
1019	1951	10	10	10	10	10	10	10	10	10
1020	1951	10	10	10	10	10	10	10	10	10

COMMISSION ON HAWAIIAN HISTORY
 HONOLULU, HAWAII
 REPORT OF THE COMMISSION ON HAWAIIAN HISTORY
 PART I
 THE HAWAIIAN PEOPLE AND THEIR HISTORY
 CHAPTER I
 THE HAWAIIAN PEOPLE AND THEIR HISTORY
 CHAPTER I

TABLE ID
 INCIDENCE OF ERRORS - AURAL PERCEPTION POST-TEST
 Comparative Table, Four Semesters, 1960-61 and 1961-62
 Consonants in Minimal Pairs in Sentences

Order	Phoneme	Minimal Pair	Test Item	Dec. 1960		May 1961		Dec. 1961		May 1962		Grand Total	
				#	%	#	%	#	%	#	%	#	%
1.	z-s	raise - race	91	31	58	35	123	43	57	28.5	329	35	
2.	ks-kst	mix - mixed	--	--	55	33	125	44	16	8	196	*30	
3.	m-n	warm - worn	98	33	35	21	87	30.6	52	26	272	28.9	
4.	rd-rid	word - world	--	--	21	12.6	137	48	24	12	182	*28	
5.	d-ð	ladder-lather	79	30	56	33.6	35	12	75	43.5	245	26	
6.	t-d	hit - hid	39	13	35	21	110	39	42	31	226	24	
7.	f-v	leaf - leave	--	--	115	69	22	7.7	19	9.5	156	*24	
8.	n-ŋ	ton - tongue	55	18.7	42	25	41	14.4	83	41.5	221	23.5	
9.	n-m	scene - seem	65	22	37	22	32	11	52	26	186	19.7	
10.	vd-v	saved - save	58	19.7	40	24	63	22	24	12	185	19.6	
11.	m-n	firm - fern	32	11	13	7.8	105	37	30	15	180	19	
	s-z	price - prize	14	4.8	7	4	132	46.5	18	9	171	18	
	ɰ-n	combs - cones	44	15	21	12.6	60	21	47	18.5	172	18	
12.	t/-t/t	watch - watched	46	15.6	14	8.4	77	27	31	15.5	168	17.8	
13.	ð-θ	either- ether	36	12	44	26.4	28	10	56	28	164	17.4	
14.	ð-ðd	bathes- bathed	32	11	20	12	57	20	53	26.5	162	17.2	
15.	f-/t	finish- finished	6	2	64	38.4	12	4	78	39	160	17	
16.	r-rd	car - card	6	2	60	36	15	5	63	31.5	144	15	
17.	s-θ	sinking- thinking	22	7.5	13	7.8	24	8.5	44	22	103	11	
18.	d-rd	god - guard	--	--	1	.6	62	22	5	2.5	68	*10.5	
19.	d-ld	need - needed	5	1.7	0	0	78	27.5	3	1.5	86	9	
Number of students tested			292	166	284	200							

* Percentage based on 650.

RECEIVED
FEB 25 1964

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

OFFICE OF THE ASSISTANT SECRETARY
FOR TECHNICAL ASSISTANCE

TECHNICAL ASSISTANCE
PROGRAM

TECHNICAL ASSISTANCE
PROGRAM

TECHNICAL ASSISTANCE
PROGRAM

TECHNICAL ASSISTANCE
PROGRAM

TECHNICAL ASSISTANCE
PROGRAM

Country	Year	Value	Unit
India	1963	1000	0000
India	1964	1000	0000
India	1965	1000	0000
India	1966	1000	0000
India	1967	1000	0000
India	1968	1000	0000
India	1969	1000	0000
India	1970	1000	0000
India	1971	1000	0000
India	1972	1000	0000
India	1973	1000	0000
India	1974	1000	0000
India	1975	1000	0000
India	1976	1000	0000
India	1977	1000	0000
India	1978	1000	0000
India	1979	1000	0000
India	1980	1000	0000
India	1981	1000	0000
India	1982	1000	0000
India	1983	1000	0000
India	1984	1000	0000
India	1985	1000	0000
India	1986	1000	0000
India	1987	1000	0000
India	1988	1000	0000
India	1989	1000	0000
India	1990	1000	0000
India	1991	1000	0000
India	1992	1000	0000
India	1993	1000	0000
India	1994	1000	0000
India	1995	1000	0000
India	1996	1000	0000
India	1997	1000	0000
India	1998	1000	0000
India	1999	1000	0000
India	2000	1000	0000
India	2001	1000	0000
India	2002	1000	0000
India	2003	1000	0000
India	2004	1000	0000
India	2005	1000	0000
India	2006	1000	0000
India	2007	1000	0000
India	2008	1000	0000
India	2009	1000	0000
India	2010	1000	0000
India	2011	1000	0000
India	2012	1000	0000
India	2013	1000	0000
India	2014	1000	0000
India	2015	1000	0000
India	2016	1000	0000
India	2017	1000	0000
India	2018	1000	0000
India	2019	1000	0000
India	2020	1000	0000
India	2021	1000	0000
India	2022	1000	0000
India	2023	1000	0000
India	2024	1000	0000
India	2025	1000	0000
India	2026	1000	0000
India	2027	1000	0000
India	2028	1000	0000
India	2029	1000	0000
India	2030	1000	0000

TECHNICAL ASSISTANCE PROGRAM
INDIA
1963-1990

SUPERFINE

24 COTTON

REVERSE

100-100000

