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ABSTRACT

This report presents the evaluation of the 1973-1974 Fall River Middle School Research and Development Center, a project funded by ESEA Title VII as a model demonstration bilingual program beginning in 1972-1973. The evaluation focused on the assessment of the degree of accomplishment of product objectives for each component of the program. The program had a total enrollment of 244 students--161 Portuguese dominant students and 83 English dominant students. The program served 119 fifth grade and 127 sixth grade students. Fifth grade English dominant students were selected for the program from the fourth grade student population who would normally be going into the fifth grade during the 1973-1974 school year. Fifth grade Portuguese dominant students were selected through consideration of two factors in addition to their language dominance--school age and neighborhood. The sixth grade students are last year's fifth grade bilingual students. The staff included the following personnel: project director, staff development specialist, English as a Second Language Coordinator, guidance counselor, parent-community coordinator, four curriculum specialists, 12 teachers, four teacher aides, and an audio-visual materials development assistant. The average class size for the 12 classes--four each at the three participating schools--was 20 students per class. (Author/JM)

# EVALUATION REPORT

# OF THE

# FALL RIVER MIDDLE SCHOOL RESEARCH AND DEVELOPMENT CENTER

# TITLE VII PROGRAM

# 1973-1974



HEURISTICS, INC.
Dedham, Massachusetts

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## INTRODUCTION

This report presents the evaluation of the 1973-1974 Fall River Middle School Research and Development Center. The project was funded by ESEA Title VII as a model demonstration bilingual program beginning in 1972-1973. Heuristics, Inc. was engaged to perform the evaluation of this second year of program operation. The evaluation was conducted under Office of Education guidelines for assessment of Title VII programs. The evaluation focused on the assessment of the degree of accomplishment of product objectives for each component of the program.

This report presents the summative assessment of the program. Formative assessment was provided orally to the project director continuously during the year, and in the written Interim Evaluation Report submitted in February, 1974.

## EVALUATION PROCEDURES

For the assessment of the Fall River Title VII project the following evaluation activities were performed by the evaluators with the cooperation in many instances of appropriate program staff members:

1. Assistance in the revision and specification of program objectives;
2. Construction and refinement of the evaluation design;
3. Selection and/or construction of appropriate measuring instruments;
4. Construction and analysis of various data collection forms;
5. Construction and analysis of attitude instruments for program staff and PAC members;

6. Construction and analysis of the Parent Survey (a demographic-sociological data instrument);

7. On-site classroom observation;

8. Interviews with program staff members;

9. Review of program files;

10. Analysis of test results;

11. Provision of regular verbal feedback to the project staff;

12. Preparation of written reports.

## PROGRAM DESCRIPTION

### Staff

The Fall River bilingual program began its second operation year on the opening day of the public schools, September 5, 1973, with its full complement of instructional and non-instructional staff members. The staff included the following personnel:

Project director - responsible for overall program management;

Staff development specialist - responsible for liaison between the instructional and non-instructional staff and for the development of in-service activities;

ESL Coordinator - responsible for the development of an ESL curriculum and the overall coordination of all ESL activities;

Guidance counselor - responsible for the development of a guidance curriculum and for providing counseling services to all program students in need;

Parent-community coordinator - responsible for program dissemination activities and for liaison between the program and the community;

Four curriculum specialists - responsible for the development of curriculum units in mathematics, science, social studies, and language arts;

Twelve teachers - responsible for instruction in all academic subjects in grades 5 and 6;

Four teacher aides - responsible for assisting the teachers in the media centers;

Audio-visual materials development assistant - responsible for assisting staff members with audio-visual materials.

As noted, there are twelve teachers in the program, half of whom are new to the program this year. Additional teachers were needed since the program was expanded this year to include a sixth grade level. Seven of the twelve teachers were assigned Portuguese dominant classrooms and five were assigned English dominant classrooms. Nine of the teachers are bilingual in Portuguese and English (with varying degrees of English language competency) and three are monolingual in English. Of the seven Portuguese dominant teachers, all are bilingual; four have had from four to sixteen years teaching experience in Portugual and one of the four also has had seven years teaching experience in Fall River as a substitute teacher; three are in degree programs at Bristol Community College or Bridgewater State College; and four have B.A. degrees from Southeastern Massachusetts University (one of the four also has a Master's degree from the University of Connecticut). Additionally, four of the seven teachers had had one year of teaching experience in the bilingual program; two have no teaching experience at all, and two have had experience in other programs elated to bilingual education in Rhode Island and Connecticut. Of the five English dominant teachers, three have had from one to fifteen years teaching experience; all have B.A. degrees (one also has a Master's degree); two are bilingual, and two have one year's teaching experience in the bilingual program. (See Table 1 for a summary of backgrounds of the Portuguese and English dominant teachers.)

Table 1

Instructional Staff Background Information

| Teacher No. | | Language Ability | | Experience | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Teaching | | | Educational | | | Other |
| Portuguese Dominant | English Dominant | Bilingual (Port.-Eng.) | Monolingual (English) | Bilingual Program | U.S. | Portugal | Currently Enrolled Under-Graduate | Bachelor's Degree | Master's Degree | |
| 1 | | ✓ | | ✓ | ✓ | ✓ | ✓ | | | |
| 2 | | ✓ | | ✓ | | ✓ | ✓ | | | |
| 3 | | ✓ | | ✓ | | ✓ | ✓ | | | |
| 4 | | ✓ | | ✓ | | | | ✓ | | |
| 5 | | ✓ | | | | ✓ | | ✓ | | ✓ |
| 6 | | ✓ | | | | | | ✓ | | |
| 7 | | ✓ | | | | | | ✓ | ✓ | ✓ |
| | 1 | ✓ | | ✓ | | | | ✓ | | |
| | 2 | ✓ | | | | | | ✓ | | |
| | 3 | | ✓ | ✓ | ✓ | | | ✓ | ✓ | |
| | 4 | | ✓ | | ✓ | | | ✓ | | |
| | 5 | | ✓ | | ✓ | | | ✓ | | |

With the exception of the ESL (English as a Second Language) Coordinator, all the professional non-instructional staff members--staff development specialist, guidance counselor, parent-community coordinator, and the curriculum specialists--are fluent in Portuguese and English. The staff development specialist is a holder of a Portuguese teaching certificate with seven years teaching experience in Portugual, six years experience as an ESL teacher in Fall River, and currently enrolled in a degree program at Bridgewater State College. The guidance counselor is a graduate of St. Francis College in Maine. The parent-community coordinator is a graduate from the seminary in Portugual, with many years experience in working with the Portuguese and English speaking communities of Fall River. Among the curriculum specialists are graduates from Southeastern Massachusetts University, and a graduate from the University of Lisbon who is currently enrolled in a Ph.D. program at Brown University. All of the non-instructional staff members except the ESL Coordinator, have had one year's experience in the bilingual program. The ESL coordinator holds a bachelor's degree from the University of Massachusetts and a Master's degree in Linguistics from Brown University. He has had four years teaching experience--two years in the Peace Corps teaching ESL, and two years training teachers in ESL methodology.

All of the teacher aides have had a year of experience in the bilingual program and are currently taking courses at Bristol Community College leading to an associate degree. The audio-visual assistant adds a valuable dimension to the program by his experience in the graphic arts and with audio-visual equipment, material, and materials development.

## Classes

The Title VII bilingual program operated at the fifth and sixth grade levels in three Fall River schools--Hartwell Street, McDonough Annex, and the Watson--with four bilingual program classes (two at each grade level) in each school. The Hartwell Street school had one Portuguese dominant and one English dominant classroom at the fifth grade level and two Portuguese dominant sixth grade classrooms; the McDonough and the Watson schools each had one Portuguese dominant and one English dominant class at both grade levels. The average class size for the twelve classes was 20 students per class (see Tables 2 and 3). In addition, a fifth and sixth grade class at the McDonough and Spring Street schools were used as comparison groups.

Table 2

Bilingual Classes by Grade, School, and Dominant Language

| Grade Level | Dominant Language | Number of Classes per School | | | Total |
|---|---|---|---|---|---|
| | | Hartwell | McDonough | Watson | |
| 5 | Portuguese | 1 | 1 | 1 | 3 |
| | English | 1 | 1 | 1 | 3 |
| 6 | Portuguese | 2 | 1 | 1 | 4 |
| | English | - | 1 | 1 | 2 |
| | Total | 4 | 4 | 4 | 12 |

Table 3

Program Enrollment by Grade, School and Dominant Language

| Grade Level | Dominant Language | Number of Students | | | Total | Average No. of Students per Class by Group | Average No. of Students per Class |
|---|---|---|---|---|---|---|---|
| | | McDonough | Watson | Hartwell | | | |
| 5 | Portuguese | 17 | 21 | 23 | 61 | 20.3 | 19.5 |
| | English | 13 | 20 | 23 | 56 | 18.7 | |
| 6 | Portuguese | 24 | 25 | 51* | 100 | 25.0 | 21.2 |
| | English | 15 | 12 | - | 27 | 13.5 | |
| Total | Portuguese | 41 | 46 | 74 | 161 | 23.0 | 20.3 |
| | English | 28 | 32 | 23 | 83 | 16.6 | |
| | Total | 69 | 78 | 97 | 244 | - | 20.3 |

* Two Classrooms

Observation of the classes was conducted throughout the year by the staff development specialist principally, and by the curriculum specialists and the evaluators. Observational data was recorded using forms developed by the evaluators. (See the Program Operation section for further discussion of classroom observation.

Students

The program had a total enrollment of 244 students--161 Portuguese dominant students representing 66% of the total student population and 83 (34%) English dominant students. Approximately the same number of students were served by the program at each grade level--117 fifth grade and 127 sixth grade students. (See Table 3 for a more complete presentation of enrollment data.)

Fifth grade English dominant students were selected for the program from the fourth grade student population who would normally be going into the fifth grade during the 1973-1974 school year and who lived in the neighborhoods served by the three participating schools. Fifth grade Portuguese dominant students were selected through consideration of two factors in addition to their language dominance--school age and neighborhood. For example, if a student was at the age level to be in the fifth grade and lived in the neighborhood served by the Watson school, he or she was placed in the fifth grade Portuguese dominant class in that school.

The sixth grade students (English and Portuguese dominant) are last year's fifth grade bilingual students and, therefore, they have been in the program for one year. One criterion to be met by all students, fifth and sixth grade alike, was parental consent. All students, therefore, are participating in the bilingual program with the approval of their parents.

Attendance

Attendance data is presented for 244 students. In September, however, the program began with approximately 211 students. At various times throughout the year students left and entered the program. The most prevalent reason for this mobility was families moving out of or into the districts served by the participating schools. The net result was that more families moved into rather than out of the school districts. Also the net increase of the number of students participating in the program was associated mostly with Portuguese dominant students. This factor provides some insight concerning the number of Portuguese immigrants arriving in Fall River.

The attendance data were analyzed to provide an overall estimate of the students' consistency of attendance. The analysis involved the tabulation of each student's daily attendance during the length of time he or she was registered for the program. For most of the students this was 144 days (from September through April). The number of students present for decreasing percentages of the total number of days was established for each school and across schools. A summary of the analysis is presented in Table 4.

Inspection of the data presented in the table indicate that overall student attendance was excellent. The data show that 219 of the 244 registered students (90%) attended school at least 80% of the time; that two-thirds of the students (67%) were present at least 90% of the time. It should also be noted that 15 students (6%) had perfect attendance records.

Table 4

Number of Students in "Percent-of-Time Present" Intervals by School Over an Eight Month Period (September - April)

| Percent of Time Present Interval | School | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | McDonough | | Watson | | Hartwell | | | |
| | N | % | N | % | N | % | N | % |
| 100 | 6 | 8 | 4 | 6 | 5 | 5 | 15 | 6 |
| 95-99 | 34 | 45 | 29 | 41 | 32 | 33 | 95 | 39 |
| 90-94 | 15 | 20 | 15 | 21 | 23 | 24 | 53 | 22 |
| 85-89 | 11 | 14 | 8 | 11 | 19 | 20 | 38 | 15 |
| 80-84 | 3 | 4 | 7 | 10 | 8 | 8 | 18 | 7 |
| 75-79 | 1 | 1 | 4 | 6 | 2 | 2 | 7 | 3 |
| 70-74 | 3 | 4 | 2 | 3 | 2 | 2 | 7 | 3 |
| 65-69 | 2 | 3 | 2 | 3 | 1 | 1 | 5 | 2 |
| 60-64 | - | - | - | - | 4 | 4 | 4 | 2 |
| 55-59 | 1 | 1 | - | - | - | - | 1 | <1 |
| 50-54 | - | - | - | - | - | - | - | - |
| Below 50 | - | - | - | - | 1 | 1 | 1 | <1 |
| Total | 76 | 100 | 71 | 101* | 97 | 100 | 244** | 100 |
| Students Present ≥80% of the Time | 87 | 90 | 69 | 91 | 63 | 89 | 219 | 90 |

* Does not equal 100% due to rounding error
** This figure includes students entering the program late

## Schedules

The program operated in the participating schools according to the established schedule of each school. The school day was divided into eight periods--one 30 minute lunch period and seven 45 minute instructional periods. Students, therefore, received 35 instructional periods per week. Except for PSL (Portuguese as a Second Language) and ESL (English as a Second Language), instruction in the academic subjects was generally presented in the students' native language by the

program's teachers. Instruction in the non-academic subjects (such as music and art) was generally conducted in English by non-program teachers.

The class schedules for bilingual program students varied slightly among the three schools. Part of the variance was attributable to the established procedure of the participating schools. For example, the McDonough school had the facilities (and teachers) for conducting sewing/cooking for girls and woodworking for boys; therefore, all students were scheduled for two periods per week in these subjects. These types of facilities did not exist at the other two schools, and students, therefore, did not receive instruction in these areas. (At the Watson school, however, the sixth grade students received limited sewing and woodworking experience for one period per week taught by a non-program (sewing) and a program teacher.) Students attending the McDonough school also received art and music instruction two periods per week, but students at the other two schools were scheduled for only one period per week in these areas. Furthermore, even though all the students had two periods per week of physical education instruction, the only school with a gymnasium was Hartwell Street.

Variance in student schedules for the bilingual program is also attributable to the program itself. Hartwell Street students had four periods of science per week and students at the McDonough and Watson had three. This year Portuguese dominant students received more instruction conducted in English in mathematics, science, and social studies than the previous year at all schools. The number of periods per week and the content areas also differed among the three schools. The range of differences is shown in Table 4. English and Portuguese dominant students at the Hartwell Street school were not integrated for any subject; however, at the McDonough and Watson schools they were integrated for one period per

week in mathematics, science, and social studies. Furthermore, at the McDonough, the bilingual students were integrated for music and art instruction and integrated with non-program students in sewing, woodworking, and physical education for two periods per week.

Student schedules in the three schools also reflected some slight differences in the number of periods per week programmed for PLA (Portuguese Language Arts) and ESL (English as a Second Language) instruction for Portuguese dominant students and for ELA (English Language Arts) and PSL (Portuguese as a Second Language) instruction for English dominant students. For example, fifth grade Portuguese dominant students at the Hartwell Street school were scheduled for 9 periods per week in PLA instruction and 7 periods per week in ESL instruction: at the Watson, they had 7 PLA and 10 ESL periods per week; and at the McDonough, they had 7 periods per week in both PLA and ESL. Student schedules (in terms of the number of periods per week for each content area) are presented in Tables 5 through 7.

Teacher schedules also varied among the three schools, however, this variance was intentional. The program used three instructional approaches.. At the Watson school, the approach was self-contained classrooms; the approach at the McDonough school was departmentalization; and at the Hartwell, utilizing non-program faculty members, the approach was a combination of the other two. Non-program teachers on the Hartwell Street school faculty instructed the Portuguese dominant students (one fifth grade and two sixth grade classes) in science, mathematics, and social studies for those periods where English was the instructional language. They also provided ESL instruction to the sixth grade Portuguese dominant students. At the Watson and McDonough schools, the academic subjects for all the students

Table 5

Periods Per Week of Mathematics, Science, and Social Studies Instruction Conducted in English for Portuguese Dominant Students by School and Grade

| Content Area | Grade Level | School | | |
|---|---|---|---|---|
| | | McDonough | Hartwell | Watson |
| Mathematics | Fifth | 1 | 1 | 0 |
| | Sixth | 2 | 2 | 1 |
| Science | Fifth | 0 | 1 | 0 |
| | Sixth | 0 | 2 | 0 |
| Social Studies | Fifth | 0 | 1 | 0 |
| | Sixth | 0 | 2 | 0 |

were conducted by the program teachers with one major difference--at the Watson, teachers did not cross grade levels and at the McDonough they did. The two fifth grade teachers at the Watson instructed only the fifth grade students, and the two sixth grade teachers only the sixth grade students. Program teachers at the McDonough school, however, were responsible for instruction in specific content areas for fifth and sixth grade Portuguese and English dominant students. The content areas for the four teachers were as follows: ESL, ELA, and vocabulary-spelling (teacher 1); social studies, reading, and health (teacher 2); science (in English) and mathematics (teacher 3); science (in Portuguese), PSL, and PLA (teacher 4).

Table 6

Fifth Grade Student Schedule in Periods per Week

| Content Area | School | | | | | |
|---|---|---|---|---|---|---|
| | Hartwell | | Watson | | McDonough | |
| | Portuguese Dominant | English Dominant | Portuguese Dominant | English Dominant | Portuguese Dominant | English Dominant |
| Mathematics | 5*** | 5 | 5* | 5* | 5*** | 5* |
| Science | 4*** | 4 | 3* | 3* | 3* | 3* |
| Social Studies | 4*** | 4 | 4* | 4* | 4* | 4* |
| Portuguese Language Arts | 9 | – | 7 | – | 7 | – |
| ESL | 7 | – | 10 | – | 7 | – |
| English Language Arts | – | 10 | – | 11* | – | 9 |
| PSL | – | 5 | – | 7 | – | 5 |
| Sewing/Woodworking | – | – | – | – | 2** | 2** |
| Music | – | 1 | 1 | 1 | 2** | 2** |
| Art | 1 | 1 | 1 | 1 | 2** | 2** |
| Physical Education | 2 | 2 | 2 | 2 | 2** | 2** |
| Health | 1 | 1 | 1 | – | 1 | 1 |
| Library | 1 | 1 | 1 | 1 | – | – |
| Handwriting | 1 | 1 | – | – | – | – |

* class integrated one period per week
** class integrated two periods per week
*** class conducted in English one period per week

## Table 7

### Sixth Grade Student Schedule in Periods per Week

| Content Area | School | | | | | |
|---|---|---|---|---|---|---|
| | Hartwell | | Watson | | McDonough | |
| | Portuguese Dominant | English Dominant | Portuguese Dominant | English Dominant | Portuguese Dominant | English Dominant |
| Mathematics | 5**** | 5**** | 5***,* | 5*****,* | 5****,* | 5* |
| Science | 4**** | 4**** | 3* | 3* | 3* | 3* |
| Social Studies | 4**** | 4**** | 4* | 4* | 4* | 4* |
| Portuguese Language Arts | 9 | 10 | 9 | – | 7 | – |
| ESL | 7 | 6 | 7 | – | 7 | – |
| English Language Arts | – | – | – | 9 | – | 9 |
| PSL | – | – | – | 7 | – | 5 |
| Sewing/Woodworking | – | – | 1 | 1 | 2** | 2** |
| Music | 1 | 1 | 1 | 1 | 2** | 2** |
| Art | 1 | 1 | 1 | 1 | 2** | 2** |
| Physical Education | 2 | 2 | 2 | 2 | 2** | 2** |
| Health | 1 | 1 | 1 | 1 | 1 | 1 |
| Library | 1 | 1 | 1 | 1 | – | – |

* class integrated one period per week
** class integrated two periods per week
*** class conducted in English one period per week
**** class conducted in English two periods per week
*****class conducted in Portuguese one period per week

Next year, i.e., 1974-197. chool year, the Hartwell Street school (including the bilingual classes) in planning to change its instructional approach to learning. The school will convert to an IGE school, i.e., the Individualized Guided Instruction method using a Multi-Unit Structure approach (IGE-MUS) in the subject areas of reading and language arts. The concept of IGE is that the "educational system should be modified to best suit student needs." To accomplish this teachers are grouped into units or teams (4-7 teachers per unit) headed by unit leaders. This allows for multi-disciplinary teaching by the sharing of teaching talents. Student grouping varies from subject to subject. The teaching process uses small group instruction extensively, but also large group, one-to-one, and independent work methods. For each subject area students are placed at their level of instruction using criterion referenced tests. Instructional materials are multi-leveled, and extensive use is made varied types of media, e.g., films, headsets, manipulatives, and games.

The planning and organization procedures have been completed, and implementation has begun. All instructional personnel (including Title VII teachers) who will be teaching at Hartwell have attended a series of workshops on IGE-MUS. These workshops began in May and ended in June, 1974. The school principal and the units leaders will be working through the summer.

# PROGRAM OPERATIONS

## Introduction

In this section of the report, opinion and observational data concerning various program elements are discussed. These data were gathered by interview, questionnaire, and classroom observation techniques.

Classes were observed by the evaluator, curriculum specialists, and the staff development specialist using specially constructed forms. The evaluator used an observation form that permitted data to be recorded on the dimensions of classroom environment and interaction. The 18 entries concerned with classroom environment required the observer to record both factual and judgmental data on the physical characteristics of classroom space and on the materials used. As many as possible of the salient characteristics of the space were included, such as room size, lighting, ventilation, and acoustics. Materials were judged according to the supply on hand and condition. On the classroom interaction dimension the instrument guided the gathering of data on the interaction behavior of teachers and students. Of the 33 items on this dimension, the following are presented as representative: small group instruction, individualized instruction, class divided into two or more groups, teacher questions-student responds, and student discussion-teacher directed.

The form used by the curriculum specialists (Classroom Observation of Curriculum and Materials Usage Form) enabled the specialists to record whether the teachers of the Portuguese dominant students were using the curriculum units they had developed, and whether the teachers were using them correctly in the different subject areas. The Classroom Observation Form was used by the staff development specialist who conducted most of the observations. This form per-

mitted the recording of factual data concerning such things as the language (Portuguese or English) of instruction, classroom organization, the kinds of materials being used (e.g. commercial or project prepared), type of audio-visual equipment and materials being used, and the activities of the students and teacher.

All program teachers completed an attitude instrument constructed by the evaluators. The instrument format was Likert type with response categories ranging from Strongly Agree through Strongly Disagree. The 54 item instrument was designed to assess teachers' opinions concerning various program elements such as: bilingual education, program administration, instructional conditions and materials, and the in-service program.

Discussion of the data gathered by these various techniques follows.

Classroom Management

The observer made a total of 36 observations. The observations took place at all participating schools from November through May. All instruction took place in regular classrooms with movable seats. Hence, the room size coupled with movable seats made for excellent accommodations for small group and individualized instruction. Room acoustics, lighting, and ventilation were good; room management in most instances was observed to be orderly; distractions, such as corridor and outside noise, was minimal. There appeared to be an adequate supply of instructional materials in good condition, as well as enough general school supplies such as pencils, erasers, and paper. In most instances materials were neatly stored on table tops (particularly the library books) and in closets or cabinets.

Generally, students were divided into two or more groups or were working independently. During most of the observations, teachers were using small group

or individualized instructional techniques. The student-teacher interaction technique most often observed was recorded under the category "Teacher Questions - Student Responds" (i.e., the student responds to an orally presented stimulus question). Most of the remaining observations found students involved in teacher-guided discussions.

A summary of the observations of the staff development specialist is presented in Table 8 and 9. The specialist made a total of 261 classroom observations from September to May. Seventy-nine percent (206 of 261) of the observations covered the academic areas of math, science, social studies, and language arts; 68% of the observations involved the Portuguese dominant classrooms. The instructional methods emphasized by the program were small group and individualized instruction. Her observations suggest that these instructional techniques were being employed by the teachers. Almost two-thirds (62%) of her observations attest to this fact. Furthermore, her observations indicate that, as planned, the teachers of Portuguese dominant students used project-prepared materials most of the time, and that the teachers of English dominant students used commercially-prepared materials most often. Materials used by both groups were designed for small group and/or individualized instruction (the curriculum units and the Continuous Progress Laboratory (CPL) materials). Teachers of both groups used the media centers (language labs) extensively. These observations support the conclusion that the teachers were adhering closely to program format.

The teacher activities most often observed were one or more of the following: performing a demonstration or experiment, giving directions, overseeing the students' work, and tutoring (one-to-one). Correlating positively with these teacher activities were the activities of the students--listening to and watching a demon-

Table 8

Number of Classroom Observations of the Primary Academic Subjects by School

| Subject Area | School | | | Total |
|---|---|---|---|---|
| | McDonough | Watson | Hartwell | |
| Social Studies | 14 | 7 | 17 | 38 |
| Language Arts | 11 | 19 | 19 | 49 |
| Mathematics | 16 | 21 | 16 | 53 |
| Science | 19 | 26 | 21 | 66 |
| Total | 60 | 73 | 73 | 206 |

stration or experiment, listening to tapes or cassettes, participating in question and answer, working on worksheets, and receiving tutorial assistance.

The curriculum specialists' observations indicate that the teachers used the curriculum units, that the units were used for their intended purpose, and were used correctly. Also, they indicated that teachers encountered few problems in using the curriculum units. (See the Materials Development section for further discussion of the results of the specialists' classroom observations.)

In general, the observations by all the observers suggest that teachers exhibited instructional behaviors that conformed with the behaviors advocated by the program. The cause of this fact may be any one or a combination of the following: the program related discussions that occurred during staff meetings. the workshops held for teachers by the curriculum specialists, that half of the teachers had one year of experience in the program, and the effects of the in-service program.

## Table 9

### Number of Classroom Observations by Subject Area, School, Dominant Language, and Classroom Organization

| Subject Area | School | | | | | | | | | | | | | | | | | | | | Overall Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | McDonough | | | | | | Watson | | | | | | Hartwell | | | | | | Total | | | |
| | Port. Dom. | | | Eng. Dom. | | | Port. Dom. | | | Eng. Dom. | | | Port. Dom. | | | Eng. Dom. | | | | | |
| | L* | S* | I* | L | S | I | L | S | I | L | S | I | L | S | I | L | S | I | L | S | I | |
| Social Studies | 8 | 4 | - | 2 | - | - | 1 | 1 | - | 1 | 2 | 2 | 5 | 3 | 4 | 5 | - | - | 22 | 10 | 6 | 38 |
| Mathematics | 1 | 6 | 3 | 1 | 2 | 2 | 4 | 7 | 3 | 1 | 3 | 3 | 2 | 5 | 4 | 2 | 3 | - | 11 | 26 | 15 | 52 |
| Science | 2 | 3 | 6 | 3 | 2 | 3 | 6 | 9 | 2 | 1 | 4 | 4 | 3 | 4 | 8 | 3 | 3 | - | 18 | 25 | 23 | 66 |
| Language Arts | - | 6 | 1 | 2 | - | - | 3 | 2 | 4 | 1 | 4 | 5 | 5 | 11 | 3 | 2 | - | - | 13 | 23 | 13 | 49 |
| PSL | - | - | - | 4 | 2 | - | - | - | - | 3 | 2 | - | - | - | - | 3 | 2 | - | 10 | 6 | - | 16 |
| ESL | 4 | 5 | 1 | - | - | - | 7 | - | - | - | - | - | 5 | 3 | 1 | - | - | - | 16 | 8 | 2 | 26 |
| Reading | 1 | 2 | 1 | 1 | 1 | - | 5 | 1 | - | - | - | - | 1 | - | - | - | - | - | 8 | 4 | 1 | 13 |
| Health | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | 1 |
| Total | 17 | 26 | 12 | 13 | 7 | 5 | 26 | 20 | 9 | 7 | 15 | 14 | 21 | 26 | 20 | 15 | 8 | - | 99 | 102 | 60 | 261 |

Percent of Overall Total - Large Group Instruction (L): 38%
Small Group Instruction (S): 39%
Individualized Instruction (I): 23%

* L= Large Group Instruction
S= Small Group Instruction
I= Individualized Instruction

Program Administration

Nearly all of the teachers (one was undecided) agreed that the bilingual program was well planned and organized; that the program administrators (the non-teaching staff members) were responsive to their needs; and that the program director was available to help and assist them in any way possible. The majority of teachers indicated that they were helped and had sufficient contact with the ESL coordinator, the staff development specialist, and the curriculum specialists. The teachers, however, were divided on whether the guidance counselor was a program asset; moreover, the majority of them indicated that they were dissatisfied with the personal contact they had with and the counseling services provided by the guidance counselor. (The director was fully aware of relatively poor performance of the guidance counselor and had several conferences with him--to no avail. The guidance counselor has resigned from the position.)

Program Communication and Objectives

A majority of the teachers indicated that communication between program teachers within schools, and between program teachers and the regular teachers within schools was good; however, teachers unanimously agreed that communication among program teachers between schools should be improved. It should be noted that frequent staff meetings were held this year which provided opportunity for interaction. Thus, this reported lack of communication is puzzling. However, this observation may have some implications concerning the agenda for staff meetings as well as meeting more frequently which was suggested by the teachers and reported in the section on Instructional Preparation. Teacher morale was high and everyone was working hard to make the program a success as indicated by a majority of the teachers.

Concerning the program's instructional objectives, all but one of the teachers indicated that they were familiar with and understood them. Furthermore, the majority agreed that their teaching was directly related to the objectives.

Instructional Preparation and Training

Nearly all of the teachers indicated that their academic training was adequate preparation for teaching in the program; that they understood the methodology of bilingual classroom instruction (although half of them did indicate a need for additional training in teaching in a bilingual situation which may be met through appropriately designed in-service programs); and that the wide range of English language competency in their classes did not make the teaching situation more difficult. Furthermore, the majority of teachers stated that even though their were special problems in teaching in a bilingual classroom they still preferred to teach a bilingual class than a regular (non-bilingual) class. Moreover, the majority felt that the number of staff meetings should be increased even though the meetings they did have were effective in providing them with information, techniques, and materials that were useful in classrooms.

Instructional Conditions and Materials

The majority of teachers agreed that their class sizes were appropriate for individualizing instruction, and that the physical characteristics of their classrooms were adequate for bilingual instruction. They also indicated that they were satisfied with the amount of audio-visual materials available for use in the classroom.

Concerning the issue of instructional materials, most of them agreed that materials were provided in sufficient quantities and in good condition. They

also indicated that the quantity of general school supplies (e.g., pencils and paper) provided for use in the classroom was adequate.

In-Service Program

Nearly all of the Title VII staff members (the instructional and non-instructional personnel) agreed that the in-service program was well planned and organized, and that the meeting times and locations were convenient. Most of the staff indicated that the in-service time was used efficiently (except in the few instances where teachers reported that the amount of travel time to reach the workshop site was not worth the workshop experience), and that the overall in-service program was not only worthwhile, but generally met their needs as teachers. Additional comments made were "worthwhile, but some meetings were of no interest to me," "very much worthwhile," "desire to make program succeed was very evident this year."

One teacher commented: "meetings broke down some of the lack of communication between administration and faculty as well as between different groups of faculty (members)." This statement further supports the existence of the previously noted problem of poor communication among teachers between schools. However, it also indicates that progress was being made in this area.

Most of the in-service workshops were scheduled using the released-time approach, i.e., classes were dismissed at noon-time enabling teachers to attend early afternoon sessions. Almost all of the teaching and non-teaching staff members indicated that they preferred this method of scheduling the workshops. Furthermore, they indicated that the released-time method had a positive motivating effect on the teachers for attending the workshops and that the time the students missed had negligible effects on their academic achievement.

Most staff members agreed that they had learned many useful things during the overall in-service program, that their participation in the program had added to their professional growth, and that their involvement in the program did produce some changes in their teaching methods as indicated by the following comments--"(program) helped make me more aware of my responsibilities to my students as people first, students second," "individualization of students needs brought out into the open." Furthermore, the majority felt that the instructors or workshop leaders were knowledgeable in their specific areas, and came to the meetings well prepared.

The majority of the teachers reported that they were not involved in the planning and organizing of the in-service program, however, both teachers and non-teachers unanimously agreed that they should have been. Representative of the staff's comments are--"might make them (workshops) more meaningful and practical," "Teachers were not involved in the planning--we should be consulted about our needs before the planning so that the in-service can meet those needs." It should be noted that teachers did receive a questionnaire requesting their input to the in-service program before it began. In fact some of the subjects they recommended were included in the program. Nonetheless, the staff's opinions concerning the involvement of teachers in structuring the in-service program provides a factor that the director and staff development specialist may want to consider when they begin to plan next year's in-service program.

Bilingual Education in General

Teachers unanimously agreed that bilingual education is important and valuable, and that it is not an educational fad. Furthermore, the majority of teachers considered it a practical approach to the education of non-English speaking children

that would neither impede their overall education nor retard the "Americanization" process. Moreover, they indicated that the education received by the English speaking students participating in a bilingual program was not inferior to that received by their peers in the regular school program. The teachers, however, were equally divided on whether non-English speaking students would benefit from a bilingual education more than English speaking students.

## Bilingual Education in Fall River

Unanimously, teachers agreed that there was a need for a bilingual program in Fall River, and that the educational-cultural-social experience would enrich the lives of those students who participated in it. The majority of teachers also indicated that they felt that non-program teachers approved of the bilingual program. Most of the teachers thought that it was useful for English dominant students as well as Portuguese dominant students to learn the Portuguese language in school, and for Portuguese dominant students to study their academic subjects in their native language. Furthermore, they indicated that in their opinion most of the participating students enjoyed the program--that they were interested in and enthusiastic about it, and that this interest was reflected in their school attendance.

## Progressive versus Traditional Practices in Education

In addition to submitting to interviews and compieting questionnaires, program personnel also completed the Education Scale developed by Kerlinger and Kaya. The results were compared with last year's posttest results to determine any attitudinal changes that may have occurred in a year's time.

The Education Scale measures attitudes toward progressive and traditional educational practices, and provides three scores--progressive and traditional

attitude scores, and a total score which is obtained by subtracting the traditional score from the progressive score.

The Scale contains 20 items--10 for each subscale. The respondent indicates his/her agreement or disagreement with each item by circling one of six choices--AVS (agree very strongly), AS, A, D, DS, and DVS (disagree very strongly). Responses are then converted to a numerical scale with a score range of 7 (AVS) to 1 (DVS)--a blank (no response) is given a score of 4. The subscale scores can range from 10 to 70 and the total score from -60 to +60. A high score on a subscale reflects favorable attitudes toward the dimension being measured (i.e., traditional or progressive practices in education). A positive total score indicates traditional attitudes toward education. (See Scales for the Measurement of Attitudes by Shaw and Wright, pages 83-86 for further discussion of the Education Scales, and Educational and Psychological Measurement, Volume XIX (1959), 13-29 and 305-317 for two studies by Kerlinger and Kaya concerning the construction and validation of the Education Scale.)

