This report describes an experiment which tests the effectiveness of a multimedia, continuous learning program in comparison with that obtained in a traditional Spanish language course. Results of the Modern Language Tests for Spanish 1 indicate that experimental and control groups were equal at the conclusion of one year of study in both the experimental and control groups. Introductory remarks, methods and procedures, results, conclusions, and statistical data are provided. (RL)
SPECIAL APPROACH TO SPANISH

A project under N.D.E.A. Title VI

PORTLAND PUBLIC SCHOOLS
Portland, Maine
July, 1972
Final Report

Project No. 2002929
Contract No. ED-0-72-0239 (823)

Title of Report Special Approach to Spanish

Nancy A. Thompson
Thomas F. Marx
Portland Public Schools

Portland, Maine

July 25, 1972

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Institute of International Studies
AUTHOR'S ABSTRACT

This project was designed to test the efficacy of a multimedia individualized program in Spanish I when compared with a program utilizing the same materials in a lockstep classroom structure.

Spanish I students were divided into an experimental group, and a control group. The experimental group, after an initial introductory phase, proceeded to the individualized portion of the program. The control group learned by the lockstep method.

The Pimsleur Language Aptitude Battery was administered to all students on the third day of school. There was no significant difference in aptitude between the experimental and the control groups. In June, the Modern Language Association Battery\(^1\) for Spanish, form LB in listening, speaking, reading, and writing was administered. Achievement was also measured by the test, "Spanish and Latin American Life and Culture."\(^2\) The results of all five tests indicated that there was no significant difference between the two groups in acquisition of Spanish I skills.

The experimental group experienced great difficulty in becoming oriented to the new program, progressing very slowly for some time. Therefore, an equal achievement is considered an indication that the individualized approach shows promise as an effective learning method. It is anticipated that conclusive results will be obtained by continuing the project in Spanish II.

\(^1\) published by Educational Testing Service, Princeton, N.J.

\(^2\) published by Bureau of Educational Measurements, Emporia, Kansas.
In accordance with the policy of the Portland Public Schools to encourage individualized instruction that meets the needs of students of widely varied interests, background experiences, and aptitudes, this program was undertaken at Deering High School during the academic year 1971-1972.

Principal objectives of the program are directly related to this general policy - to establish a research and demonstration project that will test the effectiveness of a multimedia continuous learning program, and to test the efficacy of individualized instruction in the Spanish program.

The Project Director and the Director of Research and Evaluation desire to recognize the invaluable assistance given to them by Clyde Bartlett, Assistant Superintendent for Program, Portland Public Schools, Donald G. Hale, Principal of Deering High School, and staff members of the Spanish department at Deering High School. Their skill in materials development, their understanding approach to the difficulties involved in introducing a relatively new educational concept, their willingness and ability to find the solution to each problem as it occurred, made the implementation of this program a viable task.
TABLE OF CONTENTS

Preface 3
Table of contents 4
Chapter I Introduction 5
Chapter II Methods and procedures 7
Chapter III Results 14
Chapter IV Conclusions 18
Appendix A Student contract #4 (b) 20
Appendix B Oral and written quiz #4 (b) 30
Appendix C Rationale 34
Appendix D Ground rules 35
Appendix E Student progress report 37
Appendix F Student time distribution (daily) 38
Appendix G Student time distribution (weekly) 39
Appendix H Group D - student progress log 40
Bibliography 41
Chapter I - Introduction

Background for the Study

Spanish and French are offered on an elective basis in the Portland Public Schools. Students may initiate their program of foreign language learning in grade seven. Generally, the most academically talented students exercise this option. However, there are students whose foreign language learning is undertaken in grades ten through twelve.

These students are not separated according to their ability or to their previous foreign language experience. In Deering High School in a single class the range is from average or below average ability to a small number of the most lingually gifted students in the school who are starting to learn their second or third foreign language. For many years this wide disparity of ability has posed a serious problem for the teachers of Spanish I.

Rationale for the Study

A possible solution to the problem of teaching this class appeared to exist in the new trend toward individualized instruction in foreign language teaching. Therefore, it was decided to implement a multimedia individualized program that would eliminate boredom on the part of the gifted students by allowing them to proceed at their own pace; at the same time that it would eliminate the frustration felt by the student who finds it difficult to maintain the pace of the average class, as it would no longer be necessary for him to do so.

It was further decided that the efficacy of such a program should be tested in order to determine whether or not we were, in fact, reaching a satisfactory solution to our problem. We believe with Heise that "...it is the responsibility of the classroom practitioner to examine, analyze, and, perhaps, test proposed ideas to evaluate their net effectiveness under specific learning situations."1

To this end, the Spanish I students were divided into two groups, one experimental group that would learn by individualized instruction, the other control group that would function in the lockstep conventional large group currently in use in Spanish I classes. All students would utilize the multimedia McGraw Hill materials presently available in the school.

A formal statement of the problem examined in the research is as follows.

Problem #1. Does the multimedia material produce better results in mastering the four basic skills (1) comprehension, (2) speaking, (3) reading, (4) writing

   when

   a. each child is provided with his own text, workbook, filmstrip projector, and cassette recorder and assumes, in conjunction with the teacher, responsibility for completing contracts of individual study of the language through his own use of the multiple materials,

   or when

   b. the curriculum materials are used in a group setting with the teachers presenting the text and the audiovisual components of the program to the class.