The average subscale scores and total score for each group (teachers and non-teachers) are reported in Table 10; graphical presentations of the subscale scores are shown in Figure 1 and of the total scores in Figure 2. The data summary in Table 10 suggest that the teachers and the non-teaching staff hold attitudes more favorable to a progressive educational rationale than a traditional one. This represents a significant attitudinal change over last year for the teachers. For example, they show a tendency to believe that "learning is experimental," and involves the "testing of alternatives before accepting any of them," and that students "should be allowed more freedom than they usually get in the execution of learning activities," rather than the ideas that "learning is essentially a process of increasing one's

Table 10

Subscale and Total Score Attitudinal Results on the Education Scale by Group

| Group | Testing Session | Progressive Score $\bar{X}$ | Progressive Score S | Traditional Score $\bar{X}$ | Traditional Score S | Total Score $\bar{X}$ | Total Score S |
|---|---|---|---|---|---|---|---|
| Teachers | Pre* (N=6) | 49.3 | 5.3 | 49.5 | 7.2 | -0.2 | 5.4 |
| | Post (N=12) | 56.1 | 6.9 | 43.1 | 6.9 | 13.0 | 9.8 |
| Non-Teachers | Pre* (N=7) | 54.0 | 2.7 | 42.4 | 9.9 | 11.6 | 8.1 |
| | Post (N=8) | 55.9 | 5.4 | 40.4 | 13.4 | 15.5 | 15.2 |

* Previous year's posttest

store of information," and that students "need and should have more supervision and discipline than they usually get." Both groups, teachers and non-teachers, fell in the first quadrant (High Progressive, High Traditional) when their mean scores were plotted on a coordinate system with a score of 40 on both dimensions as the origin (see Figure 1). This indicates relatively high scores on both dimensions. It should be noted, however, that both groups, particularly the non-teacher group, were close to the horizontal axis indicating traditional dimensions scores approximately in the middle of the score range of this dimension.

Both groups, therefore show attitudinal changes from the previous year that brought them closer to the most desired quadrant (Quadrant IV - High Progressive, Low Traditional) for this type of program--small group and individualized instruc-

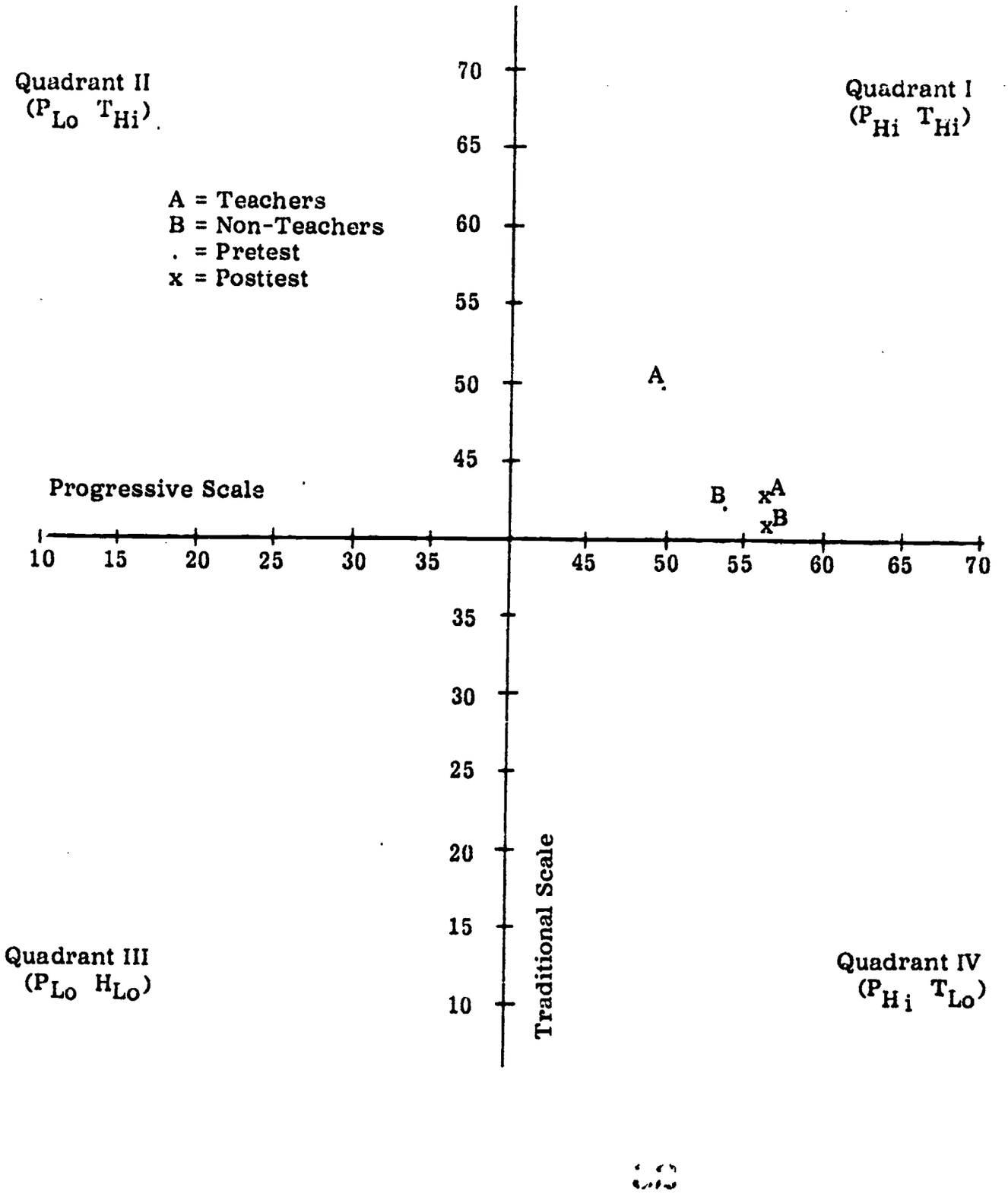


Figure 1: Pre and Post Subscale Mean Scores on the Education Scale for Teachers and Non-Teachers

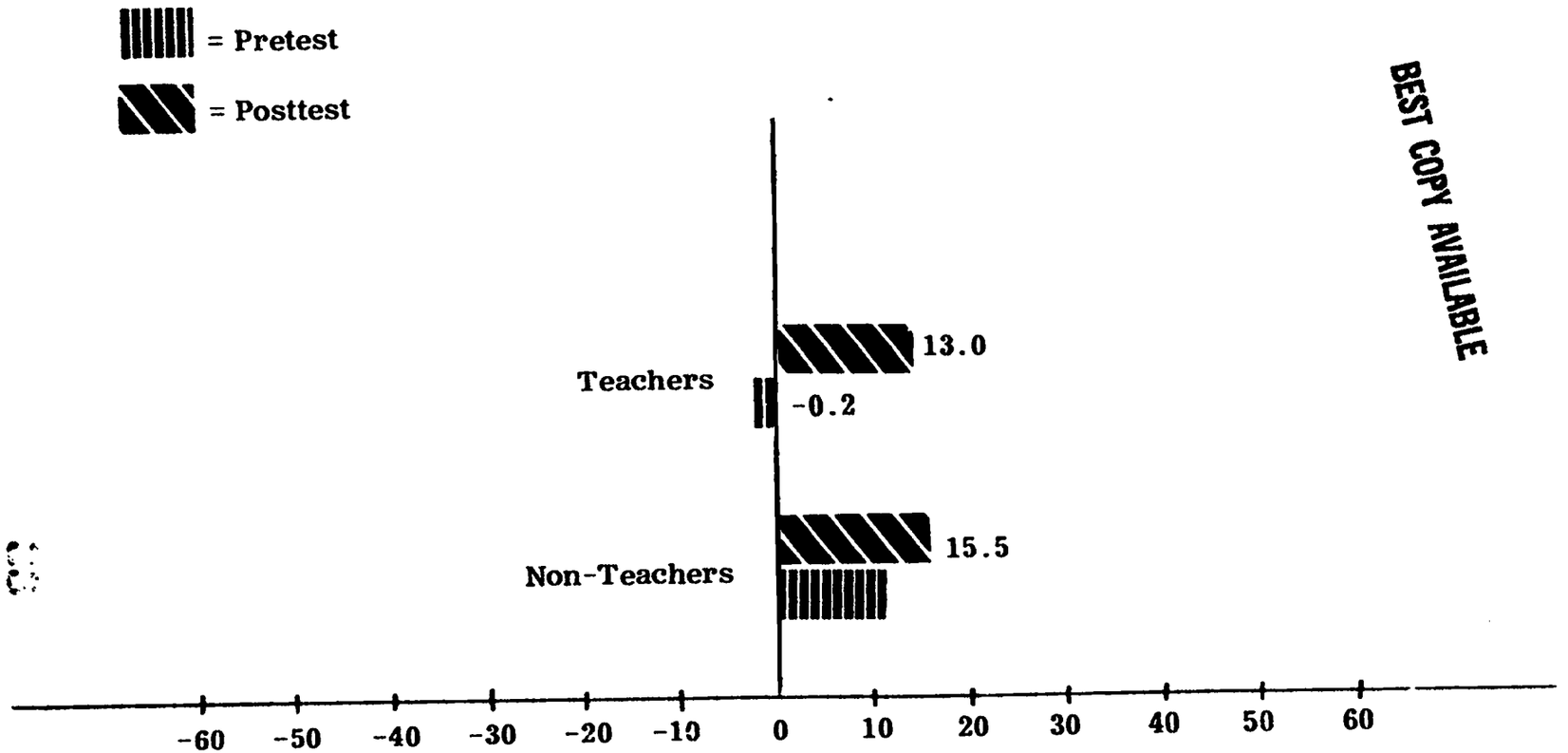




**Figure 2: Pre and Post Total Score Means on the Educational Scale for Teachers and Non-Teachers**

tion, less lecturing and more discussion, use of various media, development of materials, regular observation of classes, etc. The total score also reflects that both groups show a more favorable overall attitude toward progressive educational practices than they did the previous year, especially the program teachers (see Table 10 and Figure 2). The reasons for the rather dramatic attitudinal change of the teachers may be the result of the staff meetings, the in-service program (particularly those workshops where the teachers and curriculum specialits interacted), the hiring of new young teachers, the experiences gained by one year's participation in the program by half of the teaching staff enabling them to assist and advise the new teachers, or the leadership and encouragement provided by the program director.

In sum, if the bilingual-bicultural concept of education is considered to be innovative and progressive, then the data suggest that many of the program personnel involved in the teaching and non-teaching processes have ideas, beliefs, and opinions that are consistent with the concept.

# INSTRUCTIONAL COMPONENT

## Introduction

The product objectives of the Instructional Component focused on student achievement in the academic areas of mathematics, science, social studies, and language arts; and on the comprehension and oral production of Portuguese and English speech and grammatical structures.

In October, 1973 fifth and sixth grade English dominant students were administered the Mathematics, Science, Reading, and Language Arts subtests from the 1970 edition of the Metropolitan Achievement Tests, Intermediate Level. At the same time, the fifth and sixth grade comparison groups at the McDonough and Spring Street schools were administered the same subtests. During the first part of November, 1973, all English dominant students were administered the Portuguese Oral Productive Test which was specially constructed for the program.

Assessment of the degree to which the fifth and sixth grade Portuguese dominant students accomplished the product objectives was through the number of curriculum units they successfully completed in the subject areas of Mathematics, science, Social Studies, and Language Arts. Curriculum units successfully completed were determined by the results of criterion referenced unit tests. The number of successfully completed units was collected during the year by the classroom teachers and presented to the evaluator at the end of May, 1974. Also, in October, 1973 the Portuguese dominant students were administered project prepared achievement tests in Mathematics, Science, Social Studies, and Language Arts.

To assess the students' ability to speak and understand English the Michigan Oral Productive Test and the Test of Aural Comprehension were administered in October.

All posttests were administered to fifth and sixth grade English and Portuguese dominant students in May, 1974.

To accomplish the instructional objectives established for the English dominant students, the teachers used as their basic text for all content areas the individualized learning materials of the Continuous Progress Laboratories (CPL). Teachers used the individualized learning materials developed by the curriculum specialists in all content areas to accomplish the instructional objectives stated for the Portuguese dominant students. These materials were in the form of curriculum units and followed the format of the CPL materials.

In the discussion of the evaluation results, two or more instructional objectives that are similar except for grade level were combined to form one objective. The composite objective, however, is referenced by the objective numbers that were used in the project proposal for each objective that contributed to its formulation. For example, objectives 5-P-1.0 and 6-P-1.0 presented together refer to the "first objective (1.0) for the fifth (5) and sixth (6) grade Portuguese dominant students (P).

## Evaluation of Objectives

### Objectives 5-P-1.0, 6-P-1.0

> Seventy-five percent of the fifth and 75% of the sixth grade Portuguese speaking children will demonstrate increased proficiency in language arts/reading in Portuguese as evidenced by successful completion of 7 of 10 language arts/reading instructional units.

Evaluation

Ten Language Arts/Reading units were developed by the language arts curriculum specialist. Each unit contained, among other things, behaviorally stated objectives and a criterion referenced test. Successful completion of a unit is based on the results of the unit "posttest"--students must receive a percentage score of at least 75%. The record of successfully completed units for each student was kept by the classroom teacher, and were given to the evaluator at the end of May. Data was collected for seven classes--three fifth and four sixth grade classes. The number of units completed by each student was determined and results tallied and compared to the objective's criterion.

Students were also administered the project-prepared (by the language arts specialist) language arts achievement test on a pre-post basis (September-May). The results were analyzed with a t-test for correlated data by class and across schools (the low ability class at Hartwell was not included in this analysis). The results of all analyses are reported in Tables 11-14. Results of the project prepared achievement test are also graphically reported in Figure 3.

The data shown in Table 11 indicate that the objective criterion was not met at either grade level. Inspection of the results by school (Table 12), however, show that one of three fifth grade classes and two of three sixth grade classes did meet the criterion. (The fourth sixth grade class was not generally or expected to be included in the overall results.) Based on these results, therefore, the objective was partially accomplished.

The results of the achievement test (Tables 13 and 14, and Figure 3) indicate that significant gains were demonstrated by all classes at both grade levels.

Table 11

Number of Language Arts/Reading Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students Across Schools and Compared to Criterion Number

| Grade Level | Number of Units Completed | | | | | | | | | | Criterion Unit Number | Students At Or Above Criterion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | N | % |
| 5 (N=57) | - | 2 | 8 | 10 | 1 | 5 | 20 | 1 | 10 | - | 7 | 31 | 54 |
| 6 (N=65) | 1 | 4 | 8 | 7 | 4 | 2 | - | 37 | 2 | - | 7 | 39 | 60 |

Table 12

Number of Language Arts/Reading Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students and Compared to Criterion Number by Schools

| Grade Level | School | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Criterion Unit Number | Students at or Above Criterion N | Students at or Above Criterion % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | McDonough | (N=17) | - | - | 6 | - | 1 | - | - | - | 10 | - | 7 | 10 | 59 |
| | Watson | (N=21) | - | 2 | - | - | - | - | 19 | - | - | - | 7 | 19 | 90 |
| | Hartwell | (N=19) | - | - | 2 | 10 | - | 5 | 1 | 1 | - | - | 7 | 2 | 11 |
| | Combined Schools | (N=57) | - | 2 | 8 | 10 | 1 | 5 | 20 | 1 | 10 | - | 7 | 31 | 54 |
| 6 | McDonough | (N=19) | - | - | - | 2 | - | - | - | 15 | 2 | - | 7 | 17 | 89 |
| | Watson | (N=21) | 1 | 3 | 7 | 5 | 3 | 2 | - | - | - | - | 7 | 0 | - |
| | Hartwell | (N=25) | - | 1 | 1 | - | 1 | - | - | 22 | - | - | 7 | 22 | 88 |
| | Combined Schools | (N=65) | 1 | 4 | 8 | 7 | 4 | 2 | - | 37 | 2 | - | 7 | 39 | 60 |
| | [a]Hartwell - Low Ability | (N=17) | - | - | - | 17 | - | - | - | - | - | - | 7 | 0 | - |

[a] This class used Fifth Grade materials, but not expected to compete with 5th or 6th grade classes.

The relatively large pre-post gains exhibited are important because they were predicted as the test was a direct measure of the expected year's work.

Table 13

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Programmed Prepared Language Arts/Reading Test Across Schools

| Grade Level | Testing Session | Raw Score $\bar{X}$ | Raw Score S | t |
|---|---|---|---|---|
| 5 (N= 50) | Pre | 21.0 | 20.5 | 20.314* |
| | Post | 75.5 | 19.2 | |
| 6 (N= 62) | Pre | 23.2 | 15.8 | 15.523* |
| | Post | 64.6 | 25.7 | |

* $p < .001$

Since language arts instruction is closely associated with reading, the relatively high number of students who did not complete the expected number of units may be an indication of reading problems. The number of students who "can't read" has been the lament of a number of teachers. The results suggest that a review of the language arts units is necessary and more emphasis on language arts-reading may be required.

Table 14

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Program Prepared Language Arts/Reading Test by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=16) | 12.8 | 11.1 | 75.1 | 23.4 | 13.986** |
| | Watson (N=17) | 14.9 | 14.7 | 79.4 | 12.9 | 25.558** |
| | Hartwell (N=17) | 34.8 | 24.9 | 72.0 | 19.5 | 10.526** |
| | Combined Schools (N=50) | 21.0 | 20.5 | 75.5 | 19.2 | 20.314** |
| 6 | McDonough (N=20) | 29.5 | 17.2 | 80.2 | 12.0 | 14.943** |
| | Watson (N=19) | 14.7 | 13.6 | 42.2 | 29.2 | 4.742** |
| | Hartwell (N=23) | 24.9 | 13.0 | 69.4 | 17.5 | 13.803** |
| | [a]Hartwell - Low Ability (N=19) | 6.6 | 4.8 | 13.5 | 9.9 | 2.747* |
| | Combined Schools (N=62) | 23.2 | 15.8 | 64.6 | 25.7 | 15.523** |

a This class was not included in the Across Schools (Combined) analysis

* $p < .05$; ** $p < .001$

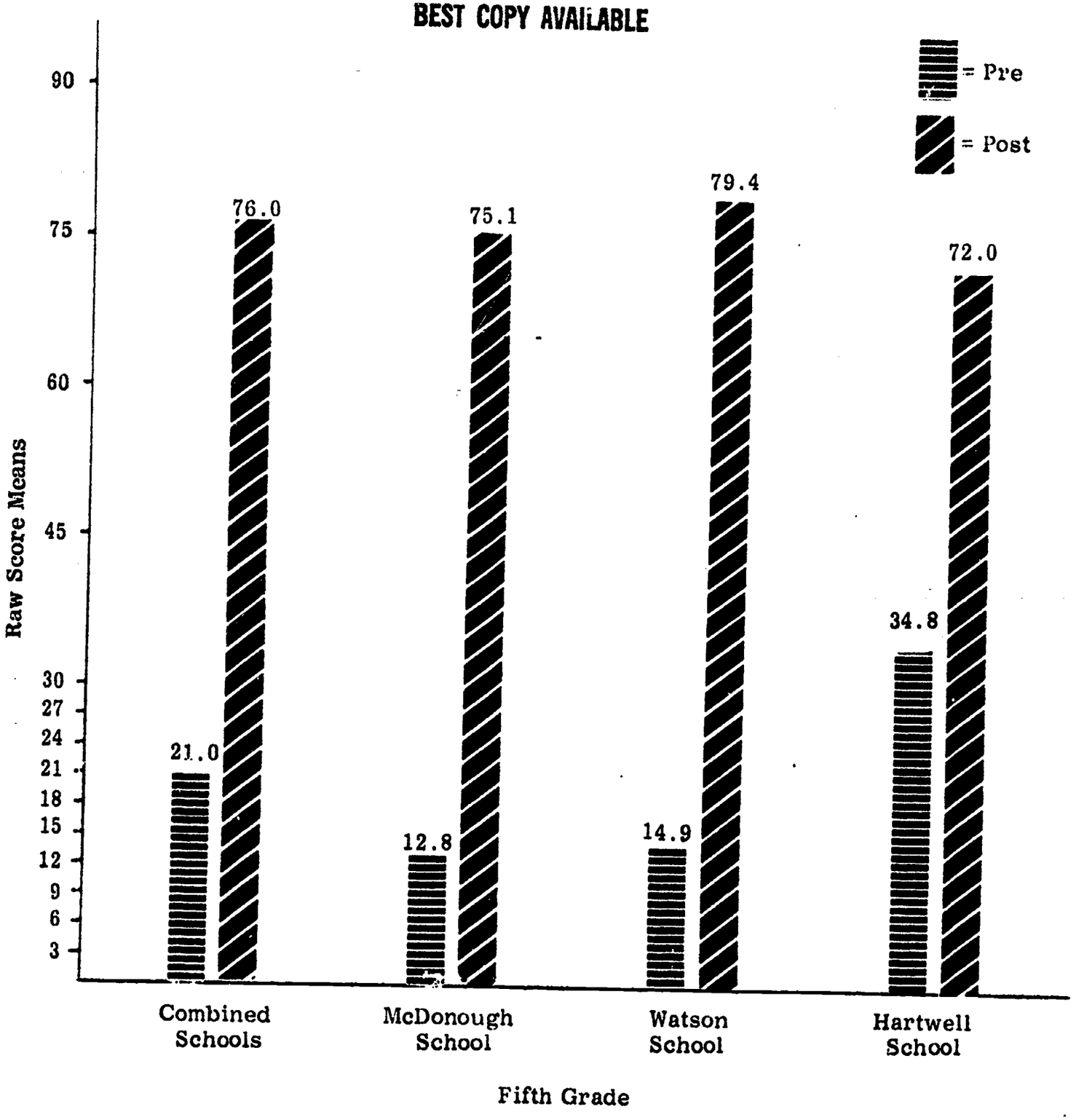


Figure 3: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Program Prepared Language Arts/Reading Test

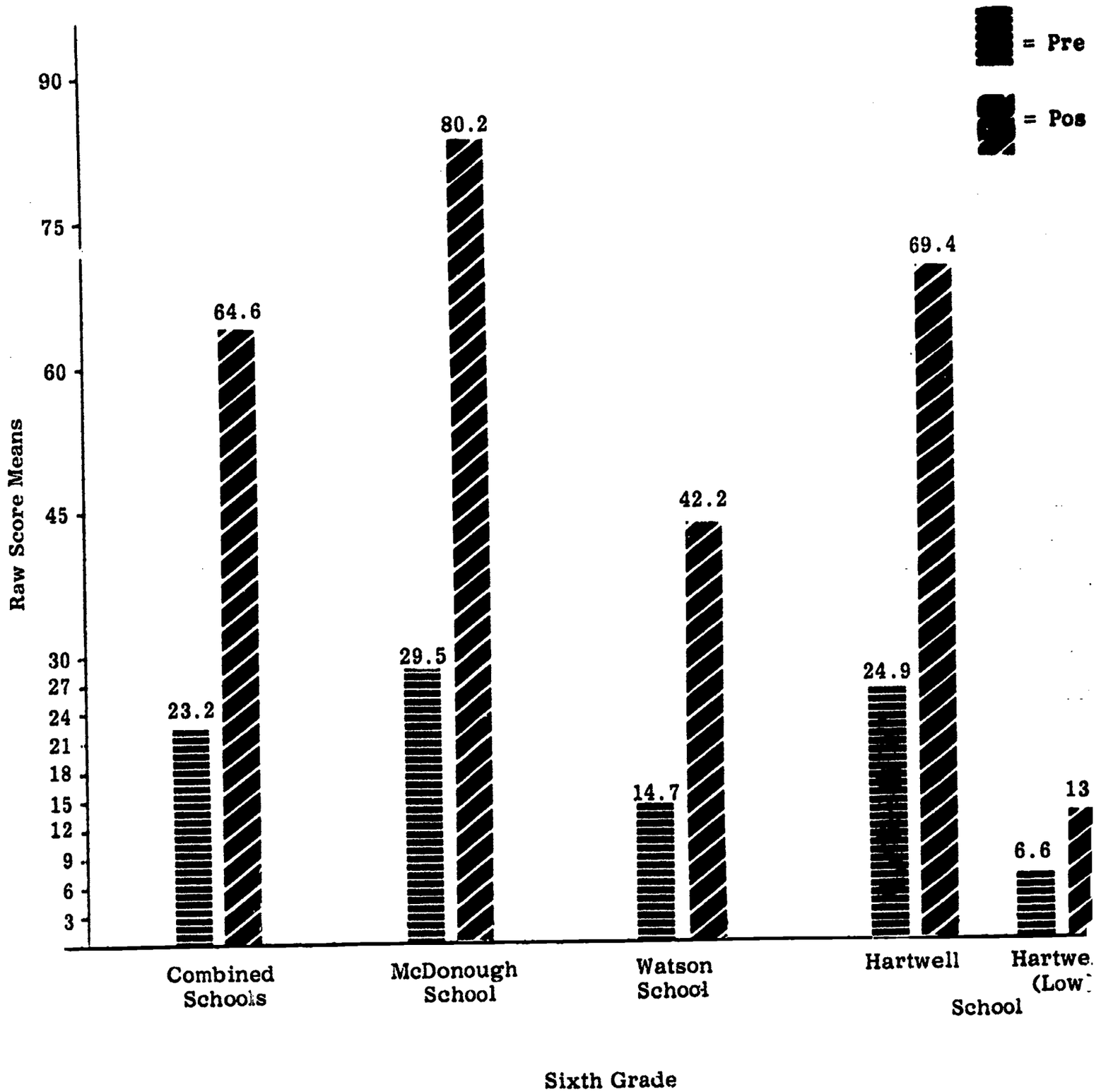


Figure 3 (Cont.)

Objectives 5-P-2.0, 6-P-2.0

> Seventy-five percent of the fifth and 75% of the sixth grade Portuguese speaking children will demonstrate increased proficiency in mathematics as evidenced by successful completion of 6 of 8 and 6 of 9 mathematics instructional units respectively.

Evaluation

The mathematics curriculum specialist developed nine curriculum units and an achievement test. Each of the units contained unit objectives in behavioral terms, and a criterion referenced test. Examples of the content covered by the units are basic operations, with whole numbers and fractions, set theory, and fractions and decimals. Successful completion of a unit was determined by a percentage score of at least 75% of each unit test. The number of students successfully completing units was determined within and across schools and compared to the stated criterion level. Also pre-post achievement test results were analyzed for statistical significance within and across schools. The results of all analyses are presented in Tables 15-18. Achievement tests results are also presented in Figure 4.

The data summary reported in Table 15 indicate that the criterion was met at the fifth grade level but not at the sixth. Examination of the results by school (Table 16) show that for two of the three schools at each level more than 75% of the students completed six or more units.

Table 15

Number of Mathematics Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students Across Schools and Compared to Criterion Number

| Grade | Number of Units Completed | | | | | | | | | | | | Criterion Unit Number | Students At Or Above Criterion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | N | % |
| 5 (N=57) | - | - | 8 | 1 | 2 | 14 | 4 | 28 | - | - | - | - | 6 | 46 | 81 |
| 6 (N=70) | 1 | 4 | 7 | 7 | 4 | 10 | - | 37 | - | - | - | - | 6 | 47 | 67 |

Table 16

Number of Mathematics Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students and Compared to Criterion Number By Schools

| Grade Level | School | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Criterion Unit Number | Students at or Above Criterion N | Students at or Above Criterion % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | McDonough | (N=17) | - | - | - | 1 | 1 | 2 | 2 | 4 | 7 | - | - | 6 | 13 | 76 |
| | Watson | (N=21) | - | - | - | 2 | - | - | - | - | 19 | - | - | 6 | 19 | 90 |
| | Hartwell | (N=19) | - | - | - | 5 | - | - | 12 | - | 2 | - | - | 6 | 14 | 74 |
| | Combined Schools | (N=57) | - | - | - | 8 | 1 | 2 | 14 | 4 | 28 | - | - | 6 | 46 | 81 |
| 6 | McDonough | (N=22) | - | 1 | 2 | - | 2 | - | 3 | - | 14 | - | - | 6 | 17 | 77 |
| | Watson | (N=22) | - | - | 2 | 5 | 5 | 3 | 7 | - | - | - | - | 6 | 7 | 32 |
| | Hartwell | (N=26) | - | - | - | 2 | - | 1 | - | - | 23 | - | - | 6 | 23 | 88 |
| | Combined Schools | (N=70) | - | 1 | 4 | 7 | 7 | 4 | 10 | - | 37 | - | - | 6 | 47 | 67 |
| | [a]Hartwell - Low Ability | (N=22) | 5 | - | - | 1 | 16 | - | - | - | - | - | - | 6 | 0 | 0 |

[a] This class used Fifth Grade materials, but not expected to compete with 5th or 6th grade classes.

The results of the significance tests are shown in Tables 17 and 18, and Figure 4. As predicted, the pre- and post-test gains were quite large and all were satistically significant. The fifth and sixth grades at the Watson are both conspicuous, but for different reasons--the fifth grade for its demonstrated achievement gains, the sixth grade for its lack of achievement. (This was also found in the language arts results.)

Table 17

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Programmed Prepared Mathematics Test Across Schools

| Grade Level | Testing Session | Raw Score | | t |
|---|---|---|---|---|
| | | $\bar{X}$ | S | |
| 5 (N= 60) | Pre | 24.6 | 10.7 | 12.123* |
| | Post | 58.9 | 25.2 | |
| 6 (N= 67) | Pre | 22.7 | 10.9 | 12.088* |
| | Post | 50.0 | 20.7 | |

* $p < .001$

Table 18

Statistical Results for Fifth and Sixth Grade Portuguese Students on the Program Prepared Mathematics Test by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=17) | 25.7 | 8.0 | 62.3 | 24.6 | 6.113* |
| | Watson (N=21) | 27.2 | 9.6 | 70.1 | 24.6 | 9.220* |
| | Hartwell (N=22) | 21.2 | 12.4 | 45.6 | 19.4 | 6.933* |
| | Combined Schools (N=60) | 24.6 | 10.7 | 58.9 | 25.2 | 12.123* |
| 6 | McDonough (N=21) | 24.8 | 14.1 | 51.9 | 18.0 | 8.044* |
| | Watson (N=21) | 21.4 | 7.8 | 32.2 | 11.0 | 6.071* |
| | Hartwell (N=25) | 22.1 | 9.7 | 63.3 | 18.2 | 13.248* |
| | [a]Hartwell - Low Ability (N=19) | 12.9 | 7.5 | 29.0 | 7.5 | 8.820* |
| | Combined Schools (N=67) | 22.7 | 10.9 | 50.0 | 20.7 | 12.088* |

[a] This class was not included in the across schools analysis

* $p < .001$

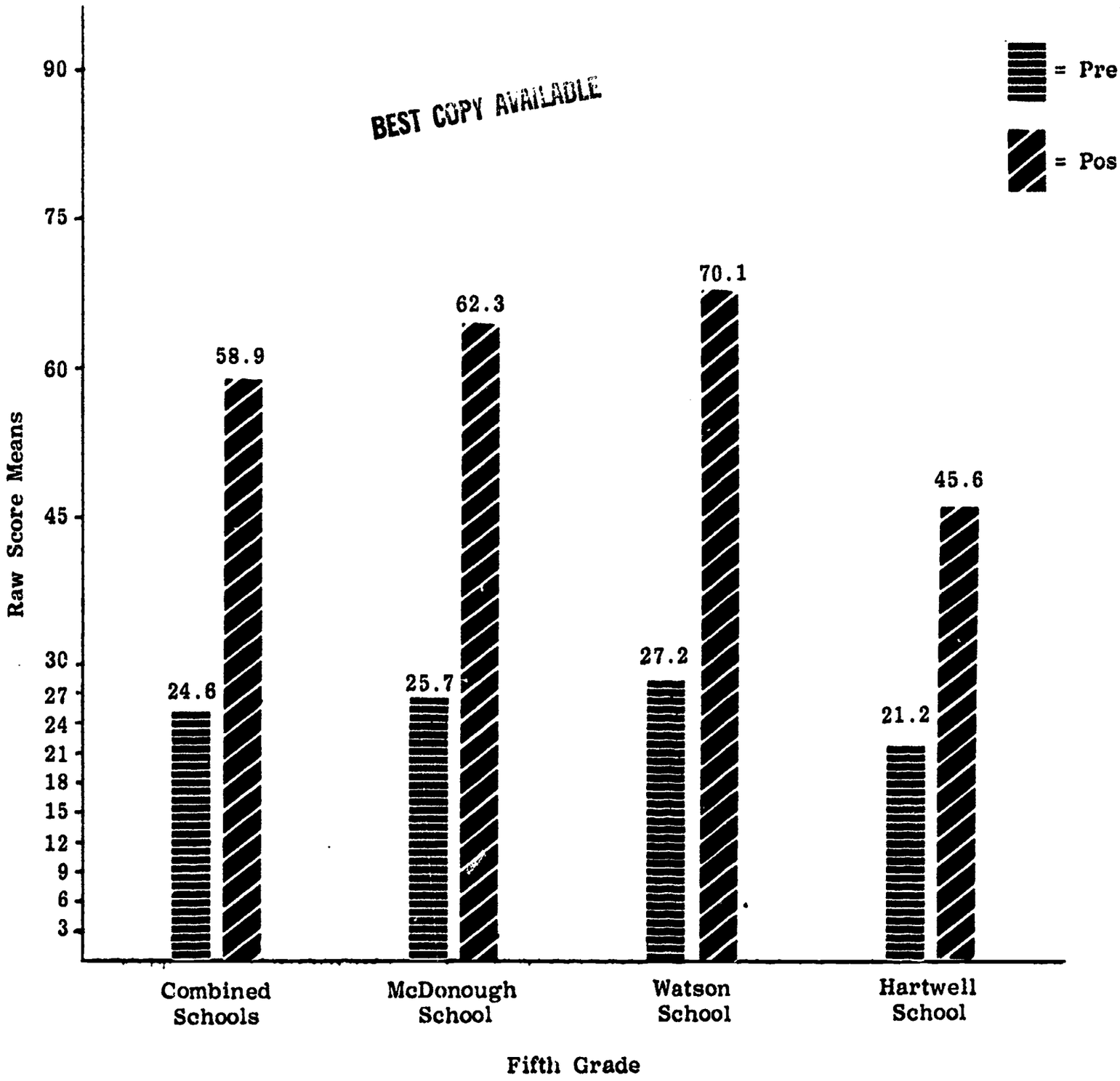


Figure 4: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Program Prepared Mathematics Test

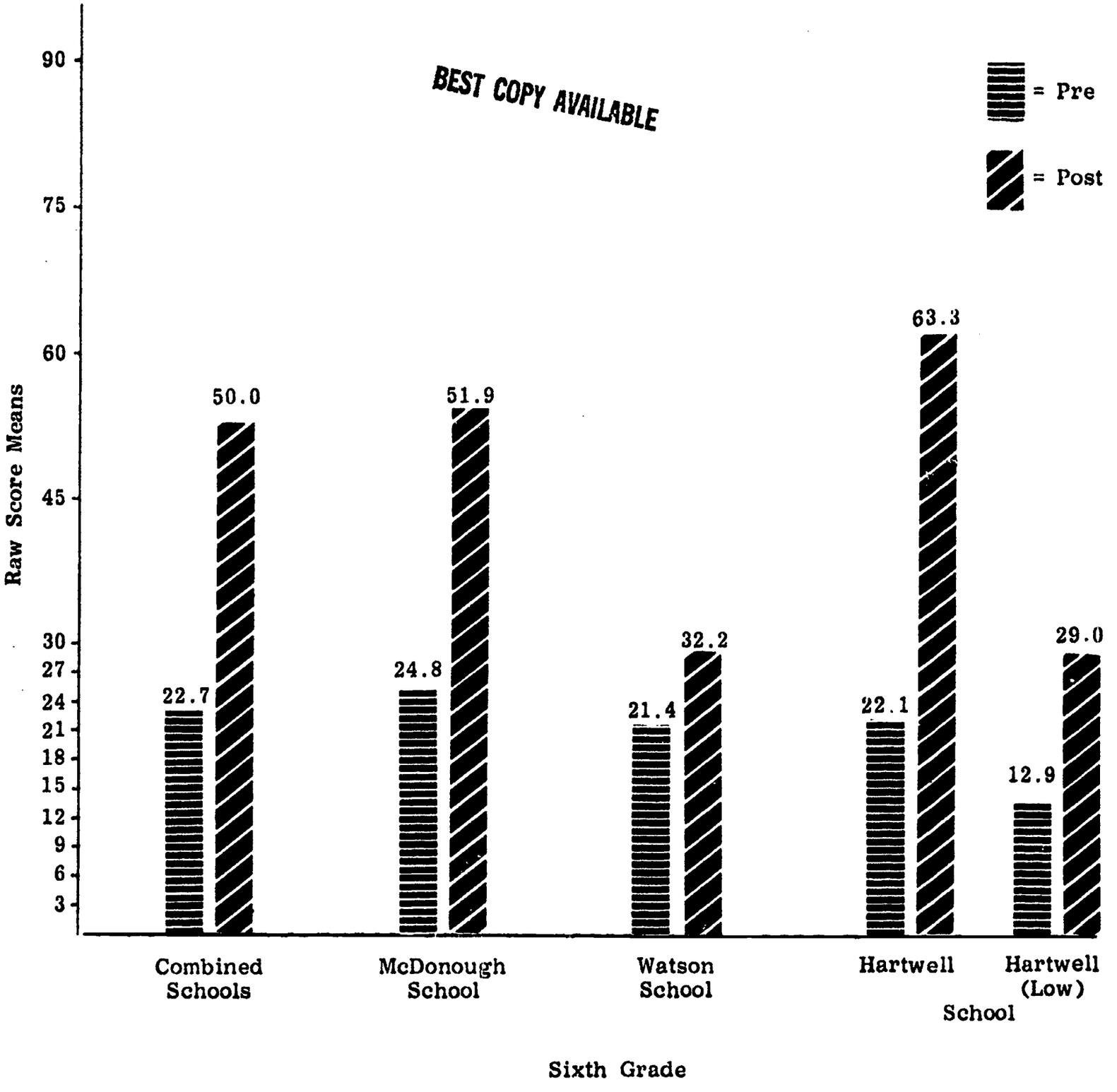


Figure 4 (Cont.)