Problem #2. Is an understanding of the culture of Spain and Latin America the same in the experimental and the control group?

Relevant Work Already Accomplished

Individualized foreign language programs that had been implemented in other school systems in the United States were studied. No study of the effectiveness of these programs was available. However, sample contracts or learning packets from several of these were examined. They were helpful in establishing a design that would suit our purposes.2

Limitation of the Study

The sampling of students was limited to students in three grades (10 - 12) who had elected to take Spanish I. They were all from one school.

In spite of the above limitation the individualized program utilized by the experimental group is considered by the Portland Public Schools to be a pilot program which, if effective with these students, can be used in any regular school classroom.

2. Other individualized programs from which samples were studied, a. McCluer Plan, Ferguson Florisson School District, Ferguson, Missouri, b. West Bend Public Schools, West Bend, Wisconsin, c. Live Oak High School, Morgan Hill, California.
Chapter II Methods and Procedures

Personnel

The staff members who participated in all phases of this project were the two teachers of Spanish at Deering High School, a teacher assistant (native speaker of Spanish), and a clerical assistant.

The original request for a solution to the problem of disparity in language learning aptitude within a single class came from Armand Polito who has been teaching Spanish at Deering High School since 1942. It was his concern that he was not meeting the needs of all students. The lockstep conventional classroom situation that has been the traditional format for foreign language classes seemed inadequate. Mrs. Leila Stockwell, the other Spanish teacher, has taught Spanish at Deering High School for four years. Before coming to Portland she lived in Seville, Spain for several years where she taught English in the Spanish public school system. The teacher assistant, Miss Dianne Rogers, grew up in Mexico City and received her elementary and secondary education there. She came to the United States to attend college and had no previous teaching experience.

These three persons, under the guidance of the project director, Mrs. Thompson, Director of Foreign Languages, Portland Public Schools, developed the contracts and prepared supplementary materials to accompany the McGraw-Hill multimedia program, Learning Spanish The Modern Way, Level I, second edition. Dr. Thomas F. Marx, Director of Research and Evaluation, Portland Public Schools, designed the research component of the project. A clerical assistant prepared materials and kept student records.

Inservice Program

Staff orientation and materials development sessions were conducted by the project director during the three days preceding the opening of school in September. The teachers involved in the research project exchanged advice and suggestions with all the other members of the foreign language staff.

A video tape of the individualized program at West Bend, Wisconsin, demonstrating student reaction to the program was reviewed and discussed; sample materials from other systems were examined; a format for adaptation of the multimedia McGraw-Hill materials to this type of program was developed. (For sample individualized contract see Appendix A).
The project director, teachers, and teacher assistant continued to meet one afternoon a week from September through December 1971 for development of these contracts and the accompanying quizzes, both oral and written. (see Appendix B). The teacher assistant prepared individual cassette material for listening comprehension and speaking skills. This was very carefully coordinated with each contract.

A typical contract contains a statement of the objectives and the learning activities necessary for meeting these objectives. On a sheet of colored paper, so that it may be easily identified, all new vocabulary is provided for the student's use. Each contract is accompanied by an oral as well as a written quiz. Generally, for completion of all the objectives in one unit of the text, four or five contracts must be fulfilled. The unit test that accompanies Learning Spanish The Modern Way provided the overall evaluation instrument for each unit. All tests are on colored paper so that the teacher may easily identify students who are taking them in a room where a variety of activities are taking place.

Establishment of Work Standards and a Progress Report

A rationale and a set of ground rules for the individualized students were prepared. (see Appendices C and D). These were distributed to students and to their parents before the individualized portion of the program was implemented.

It was felt that, in order to facilitate community acceptance of this type of program, every effort should be made to ensure that everyone involved should understand thoroughly the reasons for this change in instructional methodology as well as the mechanics of its implementation.

Deering High School has a standard letter grade system for reporting student achievement. Since this is not suitable for a program that allows the individual student to work at his own pace, a form for reporting student progress was developed. (see Appendix E).

Students were told that they would receive official credit for completion of Spanish I requirements when they had completed eight units of the text. This is the average amount accomplished by Spanish I classes during the three years that these materials have been utilized at the school. This might be done in less than an academic year by some students; others might require part of another year to accomplish all necessary objectives. In any case, credit would be given whenever the work was completed.
The possibility of failure was eliminated from the program as each contract must be completed with 80% accuracy before the student proceeds to the next one. Where this is not possible, the teacher is the judge of satisfactory performance for a particular student.

Student Population

Spanish I at Deering High School is an elective course for students in grades ten through twelve. In the academic year 1971-1972 there were four sections of Spanish I, each of which had approximately twenty-five students who had been randomly assigned to the sections. On the third day of school, the Pimsleur Language Aptitude battery was administered to all four classes. No significant difference in the overall aptitude of the four classes was indicated by these tests.

It was determined that each teacher would have one control group and one experimental group randomly assigned to him. The two classes that met the earliest and the latest during the school day were designated as experimental groups D and H respectively. The other two classes were the control groups. They will, hereafter, be called groups F and G respectively.

This year there were two students in Spanish I who had previous successful experience with another foreign language, one in the control group, one in the individualized group. All others were beginners or dropouts from the junior high program.

Individualized instruction in some subjects has been implemented in the elementary schools in the Portland Public Schools. As yet, no students trained in the practice of this methodology have reached the high school level. This means that all students involved in the individualized Spanish classes would require several weeks to become oriented to a radically different type of program from the formally structured classes to which they have long been accustomed. In addition, it was necessary to teach students to operate the special equipment with the materials to be utilized in this program.