Objectives 5-P-3.0, 6-P-3.0

> Seventy-five percent of the fifth and 75% of the sixth grade Portuguese speaking children will demonstrate increased proficiency in science as evidenced by successful completion of 7 of 10 science instructional units.

Evaluation

Ten science units were developed by science curriculum specialist. They included such content areas as Life science-human nervous system, Earth science-water, and Matter and Energy-objects in motion. The units contained objectives, tests, written material, practice exercises, suggested activities, audio-visuals, and selected references. (Incidentally, the units prepared in all the subject areas were similar in format.) An achievement test was constructed to assess the content covered by all the units, as was done in the other subject areas previously discussed. The criterion defining successful completion is the same for science as it was for the other subject areas--a 75% score. Analyses were performed to determine the percentage of students completing six (for grade 5) and seven (for grade 6) or more curriculum units, and to compare the results with the criterion stated. Pre- to post-test raw score mean differences on the achievement test were tested for statistical significance. Results are reported in Tables 19-22 and Figure 5.

The summary of the data tabulation reported in Tables 19 and 20 indicate that the fifth grade classes as a group exceeded the criterion and the sixth grade group was close to criterion. The results for separate schools shows that two of the three schools at the fifth grade level (again the Watson school was exceptional) and one of three schools at the sixth grade level exceeded the criterion. The objective was accomplished for grade 5 and partially accomplished for grade 6.

Table 19

Number of Science Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students Across Schools and Compared to Criterion Number

| Grade Level | Number of Units Completed | | | | | | | | | | Criterion Unit Number | Students At Or Above Criterion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | N | % |
| 5 (N=57) | - | - | 1 | 4 | 5 | 1 | 1 | 26 | 19 | - | 6 | 47 | 82 |
| 6 (N=70) | - | - | 4 | 10 | 3 | 1 | 3 | 23 | 26 | - | 7 | 52 | 74 |

Table 20

Number of Science Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students and Compared to Criterion Number By Schools

| Grade Level | School | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Criterion Unit Number | Students at or Above Criterion N | Students at or Above Criterion % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | McDonough | (N=17) | – | – | – | 1 | 1 | 5 | 1 | – | 9 | – | – | 6 | 10 | 59 |
| | Watson | (N=21) | – | – | – | – | – | – | – | – | 5 | 16 | – | 6 | 21 | 100 |
| | Hartwell | (N=19) | – | – | – | – | 3 | – | – | 1 | 12 | 3 | – | 6 | 16 | 84 |
| | Combined Schools | (N=57) | – | – | – | 1 | 4 | 5 | 1 | 1 | 26 | 19 | – | 6 | 47 | 82 |
| 6 | McDonough | (N=22) | – | – | – | 3 | 4 | – | – | 1 | 14 | – | – | 7 | 15 | 68 |
| | Watson | (N=22) | – | – | – | 1 | 4 | 2 | 1 | 2 | 9 | 3 | – | 7 | 14 | 64 |
| | Hartwell | (N=26) | – | – | – | – | 2 | 1 | – | – | – | 23 | – | 7 | 23 | 88 |
| | Combined Schools | (N=70) | – | – | – | 4 | 10 | 3 | 1 | 3 | 23 | 26 | – | 7 | 52 | 74 |
| | [a]Hartwell – Low Ability | (N=22) | 5 | – | – | – | 17 | – | – | – | – | – | – | 6 | 0 | 0 |

[a] This class used Fifth Grade materials, but not expected to compete with 5th or 6th grade classes.

Again, all schools at both grade levels (either combined--Table 21, or individually--Table 22) exhibited significant growth on the science achievement test. The pre-post-test raw score means are also summarized in Figure 5 for the schools. In Figure 5, the difference in growth experienced by the fifth grade Watson students and the others stands out dramatically.

Table 21

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Programmed Prepared Science Test Across Schools

| Grade Level | Testing Session | Raw Score $\bar{X}$ | Raw Score S | t |
|---|---|---|---|---|
| 5 (N= 56) | Pre | 25.3 | 15.9 | 12.139* |
| | Post | 66.2 | 21.4 | |
| 6 (N= 64) | Pre | 38.0 | 13.6 | 12.221* |
| | Post | 64.2 | 17.2 | |

* $p < .001$

Table 22

Statistical Results for Fifth and Sixth Grade Portuguese Students on the Program Prepared Science Test by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=14) | 36.6 | 13.3 | 70.3 | 22.9 | 5.138** |
| | Watson (N=21) | 17.2 | 15.7 | 77.7 | 15.6 | 19.677** |
| | Hartwell (N=21) | 25.7 | 12.5 | 52.0 | 16.8 | 6.953** |
| | Combined Schools (N=56) | 25.3 | 15.9 | 66.2 | 21.4 | 12.139** |
| 6 | McDonough (N=20) | 37.0 | 11.3 | 74.3 | 14.2 | 13.336** |
| | Watson (N=19) | 34.7 | 13.3 | 50.4 | 16.0 | 4.411** |
| | Hartwell (N=25) | 39.9 | 12.1 | 66.6 | 13.0 | 9.804** |
| | [a]Hartwell - Low Ability (N=16) | 31.8 | 13.6 | 46.3 | 10.8 | 3.456* |
| | Combined Schools (N=64) | 38.0 | 13.6 | 64.2 | 17.2 | 12.221** |

a This class was not included in the across schools analysis

* $p < .01$; ** $p < .001$

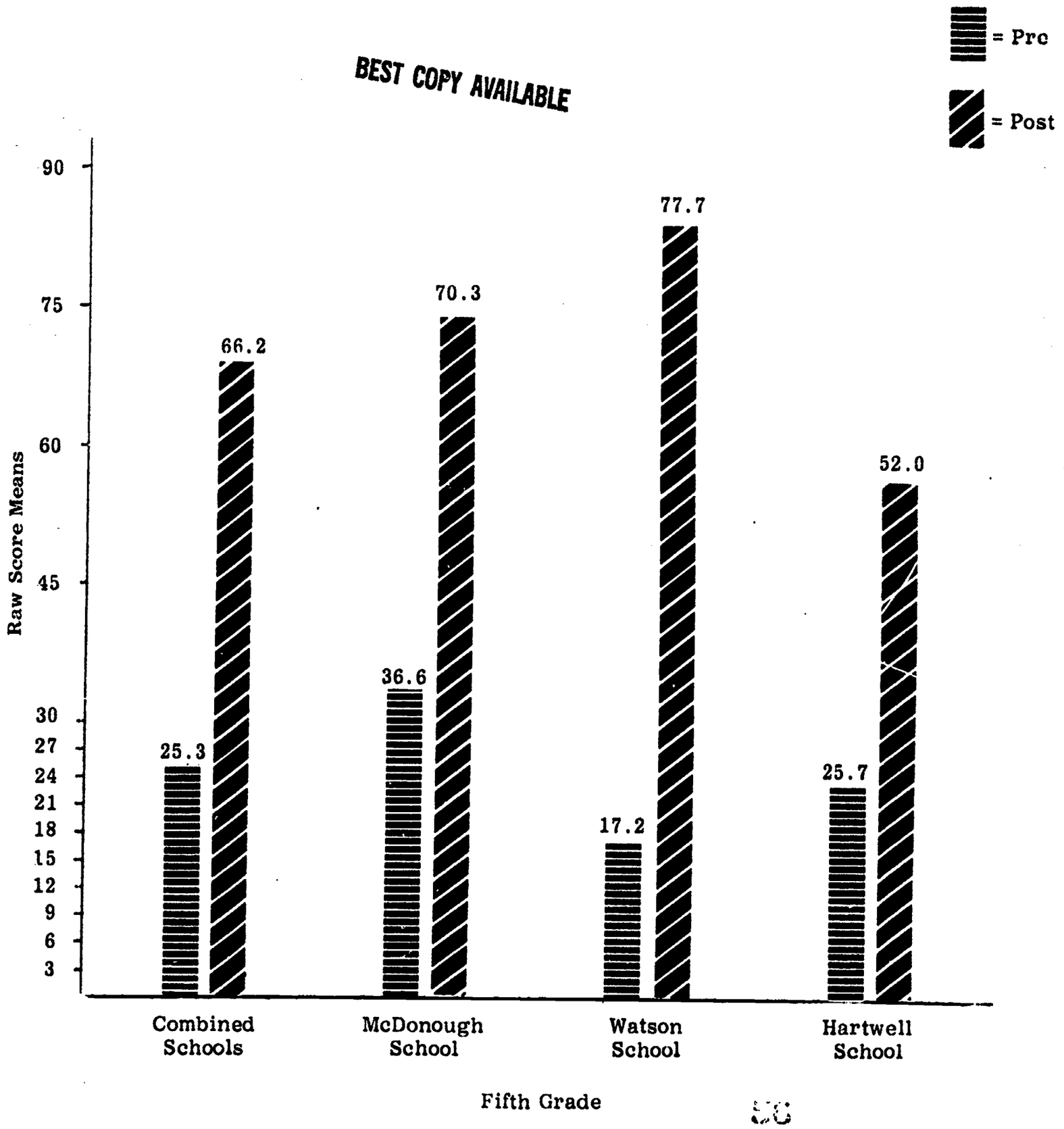


Figure 5: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Program Prepared Science Test

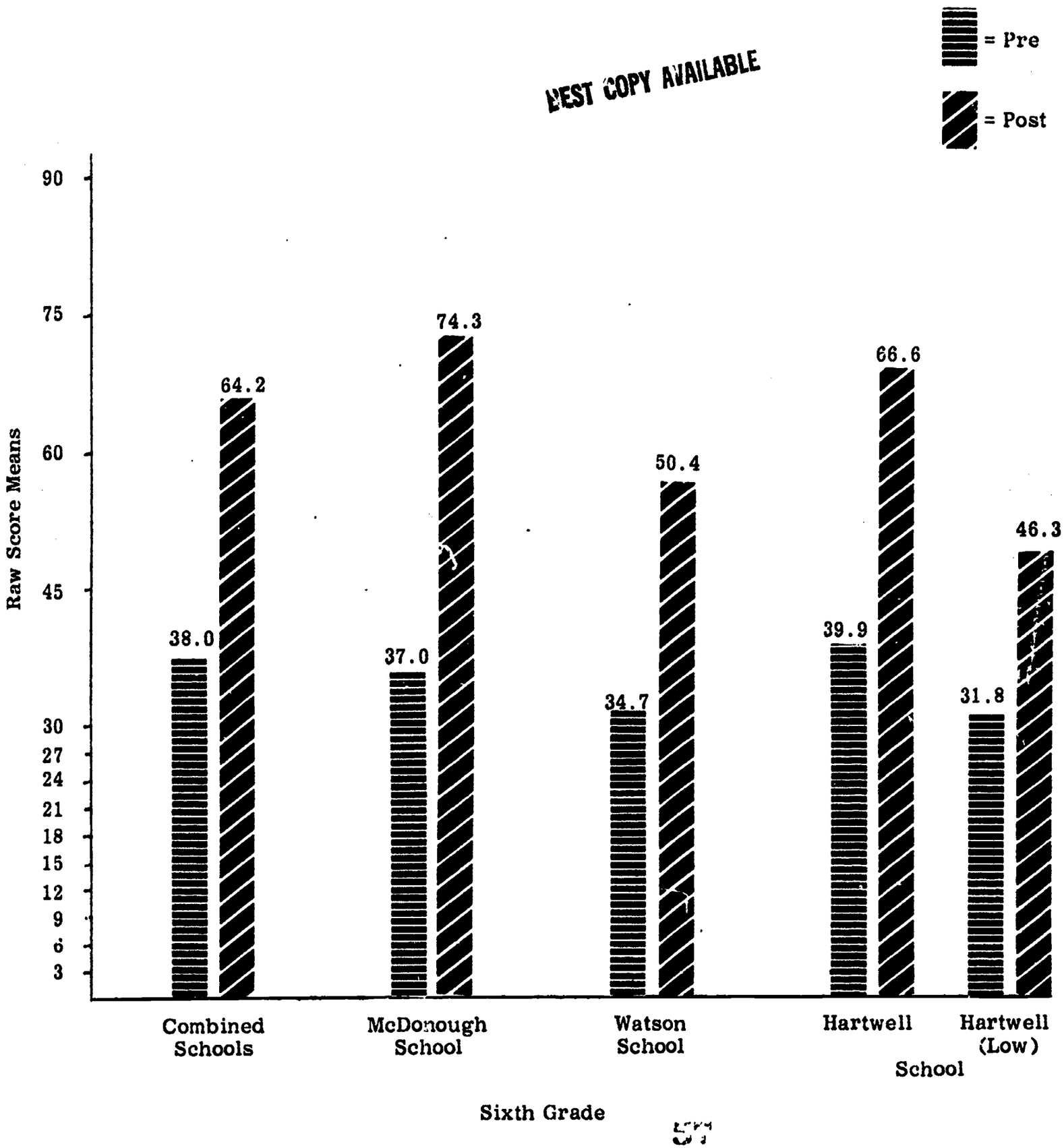


Figure 5 (Cont.)

Objectives 5-P-4.0, 6-P-4.0

> Seventy-five percent of the fifth grade and 75% of the sixth grade Portuguese speaking children will demonstrate increased proficiency in social studies as evidenced by successful completion of 8 of 12 and 6 of 9 social studies instructional units respectively.

Evaluation

Nine units were developed by the social studies specialist this year (12 the previous year). The units had the same content format as previously described including the achievement test. A summary of the tabulation of the number of curriculum units successfully completed and achievement test results are reported in Tables 23-26 and Figure 6.

Inspection of Tables 23 and 24 reveals that the sixth grade Portuguese dominant students surpassed the criterion while the fifth grade did not. When the criterion is judged against the individual schools, however, the reason for the failure of the fifth grade students to achieve the criterion is obvious--not one student completed eight or more units in one of the three classes. The end result was that in two of three fifth grade classes and in all three of the sixth grade classes, 75% or more of the students completed at least eight units successfully. The objective, therefore, was partially achieved at the fifth grade level and achieved at the sixth grade level.

Table 23

Number of Social Studies Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students Across Schools and Compared to Criterion Number

| Grade Level | Number of Units Completed | | | | | | | | | | | | Criterion Unit Number | Students At Or Above Criterion | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | N | % |
| 5 (N=58) | - | - | - | 1 | 2 | 1 | 19 | 30 | 3 | 1 | 1 | - | 8 | 35 | 60 |
| 6 (N=68) | - | - | 2 | 1 | 4 | 6 | 15 | 40 | - | - | - | - | 6 | 61 | 90 |

Table 24

Number of Social Studies Curriculum Units Completed by Fifth and Sixth Grade Portuguese Dominant Students and Compared to Criterion Number by Schools

| Grade Level | School | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Criterion Unit Number | Students at or Above Criterion N | Students at or Above Criterion % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | McDonough | (N=18) | - | - | - | - | 1 | 1 | 2 | 11 | 1 | 1 | 1 | 8 | 14 | 78 |
| | Watson | (N=21) | - | - | - | - | - | - | - | 19 | 2 | - | - | 8 | 21 | 100 |
| | Hartwell | (N=19) | - | - | - | 1 | 1 | - | 17 | - | - | - | - | 8 | 0 | 0 |
| | Combined Schools | (N=58) | - | - | - | 1 | 2 | 1 | 19 | 30 | 3 | 1 | 1 | 8 | 35 | 60 |
| 6 | McDonough | (N=20) | - | - | - | - | 1 | - | 7 | 12 | - | - | - | 6 | 19 | 95 |
| | Watson | (N=22) | - | - | 1 | - | 2 | 6 | 8 | 5 | - | - | - | 6 | 19 | 86 |
| | Hartwell | (N=26) | - | - | 1 | 1 | 1 | - | - | 23 | - | - | - | 6 | 23 | 88 |
| | Combined Schools | (N=68) | - | - | 2 | 1 | 4 | 6 | 15 | 40 | - | - | - | 6 | 61 | 90 |
| | [a]Hartwell - Low Ability | (N=20) | - | - | - | 20 | - | - | - | - | - | - | - | 8 | 0 | 0 |

[a] This class used Fifth Grade materials, but not expected to compete with 5th or 6th grade classes.

As predicted, the students demonstrated significant growth on the achievement test between testing sessions. The findings do indicate, however, that the students as a group at both grade levels, began the year quite knowledgeable about social studies as measured by the project prepared achievement test. Those data are presented in Tables 25-26 and Figure 6.

Table 25

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Programmed Prepared Social Studies Test Across Schools

| Grade Level | Testing Session | Raw Score | | t |
|---|---|---|---|---|
| | | $\bar{X}$ | S | |
| 5 (N= 55) | Pre | 37.0 | 14.9 | 8.746* |
| | Post | 58.5 | 13.9 | |
| 6 (N= 60) | Pre | 40.0 | 12.4 | 16.845* |
| | Post | 70.4 | 9.9 | |

* $p < .001$

Table 26

Statistical Results for Fifth and Sixth Grade Portuguese Students on the Program Prepared Social Studies Test by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=17) | 39.9 | 14.6 | 53.1 | 14.6 | 2.897* |
| | Watson (N=21) | 31.1 | 15.0 | 66.1 | 12.1 | 10.637** |
| | Hartwell (N=17) | 41.4 | 12.5 | 54.5 | 10.7 | 5.566** |
| | Combined Schools (N=55) | 37.0 | 14.9 | 58.5 | 13.9 | 8.746** |
| 6 | McDonough (N=16) | 42.3 | 12.6 | 67.7 | 4.9 | 9.474** |
| | Watson (N=21) | 38.2 | 15.0 | 63.1 | 7.8 | 7.372** |
| | Hartwell (N=23) | 40.1 | 8.9 | 78.8 | 7.6 | 18.050** |
| | [a]Hartwell - Low Ability (N=20) | 41.3 | 10.4 | 48.0 | 7.4 | 2.550* |
| | Combined Schools (N=60) | 40.0 | 12.4 | 70.4 | 9.9 | 16.845** |

[a] This class was not included in the across schools analysis

* $p < .05$; ** $p < .001$

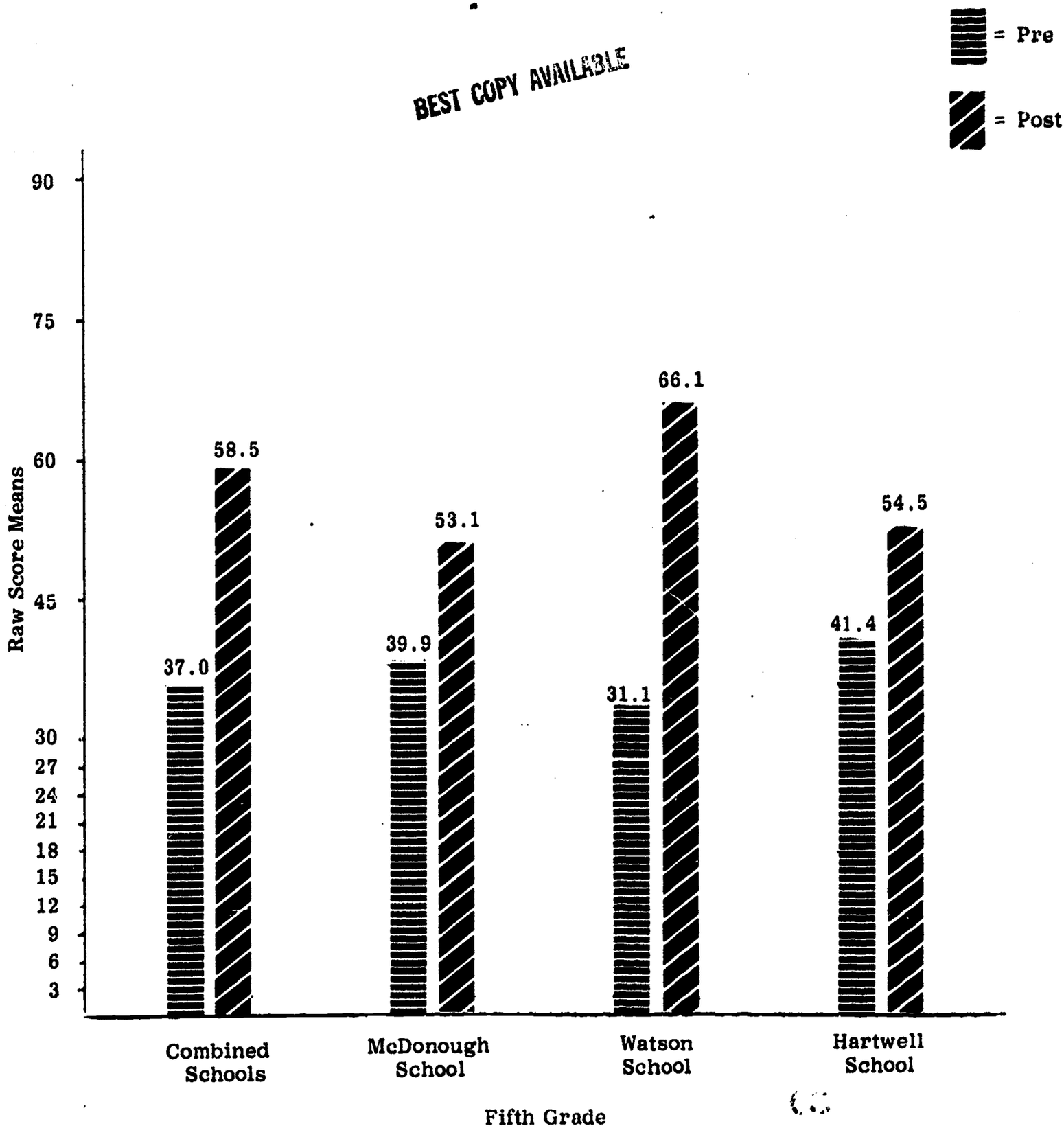


Figure 6: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Program Prepared Social Studies Test

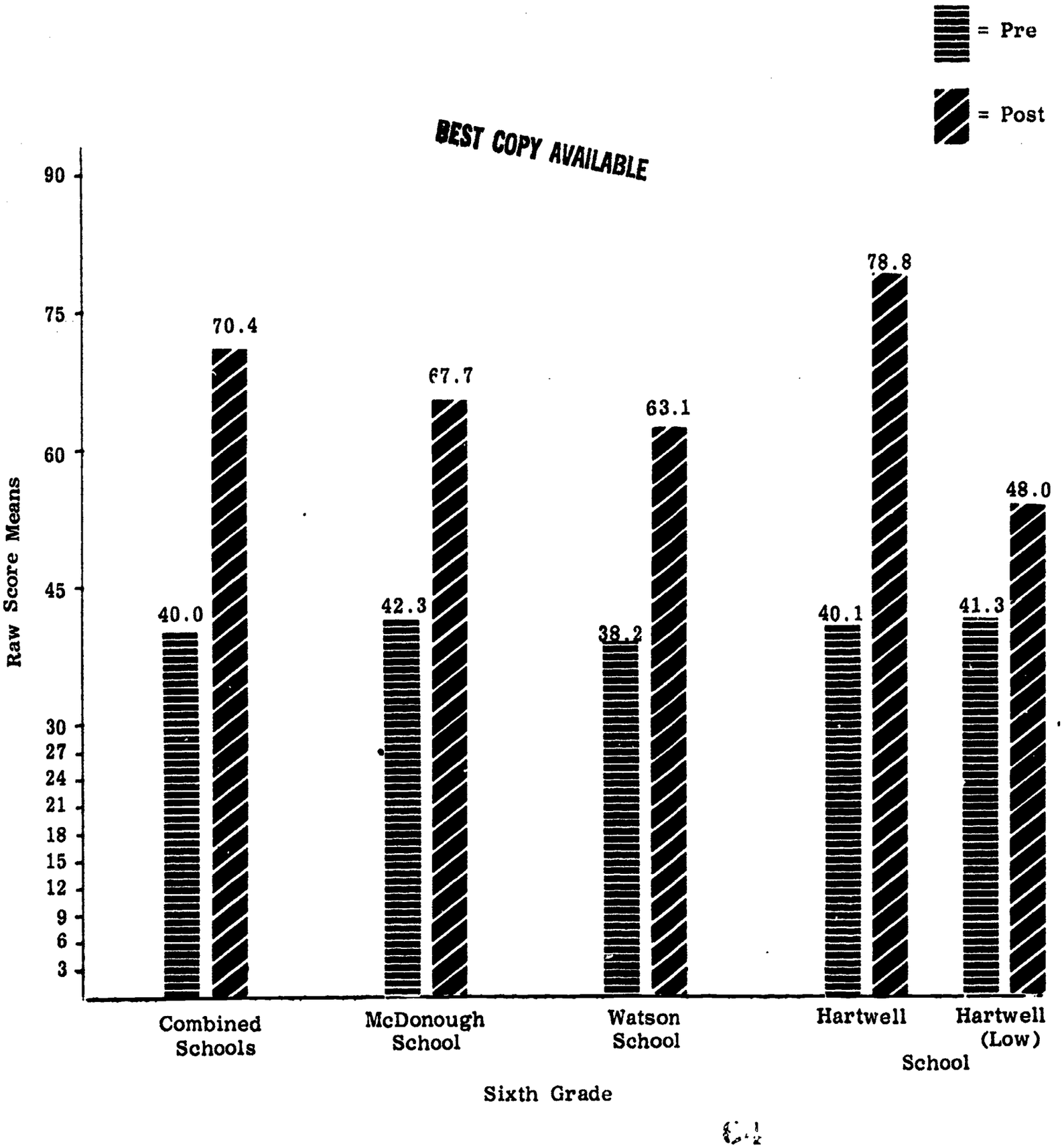


Figure 6 (Cont.)

Objectives 5-P-5.0, 6-P-5.0

Fifth and sixth grade Portuguese speaking students will demonstrate increased proficiency in English as a Second Language as evidenced by a decreased mean raw score on the Michigan Oral Productive test and an increased mean raw score on the Test of Aural Comprehension (Part I). Minimum acceptable level of performance will be statistical significance at the .05 level.

Evaluation

The Michigan Oral Language Productive Test assesses the student's ability to produce standard grammatical and phonological features when he speaks. The test, which is individually administered, contains 43 items, and provides scores in 11 categories such as: uses of be, uses of do, double negative, plurals, and possessives. The student is shown three pictures which form a story, and is given a stimulus concerning one of the pictures. The student then gives a response containing a particular feature of grammar or pronunciation. The score range is 43-378 with the low end of the range representing the best scores.

The Test of Aural Comprehension is designed to measure understanding of spoken English by persons whose native language is not English. Only Part I of the test was administered. It contains 20 short paragraphs which are read aloud to students by the examiner. For each item the students choose from three pictures the one which best corresponds to what the examiner has read. The highest possible score is 20. The test can be administered to groups.

The findings for fifth and sixth grade Portuguese dominant students on the Michigan test are presented in Tables 27-28 and Figure 7. The findings for the same students on the Aural test are presented in Tables 29-30 and Figure 8. For both tests at each grade level, the pre-posttest results were analyzed with t-tests for correlated data.

Inspection of Tables 27 and 28 shows that whether across schools or by the individual schools at each grade level, the students demonstrated a significant decrease in their pre-posttest average raw scores. The performance of the low ability class at the Hartwell Street school was most surprising. Nevertheless, both fifth and sixth grade students increased (represented by the lower posttest scores) in their ability to produce grammatically correct English. These findings are also presented in Figure 7.

Table 27

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Michigan Oral Production Test - Across Schools

| Grade Level | Testing Session | Raw Score $\bar{X}$ | Raw Score S | t |
|---|---|---|---|---|
| 5 (N= 35) | Pre | 248.8 | 90.1 | 8.851* |
| | Post | 189.2 | 74.3 | |
| 6 (N= 69) | Pre | 199.4 | 79.7 | 9.843* |
| | Post | 149.0 | 56.8 | |

* $p < .001$

Table 28

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Michigan Oral Production Test by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=9) | 252.9 | 87.1 | 184.9 | 69.9 | 5.199** |
| | Watson (N=12) | 312.6 | 79.9 | 234.1 | 82.4 | 5.930** |
| | Hartwell (N=14) | 191.6 | 56.4 | 153.5 | 42.7 | 6.046** |
| | Combined Schools (N=35) | 248.8 | 90.1 | 189.2 | 74.3 | 8.851** |
| 6 | McDonough (N=12) | 189.3 | 91.4 | 153.9 | 66.8 | 3.127* |
| | Watson (N=17) | 203.1 | 66.5 | 134.5 | 50.9 | 6.346** |
| | Hartwell (N=21) | 211.9 | 88.3 | 158.0 | 54.6 | 5.008** |
| | Hartwell - Low Ability (N=19) | 188.7 | 69.6 | 149.1 | 54.7 | 6.081** |
| | Combined Schools (N=69) | 199.4 | 79.7 | 149.0 | 56.8 | 9.843** |

* $p < .01$; ** $p < .001$

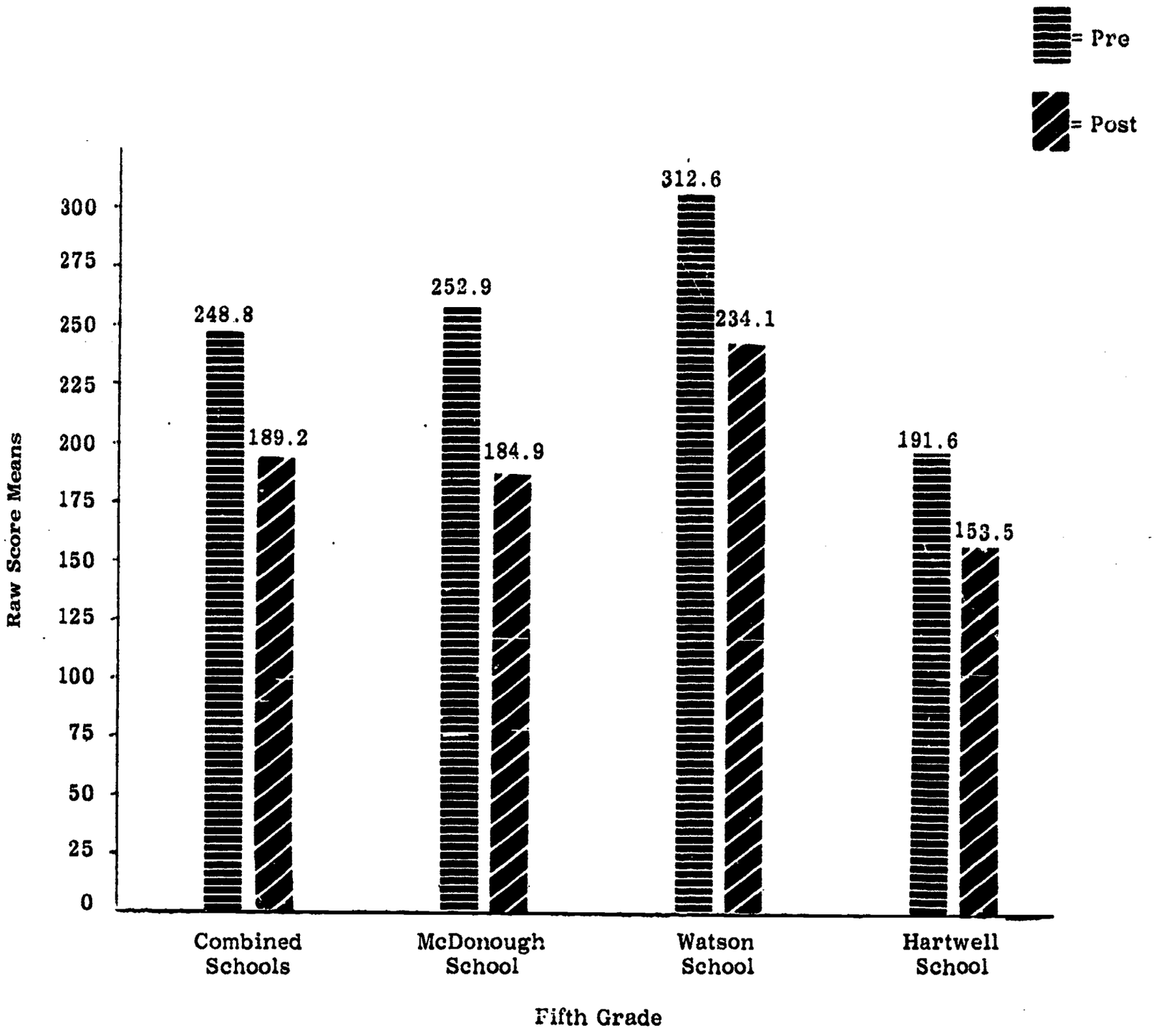


Figure 7: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Michigan Oral Production Test

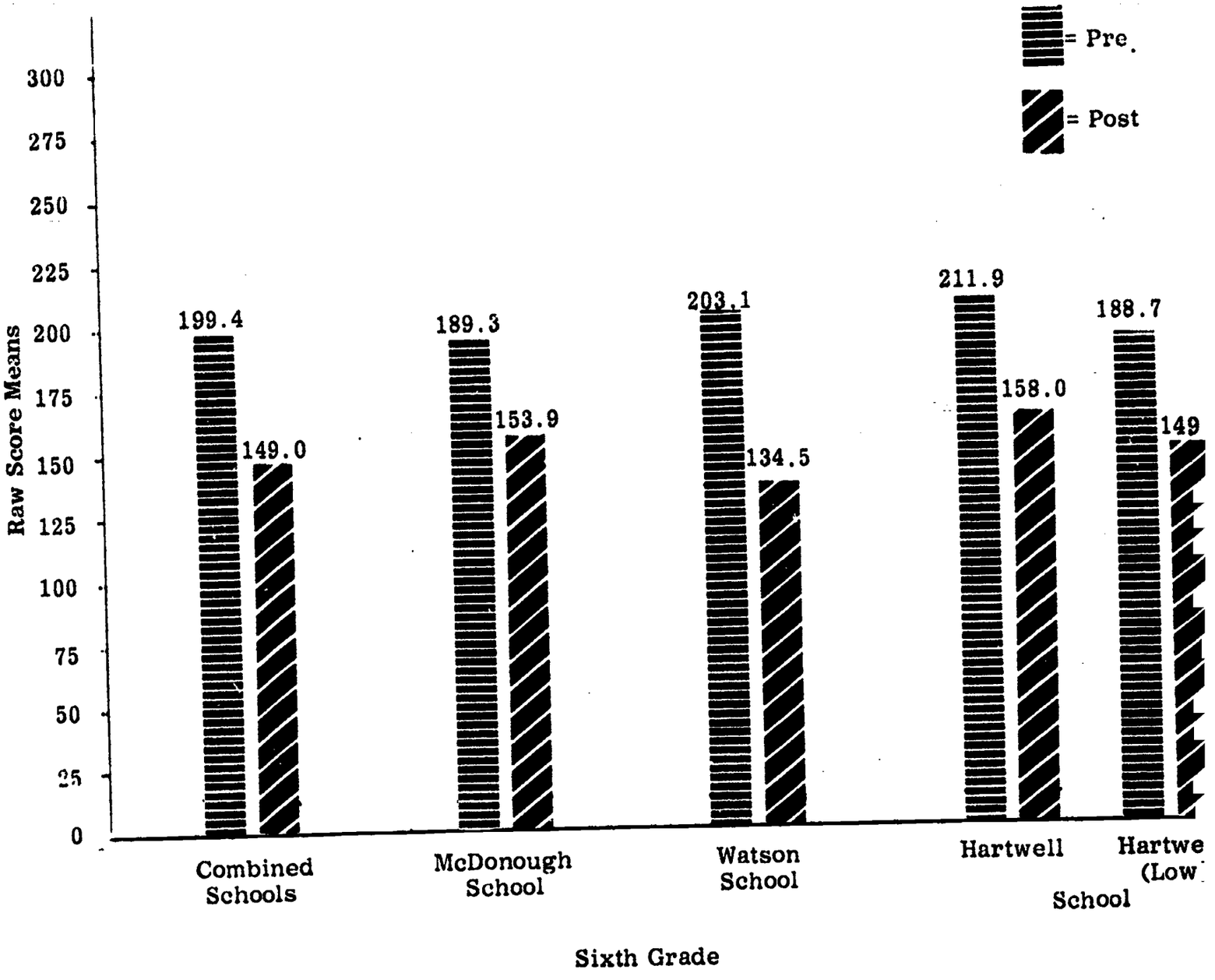


Figure 7 (Cont.)

The students at both grade levels also demonstrated increased ability to understand spoken English as well as produce it. The findings presented in Tables 29-30 and graphically presented in Figure 8 attest to this fact. Examination of the data reveals that each class and each grade exhibited significant gains in English comprehension ability when the pre-posttest gains were analyzed. Objectives 5-P-5.0 and 6-P-5.0 were accomplished.

Table 29

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Test of Aural Comprehension - Across Schools

| Grade Level | Testing Session | Raw Score $\bar{X}$ | Raw Score S | t |
|---|---|---|---|---|
| 5 (N= 41) | Pre | 10.0 | 4.1 | 5.607* |
| | Post | 12.9 | 3.5 | |
| 6 (N= 67) | Pre | 12 9 | 4.5 | 6.275* |
| | Post | 15.6 | 2.6 | |

* $p < .001$

Table 30

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Test of Aural Comprehension by School

| Grade Level | School | Pretest $\bar{X}$ | Pretest S | Posttest $\bar{X}$ | Posttest S | t |
|---|---|---|---|---|---|---|
| 5 | McDonough (N=13) | 11.0 | 2.6 | 13.1 | 2.6 | 2.044 |
| | Watson (N=14) | 7.0 | 4.6 | 11.6 | 3.7 | 4.759*** |
| | Hartwell (N=14) | 12.0 | 2.7 | 13.9 | 3.5 | 4.067** |
| | Combined Schools (N=41) | 10.0 | 4.1 | 12.9 | 3.5 | 5.607*** |
| 6 | McDonough (N=12) | 12.8 | 4.0 | 15.1 | 2.4 | 3.277** |
| | Watson (N=16) | 15.4 | 2.3 | 16.6 | 1.4 | 2.378* |
| | Hartwell (N=22) | 12.1 | 5.2 | 16.1 | 3.1 | 4.719*** |
| | Hartwell - Low Ability (N=17) | 11.5 | 4.3 | 14.4 | 2.5 | 2.723* |
| | Combined Schools (N=67) | 12.9 | 4.5 | 15.6 | 2.6 | 6.275*** |

* $p < .05$; ** $p < .01$; *** $p < .001$

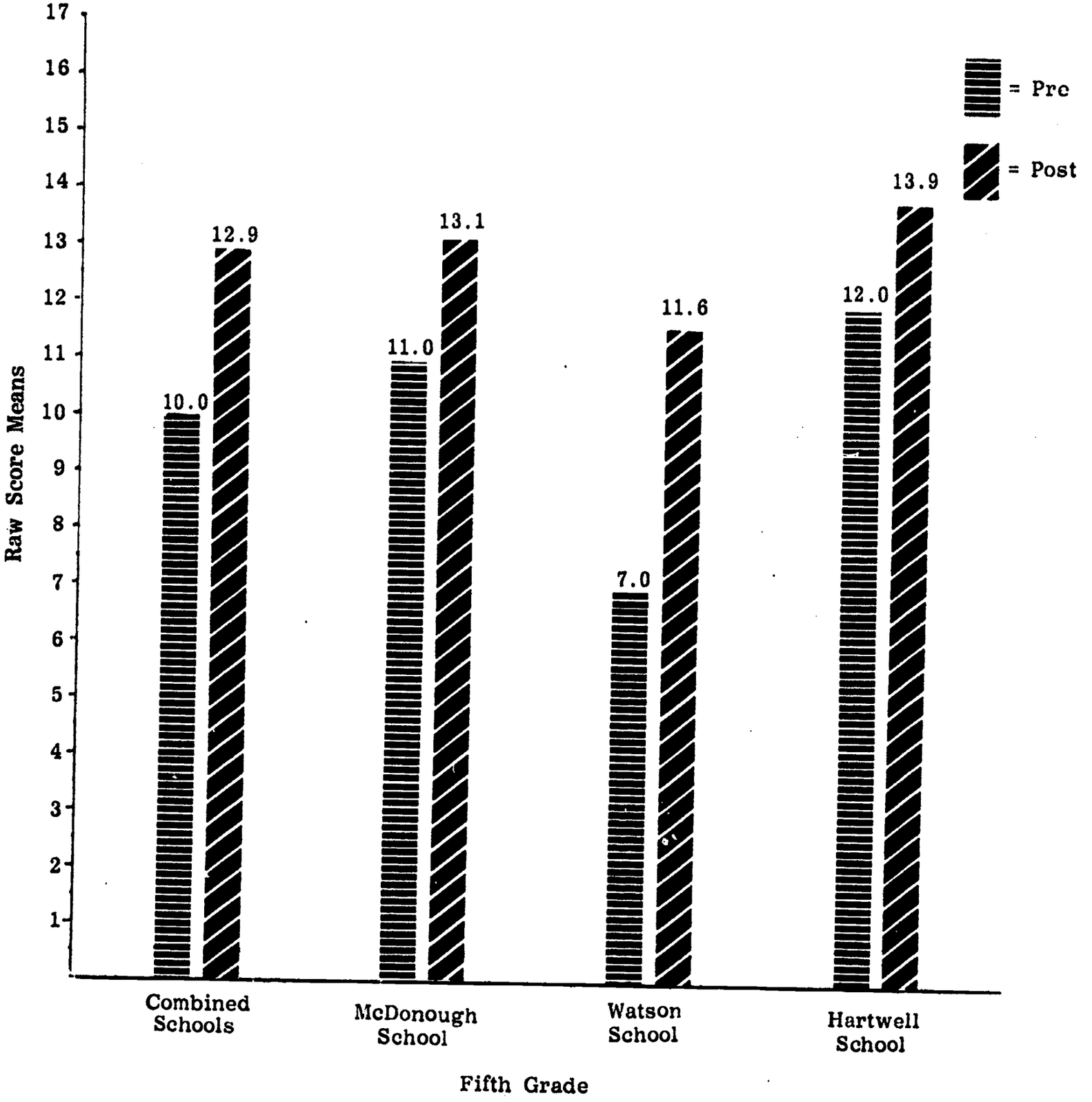


Figure 8: Pre-Posttest Raw Score Means for Fifth and Sixth Grade Portuguese Dominant Students and Program Students on the Test of Aural Comprehension

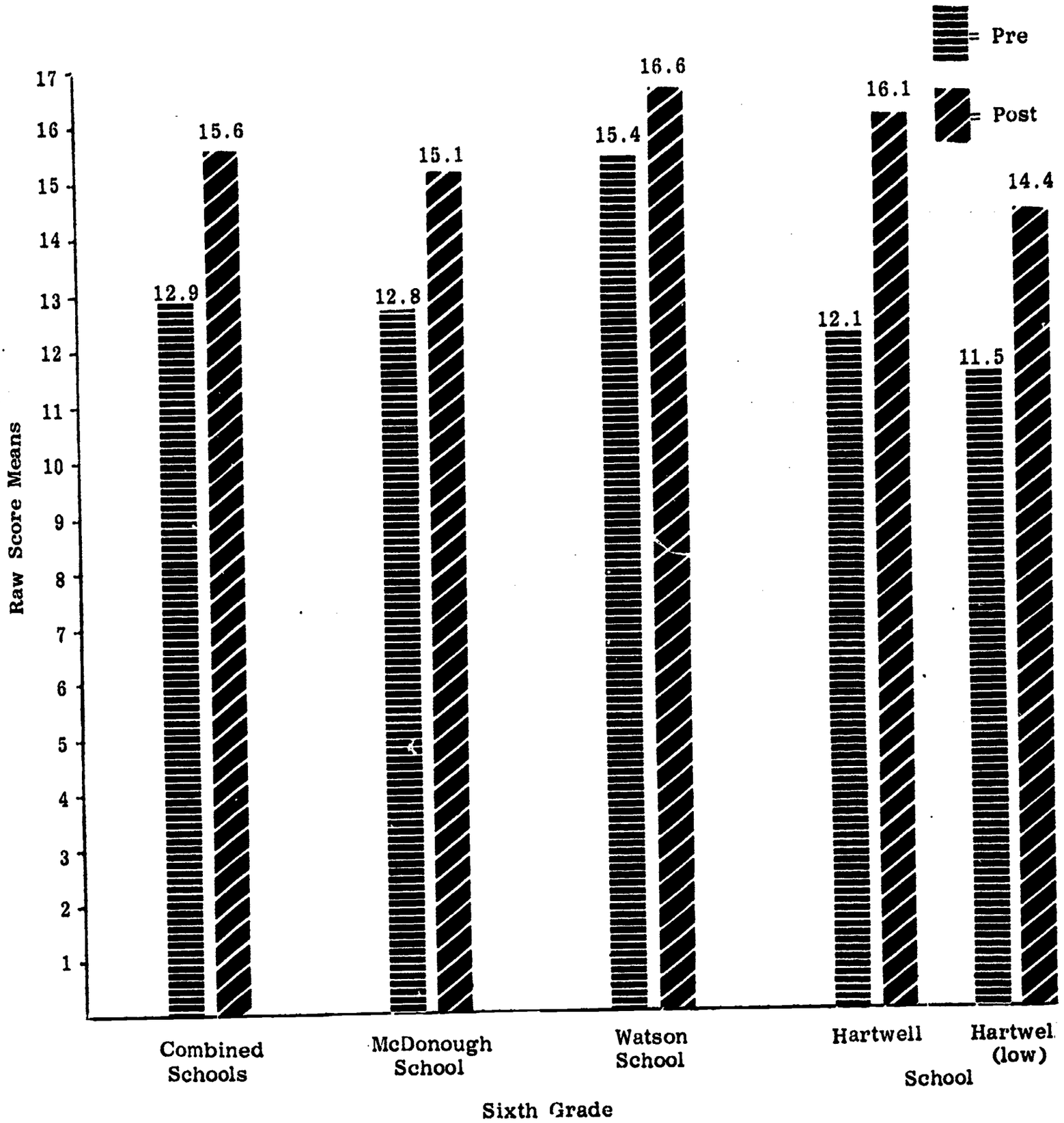


Figure 8 (Cont.)

Additional Data

In May, the fifth and sixth grade Portuguese dominant students were administered the reading subtests from the Metropolitan Achievement Tests. The subtests were: Word Knowledge--which measures the "extent of the pupils' reading vocabulary;" Reading--which measures the "pupils' comprehension of written material." The Total Reading subtest, which assesses the students' overall reading ability, is a composite of the previous two subtests.

From the information received by the project director (factual and judgmental) from all sources (teachers, administrators, test scores, anecdotal and cumulative records, etc.), it was generally accepted that the ability to read in English was low for the Portuguese dominant students. The Metropolitan reading tests were administered to obtain an estimate of "where the students were presently" and "how far they have to go" in terms of their English reading ability when compared to national norms.

At each grade level (5 and 6) the obtained raw scores for each subtest (including the composite Total Reading subtest) were converted to standard scores and to grade equivalents (G.E.) for each individual student. The mean standard scores were computed for each school and across schools at both grade levels. The standard score averages were then converted to grade equivalents. Additionally, using the grade equivalent results, the number of students falling within specified grade equivalent intervals was determined. The findings from all analyses are reported in Tables 31-33 and Figure 9.

The grade placement level at the time of testing (May) was 5.8 and 6.8 for grades 5 and 6 respectively. Examination of the data summaries presented in

Table 31

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Total Reading Subtest from the Metropolitan Achievement Tests Across Schools

| Grade Level | Testing Session | Standard Score $\bar{X}$ | Standard Score S | Grade Equivalent |
|---|---|---|---|---|
| 5 (N=63) | Post | 50.3 | 13.8 | 2.5 |
| 6 (N=64) | Post | 62.1 | 9.8 | 3.6 |

Tables 31 and 32 indicate that both fifth and sixth grade students were reading approximately three years below grade level (Total Reading results, Table 31). Examination of the findings for the separate schools for the fifth grade revealed that the obtained grade equivalents ranged from 1.8 to 3.1. These obtained grade equivalents indicate that students on the average were reading approximately two and one-half (2.7) to four years below grade level. The same approach applied to the sixth grade students for each school show them also reading from two and one-half to four years below grade level (Total Reading results, Table 32). The obtained grade equivalents for each school and the combined schools are also presented in Figure 9.

For grade 5 students, examination of the Total Reading results in another fashion show that approximately 33% (21 of 63 students) of the students exhibited G.E. below 2.5; that 64% had G.E. between 2.5 and 3.9; and that one student had a G.E. of 5.6. Approximately 15% (12 of 85) of the sixth grade students demonstrated G.E. below 2.5; 58% had G.E. between 2.5 and 3.9; and 26% of the students

Table 32

Statistical Results for Fifth and Sixth Grade Portuguese Dominant Students on the Reading Subtests from the Metropolitan Achievement Tests by School (Posttest Only)

| Grade Level | Subtest | School | Standard Score $\bar{X}$ | Standard Score S | Grade Equivalent |
|---|---|---|---|---|---|
| 5 | Word Knowledge | McDonough (N=19) | 57.4 | 6.0 | 3.0 |
| | | Watson (N=21) | 43.8 | 17.5 | 2.0 |
| | | Hartwell (N=23) | 58.4 | 6.5 | 3.1 |
| | | Combined Schools (N=63) | 53.2 | 13.0 | 2.6 |
| 6 | | McDonough (N=20) | 63.9 | 8.6 | 3.7 |
| | | Watson (N=19) | 56.1 | 5.8 | 2.9 |
| | | Hartwell (N=25) | 71.4 | 9.8 | 4.7 |
| | | Combined Schools (N=64) | 64.5 | 10.4 | 3.8 |
| | | *Hartwell - Low Ability (N=21) | 57.5 | 6.9 | 2.9 |
| 5 | Reading | McDonough (N=19) | 56.5 | 6.6 | 3.0 |
| | | Watson (N=21) | 38.6 | 22.2 | 1.6 |
| | | Hartwell (N=23) | 59.8 | 7.7 | 3.3 |
| | | Combined Schools (N=63) | 51.8 | 16.8 | 2.6 |
| 6 | | McDonough (N=20) | 63.2 | 10.2 | 3.6 |
| | | Watson (N=19) | 55.2 | 7.6 | 2.8 |

Table 32 (Cont.)

| Grade Level | Subtest | School | Standard Score $\bar{X}$ | Standard Score S | Grade Equivalent |
|---|---|---|---|---|---|
| | | Hartwell (N=25) | 64.3 | 9.6 | 3.7 |
| | | Combined Schools (N=64) | 61.2 | 9.9 | 3.4 |
| | | *Hartwell - Low Ability (N=21) | 57.3 | 8.3 | 3.0 |
| 5 | Total Reading | McDonough (N=19) | 55.3 | 4.7 | 2.9 |
| | | Watson (N=21) | 38.1 | 17.0 | 1.8 |
| | | Hartwell (N=23) | 57.4 | 6.4 | 3.1 |
| | | Combined Schools (N=63) | 50.3 | 13.8 | 2.5 |
| 6 | | McDonough (N=20) | 62.6 | 9.3 | 3.7 |
| | | Watson (N=19) | 53.6 | 6.5 | 2.8 |
| | | Hartwell (N=25) | 68.2 | 7.5 | 4.3 |
| | | Combined Schools (N=64) | 62.1 | 9.8 | 3.6 |
| | | *Hartwell - Low Ability (N=21) | 55.9 | 6.4 | 3.0 |

* This class was not included in the across schools analysis

Table 33

Number of Fifth and Sixth Grade Portuguese Dominant Students Within Specified Grade Equivalent Intervals on the Reading Subtests from the Metropolitan Achievement Tests by Schools

| Grade Level | Subtest | | ≤1.9 | 2.0-2.4 | 2.5-2.9 | 3.0-3.4 | 3.5-3.9 | 4.0-4.4 | 4.5-4.9 | 5.0-5.4 | 5.5-5.9 | 6.0-6.4 | 6.5-6.9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Word Knowledge | McDonough (N=19) | - | 3 | 3 | 8 | 5 | - | - | - | - | - | - |
| | | Watson (N=21) | 8 | 6 | 2 | 2 | 2 | 1 | - | - | - | - | - |
| | | Hartwell (N=23) | - | 1 | 6 | 11 | 2 | - | 1 | 1 | - | - | - |
| | | Combined Schools (N=63) | 8 | 10 | 11 | 21 | 9 | 1 | 1 | 1 | - | - | - |
| 6 | | McDonough (N=20) | - | 1 | 3 | 4 | 6 | 1 | 1 | 3 | - | - | 1 |
| | | Watson (N=19) | - | 3 | 6 | 7 | 3 | - | - | - | - | - | - |
| | | Hartwell (N=25) | - | - | - | - | 8 | 5 | 3 | 4 | 2 | 2 | 1* |
| | | Hartwell - Low Ability (N=21) | - | 4 | 4 | 6 | 6 | 1 | - | - | - | - | - |
| | | Combined Schools (N=85) | - | 8 | 13 | 17 | 23 | 7 | 4 | 7 | 2 | 2 | 2 |

* G.E. was actually 9.9

Table 33 (Cont.)

| Grade Level | Subtest | | ≤ 1.9 | 2.0-2.4 | 2.5-2.9 | 3.0-3.4 | 3.5-3.9 | 4.0-4.4 | 4.5-4.9 | 5.0-5.4 | 5.5-5.9 | 6.0-6.4 | 6.5-6.9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Total Reading | McDonough (N=19) | - | 3 | 5 | 9 | 2 | - | - | - | - | - | - |
| | | Watson (N=21) | 11 | 6 | 2 | 1 | 1 | - | - | - | - | - | - |
| | | Hartwell (N=23) | - | 1 | 9 | 8 | 3 | 1 | - | - | 1 | - | - |
| | | Combined Schools (N=63) | 11 | 10 | 16 | 18 | 6 | 1 | - | - | 1 | - | - |
| 6 | | McDonough (N=20) | 1 | - | 2 | 4 | 6 | 3 | 2 | 1 | 1 | - | - |
| | | Watson (N=19) | 1 | 4 | 6 | 5 | 3 | - | - | - | - | - | - |
| | | Hartwell (N=25) | - | - | - | 4 | 5 | 3 | 7 | 2 | 2 | - | 1** |
| | | Hartwell - Low Ability (N=21) | - | 6 | 4 | 6 | 4 | 1 | - | - | - | - | - |
| | | Combined Schools (N=85) | 2 | 10 | 12 | 19 | 18 | 7 | 9 | 3 | 3 | - | 1** |

** G.E. was actually 7.1

Table 33 (Cont.)

| Grade Level | Subtest | | ≤1.9 | 2.0-2.4 | 2.5-2.9 | 3.0-3.4 | 3.5-3.9 | 4.0-4.4 | 4.5-4.9 | 5.0-5.4 | 5.5-5.9 | 6.0-6.4 | 6.5-6.9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Reading | McDonough (N=19) | - | 6 | 3 | 4 | 5 | 1 | - | - | - | - | - |
| | | Watson (N=21) | 10 | 3 | 5 | - | 2 | - | 1 | - | - | - | - |
| | | Hartwell (N=23) | - | 3 | 3 | 9 | 5 | 2 | - | - | - | 1 | - |
| | | Combined Schools (N=63) | 10 | 12 | 11 | 13 | 12 | 3 | 1 | - | - | 1 | - |
| 6 | | McDonough (N=20) | 1 | 1 | 3 | 4 | 4 | 3 | 1 | 1 | 1 | 1 | - |
| | | Watson (N=19) | 1 | 6 | 3 | 5 | 4 | - | - | - | - | - | - |
| | | Hartwell (N=25) | - | 3 | 4 | 2 | 4 | 6 | 2 | 2 | 2 | - | - |
| | | Hartwell - Low Ability (N=21) | 1 | 4 | 5 | 4 | 6 | - | 1 | - | - | - | - |
| | | Combined Schools (N=85) | 3 | 14 | 15 | 15 | 18 | 9 | 4 | 3 | 3 | 1 | - |

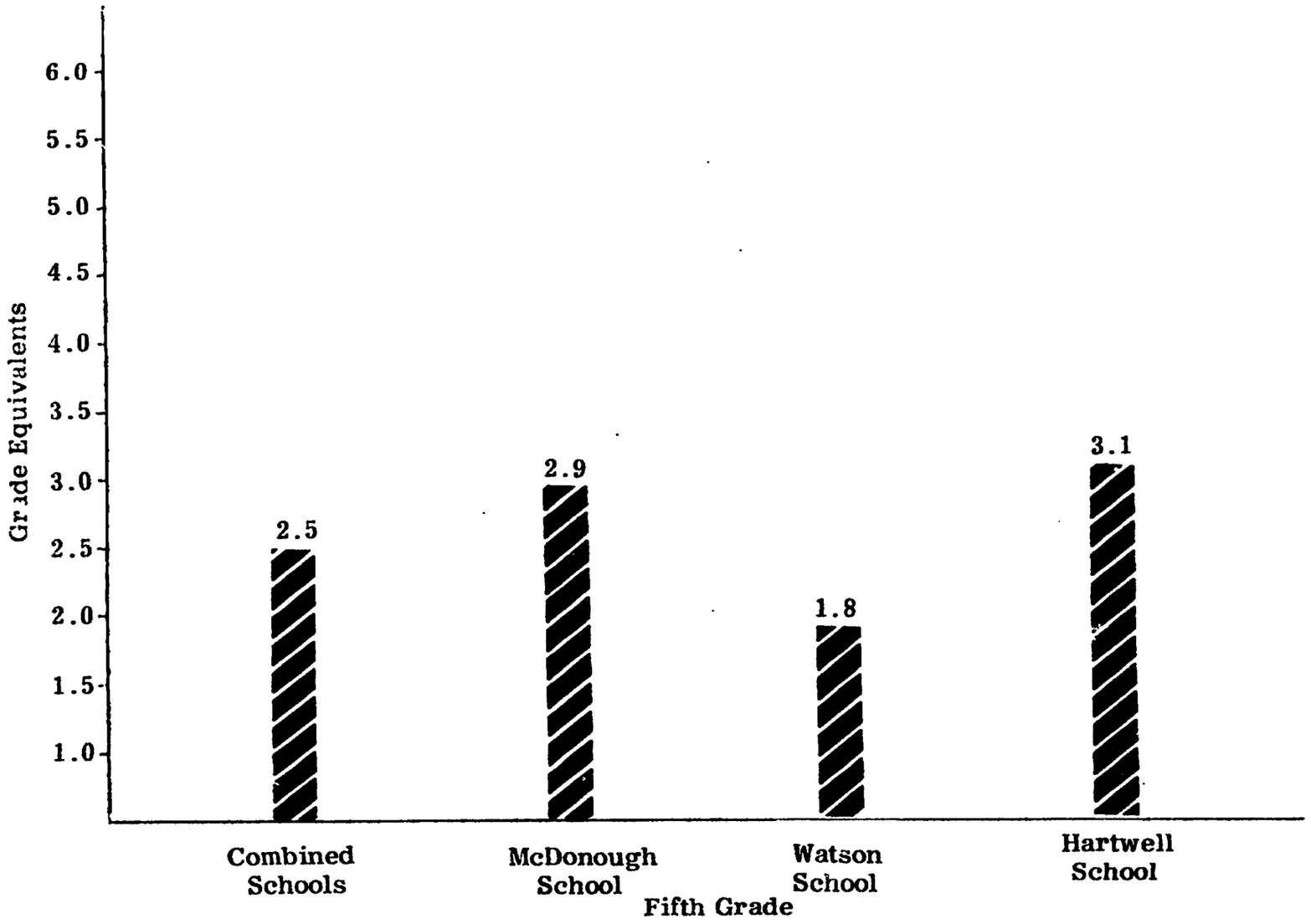


**Figure 9: Posttest Grade Equivalent Averages for Fifth and Sixth Grade Portuguese Dominant Students and Program Schools on the Total Reading Subtest**

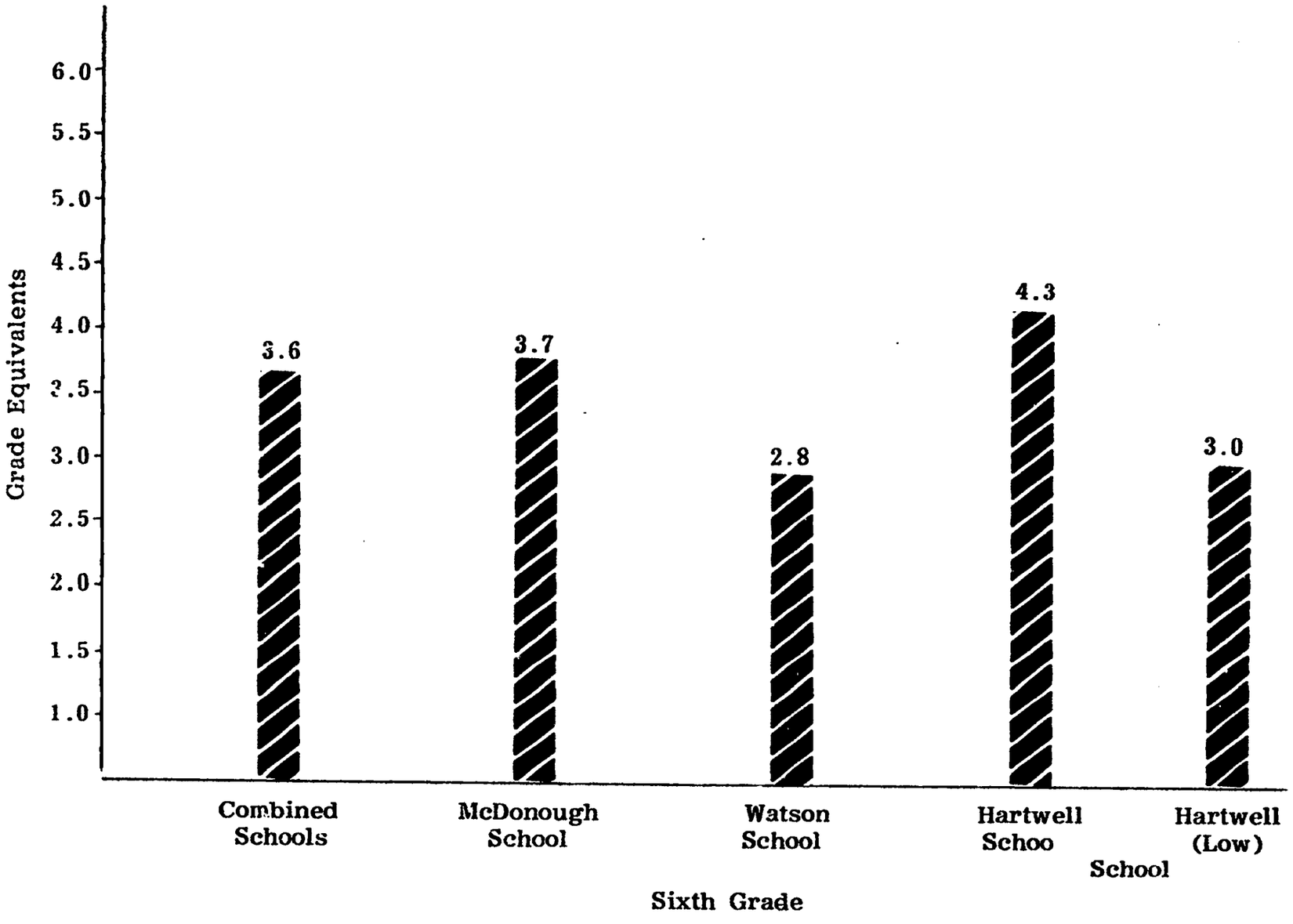


Figure 9 (Cont.)

had G.E. between 4.0 and 5.9. One Hartwell student obtained a G.E. of 7.1--3 months above grade level.

In general, the findings were not unexpected. The findings may suggest, however, that additional emphasis on reading in English should be considered for the Portuguese speaking student. It may be that the reading program developed by the ESL coordinator this past year will provide the emphasis that is apparently needed.

Objectives 5-E-1.0, 6-E-1.0

> Fifth and sixth grade English speaking students will achieve an average percentile rank equivalent to the fifth and sixth grade students in the comparison group who are not participating in the program on the Language Arts and Reading subtests from the Metropolitan Achievement Tests, Intermediate Level.

Evaluation

The Reading and Language Arts subtests of the Metropolitan Achievement Test, 1970 edition, Intermediate Level, were administered to English dominant program students and to a comparison group of non-program participants as a pre-test and post-test. The Metropolitan includes subtests to assess students' vocabulary, reading comprehension, and language skills. The students' performance on each subtest is reflected by the number of correct items. This raw score can then be transformed into a standard score. The standard score, in turn, can be transformed into 1) a percentile rank which can be used to determine if the student's position relative to the norm group changed, 2) a grade equivalent score, which can be used to compare the performance of a student to the performance of typical students at a particular grade level and also to compare the number of months of gain in mean

grade equivalent score in relation to the number of months which elapsed between pre and post-testing.

The Intermediate Level of the Metropolitan yields three reading scores--Word Knowledge, Reading, and Total Reading (a sum of the first two scores)--and one Language score. For the Word Knowledge subtest students either completed the stimulus sentence with the correct word or identified the synonym for the stimulus word. In the Reading subtest, students answered questions about a series of written paragraphs or stories. For the Language subtest, students completed exercises to test their knowledge of capitalization, punctuation, grammar, word usage, and idioms.

Tables 34-39 and Figures 10-13 describe the performance of the fifth and sixth grade program and non-program students across schools. Comparison of the percentile ranks earned by the English dominant and comparision group fifth grade students on the post-test, as shown in Table 34 and Figure 10 indicates that in Total Reading the program students, not only earned an average percentile rank equivalent to the comparison group, but scored two percentile points higher. In Language Arts, both the English dominant and comparison group students earned identical post-test percentile rank scores. These data suggest that Objective 5-L 1.0 was accomplished. In contrast, however, review of Table 35 and Figure 11, indicates that the sixth grade English dominant students did not earn an average percentile rank equivalent to the sixth grade students in the comparison group on either the Total Reading or Language scores; for both scores, the post-test average percentile rank of the English dominant students was lower than that of the comparison group. Therefore, Objective 6-E-1.0 was not rated as accomplished.