Equipment

In the absence of language laboratory facilities at Deering High School it was decided that cassette recorders and filmstrip viewers would be used by students in the acquisition of listening-comprehension and speaking skills. Because of space limitations it was necessary to select equipment that could be operated on batteries if necessary.
Audio comparative cassette recorders with headsets that included a built-in microphone were selected and purchased in limited quantity. Eight of these machines were available for students who needed to record their speech in Spanish in order to compare it with that of the native speakers on the master tapes. Fifteen regular cassette recorders were also available for student listening and repeating practice. A jackbox was used whenever several students wanted to listen to the same tape.

Filmstrip projectors that can be used on a desk in conjunction with the cassette recorder were also utilized. Since these are used to illustrate meaning, they were not needed in as great quantity as were the cassette recorders. Four of these projectors were available in the classroom. They are also operable by battery as well as by electricity. Although all of these were kept in a storage cabinet in the classroom, they were readily available to all students as the cabinet was kept open during the school day. The clerical assistant was generally available during class periods to distribute equipment as needed, thus releasing the professional staff from this responsibility.

Record Keeping

Two categories of records were kept in this program. One was an account of the amount of time spent by each student in the individualized program on the various activities involved in learning Spanish. A form was developed for the student to fill out on a daily basis indicating his activities on that day and the amount of time spent on each of these. (see Appendix F). These were collected for each class and were summarized on a weekly basis to provide an overall view of the distribution of time spent on skills oriented activities by each individual student. (see Appendix G).

Other records were of the progress of each student in the individualized program. A manila folder was given to each student in which he kept all completed contracts as well as the one on which he was currently working. The teachers checked these folders frequently, especially before a student took a unit test. All quizzes and tests the teacher kept in a separate file.

Student progress in the experimental groups was recorded on a large chart and was kept up to date by the clerical assistant on the basis of information given to her by the teachers. This chart contained the student's name, the date that he completed each contract satisfactorily, and a grade for that unit of work. This chart was not posted on the bulletin board in order to avoid embarrassment to students who were making very slow progress, but was kept in the language office where students could see it if they wished to.
Learning Procedures in the Experimental Group

The materials used in the acquisition of language skills largely consisted of a series of learning modules or contracts based upon the units in Bremes et al., Learning Spanish: The Modern Way, Level I; the coordinated tapes and filmstrips that accompany this text are an integral part of each contract.

Students were kept together in a "large group instruction" situation through the initial phase of the program. The purpose of this phase was to achieve:

1. instruction in the basics of skill acquisition in the language learning process;
2. group practice leading to a good background in the pronunciation and listening-comprehension skills;
3. development of the attitude and self discipline necessary to individualized foreign language learning;
4. training in procedures to be followed in the individualized phase of the Spanish program;
5. instruction in the use of unfamiliar equipment to be utilized in the next phase of the program.

After the eight week introductory phase, students took a pretest. This was based on the material covered in lesson I of the basic materials. Included were nouns and pronouns, five basic verbs, definite articles, noun-adjective agreement, and possessive adjectives. Pronunciation, reading and writing practice using a basic vocabulary also were part of this phase. Useful classroom terms were included since this lesson is entitled "En la escuela."

Upon satisfactory completion of the pretest, the standard test for lesson I, with a minimum grade of 80%, students entered into the individualized phase of the program. A description of this phase of the program may be quoted from the interim report submitted by the director on February 28, 1972.

"All four sections were visited by the director on February 13, 1972. In group D, twenty-three students were present, one was absent. Those students taking written quizzes were in one part of the room. Three girls working together were speaking Spanish. In the opposite corner, two students were working with cassette recorders and headsets. About ten students were studying or writing; they were receiving help from the teacher assistant. The teacher was giving oral quizzes to three students at a time. A student was working with one of the film-
strips that illustrates the conversation featured in each lesson. All were busily, actively engaged in working on Spanish, and the class had a good feeling.

In the other "experimental" group, (group H) the one that occurs during the last period of the school day, there were fourteen students present, eight absent. One student was taking a quiz; two were using the cassette recorders. The teacher was helping individual students. The students, in general, were not working busily. Many were waiting their turn to work with the teacher. Students seemed far more reluctant to be helped by the teacher assistant than did those in the other group. Their attitude toward their work was far less positive. Spread in achievement -- from contract #11 to contract #14. All students in the two control groups were working with the teacher. In one group students were reviewing for a test. They were attentive enough, but many seemed unsure of their work. The other control group was working with the magazine "Que Tal?" on culturally oriented material. This class was slow in getting started (late arrivals) but went well after about ten minutes. Students had practice (five recited) in reading aloud and the teacher corrected their errors. This material was played on a record player so that students might hear native pronunciation. In both control groups there was much less opportunity for individual performance than there was in the experimental groups."

Roles of the Student and of the Teacher

The student who had entered this continuous, self-paced, and individualized part of the program worked independently or with other students. This he did with the help of the teacher and the teacher assistant. In this program the teacher was a facilitator of learning, one who "involves himself as a helper, a counselor, and, most important of all, as a motivator of every student who wants to learn."\[1\]

Small Group and Large Group Instruction

Although the students in groups D and H spent much time at independent study, they met in large groups for cultural enrichment of the program. Occasionally they saw a Spanish film, there was a demonstration of flamenco dancing and Latin American guitar music, a Spanish student met with them. These experiences were then discussed by small groups of six or seven students. The small groups also met with the teacher

or teacher assistant for remedial work and conversational practice. One of these groups met every day during the last quarter of the year because they found self motivation difficult, the rest met once a week.