Table 34

Means, Grade Equivalents, and Percentile Ranks for the Fifth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Subtest and Group | Testing Session | Standard Score Mean | Grade Equivalent | Percentile Rank |
|---|---|---|---|---|
| Total Reading | | | | |
| English Dominant (N=45) | Pre | 58.9 | 3.4 | 14 |
| | Post | 67.7 | 4.3 | 20 |
| Comparison (N=27) | Pre | 63.6 | 3.8 | 24 |
| | Post | 67.3 | 4.2 | 18 |
| Language Arts | | | | |
| English Dominant (N=45) | Pre | 63.1 | 3.2 | 12 |
| | Post | 76.8 | 5.0 | 30 |
| Comparison (N=26) | Pre | 64.1 | 3.3 | 14 |
| | Post | 77.3 | 5.0 | 30 |

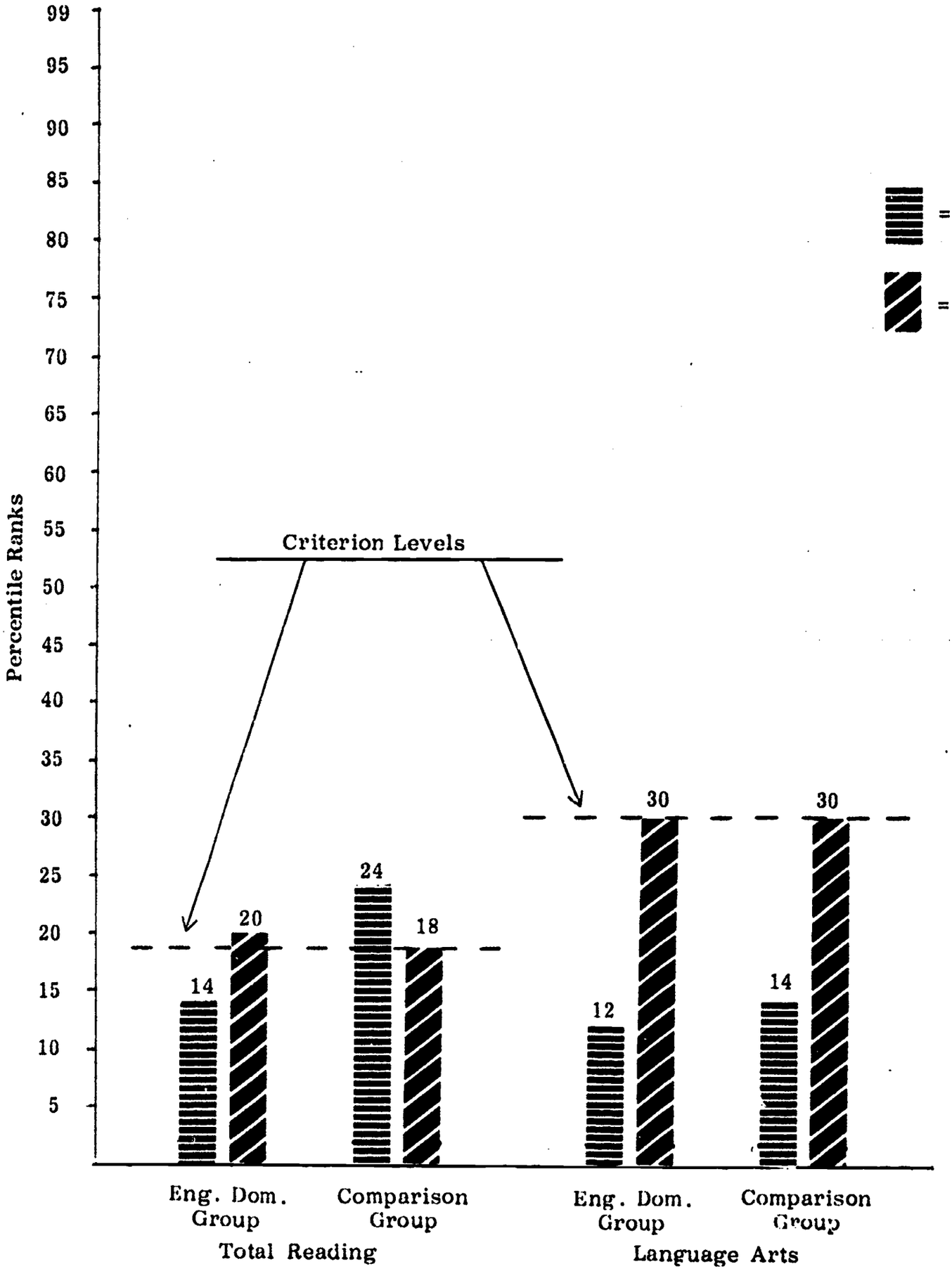


Figure 10: Pre-Posttest Percentile Ranks for Fifth Grade English Dominant and Comparison Groups on the Total Reading and Language Arts Subtests

Table 35

Means, Grade Equivalents, and Percentile Ranks for the Sixth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Subtest and Group | Testing Session | Standard Score Mean | Grade Equivalent | Percentile Rank |
|---|---|---|---|---|
| Total Reading | | | | |
| English Dominant (N=22) | Pre | 66.6 | 4.2 | 18 |
| | Post | 69.1 | 4.4 | 14 |
| Comparison (N=31) | Pre | 73.5 | 4.9 | 30 |
| | Post | 78.0 | 5.6 | 32 |
| Language Arts | | | | |
| English Dominant (N=22) | Pre | 71.1 | 4.1 | 16 |
| | Post | 75.6 | 4.8 | 16 |
| Comparison (N=32) | Pre | 81.6 | 5.7 | 42 |
| | Post | 86.4 | 6.4 | 40 |

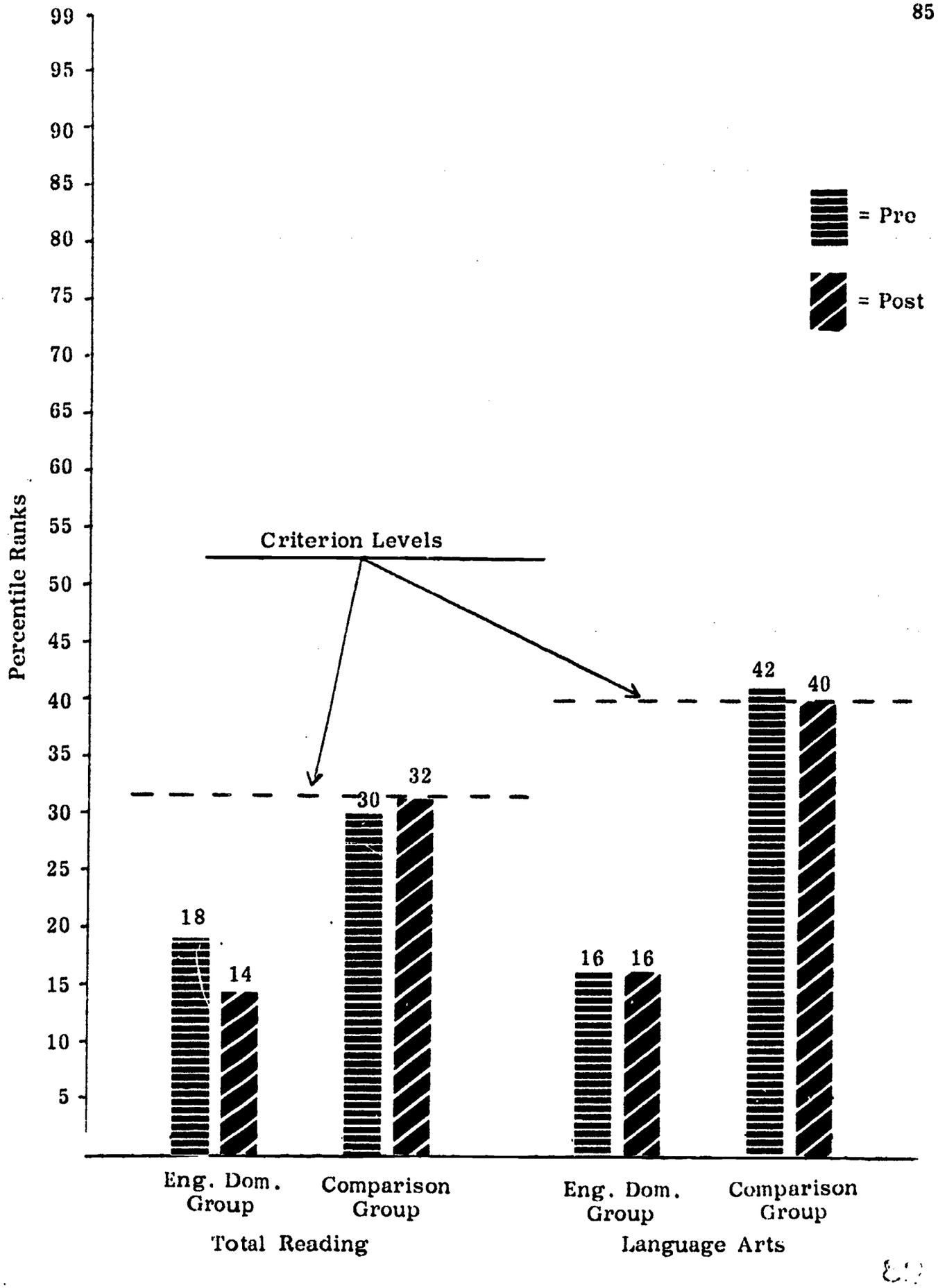


Figure 11: Pre-Posttest Percentile Ranks for Sixth Grade English Dominant and Comparison Groups on the Total Reading and Language Arts Subtests

Further analysis of the English dominant and comparison group student's performance, by reviewing Table 36, indicates that both fifth and sixth grade program and non-program student groups increased their mean grade equivalent score from pre to post-test in both Total Reading and Language Arts. All groups, with the exception of grade 6 English dominant students in Total Reading, made an average monthly grade equivalent gain of at least one month for each month of program participation. The fifth grade English dominant program students gains in language arts are especially noteworthy, since their average monthly grade equivalent gain was 3 months for each month of program participation. Nevertheless, comparison of the program students' post-test grade equivalent score to their actual grade placement, as shown in Table 37 and Figure 12 and 13, indicates that both program and non-program student groups scored substantially below their actual grade placement in Total Reading and Language Arts. English dominant program students in grades 5 and 6 scored 15 and 24 months, respectively, below actual grade placement in their Total Reading grade equivalent score. Both groups are closer to grade placement in their Language Arts scores, with the fifth grade group scoring 8 months below actual grade placement and the sixth grade group 20 months below. These data suggest the need for a continued intensive instructional program in reading in English and English language arts for the English dominant program students.

Nevertheless, program participation did have some impact on the reading and language arts skills of the fifth graders and on the language arts skills on the sixth grade program students, as shown by the statistically significant increase in mean standard score between pre and post-testing reported in Tables 38 and 39. Because of these gains, objective 6-E-1.0 was rated as being partially accomplished.

Table 36

Pre-Posttest Grade Equivalents for Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Grade Level | Subtest and Group | Testing Session | G.E. | G.E. Difference in Months | No. Months Between Pre-Posttest | Average Monthly G.E. Gain in Months |
|---|---|---|---|---|---|---|
| Total Reading | | | | | | |
| 5 | English Dominant (N=45) | Pre | 3.4 | 9 | 6 | 1.5 |
| | | Post | 4.3 | | | |
| 5 | Comparison (N=27) | Pre | 3.8 | 4 | 6 | .7 |
| | | Post | 4.2 | | | |
| 6 | English Dominant (N=22) | Pre | 4.2 | 2 | 6 | .3 |
| | | Post | 4.4 | | | |
| 6 | Comparison (N=31) | Pre | 4.9 | 7 | 6 | 1.2 |
| | | Post | 5.6 | | | |

Table 36 (Cont.)

| Grade Level | Subtest and Group | Testing Session | G.E. | G.E. Difference in Months | No. Months Between Pre-Posttest | Average Monthly G.E. Gain in Months |
|---|---|---|---|---|---|---|
| Language Arts | | | | | | |
| 5 | English Dominant (N=45) | Pre | 3.2 | 18 | 6 | 3.0 |
| | | Post | 5.0 | | | |
| 5 | Comparison (N=26) | Pre | 3.3 | 17 | 6 | 2.8 |
| | | Post | 5.0 | | | |
| 6 | English Dominant (N=22) | Pre | 4.1 | 7 | 6 | 1.2 |
| | | Post | 4.8 | | | |
| 6 | Comparison (N=32) | Pre | 5.7 | 7 | 6 | 1.2 |
| | | Post | 6.4 | | | |

Table 37

Grade Equivalents and Grade Placement at the Time of Posttesting for Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Subtest | Group | Grade Level | Post Grade Equivalent | Grade Placement | G.E.-G.P. Difference in Months |
|---|---|---|---|---|---|
| Total Reading | English Dominant | 5 | 4.3 | 5.8 | -15 |
| | Comparison | 5 | 4.2 | 5.8 | -16 |
| | English Dominant | 6 | 4.4 | 6.8 | -24 |
| | Comparison | 6 | 5.6 | 6.8 | -12 |
| Language Arts | English Dominant | 5 | 5.0 | 5.8 | -8 |
| | Comparison | 5 | 5.0 | 5.8 | -8 |
| | English Dominant | 6 | 4.8 | 6.8 | -20 |
| | Comparison | 6 | 6.4 | 6.8 | -4 |

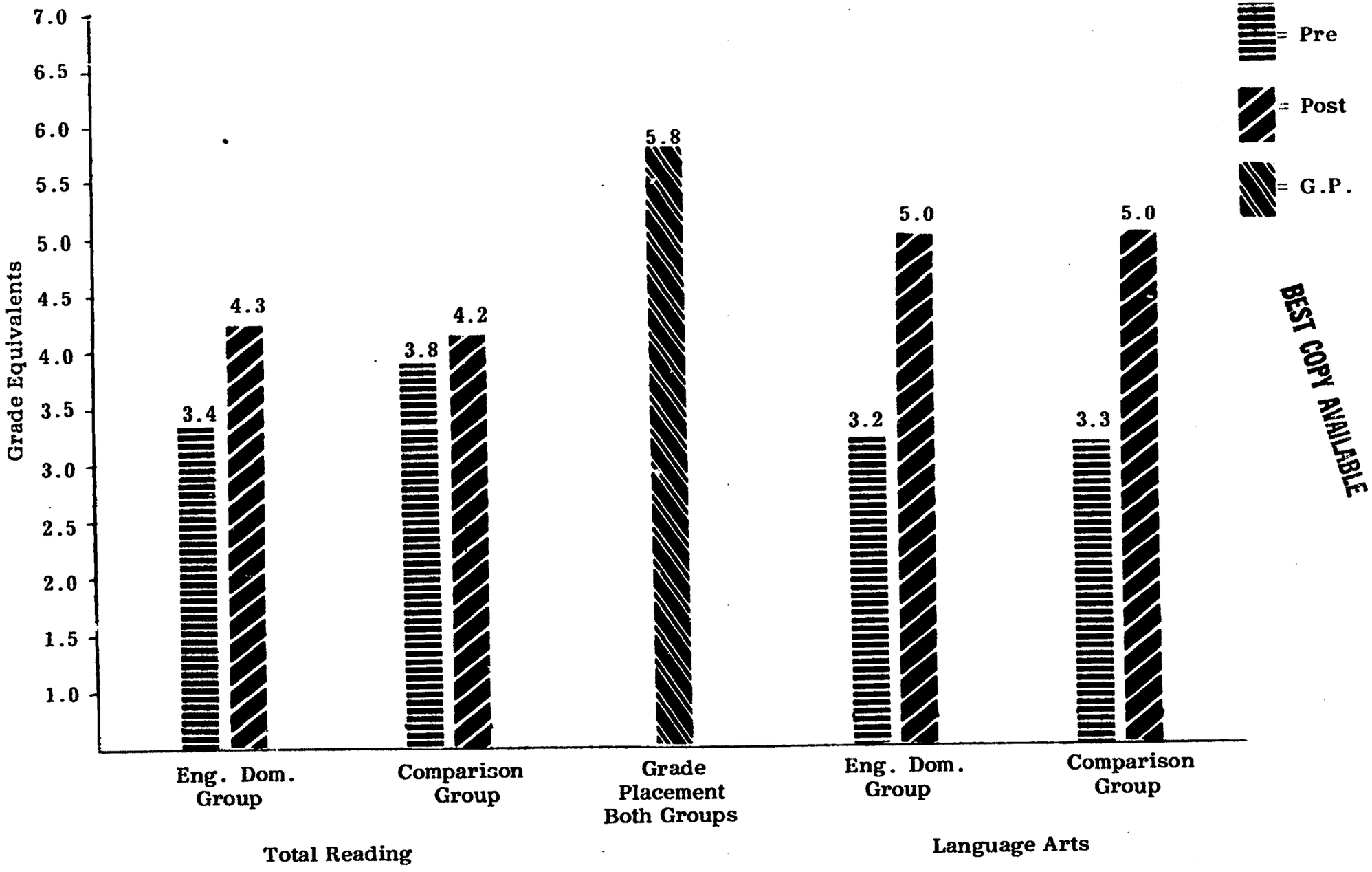




Figure 12: Pre-Posttest Grade Equivalents and Grade Placement at the Time of Posttesting for Fifth Grade English Dominant and Comparison Groups on the Total Reading and Language Arts Subtests

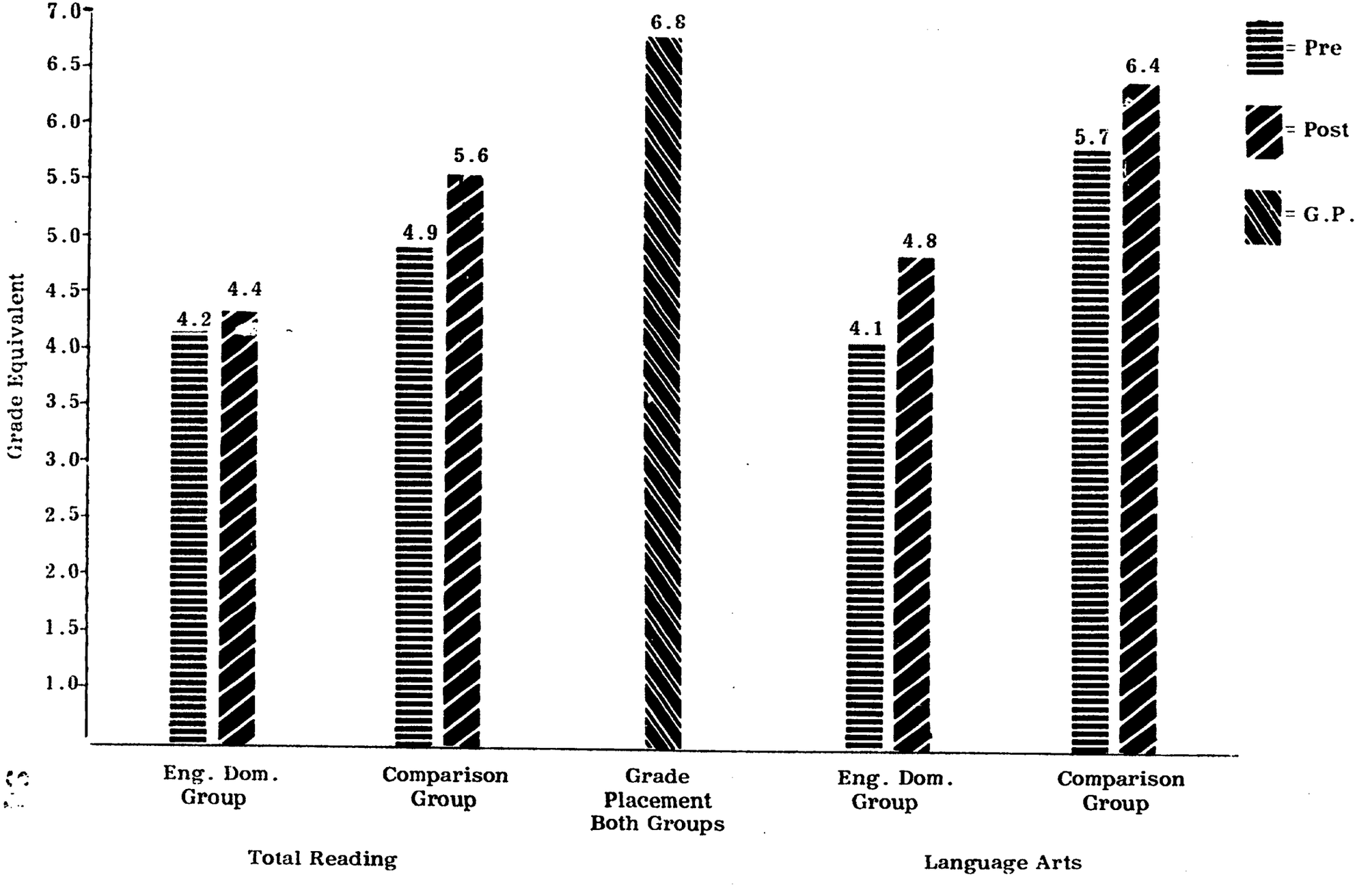


Figure 13: Pre-Posttest Grade Equivalents and Grade Placement at the Time of Posttesting for Sixth Grade English Dominant and Comparison Groups on the Total Reading and Language Arts Subtests

Table 38

Statistical Results for the Fifth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Subtest | Group | Testing Session | Standard Score $\bar{X}$ | S | t |
|---|---|---|---|---|---|
| Total Reading | English Dominant (N=45) | Pre | 58.9 | 15.5 | 4.293** |
| | | Post | 67.7 | 12.8 | |
| | Comparison (N=27) | Pre | 63.6 | 7.9 | 3.360* |
| | | Post | 67.3 | 7.9 | |
| Language Arts | English Dominant (N=45) | Pre | 63.1 | 11.9 | 6.493** |
| | | Post | 76.8 | 12.8 | |
| | Comparison (N=26) | Pre | 64.1 | 9.4 | 8.643** |
| | | Post | 77.3 | 8.4 | |

* $p < .01$; ** $p < .001$

Table 39

Statistical Results for the Sixth Grade English Dominant and Comparison Group Students on the Total Reading and Language Arts Subtests from the Metropolitan Achievement Tests Across Schools

| Subtest | Group | Testing Session | Standard Score $\bar{X}$ | S | t |
|---|---|---|---|---|---|
| Total Reading | English Dominant (N=22) | Pre | 66.6 | 12.4 | 1.889 |
| | | Post | 69.1 | 14.0 | |
| | Comparison (N=31) | Pre | 73.5 | 8.8 | 4.604** |
| | | Post | 78.0 | 9.5 | |
| Language Arts | English Dominant (N=22) | Pre | 71.1 | 13.5 | 3.026* |
| | | Post | 75.6 | 15.4 | |
| | Comparison (N=32) | Pre | 81.6 | 6.6 | 4.249** |
| | | Post | 86.4 | 9.5 | |

* $p < .01$; ** $p < .001$

Tables 40 and 41 and Figures 14 and 15 show the English dominant program and comparision group students' performance on each of the reading and lnaguage arts subtests, by school. Analysis of these data reveal differences in instructional impact and student achievement levels at the various program schools. Different student needs at the different schools are suggested by these data, and should be considered in revising and implementing the instructional program in reading and language arts for the English dominant program students.

Table 40

Results for the Fifth Grade English Dominant and Comparison Group Students on the Reading and Language Arts Subtests from the Metropolitan Achievement Tests by School

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| Word Knowledge | McDonough (N=16) | 54.1 | 11.8 | 61.4 | 10.8 | 1.912 | 2.7 | 3.4 | 6 | 10 |
| | Watson (N=12) | 68.4 | 11.6 | 71.7 | 12.8 | 1.941 | 4.2 | 4.8 | 32 | 34 |
| | Hartwell (N=17) | 58.8 | 18.3 | 78.2 | 13.8 | 4.366*** | 3.2 | 5.8 | 11 | 52 |
| | Schools Combined (N=45) | 59.7 | 15.6 | 70.5 | 14.5 | 4.500*** | 3.3 | 4.7 | 14 | 30 |
| | Spring St. (c) (N=18) | 65.4 | 8.1 | 68.8 | 8.1 | 2.598* | 3.8 | 4.4 | 22 | 24 |
| | McDonough (c) (N=9) | 58.7 | 6.0 | 67.6 | 5.9 | 5.146*** | 3.2 | 4.2 | 11 | 20 |
| | Schools Combined (c) (N=27) | 63.2 | 8.1 | 68.4 | 7.3 | 4.570*** | 3.6 | 4.2 | 18 | 20 |
| Reading | McDonough (N=16) | 55.6 | 8.4 | 59.9 | 10.5 | 1.851 | 2.9 | 3.3 | 11 | 10 |
| | Watson (N=12) | 66.4 | 16.1 | 73.1 | 11.7 | 1.510 | 3.9 | 4.8 | 28 | 30 |
| | Hartwell (N=17) | 61.5 | 19.0 | 65.9 | 10.6 | 1.133 | 3.5 | 3.9 | 20 | 18 |

Table 40 (Cont.)

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| | Schools Combined (N=45) | 60.7 | 15.8 | 65.7 | 12.0 | 2.463* | 3.4 | 3.9 | 18 | 18 |
| | Spring St. (c) (N=18) | 65.7 | 9.7 | 65.5 | 9.4 | .126 | 3.9 | 3.9 | 28 | 18 |
| | McDonough (c) (N=9) | 66.2 | 5.7 | 70.1 | 8.4 | 1.286 | 3.9 | 4.4 | 28 | 24 |
| | Schools Combined (c) (N=27 | 65.9 | 8.6 | 67.0 | 9.3 | .735 | 3.9 | 4.1 | 28 | 18 |
| Total Reading | McDonough (N=16) | 52.5 | 9.9 | 59.6 | 9.9 | 2.242* | 2.7 | 3.4 | 6 | 8 |
| | Watson (N=12) | 67.1 | 12.9 | 71.8 | 12.9 | 1.833 | 4.2 | 4.8 | 30 | 30 |
| | Hartwell (N=17) | 59.0 | 18.4 | 72.4 | 11.2 | 3.281** | 3.3 | 4.8 | 14 | 30 |
| | Schools Combined (N=45) | 58.9 | 15.5 | 67.7 | 12.8 | 4.293*** | 3.4 | 4.3 | 14 | 20 |
| | Spring St. (c) (N18) | 65.1 | 8.5 | 66.8 | 8.6 | 1.758 | 3.9 | 4.2 | 26 | 18 |
| | McDonough (c) (N=9) | 60.8 | 5.6 | 68.2 | 6.0 | 3.476** | 3.5 | 4.3 | 18 | 20 |

Table 40 (Cont.)

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| | Schools Combined (N=27) | 63.6 | 7.9 | 67.3 | 7.9 | 3.360** | 3.8 | 4.2 | 24 | 18 |
| Language Arts | McDonough (N=16) | 58.4 | 9.2 | 66.0 | 7.5 | 3.050** | 2.8 | 3.5 | 6 | 11 |
| | Watson (N12) | 73.2 | 11.5 | 77.6 | 12.2 | 2.074 | 4.5 | 5.1 | 36 | 34 |
| | Hartwell (N=17) | 60.4 | 10.2 | 86.5 | 8.5 | 8.544*** | 3.0 | 6.7 | 8 | 60 |
| | Schools Combined (N=45) | 63.1 | 11.9 | 76.8 | 12.8 | 6.493*** | 3.2 | 5.0 | 12 | 30 |
| | Spring St. (c) (N=18) | 61.7 | 9.3 | 75.1 | 7.8 | 6.900*** | 3.2 | 4.7 | 11 | 26 |
| | McDonough (c) (N=8) | 69.6 | 7.0 | 82.4 | 7.5 | 5.032** | 4.0 | 5.7 | 26 | 44 |
| | Schools Combined (c) (N=26) | 64.1 | 9.4 | 77.3 | 8.4 | 8.643*** | 3.3 | 5.0 | 14 | 30 |

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 41

Results for the Sixth Grade English Dominant and Comparison Group Students on the Reading and Language Arts Subtests from the Metropolitan Achievement Tests by School

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | S | Post-Test $\bar{X}$ | S | | Pre | Post | Pre | Post |
| Word Knowledge | McDonough (N=10) | 56.2 | 6.9 | 60.6 | 4.7 | 1.851 | 2.9 | 3.4 | 4 | 6 |
| | Watson (N=12) | 73.3 | 8.9 | 76.7 | 12.1 | 1.908 | 5.0 | 5.6 | 30 | 30 |
| | Schools Combined (N=22) | 65.5 | 11.7 | 69.4 | 12.4 | 2.714* | 3.9 | 4.4 | 14 | 14 |
| | Spring St. (c) (N=19) | 76.2 | 7.3 | 78.8 | 8.9 | 2.413* | 5.4 | 6.0 | 36 | 36 |
| | McDonough (c) (N=12) | 65.7 | 6.8 | 73.8 | 5.8 | 5.938*** | 3.9 | 5.0 | 14 | 22 |
| | Schools Combined (c) (N=31) | 72.1 | 8.8 | 76.9 | 8.2 | 4.903*** | 4.8 | 5.6 | 28 | 30 |
| Reading | McDonough (N=10) | 59.2 | 8.5 | 57.5 | 8.1 | .462 | 3.2 | 3.1 | 10 | 4 |
| | Watson (N=12) | 77.9 | 8.6 | 81.3 | 10.2 | 1.909 | 5.5 | 6.0 | 38 | 36 |
| | Schools Combined (N=22) | 69.4 | 12.6 | 70.5 | 15.1 | .556 | 4.3 | 4.5 | 20 | 16 |

Table 41 (Cont.)

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | S | Post-Test $\bar{X}$ | S | | Pre | Post | Pre | Post |
| | Spring St. (c) (N=19) | 78.8 | 9.2 | 80.5 | 11.1 | 1.191 | 5.7 | 6.0 | 42 | 36 |
| | McDonough (c) (N=12) | 70.4 | 4.4 | 75.6 | 8.7 | 2.555* | 4.4 | 5.3 | 24 | 26 |
| | Schools Combined (c) (N=31) | 75.5 | 8.7 | 78.6 | 10.5 | 2.552* | 5.3 | 5.7 | 36 | 30 |
| Total Reading | McDonough (N=10) | 56.0 | 6.3 | 57.7 | 5.5 | .691 | 3.0 | 3.2 | 4 | 4 |
| | Watson (N=12) | 75.3 | 8.8 | 78.7 | 11.5 | 2.173 | 5.2 | 5.7 | 34 | 34 |
| | Schools Combined (N=22) | 66.6 | 12.4 | 69.1 | 14.0 | 1.889 | 4.2 | 4.4 | 18 | 14 |
| | Spring St. (c) (N=19) | 77.5 | 8.1 | 79.9 | 10.0 | 2.198* | 5.5 | 5.8 | 42 | 36 |
| | McDonough (c) (N=12) | 67.2 | 5.5 | 75.1 | 7.9 | 5.526*** | 4.2 | 5.2 | 18 | 23 |
| | Schools Combined (c) (N=31) | 73.5 | 8.8 | 78.0 | 9.5 | 4.604*** | 4.9 | 5.6 | 30 | 32 |

Table 41 (Cont.)

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| Language Arts | McDonough (N=10) | 59.9 | 5.5 | 62.5 | 7.8 | .867 | 3.0 | 3.2 | 2 | 4 |
| | Watson (N=12) | 80.5 | 10.8 | 86.5 | 11.0 | 6.045*** | 5.6 | 6.7 | 40 | 44 |
| | Schools Combined (N=22) | 71.1 | 13.5 | 75.6 | 15.4 | 3.026** | 4.1 | 4.8 | 16 | 16 |
| | Spring St. (c) (N=20) | 83.3 | 7.3 | 87.5 | 11.5 | 2.465* | 5.9 | 7.0 | 46 | 48 |
| | McDonough (c) (N=12) | 78.8 | 3.5 | 84.7 | 3.9 | 5.170*** | 5.3 | 6.2 | 34 | 36 |
| | Schools Combined (c) (N=32) | 81.6 | 6.6 | 86.4 | 9.5 | 4.249*** | 5.7 | 6.4 | 42 | 40 |

* $p < .05$; ** $p < .01$; *** $p < .001$

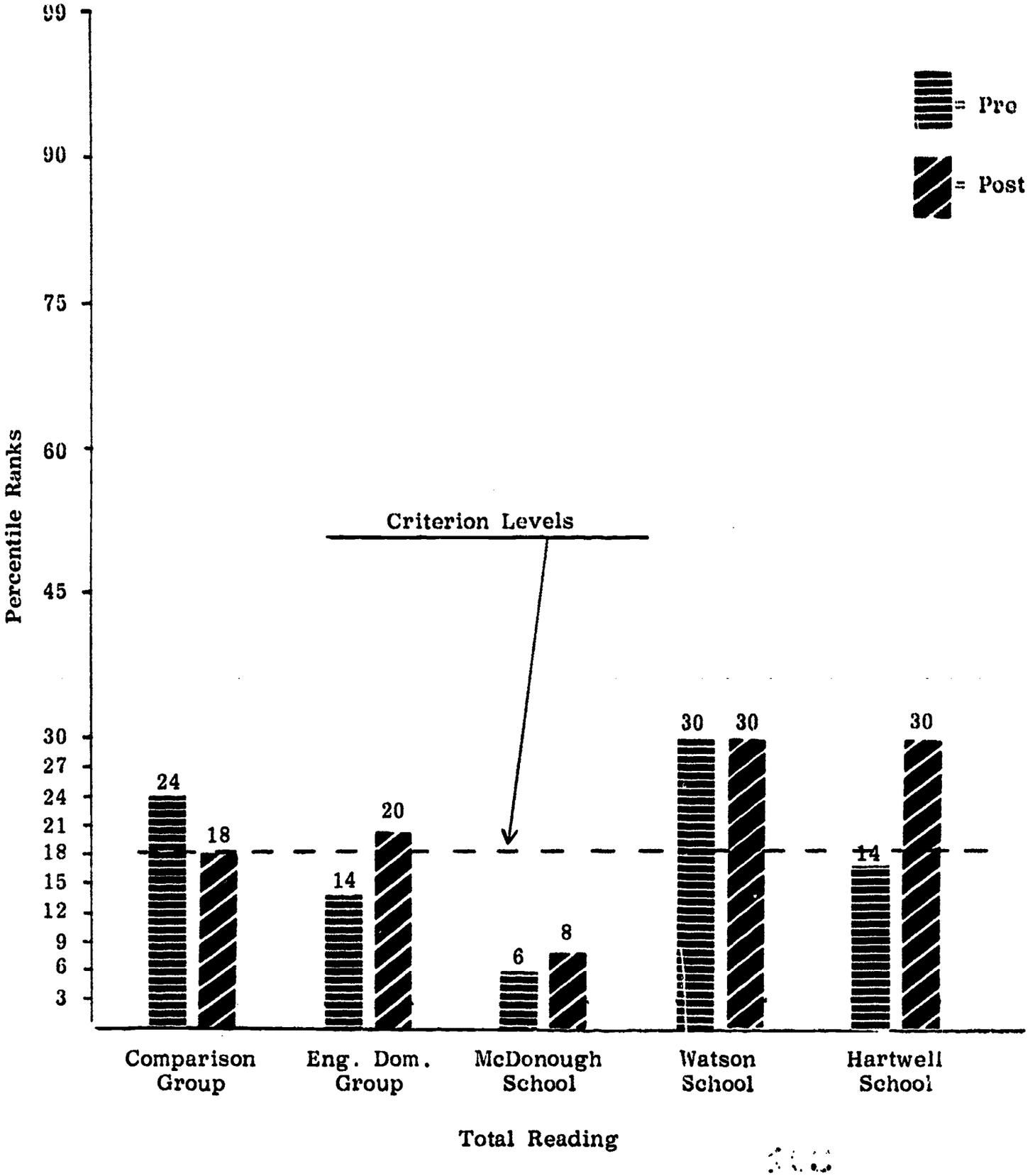


Figure 14: Pre-Posttest Percentile Ranks for the Fifth Grade Comparison and English Dominant Groups and the Program Schools on the Total Reading and Language Arts Subtests

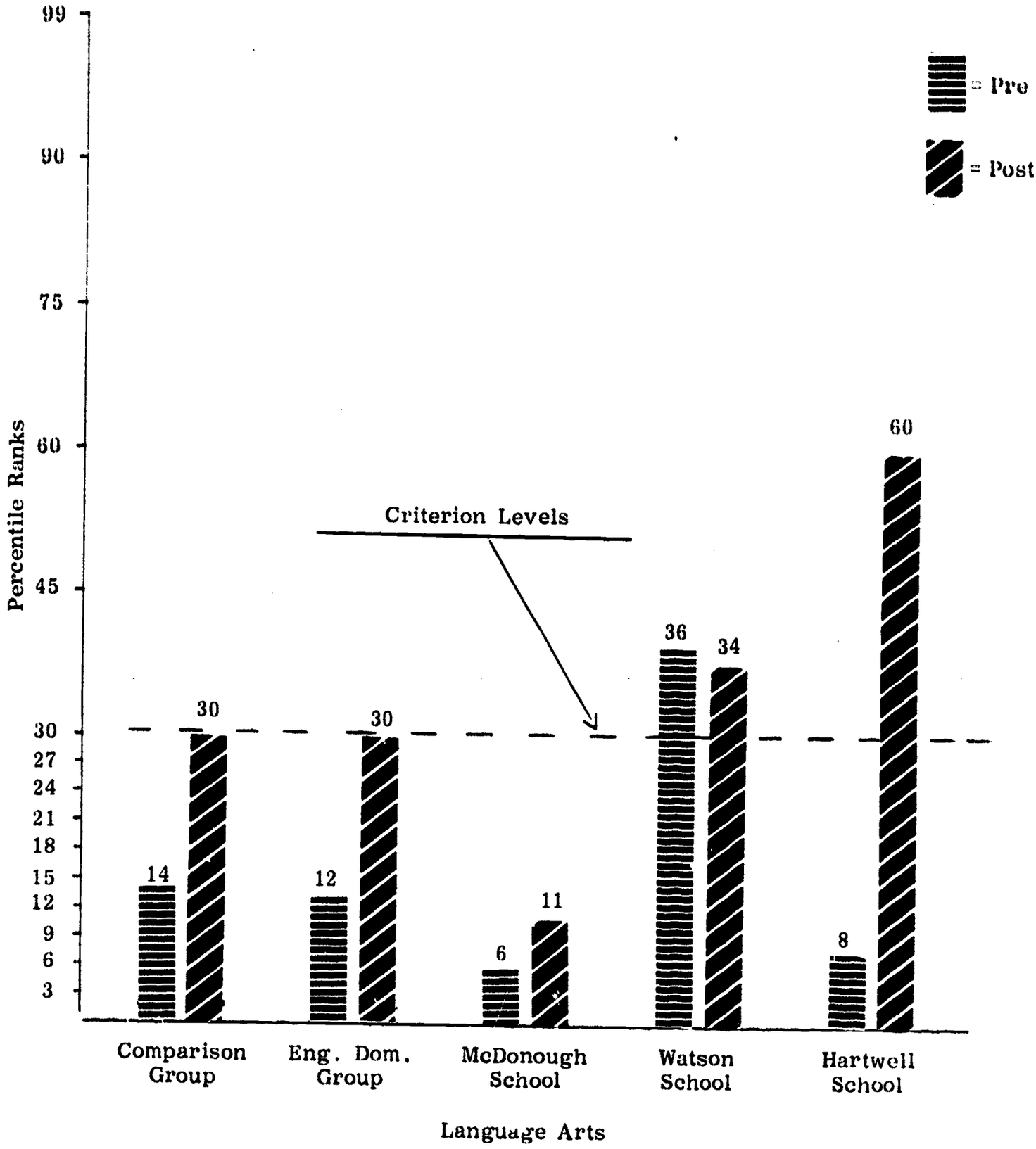


Figure 14 (Cont.)

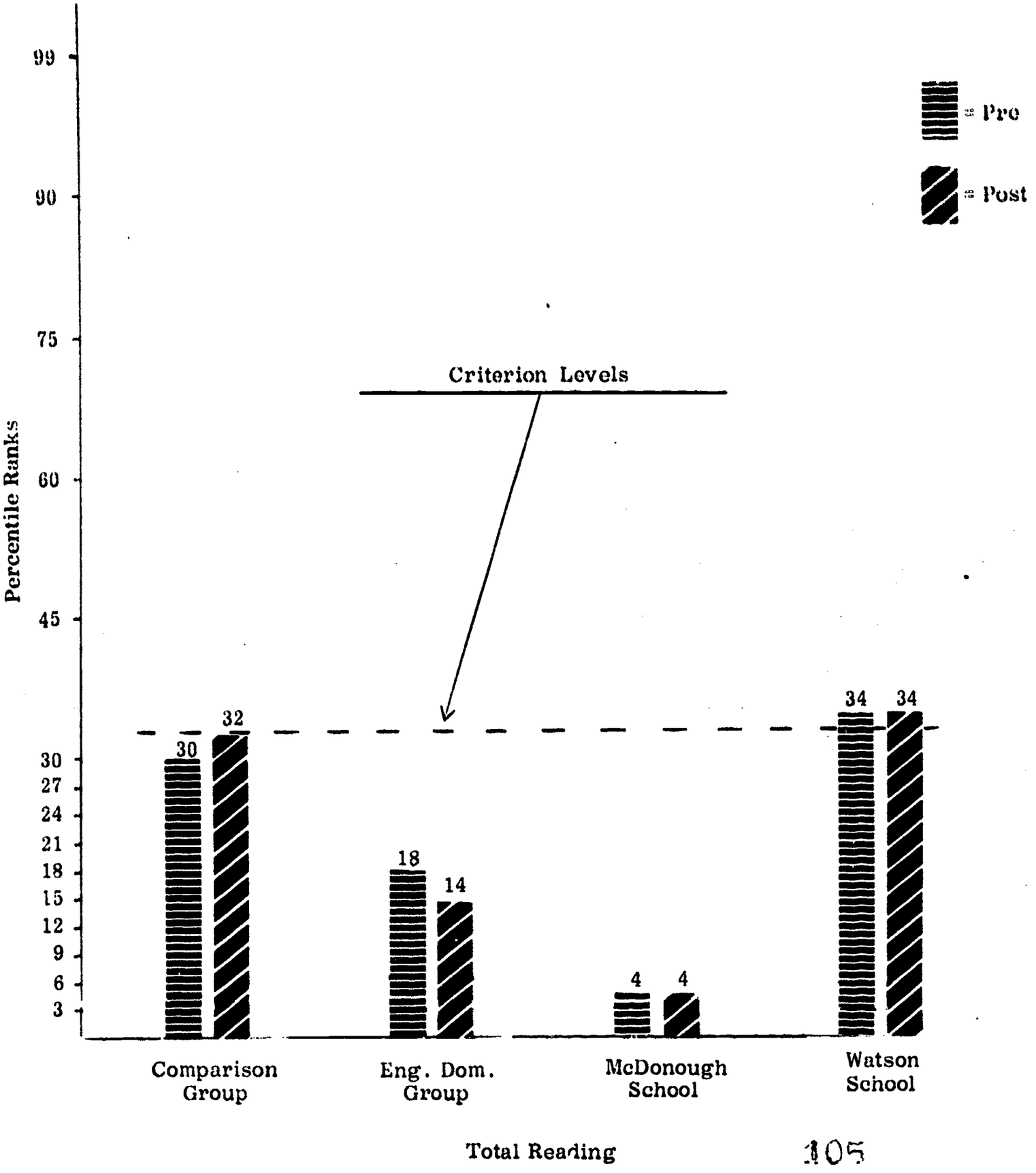


Figure 15: Pre-Posttest Percentile Ranks for the Sixth Grade Comparison And English Dominant Groups and the Program Schools on the Total Reading and Language Arts Subtests

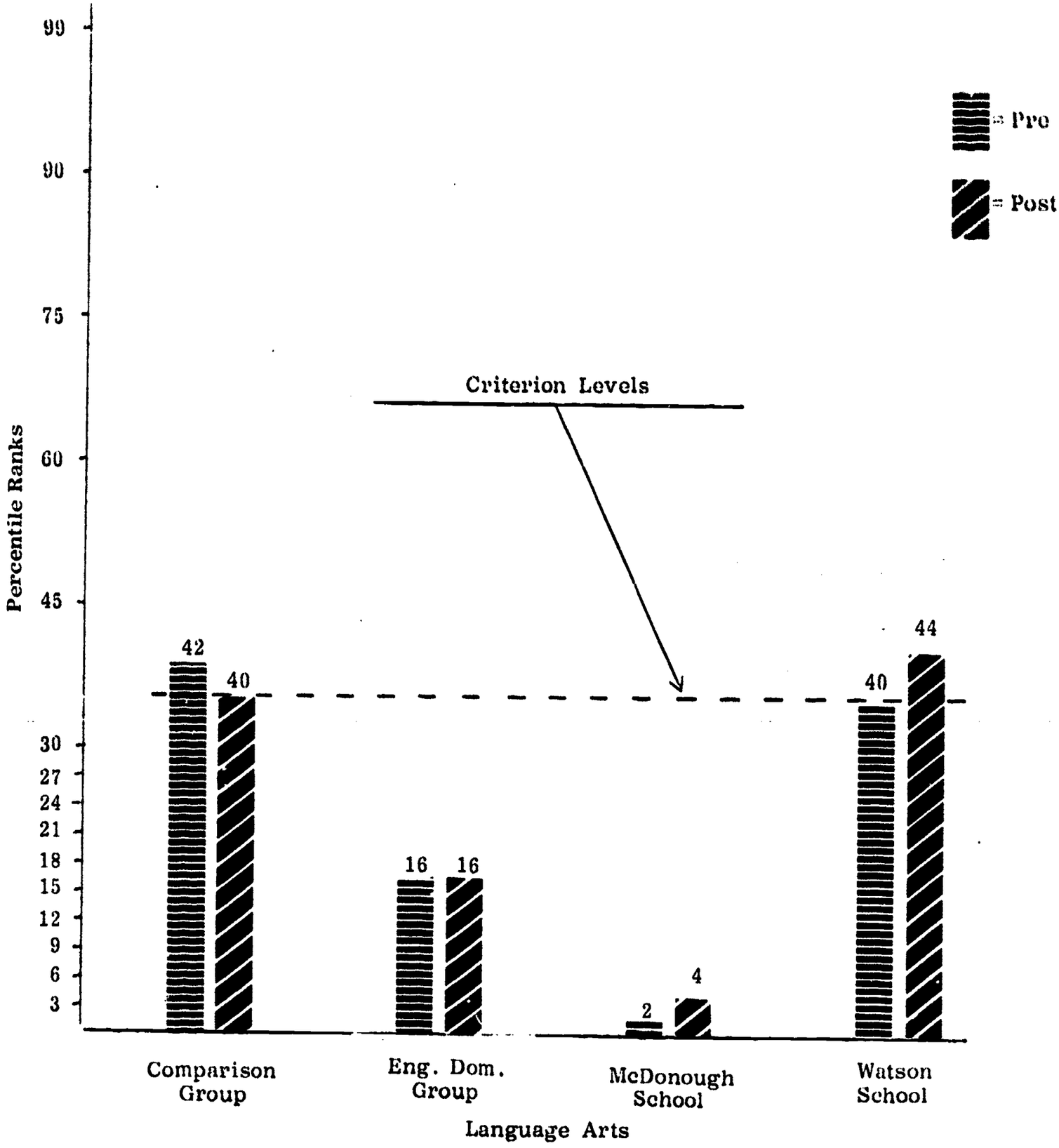


Figure 15 (Cont.)

Objectives 5-E-2.0, 6-E-2.0

> Fifth and sixth grade English speaking students will achieve an average percentile rank equivalent to the fifth and sixth grade students in comparison group who are not participating in the program on the Mathematics subtests from the Metropolitan Achievement Test, Intermediate Level.

Evaluation

The Mathematics subtests of the Metropolitan Achievement Test were administered to fifth and sixth grade program students and to a comparison group of non-program students as pre and post-tests. The Total Mathematics score is composed of three subtest scores--Mathematics Computation, Mathematics Concepts, and Mathematics Problem Solving. Students' performance was reflected by the total raw score, which was converted to a standard score. Standard scores for all students in a group were averaged to obtain the mean standard score; these mean scores were then transformed into the corresponding percentile rank or grade equivalent scores required by the analyses. Tables 42-47 and Figures 16-18 summarize the performance of English dominant and comparison group students on the Mathematics subtests.

A comparision of the post-test percentile rank scores, reported in Table 42 and Figure 16 of program and non-program students indicates that the fifth grade students scored better than the non-program students, resulting in the accomplishment of Objective 5-E-2.0, whereas the sixth grade program students earned lower average percentile rank scores than did the comparison group, preventing the accomplishment of Objective 6-E-2.0. However, both English dominant program groups increased their percentile rank from pre to post-test.

This improved performance as a result of participation in the program is further reflected in Table 43 and Figure 17, which show the gains in mean grade equi-

Table 42

Means, Grade Equivalents, and Percentile Ranks for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Mathematics Subtest from the Metropolitan Achievement Tests Across Schools

| Grade Level | Group | Testing Session | Standard Score Mean | Grade Equivalent | Percentile Rank |
|---|---|---|---|---|---|
| 5 | English Dominant (N=45) | Pre | 65.3 | 3.4 | 6 |
| | | Post | 81.3 | 4.8 | 28 |
| 5 | Comparison (N=26) | Pre | 67.5 | 3.6 | 8 |
| | | Post | 79.5 | 4.7 | 26 |
| 6 | English Dominant (N=21) | Pre | 75.7 | 4.4 | 14 |
| | | Post | 83.7 | 5.2 | 20 |
| 6 | Comparison (N=30) | Pre | 84.7 | 5.3 | 32 |
| | | Post | 91.2 | 6.4 | 42 |

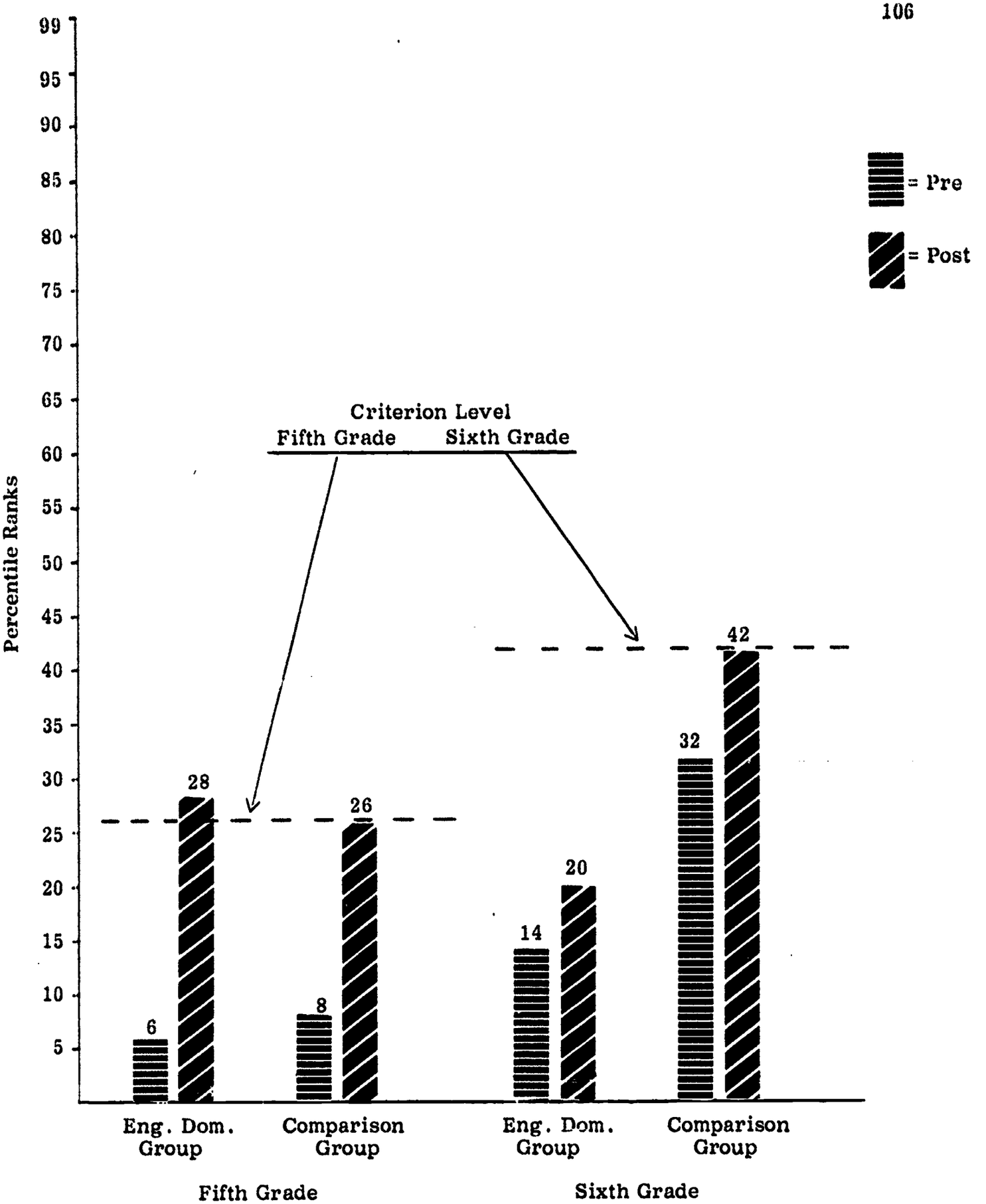


Figure 16: Pre-Posttest Percentile Rank for Fifth and Sixth Grade English Dominant and Comparison Groups on the Total Mathematics Subtest

Table 43

Pre-Posttest Grade Equivalents for Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Mathematics Subtest from the Metropolitan Achievement Tests Across Schools

| Grade Level | Group | Testing Session | G.E. | G.E. Difference in Months | No. Months Between Pre-Posttest | Average Monthly G.E. Gain in Months |
|---|---|---|---|---|---|---|
| 5 | English Dominant (N=45) | Pre | 3.4 | 14 | 6 | 2.3 |
| | | Post | 4.8 | | | |
| 5 | Comparison (N=26) | Pre | 3.6 | 11 | 6 | 1.8 |
| | | Post | 4.7 | | | |
| 6 | English Dominant (N=21) | Pre | 4.4 | 12 | 6 | 2.0 |
| | | Post | 5.2 | | | |
| 6 | Comparison (N=30) | Pre | 5.3 | 11 | 6 | 1.8 |
| | | Post | 6.4 | | | |

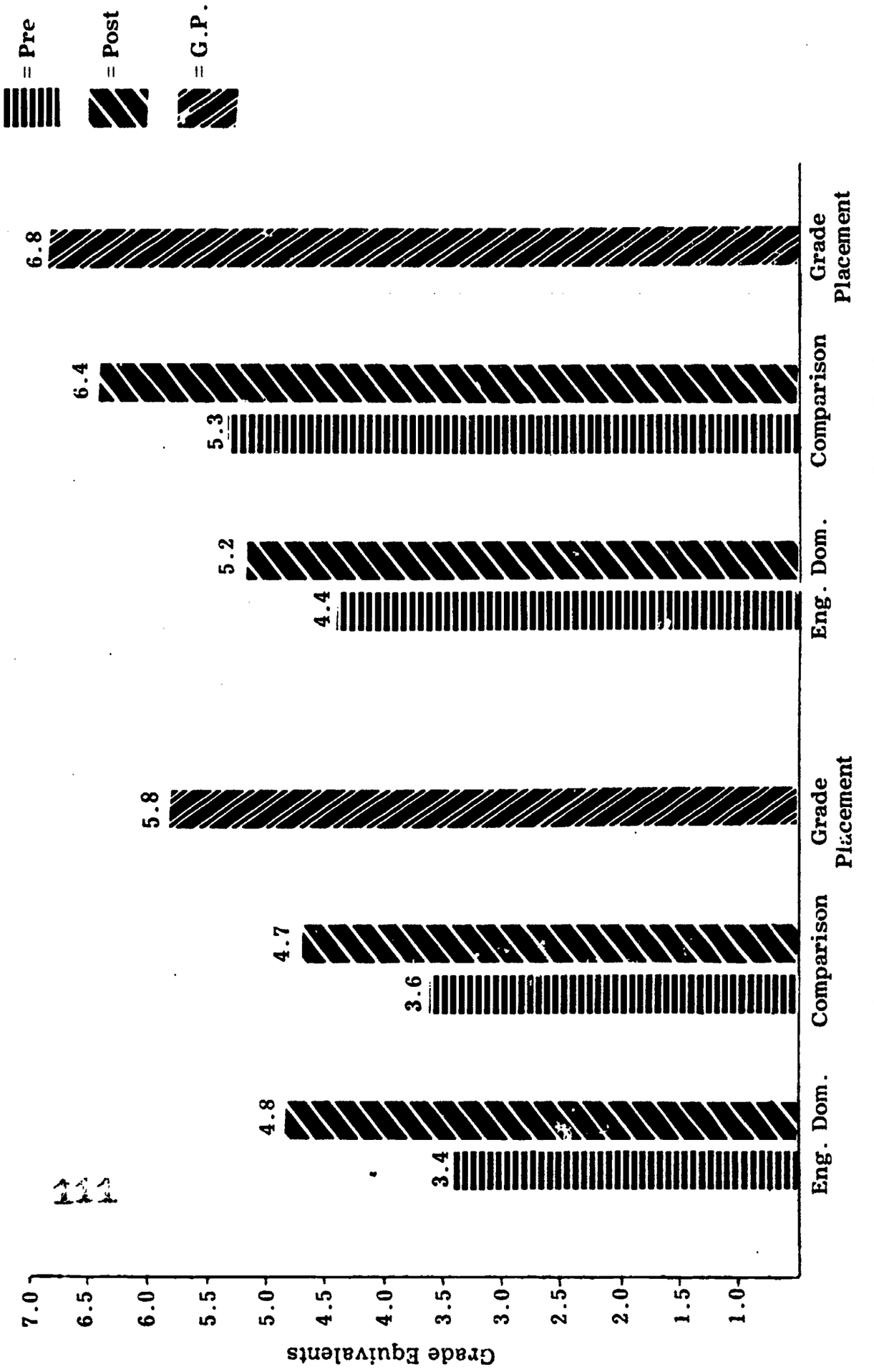


Figure 17: Pre-Posttest Grade Equivalents and Grade Placement at the Time of Posttesting for Fifth and Sixth Grade English Dominant and Comparison Groups on the Total Mathematics Subtest

valent score from pre to post-test. Both English dominant program groups made larger average monthly grade equivalent gains than the corresponding comparison group. Both fifth and sixth grade program groups gained at least two months in mean grade equivalent score for each month of program participation, which is highly commendable progress. Still, as shown in Table 44 and Figure 17, the program groups' post-test grade equivalent score is substantially below their actual grade placement--10 months below for grade 5 and 16 months below for grade 6. These data suggest that intensified mathematics instruction as a major part of the program is appropriate. Program students did improve their mathematics skills during the school year, as reflected by the statistically significant difference between pre and post mean standard scores shown in Table 45. These data allow objective 6-E-2.0 to be rated as partially accomplished, since the sixth grade students did increase their mathematics skills, but not to a sufficiently high degree to result in the complete accomplishment of the objective. Tables 46 and 47 and Figure 18 allow identification of the gains experienced by individual program and non-program classes. Adjustment of the mathematics curriculum to match the needs of the various program groups can be based on the information presented in these tables.

Table 44

Grade Equivalents and Grade Placement at the Time of Post-testing for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Mathematics Subtest from the Metropolitan Achievement Tests Across Schools

| Group | Grade Level | Post Grade Equivalent | Grade Placement | G.E.-G.P. Difference in Months |
|---|---|---|---|---|
| English Dominant (N=45) | 5 | 4.8 | 5.8 | -10 |
| Comparison (N=26) | 5 | 4.7 | 5.8 | -11 |
| English Dominant (N=21) | 6 | 5.2 | 6.8 | -16 |
| Comparison (N=30) | 6 | 6.4 | 6.8 | -4 |

Table 45

Statistical Results for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Total Mathematics Subtest from the Metropolitan Achievement Tests Across Schools

| Group | Grade Level | Testing Session | Standard Score $\bar{X}$ | S | t |
|---|---|---|---|---|---|
| English Dominant (N=45) | 5 | Pre | 65.8 | 18.6 | 6.542* |
| | | Post | 81.3 | 11.8 | |
| Comparison (N=26) | 5 | Pre | 67.5 | 15.4 | 4.397* |
| | | Post | 79.5 | 7.8 | |
| English Dominant (N=21) | 6 | Pre | 76.7 | 15.3 | 4.592* |
| | | Post | 83.7 | 13.7 | |
| Comparison (N=30) | 6 | Pre | 84.7 | 8.0 | 5.066* |
| | | Post | 91.2 | 7.8 | |

* $p < .001$

Table 46

Results for the Fifth Grade English Dominant and Comparison Group Students on the Mathematics Subtests from the Metropolitan Achievement Tests by School

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| Computation | McDonough (N=16) | 58.5 | 17.8 | 77.6 | 8.4 | 5.127*** | 3.2 | 5.0 | 2 | 26 |
| | Watson (N=12) | 69.1 | 22.5 | 81.4 | 10.5 | 2.086 | 4.2 | 5.4 | 18 | 38 |
| | Hartwell (N=17) | 67.9 | 19.8 | 86.4 | 11.1 | 4.086*** | 4.1 | 6.0 | | 58 |
| | Schools Combined (N=45) | 64.9 | 20.5 | 81.9 | 10.7 | 6.446*** | 3.8 | 5.5 | 8 | 40 |
| | Spring St. (c) (N=18) | 64.9 | 16.9 | 79.3 | 6.9 | 3.690** | 3.8 | 5.1 | 8 | 30 |
| | McDonough (c) (N=8) | 73.0 | 8.9 | 78.5 | 10.0 | 1.448 | 4.5 | 5.1 | 26 | 30 |
| | Schools Combined (c) (N=26) | 67.4 | 15.3 | 79.0 | 7.8 | 3.869*** | 4.0 | 5.1 | 16 | 30 |
| Concepts | McDonough (N=16) | 50.3 | 20.7 | 59.3 | 16.5 | 1.920 | 2.4 | 3.1 | 1 | 4 |
| | Watson (N=12) | 68.6 | 12.2 | 72.7 | 10.0 | 2.595* | 3.8 | 4.6 | 20 | 30 |

Table 46 (Cont.)

| Subtest | School | Standard Score Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | t | G.E. Pre | G.E. Post | %ile Pre | %ile Post |
|---|---|---|---|---|---|---|---|---|---|---|
| | Hartwell (N=17) | 61.5 | 17.4 | 93.1 | 6.2 | 7.618*** | 3.3 | 7.9 | 8 | 82 |
| | Schools Combined (N=45) | 59.4 | 19.0 | 75.6 | 18.7 | 5.551*** | 3.1 | 4.9 | 6 | 38 |
| | Spring St. (c) (N=18) | 60.5 | 16.9 | 70.4 | 11.5 | 2.648* | 3.3 | 4.1 | 8 | 20 |
| | McDonough (c) (N=8) | 67.8 | 4.6 | 74.3 | 5.9 | 2.556* | 3.9 | 4.7 | 22 | 32 |
| | Schools Combined (c) (N=26) | 62.7 | 14.3 | 71.6 | 10.3 | 3.292** | 3.4 | 4.4 | 10 | 26 |
| Problem Solving | McDonough (N=16) | 48.4 | 25.6 | 61.7 | 17.8 | 2.298* | 2.3 | 3.2 | 2 | 6 |
| | Watson (N=12) | 67.6 | 17.3 | 74.4 | 17.4 | 1.425 | 3.7 | 4.4 | 20 | 26 |
| | Hartwell (N=17) | 64.5 | 21.6 | 74.9 | 11.9 | 2.012 | 3.4 | 4.5 | 14 | 28 |
| | Schools Combined (N=45) | 59.6 | 23.7 | 70.1 | 16.9 | 3.416** | 3.1 | 3.9 | 8 | 18 |
| | Spring St. (c) (N=18) | 55.3 | 22.0 | 74.5 | 9.8 | 4.273*** | 2.8 | 4.5 | 4 | 28 |

Table 46 (Cont.)

| Subtest | School | Standard Score Pre-Test $\bar{X}$ | Standard Score Pre-Test S | Standard Score Post-Test $\bar{X}$ | Standard Score Post-Test S | t | G.E. Pre | G.E. Post | %ile Pre | %ile Post |
|---|---|---|---|---|---|---|---|---|---|---|
| | McDonough (c) (N=8) | 67.9 | 4.9 | 74.6 | 4.6 | 2.748* | 3.7 | 4.5 | 20 | 28 |
| | Schools Combined (c) (N=26) | 59.2 | 19.4 | 74.5 | 8.6 | 4.562*** | 3.1 | 4.5 | 6 | 28 |
| Total Mathematics | McDonough (N=16) | 56.8 | 17.5 | 72.3 | 9.7 | 3.922** | 2.7 | 3.9 | 1 | 8 |
| | Watson (N=12) | 74.0 | 11.9 | 81.7 | 10.8 | 8.867*** | 4.1 | 4.9 | 22 | 32 |
| | Hartwell (N=17) | 68.6 | 19.8 | 89.4 | 7.3 | 4.456*** | 3.5 | 5.9 | 8 | 58 |
| | Schools Combined (N=45) | 65.8 | 18.6 | 81.3 | 11.8 | 6.542*** | 3.4 | 4.8 | 6 | 28 |
| | Spring St. (c) (N=18) | 64.5 | 17.5 | 79.3 | 8.4 | 3.981*** | 3.3 | 4.6 | 6 | 22 |
| | McDonough (c) (N=8) | 74.3 | 4.4 | 80.1 | 6.2 | 2.985* | 4.1 | 4.7 | 22 | 26 |
| | Schools Combined (c) (N=26) | 67.5 | 15.4 | 79.5 | 7.8 | 4.397*** | 3.6 | 4.7 | 8 | 26 |

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 47

Results for the Sixth Grade English Dominant and Comparison Group Students on the Mathematics Subtests from the Metropolitan Achievement Tests by School

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | S | Post-Test $\bar{X}$ | S | | Pre | Post | Pre | Post |
| Computation | McDonough (N=9) | 66.7 | 9.9 | 79.3 | 4.6 | 4.875** | 4.0 | 5.1 | 4 | 14 |
| | Watson (N=12) | 86.5 | 12.0 | 89.6 | 12.3 | 1.810 | 6.1 | 6.5 | 50 | 40 |
| | Schools Combined (N=21) | 78.0 | 14.9 | 85.2 | 11.0 | 4.024*** | 5.0 | 5.9 | 18 | 28 |
| | Spring St. (c) (N=18) | 88.9 | 8.1 | 96.5 | 9.0 | 6.119*** | 6.3 | 7.5 | 56 | 60 |
| | McDonough (c) (N=12) | 80.5 | 3.2 | 85.0 | 3.1 | 3.646** | 5.4 | 5.9 | 28 | 28 |
| | Schools Combined (c) (N=30) | 85.6 | 7.8 | 91.9 | 9.2 | 6.576*** | 6.0 | 6.7 | 46 | 44 |
| Concepts | McDonough (N=9) | 60.8 | 6.3 | 62.7 | 9.7 | .521 | 3.3 | 3.4 | 4 | 4 |
| | Watson (N=12) | 76.0 | 13.5 | 83.5 | 14.5 | 3.245** | 4.9 | 6.1 | 26 | 38 |
| | Schools Combined (N=21) | 69.5 | 13.3 | 74.6 | 16.4 | 2.452* | 4.1 | 4.8 | 14 | 18 |

Table 47 (Cont.)

| Subtest | School | Standard Score Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | t | G.E. Pre | G.E. Post | %ile Pre | %ile Post |
|---|---|---|---|---|---|---|---|---|---|---|
| | Spring St. (c) (N=18) | 74.7 | 20.0 | 85.1 | 9.7 | 2.026 | 4.8 | 6.3 | 24 | 40 |
| | McDonough (c) (N=12) | 72.6 | 6.0 | 80.1 | 11.4 | 3.273** | 4.6 | 5.5 | 20 | 28 |
| | Schools Combined (c) (N=30) | 73.9 | 16.0 | 83.1 | 10.7 | 2.907** | 4.7 | 5.9 | 22 | 36 |
| Problem Solving | McDonough (N=9) | 58.8 | 12.0 | 63.3 | 7.1 | 1.062 | 3.0 | 3.3 | 2 | 4 |
| | Watson (N=12) | 82.0 | 15.0 | 87.7 | 15.1 | 2.922* | 5.5 | 6.4 | 36 | 48 |
| | Schools Combined (N=21) | 72.0 | 17.9 | 77.3 | 17.3 | 2.513* | 4.1 | 4.7 | 16 | 18 |
| | Spring St. (c) (N=18) | 76.4 | 23.2 | 85.6 | 12.4 | 1.637 | 4.7 | 6.1 | 22 | 42 |
| | McDonough (c) (N=12) | 80.2 | 13.3 | 83.7 | 7.8 | 1.433 | 5.2 | 5.8 | 32 | 38 |
| | Schools Combined (c) (N=30) | 77.9 | 20.0 | 84.8 | 10.8 | 1.976 | 4.9 | 6.0 | 26 | 40 |
| Total Mathematics | McDonough (N=9) | 65.3 | 9.6 | 74.1 | 5.9 | 2.896* | 3.3 | 4.1 | 2 | 4 |

Table 47 (Cont.)

| Subtest | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | S | Post-Test $\bar{X}$ | S | | Pre | Post | Pre | Post |
| | Watson (N=12) | 85.3 | 13.1 | 90.9 | 13.4 | 4.000** | 5.3 | 6.2 | 32 | 42 |
| | Schools Combined (N=21) | 76.7 | 15.3 | 83.7 | 13.7 | 4.592*** | 4.4 | 5.2 | 14 | 20 |
| | Spring St. (c) (N=18) | 85.9 | 9.3 | 93.1 | 8.1 | 3.603** | 5.4 | 6.6 | 34 | 50 |
| | McDonough (c) (N=12) | 82.8 | 4.9 | 88.3 | 6.2 | 4.576*** | 5.1 | 5.7 | 26 | 32 |
| | Schools Combined (c) (N=30) | 84.7 | 8.0 | 91.2 | 7.8 | 5.066*** | 5.3 | 6.4 | 32 | 42 |