Evaluation

The Modern Language Association Tests for Spanish, Form LB, published by Educational Testing Service, were administered to both groups in June for purposes of evaluating their achievement in listening, speaking, reading and writing skills. In addition, the test "Spanish and Latin American Life and Culture" was administered to each group.

Chapter III - Results

The research proposal as outlined and modified calls for the establishment of two experimental Spanish instructional classes to be taught by an individualized approach at Deering High School for the 1971-1972 school year. Also established were two control Spanish I programs at Deering High School to be taught in the traditional large group lecture approach.

Two staff members were assigned to teach the Spanish I sections. Each was assigned one experimental and one control class of Spanish I. Students were assigned to the four classes of Spanish I on a random basis. The designation of a class as experimental or control was also randomly done.

During the first week of school, on the third day of school, the Pimsleur Language Aptitude Test was administered to all students in all four sections of Spanish I. The results were then tabulated for the experimental classes and for the two control classes. These results were then compared using a two-tailed T test at the .05 Alpha level of significance and the results proved to be non-significant.

The research design as modified in the addendum to the original proposal calls for the establishment and testing of five null hypotheses. For each of the five null hypotheses, a two-tailed T test was run to determine the significance of the difference between the experimental and control means (experimental being the combination of the two experimental classes, control being the combination of the two control classes.) A significance level of .05 was used for all five null hypotheses. The null hypotheses were as follows:

a. There will be no difference between the mean achievement score in comprehension (listening) on the MLA test with the two experimental classes combined and the mean achievement score for the two control classes combined.

b. There will be no difference between the mean achievement score in speaking on the MLA test for the two experimental classes combined and the mean achievement score for the two control classes combined.

c. There will be no difference between the mean achievement score in reading on the MLA test for the two experimental classes combined and the mean achievement score for the two control classes combined.
d. There will be no difference between the mean achievement score in writing on the MLA test for the two experimental classes combined and the mean achievement score for the two control classes combined.

e. There will be no difference between the mean score on the "Spanish and Latin American Life and Culture" test with the two experimental classes combined and the mean score for the two control classes combined.

Testing on the MLA test and the "Spanish and Latin American Life and Culture" test took place during the last week of school. Correction and scoring of the tests were done by the teacher assistant for the Spanish I classes. The raw scores on the MLA tests were changed to the converted score for the statistical treatment. The raw scores for the "Spanish and Latin American Life and Culture" test were used for the statistical treatment.

The testing of the five null hypotheses was done on the University of Maine IBM computer using the packaged DIFER program stored at the Orono Center.

The results of all five T tests were non-significant. The report of the statistical findings are reproduced below.

For null hypotheses a:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Computed T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized Instruction (experimental group)</td>
<td>34</td>
<td>140.38</td>
<td></td>
<td>7.42</td>
</tr>
<tr>
<td>Traditional Instruction (control group)</td>
<td>39</td>
<td>139.46</td>
<td></td>
<td>7.40</td>
</tr>
</tbody>
</table>

For testing of null hypotheses b:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Computed T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized Instruction (experimental group)</td>
<td>34</td>
<td>149.71</td>
<td>17.39</td>
<td>-0.85</td>
</tr>
<tr>
<td>Traditional Instruction (control group)</td>
<td>36</td>
<td>153.22</td>
<td>17.17</td>
<td>-15</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Computed T</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------</td>
<td>------</td>
<td>--------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Individualized Instruction (experimental group)</td>
<td>34</td>
<td>142.97</td>
<td>3.04</td>
<td>1.344</td>
</tr>
<tr>
<td>Traditional Instruction (control group)</td>
<td>39</td>
<td>141.67</td>
<td>4.78</td>
<td></td>
</tr>
<tr>
<td>For testing of null hypotheses d:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualized Instruction (experimental group)</td>
<td>33</td>
<td>143.48</td>
<td>5.98</td>
<td>-0.362</td>
</tr>
<tr>
<td>Traditional Instruction (control group)</td>
<td>39</td>
<td>144.05</td>
<td>7.09</td>
<td></td>
</tr>
<tr>
<td>For testing of null hypotheses e:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualized Instruction (experimental group)</td>
<td>34</td>
<td>36.18</td>
<td>11.10</td>
<td>-0.44</td>
</tr>
<tr>
<td>Traditional Instruction (control group)</td>
<td>36</td>
<td>37.39</td>
<td>11.92</td>
<td></td>
</tr>
</tbody>
</table>
Students in the experimental groups made noticeably more progress quantitatively in the second semester than in the first. At the end of the first semester the control groups F and G had completed three lessons in the McGraw-Hill materials. No student in group D or group H had performed all of the activities prescribed for this number of lessons.

At the end of the second semester the control groups F and G had completed eight lessons in the McGraw-Hill materials. In the experimental groups D and H six students had completed all the work in the contracts for those eight lessons. Other students in these groups were making better progress than in the first semester. (See Appendix H).

The program allowed for flexibility in determining starting and stopping dates for the study of Spanish. It was possible to begin at any time during the school year, and to continue progressing after the formal school year ended. Since the closing of school, twelve students from D and H have regularly been working on additional contracts, receiving assistance from one of the project Spanish teachers. At least half of these have completed the lessons required for credit in Spanish I. (See Appendix H). One student entered group D on February 1, 1972 (in the second week of the second semester). She had completed the work on three lessons by May 25, 1972 (one semester's work in slightly less than a semester). It may be noted here that this student would not have been able to take Spanish I at all were it not for the individualized program.

This program allowed individual students to allot their time differently in practicing the four basic skills, (listening, speaking, reading, and writing.) A sample of the distribution of student time spent working on the Spanish skills appears in Appendix G. In a class of twenty-four students, nine spent all of their time during that week working on listening-comprehension and speaking; ten of them practiced writing exclusively; the others divided their time among a variety of activities.

In the control group the students had no choice in the distribution of classroom time among the activities involved in learning Spanish. Instead, they were forced to meet teacher expectations.
Chapter IV - Conclusions

It is the conclusion of this research that in terms of achievement on the four sub-sections of the MLA Foreign Language Test for Spanish I and in terms of achievement on the "Latin American Life and Culture" test, that the experimental and control groups were equal at the end of one year in their respective programs.

Waldman's findings in a study of the performance of students of elementary French at the college level, in which he compared students enrolled in individually self-paced foreign language instruction with a comparable group of students enrolled in a conventional lockstep program, indicate that "....there was no significant difference in overall mean proficiency between the two groups."1 Since he, too, used the Modern Language Association test batteries as the evaluative instruments, his results with students in college level French are comparable to the findings of this study of secondary school level students of Spanish.

In an individualized program for senior high students beginning Spanish I who have previously been taught by traditional methods in their other courses, a period of three or four months appears to be required for orientation and development of an ability for self direction. The slow progress of the individualized students during the first semester of Spanish I is considered attributable to the difficulty they encountered developing a constructive learning approach to the methodology involved in a radically different type of program from the formally structured one to which they had long been accustomed. Both instructors felt that the majority of these students found the transition extremely difficult; they were well into the second semester before the instructors felt the performance records of the students indicated they were beginning to work effectively in the new program. Those few in groups D and H who successfully completed the objectives for the first eight lessons of the materials did either five or six lessons in the second semester, a good increase over their performance in the first semester, when they accomplished fewer than three lessons.

The slow start and the small number of units completed by the experimental group may have contributed to a lower average achievement than might otherwise have been the case on the standardized tests. Because of this, it is recommended that an accurate assessment of the effect of independent variable individualized learning may require measurement of achievement during a second year of program operation when the variable of orientation has already been controlled.

The widely varied patterns of learning that are illustrated by the time distribution chart (Appendix G) are considered to indicate that students are making choices as to how they wish to learn, each one searching for the most effective mode of learning Spanish. Furthermore, it is assumed that the student in groups D and H had the opportunity to work toward his perceived goals, emphasizing that skill in language learning that is most meaningful to him. An examination of the time distribution charts indicates that some students consistently placed more emphasis on the oral skills while others emphasized those of reading and writing.

It is recommended, therefore, that, in a future study specific measurement should be made of student attitudes and of their reasons for choosing a certain modality of learning.

Learning is an individual process, not restricted to five hours one hundred and eighty days a year, inside a school building. To foster and to encourage an individual's learning time, at his own speed, using the mode of learning that is best for him, and choosing the time and place that is most effective for him, is part of developing the human being.
APPENDIX A

Name__________________________
Date Started____________________
Date Completed__________________

Learning Spanish the Modern Way I
Lección Cuarta - "Una Prueba" - Contract (b)

Content: Dialog - Aquí tienen Uds. los resultados” (Pages 57-59)
Making adjectives agree with the nouns they modify in gender and number (o, - a, - os, - as)

Objective(s)

1. Basic Dialog
   a. Be able to repeat all lines of the basic dialog using good intonation; pronouncing in word groups, not individual words.
   b. Be able to write the basic dialog from dictation with correct spelling and punctuation.
   c. Be able to answer questions related to the basic dialog.
   d. Participate verbally in controlled conversational situation.

2. Vocabulary
   a. Know the vocabulary of Lesson 4 - Contract (b) including the gender and number of each noun; know the idiomatic expressions. (Those expressions that do not correspond word for word to its English equivalent).

3. Supplement (Expansion)
   a. Be able to respond to oral or visual stimuli in a manner indicating comprehension of the original situation established in the dialog and the expanded situations.
4. Reading and Writing
   a. Be able to read and write all material in Lesson 4 - Contract (b).

5. Grammar (Estructura)
   a. Learn that adjectives agree with the nouns they modify in number and gender.
   b. Know that adjectives ending in -o or -a have four forms.

6. Creative Conversation
   a. Participate in a small conversation group (or between the teacher and students) in which you initiate as well as respond in conversational exchange.

SP. I, 4 (b)
- Learning Spanish the Modern Way I

Student Activities and Check List, Lesson 4 - Contract (b)

To The Student:

For each numbered item of work:

a. If there is a line only in the second column, this item does not have to be checked by the teacher. Do it to your own satisfaction.

b. If the line extends into the first column (the one headed by the word Professor(a)), it indicates that this item must be checked by the teacher before you go further.

If at any point, you are having difficulty, do not go on without consulting a teacher.