* $p < .05$; ** $p < .01$; *** $p < .001$

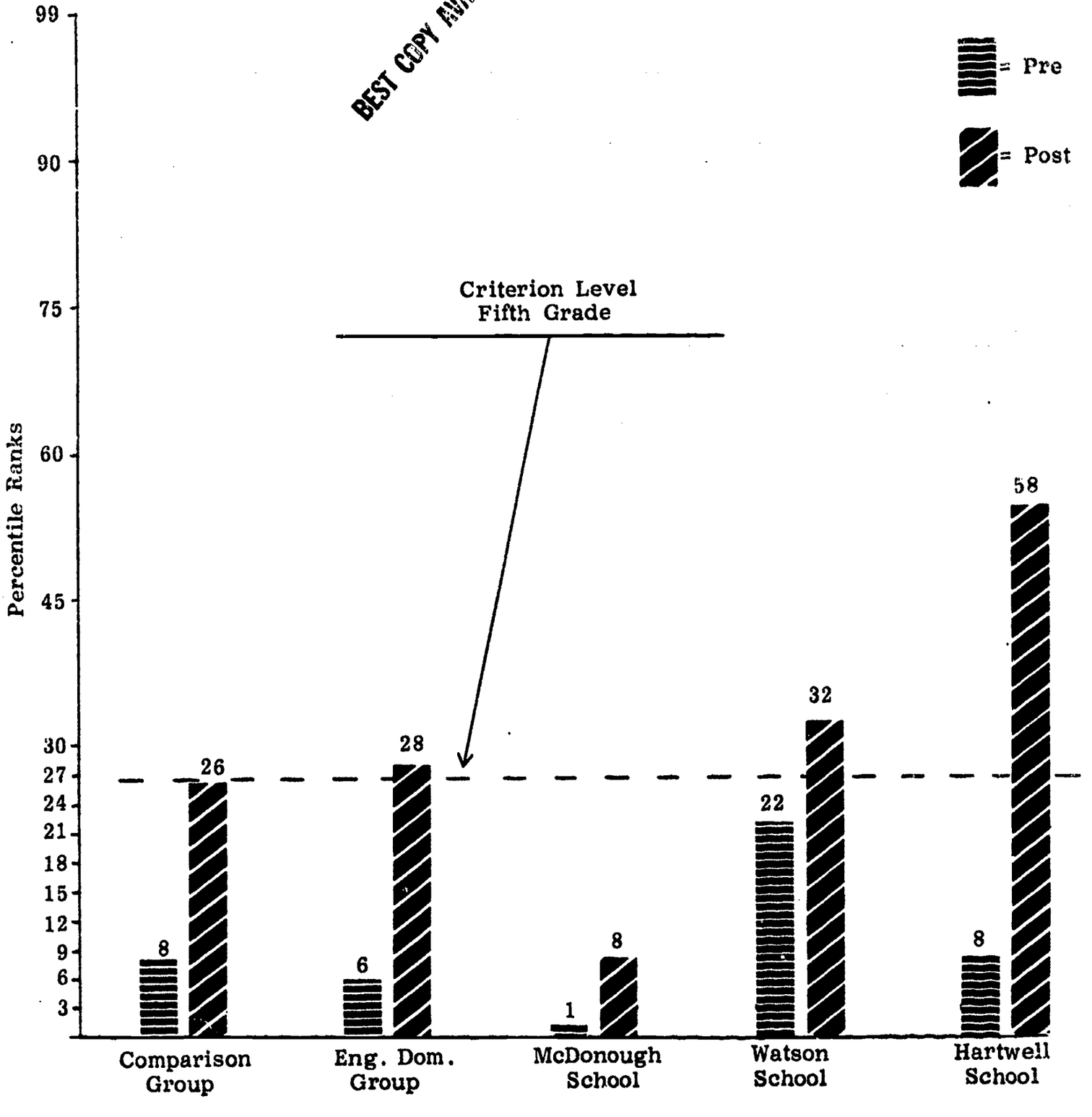


Figure 18: Pre-Posttest Percentile Ranks for Fifth and Sixth Grade Comparison and English Dominant Groups and the Program Schools on the Total Mathematics Subtest

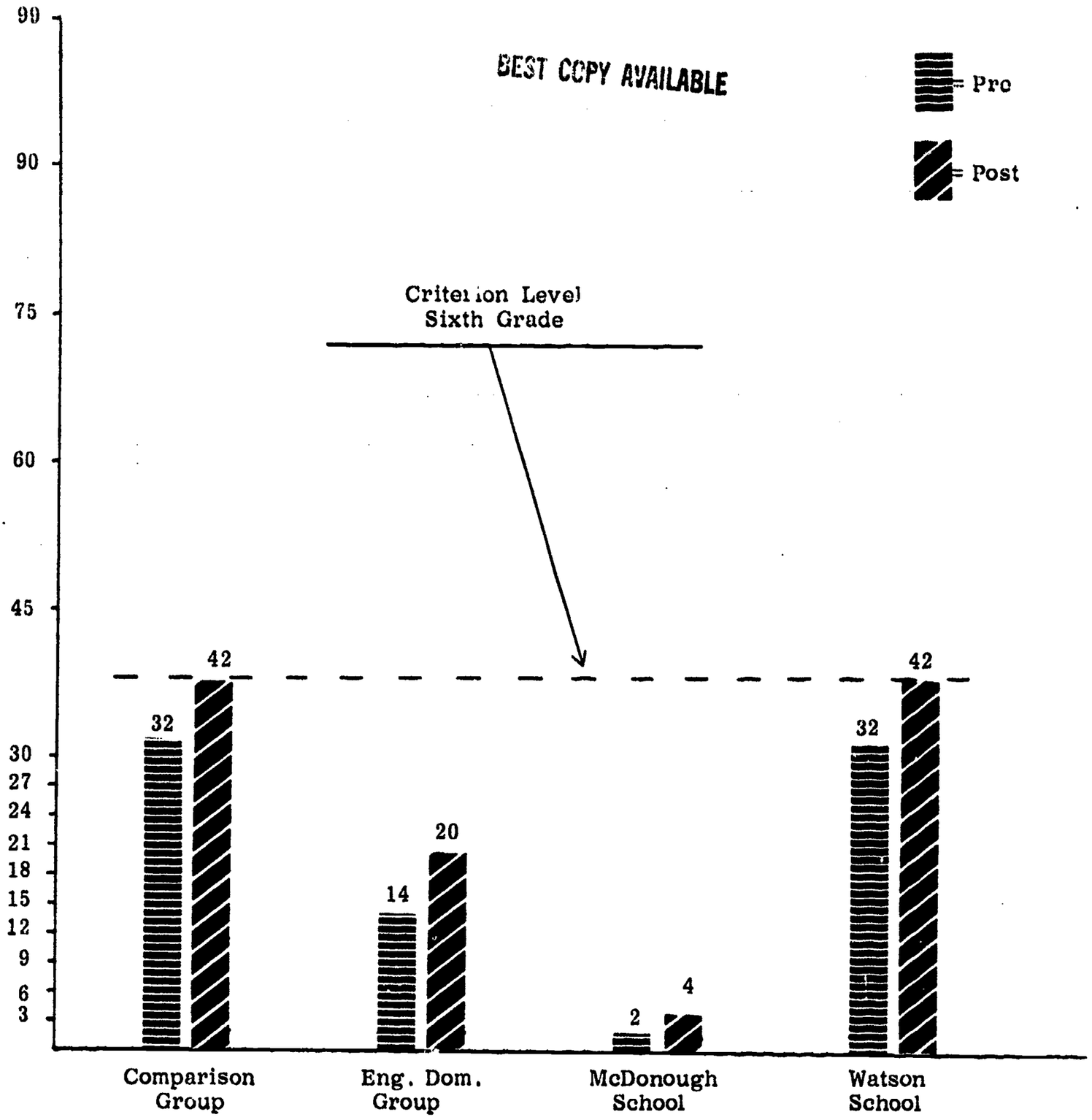


Figure 18 (Cont.)

Objectives 5-E-3.0, 6-E-3.0

> Fifth and sixth grade English speaking students will achieve an average percentile rank equivalent to the fifth and sixth grade students in the comparison group who are not participating in the program on the Science subtest from the Metropolitan Achievement Test, Intermediate Level.

Evaluation

The Science subtest of the Metropolitan Achievement Test was administered to fifth and sixth grade program students and to comparison groups of fifth and sixth grade students as a pre- and post-test to assess their acquisition of science skills. Tables 48-52 and Figures 19-21 summarize their performance on this subtest.

A comparison of the post-test percentile rank for the fifth and sixth grade English dominant students to those of the fifth and sixth grade comparison group students, as shown in Table 48 and Figure 19, indicates that on both subtests, the program students earned lower percentile ranks than the non-program students. These data suggest that objectives 5-E-3.0 and 6-E-3.0 cannot be rated as accomplished. Yet, both English dominant program groups increased their grade equivalent scores from pre to post-test.

Review of Table 49 and Figure 20 further reflects the progress made by the program students. The fifth grade group gained 1.8 months for each month of program participation. The gains of the sixth grade students were less noteworthy, less than one month for each month of program participation. Still, fifth and sixth grade comparision groups gained at a faster rate than the corresponding program group. Both program and non-program groups' post-test grade equivalent score was substantially below their actual grade placement at the time of testing, as reported in Table 50 and Figure 20. These data suggest that continued emphasis on science skill acquisition is appropriate.

Table 48

Means, Grade Equivalents, and Percentile Ranks for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Science Subtest from the Metropolitan Achievement Test Across Schools

| Grade Level | Group | Testing Session | Standard Score Mean | Grade Equivalent | Percentile Rank |
|---|---|---|---|---|---|
| 5 | English Dominant (N=44) | Pre | 62.1 | 2.8 | 8 |
| | | Post | 71.4 | 3.9 | 16 |
| 5 | Comparison* (N=8) | Pre | 69.3 | 3.6 | 20 |
| | | Post | 73.4 | 4.2 | 20 |
| 6 | English Dominant (N=22) | Pre | 71.7 | 4.0 | 14 |
| | | Post | 73.9 | 4.4 | 12 |
| 6 | Comparison* (N=12) | Pre | 75.8 | 4.8 | 24 |
| | | Post | 80.0 | 5.4 | 26 |

* one school only

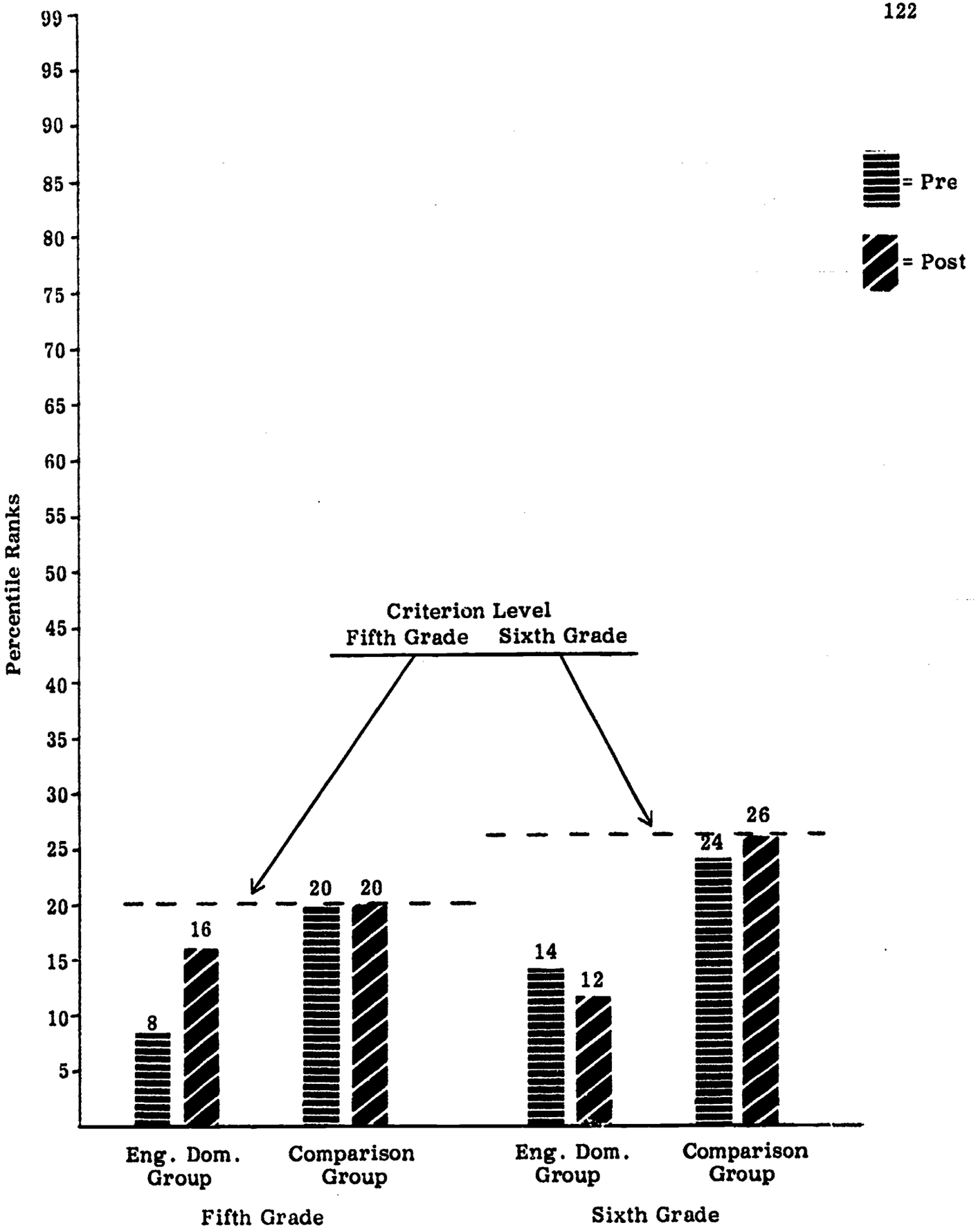


Figure 19: Pre-Posttest Percentile Rank for Fifth and Sixth Grade English Dominant and Comparison Groups on the Total Science Subtest

Table 49

Pre-Posttest Grade Equivalents for Fifth and Sixth Grade English Dominant and Comparison Group Students on the Science Subtest from the Metropolitan Achievement Tests Across Schools

| Grade Level | Group | Testing Session | G.E. | G.E. Difference in Months | No. Months Between Pre-Posttest | Average Monthly G.E. Gain in Months |
|---|---|---|---|---|---|---|
| 5 | English Dominant (N=44) | Pre | 2.8 | 11 | 6 | 1.8 |
| | | Post | 3.9 | | | |
| 5 | Comparison* (N=8) | Pre | 3.6 | 14 | 6 | 2.3 |
| | | Post | 4.2 | | | |
| 6 | English Dominant (N=22) | Pre | 4.0 | 4 | 6 | .7 |
| | | Post | 4.4 | | | |
| 6 | Comparison* (N=12) | Pre | 4.8 | 6 | 6 | 1.0 |
| | | Post | 5.4 | | | |

* one school only

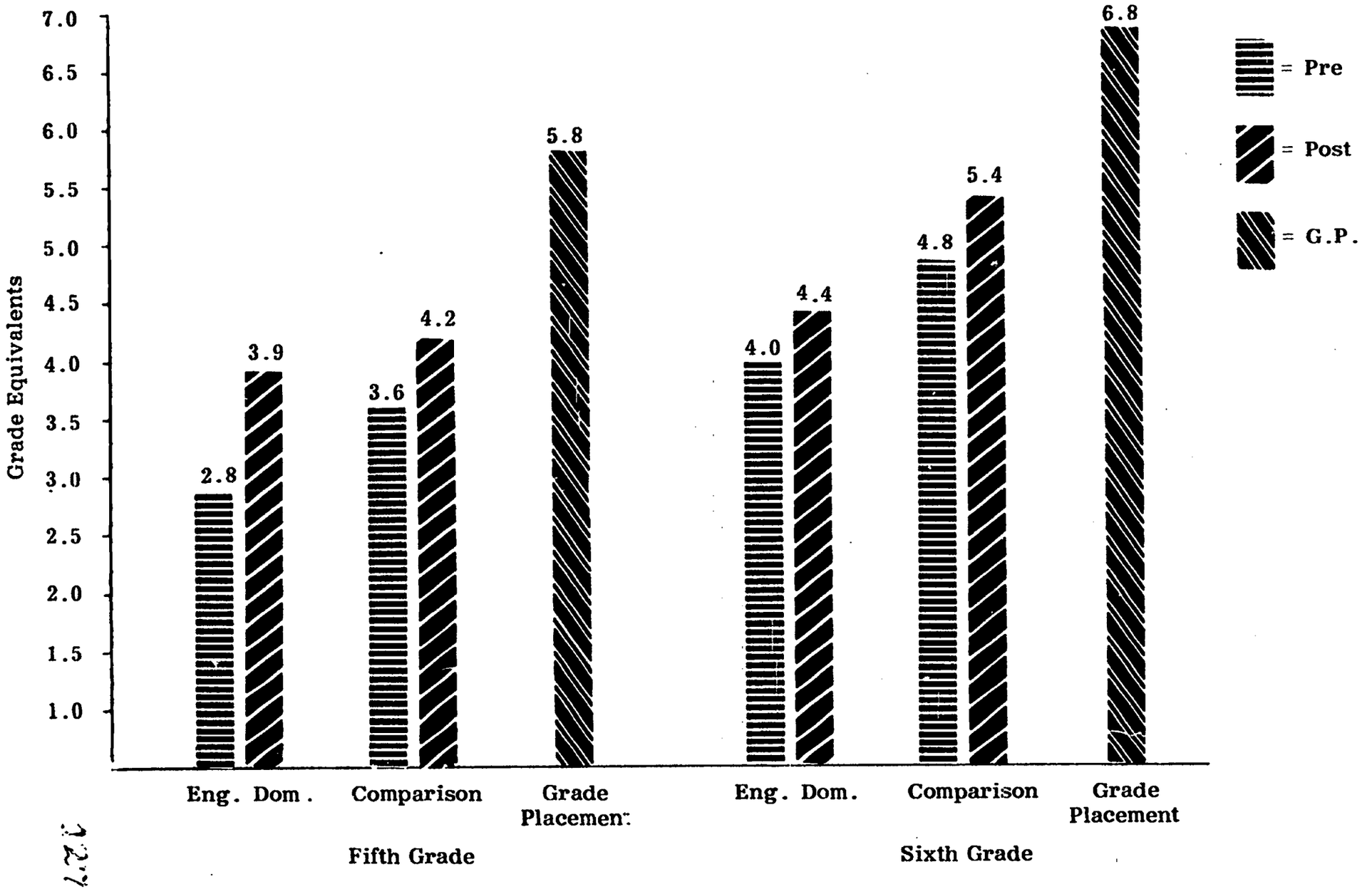


Figure 20: Pre-Posttest Grade Equivalents and Grade Placement at the Time of Posttesting for Fifth and Sixth Grade English Dominant and Comparison Groups on the Science Subtest

Table 50

Grade Equivalents and Grade Placement at the Time of Post-testing for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Science Subtest from the Metropolitan Achievement Tests Across Schools

| Group | Grade Level | Post Grade Equivalent | Grade Placement | G.E.-G.P. Difference in Months |
|---|---|---|---|---|
| English Dominant (N=44) | 5 | 3.9 | 5.8 | -19 |
| Comparison* (N=8) | 5 | 4.2 | 5.8 | -16 |
| English Dominant (N=22) | 6 | 4.4 | 6.8 | -24 |
| Comparison* (N=12) | 6 | 5.4 | 6.8 | -14 |

* one school only

Table 51 further reflects the gains made by the fifth grade English dominant students, by reporting a statistically significant difference between pre and post-test mean standard scores. This significance allows objective 5-E-3.0 to be rated as partially accomplished, since the fifth grade students improved their science skills, but not at the level required for complete accomplishment of the objective. The difference between pre and post-test mean standard scores for the sixth grade students, however, was not statistically significant, causing objective 6-E-3.0 to be rated as not accomplished. Review of Table 52 and Figure 21, which present the results of the program and non-program students' performance by school, allows a more detailed analysis of the level of performance and impact of instruc-

tion at the various program schools, and may suggest changes in the science instruction for the different schools.

Table 51

Statistical Results for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Science Subtest from the Metropolitan Achievement Tests Across Schools

| Group | Grade Level | Testing Session | Standard Score $\bar{X}$ | S | t |
|---|---|---|---|---|---|
| English Dominant (N=44) | 5 | Pre | 62.1 | 19.7 | 3.240** |
| | | Post | 71.4 | 9.8 | |
| Comparison[a] (N=8) | 5 | Pre | 69.3 | 4.3 | 2.678* |
| | | Post | 73.4 | 3.1 | |
| English Dominant (N=22) | 6 | Pre | 71.7 | 12.1 | 1.969 |
| | | Post | 73.9 | 14.5 | |
| Comparison[a] (N=12) | 6 | Pre | 75.8 | 4.6 | 2.981* |
| | | Post | 80.0 | 5.7 | |

[a] one school only

* $p < .05$; ** $p < .01$

Table 52

Results for the Fifth and Sixth Grade English Dominant and Comparison Group Students on the Science Subtest from the Metropolitan Achievement Tests by School

| Grade Level | School | Standard Score | | | | t | G.E. | | %ile | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-Test $\bar{X}$ | Pre-Test S | Post-Test $\bar{X}$ | Post-Test S | | Pre | Post | Pre | Post |
| 5 | McDonough (N=15) | 59.1 | 17.1 | 63.3 | 5.0 | .972 | 2.6 | 2.9 | 6 | 4 |
| | Watson (N=12) | 67.3 | 13.9 | 77.2 | 10.7 | 2.367* | 3.4 | 5.0 | 16 | 34 |
| | Hartwell (N=17) | 61.1 | 24.2 | 74.4 | 7.4 | 2.369* | 2.8 | 4.4 | 8 | 22 |
| | Schools Combined (N=44) | 62.1 | 19.7 | 71.4 | 9.8 | 3.240** | 2.8 | 3.9 | 8 | 16 |
| | Spring St. (c)[a] McDonough (c) (N=8) | 69.3 | 4.3 | 73.4 | 3.1 | 2.678* | 3.6 | 4.2 | 20 | 20 |
| 6 | McDonough (N=10) | 62.1 | 4.4 | 61.6 | 4.3 | .307 | 2.8 | 2.8 | 2 | 2 |
| | Watson (N=12) | 79.8 | 10.5 | 84.2 | 11.7 | 3.614** | 5.4 | 6.0 | 36 | 38 |
| | Schools Combined (N=22) | 71.7 | 12.1 | 73.9 | 14.5 | 1.969 | 4.0 | 4.4 | 14 | 12 |
| | Spring St. (c)[a] McDonough (c) (N=12) | 75.8 | 4.6 | 80.0 | 5.7 | 2.981* | 4.8 | 5.4 | 24 | 26 |

[a] Subtest not administered

* $p < .05$; ** $p < .01$

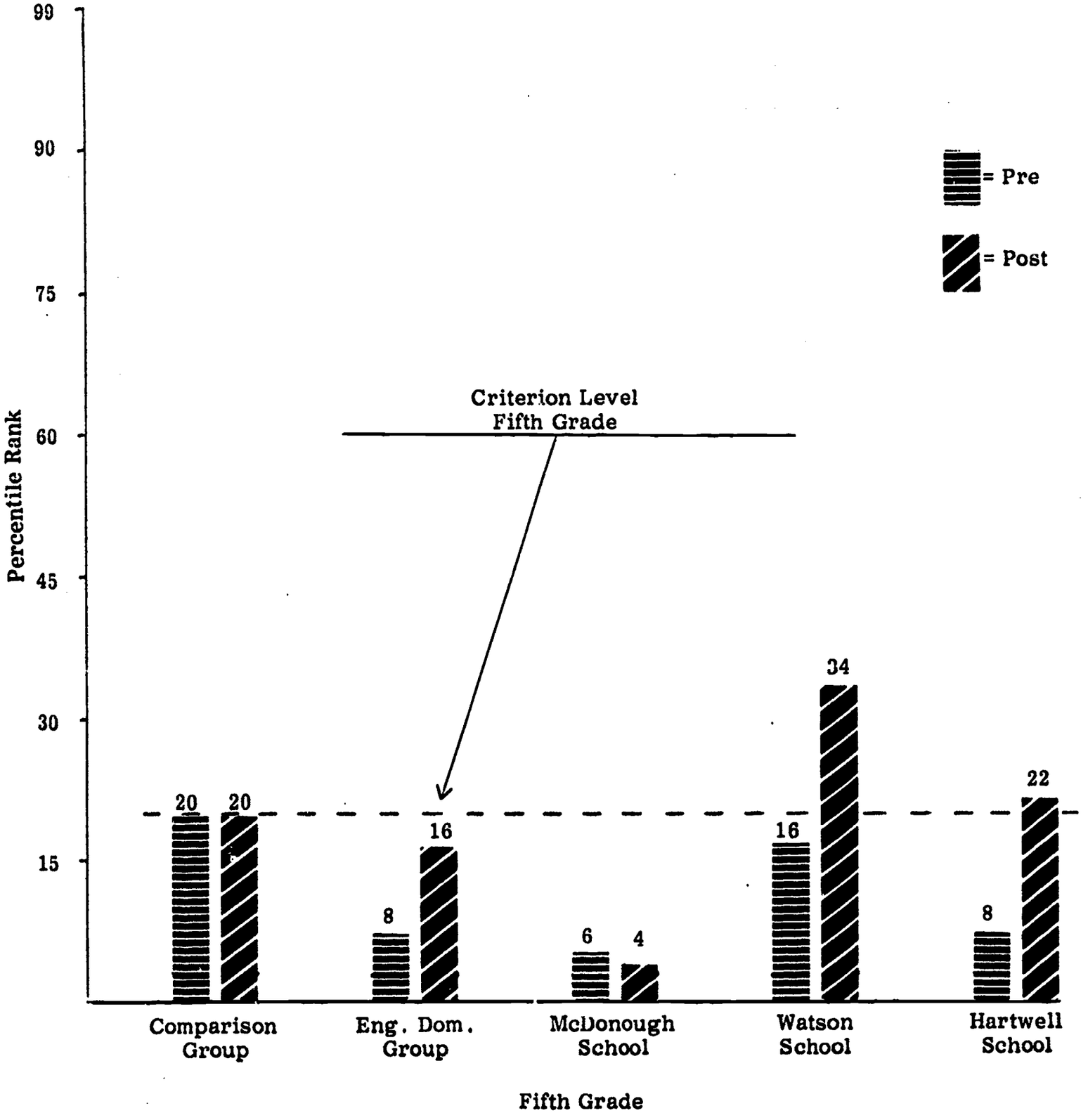


Figure 21: Pre-Posttest Percentile Ranks for Fifth and Sixth Grade Comparison and English Dominant Groups and the Program Schools on the Science Subtest

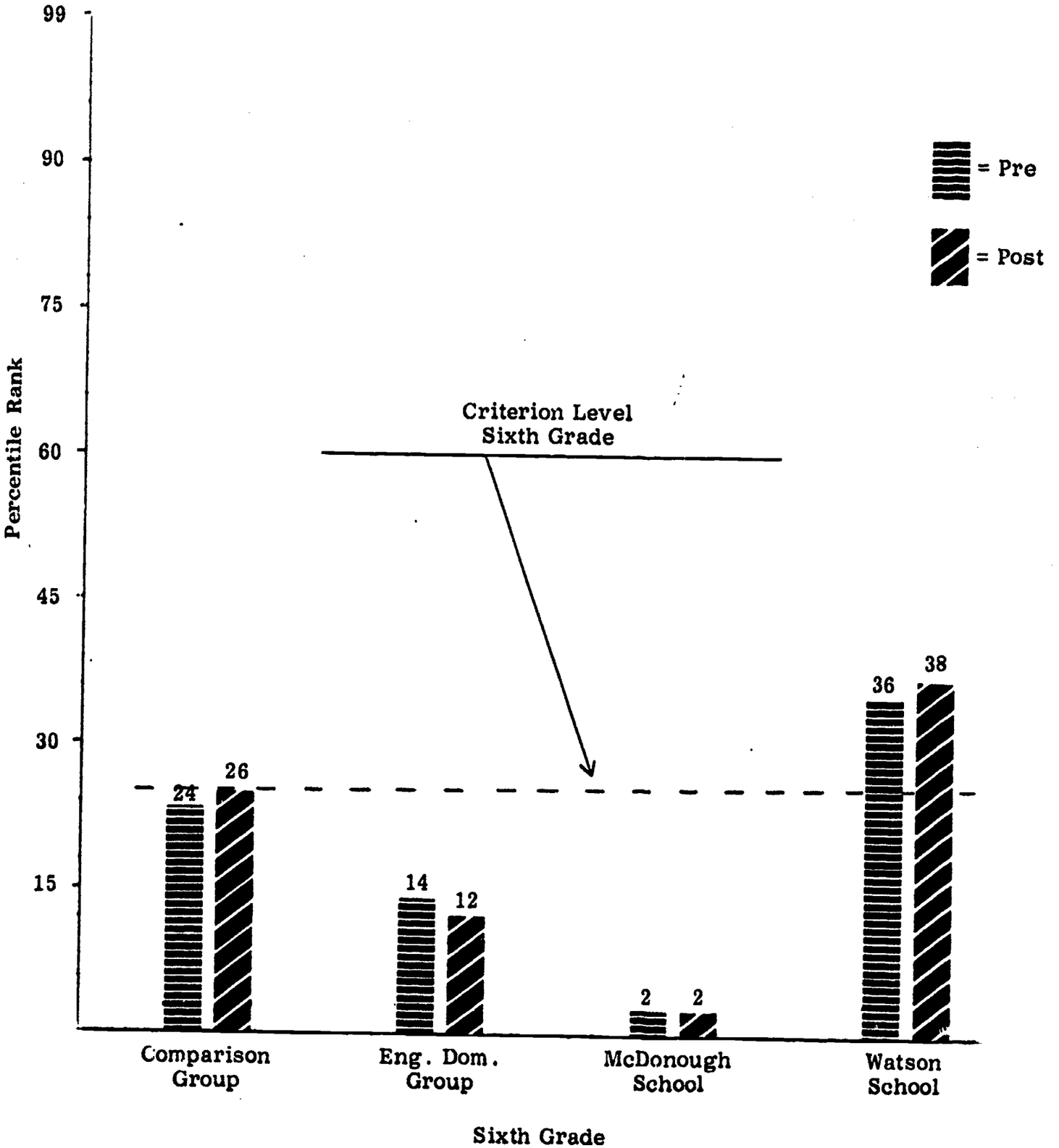


Figure 21 (Cont.)

Objectives 5-E-4.0, 6-E-4.0

> Seventy-five percent of the fifth grade and 75% of the sixth grade English speaking students will demonstrate increased proficiency in social studies as evidenced by their successfully completing 7 units of the Continuous Progress Laboratory.

Evaluation

Fifth and sixth grade English dominant program students used the Continuous Progress Laboratory as the basis of their social studies instruction. This individualized instructional package was organized into units; students completed a pre-test, instructional activities designed to match areas of weakness identified on the pre-test, and a post-test. Table 53 shows the number of Continuous Progress Laboratory Social Studies units completed by the fifth and sixth grade English dominant students. A review of this table indicates that students were required to complete seven units. All fifth grade students completed at least seven units, and a substantial number--ten students, completed at least 30 units, which is highly commendable progress. Thus, objective 5-E-4.0 was accomplished.

In contrast, the sixth grade students did not completely accomplish the corresponding objective, 4-E-6.0; only 50% of the students (less than the 75% required by the objective) completed at least seven units, the criterion level of the objective. Table 54 further describes the students' skill acquisition in social studies by reporting the number of C.P.L. social studies units completed at each grade level for the McDonough and Watson Schools separately, as well as combined. A review of this table indicates that the partial accomplishment of this objective by the sixth grade students can be attributed to the small percentage of sixth graders at the Watson School who completed at least seven social studies units.

Table 53

Number of CPL Social Studies Units Completed by Fifth and Sixth Grade English Dominant Students Across Schools and Compared to Criterion Number

| Grade Level | Number of Units Completed | | | | | | Criterion Unit Number | Students At or Above Criterion | |
|---|---|---|---|---|---|---|---|---|---|
| | 1-6 | 7-12 | 13-18 | 19-24 | 25-30 | ≥30 | | N | % |
| 5 (N=22) | - | 2 | 9 | 1 | - | 10 | 7 | 22 | 100 |
| 6 (N=16) | 8 | 8 | - | - | - | - | 7 | 8 | 50 |

(It should be noted that not all classes used the C.P.L. and are, therefore, not included in the discussion above. C.P.L. was not being used by the fifth grade class at the Hartwell School because it was a Follow-Through class and the teacher did not use the materials. One sixth grade class at the Watson and one at the McDonough also did not use it due to the late arrival of many books and the reported low reading level of the students.)

Table 54

Number of CPL Social Studies Units Completed by Fifth and Sixth Grade English Dominant Students by Schools and Compared to Criterion Number

| Grade Level | School | 1-6 | 7-12 | 13-18 | 19-24 | 25-30 | 30 | Criterion Unit Number | Students At Or Above Criterion N | Students At Or Above Criterion % |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | McDonough (N=10) | - | 2 | 8 | - | - | - | 7 | 10 | 100 |
| | Watson (N=12) | - | - | 1 | 1 | - | 10 | 7 | 12 | 100 |
| | Combined Schools (N=22) | - | 2 | 9 | 1 | - | 10 | 7 | 22 | 100 |
| 6 | McDonough (N=5) | 1 | 4 | - | - | - | - | 7 | 4 | 80 |
| | Watson (N=11) | 7 | 4 | - | - | - | - | 7 | 4 | 36 |
| | Combined Schools (N=16) | 8 | 8 | - | - | - | - | 7 | 8 | 50 |

Objectives 5-E-5.0, 6-E-5.0

Fifth and sixth grade English speaking students will demonstrate increased proficiency in Portuguese as a Second Language as evidenced by increased mean score on the Portuguese Oral Production Test. Minimum acceptable level of performance will be statistical significance at the .05 level.

Evaluation

The Portuguese Oral Production Test was administered to English dominant fifth (Level 1) and sixth (Level 2) grade students as a pre- and post-test to assess their ability to speak Portuguese. This test required students to respond to a series of questions, many of which referred to a series of stimulus pictures. The questions were specially designed to assess students' knowledge of the phonological and grammatical features of Portuguese, while requiring a very basic and limited vocabulary to respond. Table 55 reports the mean raw score on the pre and post-

Table 55

Statistical Results for Fifth and Sixth Grade English Dominant Students on the Portuguese Oral Production Test Across Schools

| Grade Level | Test Level | Testing Session | Raw Score $\bar{X}$ | S | t |
|---|---|---|---|---|---|
| 5 | Level 1 (N= 41) | Pre | 12.3 | 9.6 | 7.044** |
| | | Post | 18.5 | 7.4 | |
| 6 | Level 2 (N= 20) | Pre | 8.4 | 3.9 | 3.067* |
| | | Post | 11.9 | 5.5 | |

* $p < .01$; ** $p < .001$

tests and the t-statistic from the t-tests for correlated data used to compare mean scores across all schools. Table 56 further delineates the results by showing the comparisons between pre-test and post-test for each grade by school: Figure 22 graphically depicts these same comparisons. A review of these tables indicates that both fifth and sixth grade students as a group demonstrated statistically significant gains from pre- to post-test scores. Therefore, objectives 5-E-5.0 and 6-E-5.0 were accomplished. Also noteworthy were the statistically significant gains demonstrated by three of five groups when the data are analyzed by grade and school (see Table 56).