<table>
<thead>
<tr>
<th>Professor(a)</th>
<th>Estudiante</th>
<th>Dialog</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1. Keeping your book closed, listen and practice the basic dialog. (Use tape Cassette # ).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Listen and practice the basic dialog with the book open.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Copy the basic dialog in your notebook. (Always use ink). Have a teacher check your notebook.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Listen and practice the Preguntas and the responses with the book open.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. In your notebook copy each pregunta with its responses.</td>
</tr>
</tbody>
</table>

SP. 1, 4 (b)
Learning Spanish the Modern Way I

Student Activities and Check List, Lesson 14 - Contract (b)

<table>
<thead>
<tr>
<th>Profesor(a)</th>
<th>Estudiante</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>7. Begin the Expansion (page 57 and tape cassette # ). Listen and speak according to directions as given on tape. (Be careful of new vocabulary which may appear.)</td>
</tr>
</tbody>
</table>

You must practice these drills as many times as you need to, so that your comprehension and responses are always correct. The last sheet of this lesson 14 - Contract (b) is a vocabulary guide in Spanish. In your spare time you should copy these words and expressions in your notebook, including the English meaning which you will have to look up. This is a required activity at the end of this lesson 14 - Contract (b).

8. If this dialog has an accompanying filmstrip, ask for it and practice with it, so to fix the meaning of the spoken words and ideas in the dialog. (Keep in mind that these filmstrips may later be used for testing you).

Estructura

9. Begin the Estructura (Page 58). Practice structure drills a, b, c, d, e, f using the textbook and the tape. (If you wish, practice these drills with a friend).

10. Read the Grammatical Generalization in the pink block (Page 59), and do the test drill that follows it. If you do not understand, see a teacher for help.

SP/ I, 4 (b)
### Student Activities and Check List, Lesson 4 - Contract (b)

<table>
<thead>
<tr>
<th>Profesor(a)</th>
<th>Estudiante</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>11. On notebook paper write Ejercicios VIII, IX, X, XI, XII, which are in your Cuaderno de Ejercicios (Pages 36-37).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. The last sheet of this Lesson 4 - Contract (b) is the Vocabulary Guide. In your notebook set up two (2) columns, one titled SPANISH and one titled ENGLISH then copy the vocabulary under the SPANISH column, look up the meanings and write them under the ENGLISH column. (Include also any word or expression that you find and which may have been omitted).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. Notify your teacher that you are ready for a Dictation and Conversation Test. (Filmstrips, some of your classmates, tapes etc. may be used in this part of the test).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Notify your teacher that you are ready for your written test over the whole of lesson 4 - Contract (b). You will be expected to write some recombination sentences, to complete sentences, and to answer questions. (Using complete statements).</td>
</tr>
</tbody>
</table>

SP. I, 4 (b)
Learning Spanish the Modern Way I
Student Activities and Check List, Lesson 4 - Contract (b)

END OF LESSON 4 - Contract (b). If the results of the above tests are not satisfactory, you will have to repeat work until it becomes satisfactory. Then, you may go on to Lesson 4 - Contract (c).

RESOURCES:

B. McGraw - Hill Book Co. 1967, Cuaderno De Ejercicios for "Learning Spanish the Modern Way I" (Pages 36-37)
C. Filmstrips No.___________
D. Tape Cassette No.___________
E. Spanish - English Dictionary
F. Cassette Recorder
G. Headset
H. Filmstrip Viewer

SP. I, 4 (b)
READ THE DIALOG AND ANSWER THE QUESTIONS THAT FOLLOW

Profesor: Aquí tienen Uds. los resultados de la prueba.

Paco: El papel amarillo es mío, señor.

Profesor: Tome Ud., Paco.

Paco: ¡Un cero! Ay, qué nota más mala!

Profesor: Tiene Ud. razón. No es muy buena

1. ¿Quién tiene los resultados?
2. De qué son los resultados?
3. ¿De quién es el papel amarillo?
4. ¿De quién es el cero?
5. ¿Qué notas tiene Ud.?
6. ¿De qué color es el papel de Ud.?
7. ¿Cuál es la nota más mala?

FOLLOW THE MODEL:

Allí está el cuaderno nuevo.

mesa

Allí está la mesa nueva.

mesa

Allí está el cuaderno nuevo.

1. mesa
2. libro
3. muchacho
4. silla
5. prueba

Sp. I, 4 (b)
COMPLETE THE SENTENCES.

Donde están los cuadernos negros?

1. mesas
2. sillas
3. libros
4. escritorios
5. plumas

COMPLETE THE SENTENCES.

Voy a comprar la casa amarilla

1. barco
2. plumas
3. libros
4. mesa
5. cuaderno
6. sillas
7. escritorio
8. cuadernos
9. libro
10. silla

Sp. I 4 (b)
FOLLOW THE MODEL.

Tengo que ver el libro nuevo

amarillo. Tengo que ver el libro amarillo.

Tengo que ver el libro nuevo

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>amarillo</td>
</tr>
<tr>
<td>2</td>
<td>casa</td>
</tr>
<tr>
<td>3</td>
<td>negras</td>
</tr>
<tr>
<td>4</td>
<td>cuaderno</td>
</tr>
<tr>
<td>5</td>
<td>blanco</td>
</tr>
<tr>
<td>6</td>
<td>sillas</td>
</tr>
</tbody>
</table>

Sp. I 4 (b)
<table>
<thead>
<tr>
<th>NOUNS</th>
<th>VERBS</th>
<th>OTHER WORDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>resultado</td>
<td>tomar (tome, etc.)</td>
<td>Aquí tienen Uds.</td>
</tr>
<tr>
<td>prueba</td>
<td></td>
<td>amarillo(a)</td>
</tr>
<tr>
<td>razón</td>
<td></td>
<td>es mio</td>
</tr>
<tr>
<td>nota</td>
<td></td>
<td>¡Ay, qué nota más mala!</td>
</tr>
<tr>
<td>lápiz</td>
<td></td>
<td>tener reson</td>
</tr>
<tr>
<td>sustantivo</td>
<td></td>
<td>De qué color?</td>
</tr>
<tr>
<td>adjectivo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>palo</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>blanco(a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>rojo(a)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

Contract 4 (b)

*Oral

1. ¿De qué color es el papel?
2. ¿Quién tiene las mesas amarillas?
3. ¿De qué color es el lápiz?
4. ¿Es la mesa nueva?
5. ¿Están allí los cuadernos?

Dictation

1. El lápiz es negro.
2. No veo el libro nuevo.
3. El profesor tiene razón.
4. Aquí tienen Uds. los resultados.
5. Las barcos están allí.

*In the oral part the student answers the question orally and then writes the responses.

Spanish Test I, Contract 4 (b)
"Learning Spanish the Modern Way I"

SPANISH TEST 1, Contract 4, (b)

PUT NAME, DATE AND TRIAL # ON YOUR ANSWER SHEET

I. Read the paragraph and answer the question in Spanish (in full sentences):

El profesor viene con los resultados de la prueba.
Paco tiene un cero.

Es una nota muy mala. Paco no es un muchacho estúpido, pero es perezoso.

Su amiga María es muy lista. Ella tiene una nota muy buena - noventa y cinco. El profesor dice que Paco tiene que estudiar más. ¡El tiene razón!

1. ¿Qué tiene el profesor?
2. ¿Qué nota tiene Paco?
3. ¿Es estúpido Paco? (5 points each - 25)
4. ¿Quién tiene una nota muy buena?
5. ¿Qué tiene que hacer Paco?

Spanish Test 1, Contract 4 (b)
II. Change the adjective to match up with the noun it modifies. (Some don't need to be changed):

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td>negro</td>
<td>Los toros son_________.</td>
</tr>
<tr>
<td>rosa</td>
<td>Las flores son_________.</td>
</tr>
<tr>
<td>blanco</td>
<td>Mi casa es_________.</td>
</tr>
<tr>
<td>amarillo</td>
<td>El papel es_________.</td>
</tr>
<tr>
<td>rojo</td>
<td>Es un lápiz_________.</td>
</tr>
<tr>
<td>verde</td>
<td>Es una pluma_________.</td>
</tr>
<tr>
<td>marrón</td>
<td>La maleta es_________.</td>
</tr>
<tr>
<td>morado</td>
<td>Las violetas son_________.</td>
</tr>
<tr>
<td>azul</td>
<td>Mis ojos son de color_____</td>
</tr>
<tr>
<td>grío</td>
<td>Hoy cielo está_________.</td>
</tr>
<tr>
<td>bueno</td>
<td>Es una prueba_________.</td>
</tr>
<tr>
<td>malo</td>
<td>Las notas son muy_________.</td>
</tr>
</tbody>
</table>
III. Translate these sentences into Spanish:

1. The professor is right.
2. What a bad grade!
3. You have to study more.
4. What is the result of the test?
5. I have a blue book and a red notebook.
6. Where are the yellow chairs?
7. We have to go now.
8. John has to be in school at eight o'clock.
9. The new girl is very pretty.
10. She has green eyes and black hair. (los ojos, el pelo)
APPENDIX C
"Special Approach to Spanish"

Rationale

Students enrolled in Spanish I range in ability from average or below average to the most lingually gifted students in the school who are starting to learn their second or third foreign language.

In order to meet the widely varied needs of each of these students we are presenting to them a continuous learning Spanish program based on individual contracts designed from the multimedia McGraw-Hill Spanish program currently in use in the Portland Public Schools.

The goals of this program are as follows:

1. To individualize instruction in order to meet the needs of all students regardless of their ability to acquire the technical skills of language learning.

2. To change the Spanish program from one which is based on time criteria to one which is based on performance and achievement criteria, thus avoiding boredom (for students of high ability) and frustration (for students of low ability) that are inherent in time oriented, lockstep classes.

3. To provide assistance for the individual student from the teacher or teacher assistant at all times.
APPENDIX D

Individualized Program

"Special Approach to Spanish"

Ground Rules

1. You are now commencing a new experience in language learning. You will, for the most part, do for yourself and by yourself, under your teacher's direction, many of the things you have done previously within a group structure. In so doing, you will be making your own decisions about the best use of your time.

2. You will receive credit for the completion of Spanish I when you have accomplished the skills specified for that course. The time spent on these will vary greatly from one student to the next. Some may complete the objectives for Spanish I in less than a year, others may require more time for the mastery of Spanish I. The program is designed in such a way that the average student, putting in a reasonable amount of time on the program, will complete half of the Spanish I skills in one semester, and the other half in the next semester.

3. The activities you are to perform in acquiring these skills are described to you in contract form. Each contract is to be completed with 80% accuracy. Where this is not possible, the teacher will be the judge of the satisfactory performance that permits the student to proceed to the next contract.

4. The class time must be spent on Spanish. Do not distract the others. Students working on the same contract may work together whenever practicable.

5. About 3/5 of the time in class you will be working individually on contracts. One day a week you will meet with the teacher or teacher assistant for conversational practice with a small group of other students for thirty minutes. 30% of your grade is based on oral use of the language.

6. One period a week will be set aside for an enrichment program in which all students participate. You will be tested on material presented in these session.
7. You will take unit tests when you feel that you are prepared for them. Arrange with your teacher to take them at the beginning of the class periods as they will require an entire period for completion. Students may take a practice test before making the decision to take a unit test if they wish to.

8. At all times, during the individual, small group or large group phases of the program, feel free to ask for assistance from the teacher or teacher assistant; student aides may be available in some classes; they will help you also.

9. Equipment and resource materials will be distributed to you by a clerical assistant. You will be responsible for returning them as soon as you have finished using them.

10. Each student will have his own textbook — Learning Spanish, the Modern Way, Level 1, second edition. From time to time students' contracts will specify the use of other resource materials that will be available in the classroom.

The goals of this program are as follows:

1. To individualize instruction in order to meet the needs of all students regardless of their ability to acquire the technical skills of language learning.

2. To change the Spanish program from one which is based on time criteria to one which is based on performance and achievement criteria, thus avoiding boredom (for students of high ability) and frustration (for students of low ability) that are inherent in time oriented, lockstep classes.

3. To provide assistance for the individual student from the teacher or teacher assistant at all times.

4. To help the student to acquire an understanding of the cultures of Spanish speaking peoples.
APPENDIX E

To: Parents of Students in "Special Approach to Spanish"

From: Date 1-21-72

Subject: Report of Student Progress in Spanish I

In accordance with the rationale of the "Special Approach to Spanish" program in which your son or daughter is a participant, we are enclosing a special report on his or her progress in this program. (A description of this program was sent to you via the students in November.)

Each student has been responsible for his own progress in Spanish I since November 8, 1971. Although some students have made much more progress than others in this course, generally the quality of the work has been high. The result, of course, is that the grades in this class tend to be better than they were before. Your son or daughter receives official credit for the first semester of Spanish I when the designated skills for Spanish IAB have been accomplished. Some will do this in less than a semester; as others complete these requirements, they, too, will receive official credit.

Name_________________________

Grade - on the basis of his/her progress to Jan. 21, 1972 □

The student has met all requirements for the 1st semester of Spanish I.

Yes □ No □ Work Done □

The student has met all requirements for the 2nd semester of Spanish I.

Yes □ No □ Work Done □

The student is presently working as well as possible □

The student should be making more of an effort □

Number of sessions absent this quarter □

Teacher's signature__________________________

37
# APPENDIX F

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>LISTENING-COMPREHENSION</th>
<th>SPEAKING</th>
<th>READING</th>
<th>WRITING</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of minutes:</td>
<td>No. of minutes</td>
<td>No. of minutes</td>
<td>No. of minutes</td>
</tr>
<tr>
<td>Teacher</td>
<td>Teacher</td>
<td>Teacher</td>
<td>Cassette</td>
</tr>
<tr>
<td>Ass't. Teacher</td>
<td>Ass't. Teacher</td>
<td>Ass't. Teacher</td>
<td>Other</td>
</tr>
<tr>
<td>Cassette</td>
<td>Cassette</td>
<td>Cassette</td>
<td></td>
</tr>
<tr>
<td>Movie</td>
<td>Another Student</td>
<td>None of the above</td>
<td></td>
</tr>
</tbody>
</table>

Spanish Test I, Contract 4 (b)
### APPENDIX G

**WEEK ENDING \(4/28\)**

<table>
<thead>
<tr>
<th>Name of Student</th>
<th>Listening-Comprehension</th>
<th>Speaking</th>
<th>Reading</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student A</td>
<td></td>
<td>20</td>
<td></td>
<td>60</td>
</tr>
<tr>
<td>&quot; B</td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>&quot; C</td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>&quot; D</td>
<td></td>
<td></td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>&quot; E</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; F</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; G</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; H</td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>&quot; I</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
</tr>
<tr>
<td>&quot; J</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
</tr>
<tr>
<td>&quot; K</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>&quot; L</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; M</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
</tr>
<tr>
<td>&quot; N</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; O</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; P</td>
<td></td>
<td></td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>&quot; Q</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; R</td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>&quot; S</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; T</td>
<td></td>
<td></td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>&quot; U</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; V</td>
<td></td>
<td></td>
<td></td>
<td>120</td>
</tr>
<tr>
<td>&quot; W</td>
<td>45</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; X</td>
<td></td>
<td></td>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>
NUMBER OF STUDENTS IN EXPERIMENTAL GROUP D COMPLETING EACH CONTRACT BY THE END OF EACH MONTH.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2a</td>
<td>8</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2b</td>
<td>14</td>
<td>7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2c</td>
<td>10</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2d</td>
<td>1</td>
<td>17</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2e</td>
<td>17</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2f</td>
<td>7</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2g</td>
<td>4</td>
<td>12</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>12</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3b</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3c</td>
<td>1</td>
<td>7</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b</td>
<td>1</td>
<td>8</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4c</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5a</td>
<td>1</td>
<td>6</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b</td>
<td>6</td>
<td>14</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5c</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5e</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6a</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6b</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6c</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6d</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7a</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7b</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7c</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8a</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY

Books


Article