Table 56

Statistical Results for Fifth and Sixth Grade English Dominant Students on the Portuguese Oral Production Test by School

| Grade Level | Test Level | School | Pretest (Raw Scores) $\bar{X}$ | Pretest (Raw Scores) S | Posttest (Raw Scores) $\bar{X}$ | Posttest (Raw Scores) S | t |
|---|---|---|---|---|---|---|---|
| 5 | Level 1 | McDonough (N=16) | 18.6 | 6.4 | 20.6 | 5.6 | 2.080 |
| | | Watson (N=12) | 14.8 | 8.0 | 22.3 | 6.8 | 4.834** |
| | | Hartwell (N=13) | 2.2 | 5.2 | 12.3 | 5.9 | 8.468** |
| | | Combined Schools (N=41) | 12.3 | 9.6 | 18.5 | 7.4 | 7.044** |
| 6 | Level 2 | McDonough (N=8) | 6.6 | 1.7 | 11.9 | 3.3 | 3.900* |
| | | Watson (N=12) | 9.6 | 4.5 | 11.9 | 6.6 | 1.428 |
| | | Combined Schools (N=20) | 8.4 | 3.9 | 11.9 | 5.5 | 3.067* |

* $p < .01$; ** $p < .001$

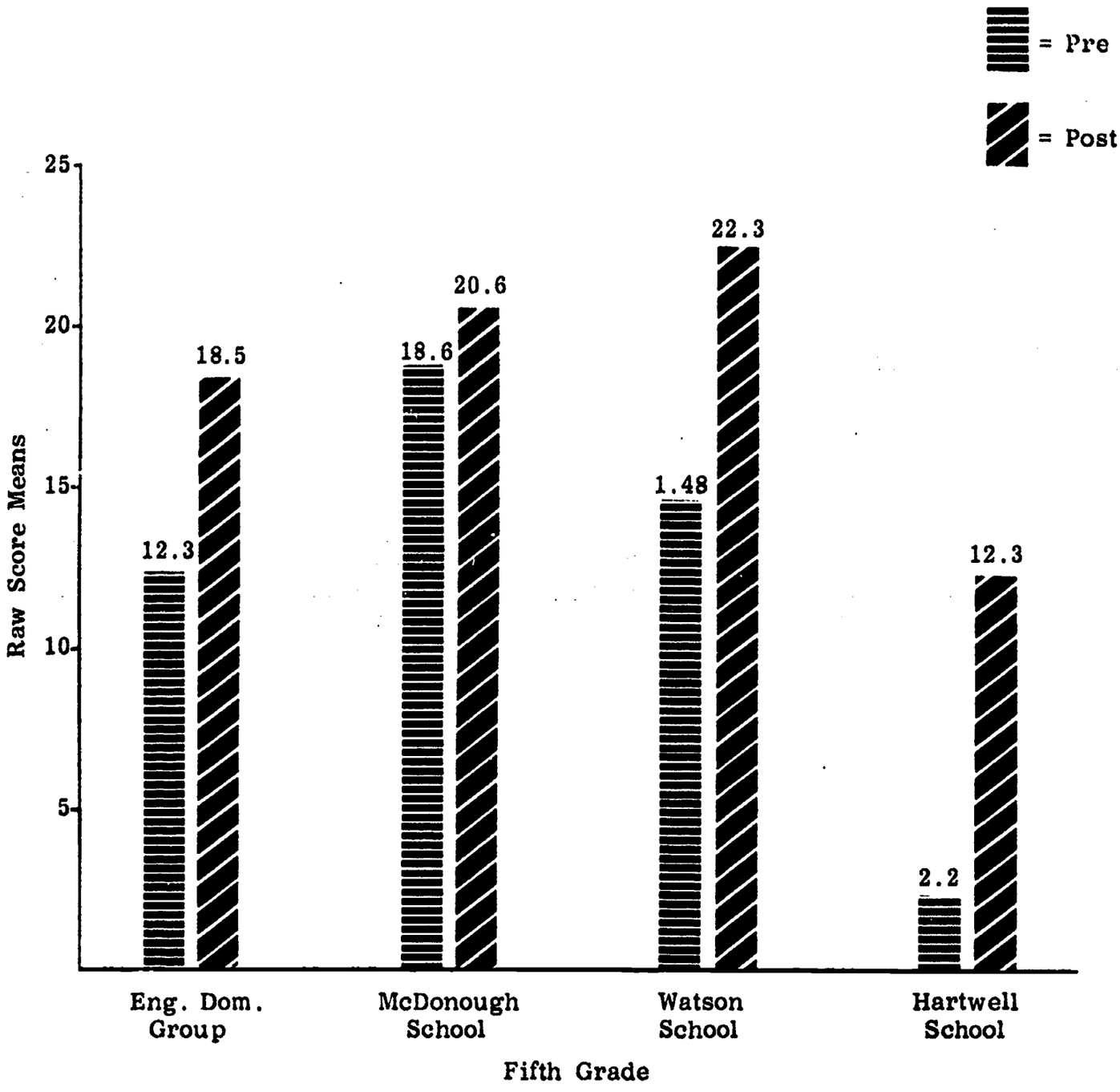


Figure 22: Pre-Posttest Raw Score Means for Fifth and Sixth Grade English Dominant Group and Program Schools on the Portuguese Oral Production Test

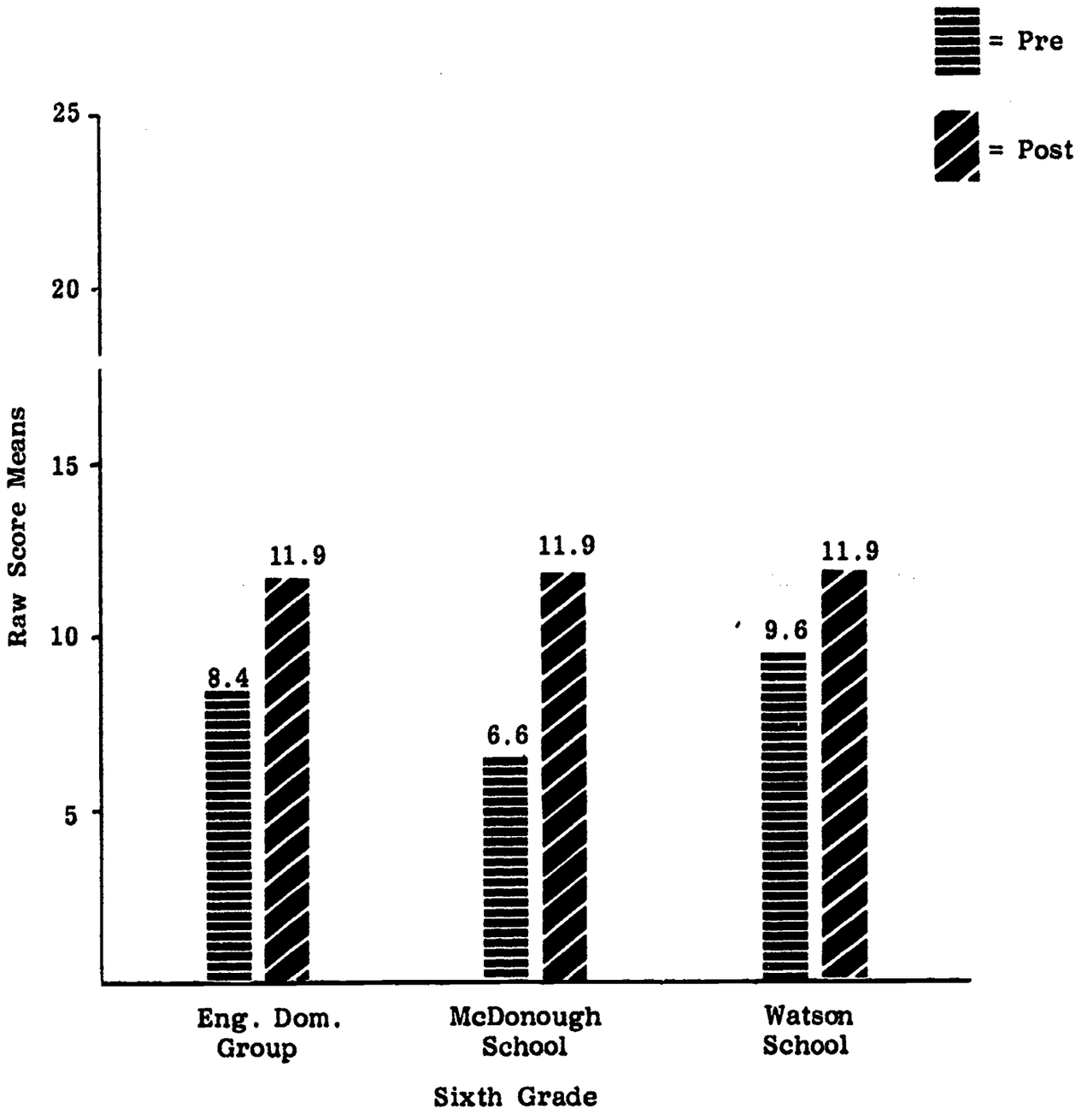


Figure 22 (Cont.)

# MATERIALS DEVELOPMENT COMPONENT

## Introduction

The Materials Development Component of the bilingual program intends to provide an individualized curriculum for Portuguese dominant students in grades five through nine. The goal of the program is to complete this endeavor within five years for the content areas of mathematics, science, language arts, and social studies. A Curriculum was developed last year for the fifth grade. The program's goal this past year was to revise the fifth grade curriculum, and to develop a curriculum for sixth grade students. The curriculum was to parallel, as closely as possible, the Fall River curriculum in the sixth grade subject area. An additional project goal was to develop an ESL (English as a Second Language) program. A staff position was created and a person hired to accomplish this. As a necessary, and desirable, adjunct to this component, language laboratories were installed and operating in program schools. Also an audio-visual center was constructed and operating in the Hartwell Street School.

## Evaluation of Objectives

### Objective MD-1.0

The curriculum specialists will prepare sixth grade Portuguese curriculum materials in Language Arts, Mathematics, Science, and Social Studies; also mini-lessons for Portuguese as a Second Language. The curriculum materials will include:

1. Outline of topical areas;
2. Written materials for each area of the outline;
3. Major objectives for each area;
4. Catalog of materials--including audio-visuals, textbooks, workbooks, library books.

Evaluation

A review of the program files indicate that this objective was accomplished. Examintion of the records revealed that during the summer of 1973, the curriculum specialists rewrote and revised the fifth grade curriculum. The writing and revisions incorporated the teachers' constructive criticisms and student achievement data collected during the previous year. The result was a series of curriculum units in each of the specified content areas. Each curriculum unit was replete with pre and post mastery tests, instructional objectives in behavioral terms, written material for teaching the objectives, practice exercises, suggested supplementary activities, audio-visual materials, and reference sources. Also, an achievement test was constructed for each content area.

The sixth grade curriculum units in each of the specified content areas have the same format described above. In developing in the curriculum units, and in order to provide a degree of parallelism with the Fall River curriculum, the specialists initiated a review program. They reviewed existing curriculum guides and textbooks in use in the Fall River system and the C.P.L. (Continuous Progress Laboratory) materials, and recommended texts which were being used with the English dominant students in the program. They also reviewed materials from other bilingual programs in Massachusetts, Rhode Island, and California, as well as Portuguese textbooks. Then they adopted and adapted selected material and ideas from these various sources, and coupled them with their own ideas and ingenuity to produce the curriculum units now being used. A listing of the sixth grade Portuguese curriculum for each content area follows.

Language Arts. The following ten units were developed:

Clauses:
Pronouns,

Verbs;
Morphemes;
Figurative Language;
Synonyms, Antonyms, Homonyms;
Finding Information;
Composition;
Writing Letters;
Songs and Poems.

Adapting and adopting material from the English through Pictures Series, and Let's Speak Spanish with his own ideas, the language arts specialist also developed PSL-Book II. PSL-Book II along with PSL-Book I (developed the previous year) provides a PSL curriculum that uses flash-cards, tapes, filmstrips, slides, and transparencies.

Additionally, the language arts specialist wrote and produced a play that was performed at the Spring Festival held in May at Bristol Community College. The performers and chorus members were all program students. In the role of materials development coordinator, the language arts specialist spent some of his time with visitors; was a program participant (as was the program director) at the Third Annual Portuguese Conference held in April in San Jose, California, and during the same period conducted a workshop for teachers in Artesia, and one for community members in Haywood, California.

Mathematics. The following nine units were developed:

Sets;
Basic Operations with Whole Numbers;
Bases, Factors, Exponents;
Geometry-Area and Perimeter;
Fractions-Addition and Subtraction;
Fractions-Multiplication and Division;
Fractions and Decimals;
Percents;
Metric and English Measurement.

Moreover, the mathematics curriculum specialist developed a Math Kit. The Kit was developed for individualized instruction, and consisted of a set of individual cards and answer keys based on the four fundamental operations. On each card was a word problem the solution of which employed one or more of the basic operations.

Social Studies. The following nine units were developed:

Ancient Egypt;
Mesopotania;
Ancient Greece;
Ancient Rome;
the Early Middle Ages;
the Later Middle Ages;
the Renaissance;
the Age of Discovery;
To the New World.

In addition to the above, the social studies specialist also developed the following material: a series of mini-lessons on Portuguese culture, a set of flash-cards on Portuguese history and culture, a slide presentation about Portugal, a historical game, and a tape and accompanying filmstrip on English social studies.

Science. Ten units were developed in science. They are:

Life Science Classification and Structure of Animals;
Life Science-Circulation, Respiration, Foods;
Life Science-Human Nervous System;
Life Science-Plants;
Matter and Energy-Objects in Motion;
Matter and Energy-Light;
Matter and Energy-Magnets'
Matter and Energy-Electricity;
Acids;
Earth Science-Water.

Over and above the ten science units, the curriculum specialist made a number of instructional tapes. A tape was made about the human body called "Voyage Inside the Human Body," and another on "How to Study;" a series of tapes were

made on "How to Use the Dictionary and Other Resources." He also put all the fifth grade science material on five tapes.

The tapes made by the science curriculum specialist, and those made by the other curriculum specialists were used in the language labs, thus allowing up to twelve students at a time to listen and receive instruction aurally. Also, most of the tapes had accompanying worksheets. The media centers (or language labs) helped the teachers and students to use program and commercially prepared instructional materials. The centers were under the supervision of teacher aides who worked, however, under specific instructions from the teachers.

A catalogue was compiled of the curriculum units for each subject area. Each subject area in the catalog contains a title page, a packet summary, a description of each unit, and a list of audio-visual materials and books available. The catalog is in the program files.

The curriculum specialists periodically visited the classrooms to observe the teachers and students using the instructional units, and to discuss various aspects of the units with the teacher. Their observations and comments were recorded on a special form developed by the evaluators (the Classroom Observation of Curriculum and Materials Form). The number of classroom visitations made by each specialist is presented in Table 57. Also, the teachers used a special form--the Materials Usage Form--to record their reactions to each unit that they used. Completed forms were given to the staff development specialist, who in turn, gave them to the respective specialists. The specialists kept a record of the teachers' comments which will be used in revising the units this summer. A summary of the teachers' reactions is presented in Table 58.

Table 57

Summary of Visitations to Portuguese Dominant Classrooms by the Curriculum Specialists for Purpose of Observing Instruction Using the Curriculum Units by School and Subject Area

| Subject Area | School | | | |
|---|---|---|---|---|
| | McDonough | Watson | Hartwell* | Total |
| Science | 9 | 5 | 10 | 24 |
| Mathematics | 6 | 5 | 7 | 18 |
| Social Studies | 8 | 3 | 6 | 17 |
| Language Arts | 4 | 4 | 1 | 9 |
| Total | 27 | 17 | 24 | 68 |

* Hartwell had three Portuguese dominant classrooms; the others had two each.

The observations of the specialists indicate that the units were used for their intended purpose, and were used correctly. The specialists indicated that the teachers encountered no problems in using the materials, and that they did not require additional materials. (Approximately one-third of the teachers, however, using the social studies and math units indicate that they had to use additional supplementary materials.) The specialists also thought that the units were of the appropriate difficulty level for average students. Moreover, they felt the units were adaptable for use with below or above average students. This would require the use of the complementary and supplementary suggested activities and reference sources by the individual teachers.

Table 58

Summary of Teachers' Reactions to the Portuguese Curriculum Units by Content Area

| Question | Social Studies | Mathematics | Science | Language Arts |
|---|---|---|---|---|
| Unit directions for teacher - | | | | |
| Clear: | 44 | 53 | 64 | 46 |
| Unclear: | 0 | 0 | 0 | 0 |
| Complete: | 44 | 53 | 64 | 46 |
| Incomplete: | 0 | 0 | 0 | 0 |
| Unit directions for students - | | | | |
| Clear: | 45 | 53 | 64 | 46 |
| Unclear: | 0 | 0 | 0 | 0 |
| Complete: | 45 | 52 | 63 | 45 |
| Incomplete: | 0 | 0 | 1 | 1 |
| Unit requirements for teacher - | | | | |
| Appropriate Participation: | 29 | 39 | 56 | 36 |
| Inappropriate Participation: | 16 | 11 | 8 | 8 |
| Unit subject matter - | | | | |
| Appropriate: | 45 | 50 | 64 | 42 |
| Inappropriate: | 0 | 2 | 0 | 1 |
| Unit sample exercises - | | | | |
| Sufficient: | 45 | 54 | 63 | 44 |
| Insufficient: | 0 | 0 | 1 | 1 |

Table 58 (Cont.)

| Question | Social Studies | Mathematics | Science | Language Arts |
|---|---|---|---|---|
| Unit requirements of supplementary material - | | | | |
| Yes: | 15 | 13 | 3 | 1 |
| No: | 29 | 39 | 59 | 42 |
| Unit material difficulty level for Fast Students - | | | | |
| Appropriate: | 21 | 39 | 35 | 29 |
| Too Easy: | 1 | 1 | 0 | 0 |
| Too Hard: | 0 | 2 | 0 | 0 |
| Average Students - | | | | |
| Appropriate: | 39 | 47 | 51 | 36 |
| Too Easy: | 0 | 0 | 0 | 0 |
| Too Hard: | 4 | 4 | 6 | 7 |
| Slow Students - | | | | |
| Appropriate: | 15 | 30 | 27 | 19 |
| Too Easy: | 0 | 0 | 0 | 0 |
| Too Hard: | 24 | 16 | 12 | 10 |
| Unit overall rating - | | | | |
| Excellent: | 17 | 38 | 49 | 30 |
| Good: | 27 | 16 | 15 | 13 |
| Adequate: | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 |
| Poor: | 0 | 0 | 0 | 0 |

The teachers also indicated that the units were appropriate for average and above average students. There was, however, some varying opinions whether the units could be used for below average students. The teachers found the units as having clear and complete directions for both teachers and students, appropriate content, and a sufficient number of sample exercises. They thought that most of the materials could be used for large group, small group, and individualized instruction. Nevertheless, most of the units were used for small group and individualized instruction. Furthermore, the teachers rated all the units from good to excellent.

ESL Coordinator

A two year goal was established for the ESL coordinator. It was to develop an ESL reading curriculum. The curriculum would consist of a series of six booklets which gradually increased in difficulty and language complexity. The first three booklets were to be completed this year.

A review of the program files indicate that this year's objective was accomplished. Three ESL reading booklets were developed--the third booklet is in three parts. The SRA Multi-level Reading Kits were correlated with the ESL reading booklets. The kits will be used to complement as well as supplement the reading booklets. The coordinator also wrote a Teacher's ESL Manual. The manual, which contains a series of ESL lesson plans with accompanying suggestion on teaching techniques, was modeled after Book I of the English Through Pictures series (ETP). (The ETP series is the prescribed ESL curriculum for the Fall River Public Schools.) By January, 1974, the coordinator had trained the five program teachers, who were teaching ESL, on the use of the manual. Also, the ESL coordinator (with four of the program teachers) was engaged in the production of 26 English language audio-visual programs to complement the ESL curriculum. This

endeavor began in October and ended in the middle of December, 1973. These programs included cassettes, slides, films, and video-tapes.

The Audio-Visual Production-Reproduction Center

This Center was located in the Hartwell Street School. The Center is under the direction of a media specialist (non-program person) and an assistant (program member). These two people add a valuable dimension to the program by their experience in the graphic arts, with audio-visual and video equipment and materials, and with materials development. All through the year, the Center received many requests for its services from teachers, the curriculum specialists, Hartwell faculty, and administrators. On many occasions the requests compelled them to go into the classroom with their equipment, work nights to film or video-tape various extra-curricula activities, and to show a film or video-tape of program activities at meetings or to visitors. They also trained some teachers on such skills as lamination, slide preparation, and the diazo process.

The following statistics are presented to provide an indication of the extent of their activities. They prepared at least:

805 slides (2 x 2)--many of the slide presentations had accompanying sound tracks;

345 transparences for use with the overhead projector;

85 black and white enlargements of various sizes;

91 sound recordings (cassettes) from 30 to 90 minutes;

3,931 mountings and laminations of such things as posters, cards, games, maps, and color lifts.

## Television Project

The Fall River Title VII program and the Massachusetts Executive Committee for Educational Television had an agreement for the production of a series of educational-cultural television programs. The intended audience was the English dominant and Portuguese speaking parents and students of the bilingual program specifically, and of Fall River generally. The development of accompanying curriculum materials for program students was the responsibility of the curriculum specialists.

### Project Design

The project consisted of developing three, thirty minute television programs, each with related curriculum materials. The general themes of the programs were Family Life in the New Country, Community and Culture, and Bilingual Education. Material for the programs was collected by interviewing parents, teachers, and students; observation of bilingual classrooms, extracurricula and program activities; and observation of cultural events such as the Spring Festival. All interviews and observations were filmed or video-taped.

The Television and Curriculum committee was composed of members from the Executive Committee for Educational Television (more specifically the 21 Inch Classroom), and representatives from the Title VII materials development staff, the Title VII parent-advisory component and council, and the Fall River school system. The three representatives from the materials development staff also formed the committee for developing the educational materials.

All three television programs and accompanying materials were to be completed by June 30, 1974.

Progress

From December, 1973 through June 1, 1974 the committee met on several occasions. The meetings were held to determine strategy and methods, and film or video-tape interviews and observations. The meetings took place at various times during the day, i.e., mornings, afternoons, nights, and also on weekends. The curriculum sub-committee met many times from January through June to discuss curriculum approaches, and write content outlines and script.

To date, the first program has been completed. It is called "Outra Terra, a Mesma Gente-Another Land, the Same People." The basic theme was "family life in a new country." The basic curriculum design for the program was also completed. The remaining two programs have been filmed or video-taped, but need to be edited. The script and curriculum outlines for the two programs also have been completed. Discussions with the curriculum specialists and the project director suggest the programs and materials will be completed by June 30, 1974, on schedule.

# STAFF DEVELOPMENT COMPONENT

## Introduction

The Staff Development Component included objectives which focused on increasing the professional competence of the program staff through pre and in-service training sessions and on interaction with the staff development specialist. The activities of this component were the primary responsibility of the staff development specialist, aided by the project director.

The staff development specialist regularly observed program classes to assess teachers' classroom performance, and to meet with them to discuss their instructional methods as well as the curriculum units. The specialist also performed the role of a liaison person between the instructional and non-instructional staff members, e.g., providing the curriculum specialists regular feedback from the teachers concerning various aspects of the curriculum units. Also, the staff development specialist scheduled the time periods and made the necessary arrangements with the different school administrators (including the two schools that provided the comparison groups) for test administrations.

## Evaluation of Objectives

### Objective SD-1.0

> The bilingual teachers will demonstrate increased knowledge of bilingual instructional materials as measured by staff development specialist's and curriculum specialists' ratings. Evidence of increased knowledge will be average gains of at least one unit on a five-point scale.

The teachers' knowledge of bilingual instructional materials was rated by the curriculum specialists as part of their regular observation of classes. Also, the curriculum specialists felt that since they had constructed the materials, and were familiar with the content, they were the appropriate staff members to judge the teachers use of the materials. The above objective, therefore, was revised. In its revised version the objective reads:

> The bilingual teachers will demonstrate knowledge of bilingual instructional materials as measured by curriculum specialits' ratings. Evidence of knowledge will be an average rating of at least 85%.

Evaluation

In conjunction with the curriculum specialists, the evaluators constructed the Classroom Observation of Curriculum and Materials form. This form was used by specialists in their observation of classes. Four of the items on the form relate to the teachers' knowledge and use of materials. Table 59 reports the percentage of favorable ratings that teachers received on each of the four items. The data indicate that the objective was accomplished.

Contributing to the accomplishment of this objective was the number of workshops on the use of the curriculum units conducted by the curriculum specialists for the teachers. Also, contributing to the achievement of the objective and to the overall professional growth of all staff members were the number and variety of the in-service workshops held throughout the school year. The overall in-service program is indicative of the high performance level of the staff development specialist and the program director. A summary of the in-service program is presented in Table 60.

Table 59

Curriculum Specialists Ratings of Teachers' Knowledge and Use of Bilingual Materials

| Questions | Math | Science | Language Arts | Social Studies | Number of Ratings | Favorable Ratings N | Favorable Ratings % |
|---|---|---|---|---|---|---|---|
| Material used for intended purpose - | | | | | | | |
| Yes: | 18 | 24 | 9 | 17 | 68 | | |
| No: | - | - | - | - | - | 68 | 100 |
| Material used to teach an appropriate skill - | | | | | | | |
| Yes: | 17 | 23 | 9 | 17 | 66 | | |
| No: | 1 | 1 | - | - | 2 | 66 | 97 |
| Materials implemented correctly - | | | | | | | |
| Yes: | 17 | 24 | 8 | 17 | 66 | | |
| No: | 1 | - | 1 | - | 2 | 66 | 97 |
| Materials used in sequence in the curriculum - | | | | | | | |
| Yes: | 17 | 24 | 8 | 17 | 66 | | |
| No: | 1 | - | 1 | - | 2 | 66 | 97 |

Table 60

Summary of the In-Service Program

| Date | Topic | Consultant |
|---|---|---|
| July - 3 weeks | Bilingual Summer Institute | Dr. N. Vieira, Brown University |
| November 10, 1973 | Bilingualism and Second Language Learning | Dr. Vieira |
| March 2, 1974 | Second Language Strategy and Linguistic Maneuvers | Dr. Vieira |
| April 27, 1974 | A case for Bilingual Education | Dr. Vieira |
| May 11, 1974 | Sociolinguistics | Dr. Vieira |
| October 2, 1973 | Title VII: Objectives, Philosophy, and Graduate School Opportunities | Heuristics, Inc.<br>E. Mazzone, State Director, TBE<br>M. Vermette, S.M.U. |
| October 9, 1973 | Language Laboratory | UNICOM |
| October 16, 1973 | Continuous Progress Laboratories | W. Kerniham, CPL |
| October 23, 1973 | Curriculum Units Workshop | Curriculum Specialists, Title VII Staff |
| October 30, 1973 | Follow Through Field Trip Workshop | L. Smithberger, Follow Through Director |
| November 6, 1973 | IGE-MUS Workshop | J. Stefani, Project SPOKE |

Table 60 (Cont.)

| Date | Topic | Consultant |
|---|---|---|
| November 13, 1973 | Curriculum Units Workshop | Curriculum Specialists |
| November 20, 1973 | Workshop on Record Keeping | J. Barrett, Project SPOKE |
| November 27, 1973 | Microfiche Reader<br>Curriculum Units Workshop | Xerox Co.<br>Curriculum Specialists |
| December 4, 1973 | 1972-73 Evaluation: Fall River Title VII | Heuristics, Inc. |
| December 11, 1973 | Visits to Foxpoint or Perkins Schools | Host: Foxpoint and Perkins Schools |
| December 18, 1973 | Curriculum Units Workshop | Curriculum Specialists |
| April 24-30 and May 2, 1974 | Learning Packet Workshop | J. Barrett, Project SPOKE |
| May 1, 3, 6, 9, 13, 16, 20, 23, 28, 30 (1974) | IGE Workshops | J. Correiro, Project Director |
| June 3, 5, 10, 13, 17 (1974) | | J. Stefani, Project SPOKE |

The teachers participated in a variety of in-service activities: 1) Bilingual Institute at Brown University; 2) released time workshops covering various topics; 3) Learning Packet Workshop offered by Project SPOKE: and 4) Individualized Guided Instruction using a Multi Unit Structure (IGE-MUS). In-service at Brown University included a three week summer institute and four all day sessions during the year. Seven staff members attended the summer institute which included classes in language instruction, bilingual education principles, linguistics, and curriculum development workshops. All staff members participated in the twelve week series of released time workshops. The series began on October 2, 1973 and continued through December 18, 1973. (The reader is reminded of the discussion of teachers' opinions toward this series of workshops and the overall in-service program reported earlier in the Program Operation section of the report.) In addition, one staff member attended the National TESOL Conference in Denver, Colorado, March 4-11, 1974. Also, the director and a staff member participated in the third Annual Portuguese Conference in San Jose, California, April 27-28, 1974.

Five staff members attended the week-long workshops at Project SPOKE. The workshops emphasized the preparation of individualized curriculum units, specification of behavioral objectives, construction of pre- and post-tests, writing sample exercises, and preparation of audio-visual materials. All topic areas were related to the individual curriculum units.

The IGE in-service program consisted of a series of fifteen workshops from May 1 through June 17, 1974. The workshops covered a variety of topics all essen tial for the implementation of the program at the Hartwell Street school in September, 1974. In general, the topics were IGE team membership responsibilities, resources, self-evaluation and assessment activities, and school reorganization. Along with

the Hartwell school faculty, six Title VII personnel participated in this series of workshops.

Objective SD-2.0

> The bilingual teachers will utilize the new curricula developed by the curriculum specialists as evidence by logs kept by the curriculum specialists and the staff development specialist.

Evaluation

The data relating to the accomplishment of this objective were gathered from records maintained by the curriculum specialists and the staff development specialist. During their visits to the classrooms, their observations were recorded on the Classroom Observation of Curriculum and Material Usage Form (curriculum specialists) and the Classroom Observation Form (staff development specialist). The new curriculum units were used chiefly in the sixth grade classrooms. Table 61 summarizes the number and percentage of times they reported that the sixth grade teachers were using the new materials. These data suggest that the objective was accomplished.

Table 61

Bilingual Teachers Use of New Curricula

| Observer | Number of Observations | Frequency of Use | Percentage of Use |
|---|---|---|---|
| Curriculum Specialists | 48 | 43 | 90 |
| Staff Development Specialists | 94 | 81 | 86 |

Objective SD-3.0

The bilingual teachers will evaluate the new curriculum materials developed by the curriculum specialists as measured by a specially designed checklist assessing the new material (Materials Usage Form).

Evaluation

The Materials Usage Form was completed by the classroom teachers for all project developed material they used. The form was distributed to the teachers in September by the staff development specialist. As the forms were completed, the teachers gave them to the staff development specialist. The specialist then gave the completed forms by subject area to the respective curriculum specialist. The results, where indicated, were considered by the curriculum specialists for improving the development of additional units and for revision purposes.

Discussion of the teachers' recorded reactions to the new materials was reported previously in the evaluation of the objective MD-1.0. The results indicate that this objective--SD-3.0--was accomplished.

Objective SD-4.0

The project staff will show empathy toward the problems of the children in the bilingual program as evidenced by a majority of positive responses on a specially designed attitude scale.

Evaluation

A Likert-type attitude scale was administered to all program teachers in April, 1974. The scale contained 52 items and teachers responded to each item by circling one of five response categories that best represented their opinions. The response categories ranged from Strongly Agree to Strongly Disagree. Twelve of the 52 items assessed the teachers' empathy toward the problems of children in

the bilingual program. A detailed discussion of the results of the attitude is included in an earlier section of this report.

On the items of the scale which describe empathy toward program childrens' problems, the majority of the teachers' responses demonstrated positive attitudes. They felt that the bilingual program enriched the lives of the children who participated in it, and that the education received from program participation was not inferior to the education received by their non-program peers. They thought that most of the students liked the program, and attended school regularly. Moreover, the teachers suggest that it is good for the students to learn Portuguese in school, and for Portuguese dominant students to receive instruction in their native language. While they implied that there were special problems in teaching in a bilingual classroom, nevertheless, they preferred teaching in the bilingual program to teaching in the regular school program. Objective SD-4.0 was accomplished.

Objective SD-5.0

> The bilingual teachers will show improvement in their teaching methods as measured by an increasing rating throughout the school year on an evaluator constructed rating scale used by the staff development specialist. Each teacher will improve their rating in at least one area which was identified as weak at the beginning of the year.

Evaluation

The rating scale to assess the teachers' overall instructional methods was constructed by the evaluators. The scale was completed three times during the school year--November, February, and May--by the staff development specialist. Her ratings were based on data gathered during her classroom observations and from her anecdotal records on teacher performance. Teachers were rated on 40 desired

behaviors using a five-point scale representing the frequency of performance of a behavior. The scale ranged from "one" (never) through "five" (always). At each of the rating periods an average rating was obtained for each teacher by summing the ratings and dividing the sum by the number of ratings. A rating between 3.0 and 3.9 is considered average; 4.0-5.0 above average; and a rating of less than 3.0 is below average. Table 62 reports these data. In general, the data indicate a trend toward increased positive ratings from November to May. Moreover, each teacher improved on several ratings of individual behaviors from November to May. These data indicate that the objective SD-5.0 was accomplished.

Table 62

Evaluation of the Teachers' Instructional Methods
by the Staff Development Specialist

| Teacher Number | Mean Rating | | | Number of Rating Changes | | | |
|---|---|---|---|---|---|---|---|
| | | | | Nov. - Feb. | | Feb. - May | |
| | November | February | May | Neg. (-) | Pos. (+) | Neg. (-) | Pos. (+) |
| 1 | 4.0 | 4.3 | 4.4 | 2 | 13 | 5 | 9 |
| 2 | 3.4 | 3.5 | 4.3 | 6 | 10 | 1 | 29 |
| 3 | 3.2 | 2.9 | 3.2 | 15 | 4 | 1 | 13 |
| 4 | 3.7 | 4.1 | 4.4 | 6 | 13 | 1 | 14 |
| 5 | 3.6 | 4.2 | 4.5 | 2 | 21 | 3 | 15 |
| 6 | 4.0 | 4.3 | 4.4 | 3 | 15 | 4 | 7 |
| 7 | 3.1 | 3.5 | 3.2 | 3 | 16 | 16 | 3 |
| 8 | 3.6 | 3.9 | 4.0 | 3 | 15 | 11 | 14 |
| 9 | 3.4 | 4.2 | 4.3 | 0 | 27 | 0 | 9 |
| 10 | 3.2 | 4.0 | 4.5 | 0 | 28 | 3 | 20 |
| 11 | 4.3 | 4.4 | 4.6 | 3 | 10 | 4 | 12 |
| 12 | 3.3 | 3.7 | 4.2 | 1 | 14 | 2 | 21 |

# PARENT-COMMUNITY COMPONENT

## Introduction

Objectives of the Parent-Community Component focused on the involvement of parents of participating students and of the community-at-large in activities related to the bilingual program, and on the dissemination of program information to parents and the community. With these objectives in mind, the parent-community coordinator planned, implemented, and coordinated all activities related to the accomplishment of the stated program objectives. Data related to the assessment of these objectives were obtained from the coordinator's files, discussions with the coordinator and the program director, and from the administration of the Parent Survey instrument.

The following activities were initiated by the coordinator to attain the objectives of the program: establishment of an Advisory Council; establishment of the Multi-Service Center; conducting an in-service program; and dissemination activities such as press releases, distribution of bi-monthly issues of the Bulletin (the program's newsletter), talks to community groups, and letters to parents.

## Evaluation of Objectives

### Objective P-1.0

In the second year of the Program, the parents will show more interest in, appreciation of, and a better understanding of Bilingual Education as evidenced by

1. 25% of the parents in attendance at each parent group meeting (three to be held);

2. 25% of the parents attending an Open House and/or Bilingual Festival;

3. improved responses from pre to post attitude questionnaires or positive attitudes on pre and post questionnaires.

Evaluation

To accomplish the above objective, the parent-community coordiator implemented a variety of methods. Eight issues of the Bulletin, the program's newsletter, were published. Publication began in November and continued in each succeeding month through June. The newsletter was published in both languages (Portuguese and English) and contained articles and other information related to the program. The newsletter also printed notices concerning future events such as parent and advisory council meetings. Additionally parents were always notified by letter of each scheduled parent meeting. The letters were also written in both languages.

Three parent meetings were scheduled--January 15, 17, and 24--at the Watson, McDonough, and Hartwell Street schools respectively. Thirty-two parents were present at the Watson school representing approximately 38% of the school's student enrollment; 16 parents ( or approximately 25% of the student enrollment) were present at the McDonough meeting; and 40 (or 62%) parents were in attendance at the Hartwell meeting. Thus, the first of the three stated criteria was met.

Notices of the Fall River school system's Open House and of the Spring Festival were sent to parents and published in the newsletter. In addition, articles were published in local newspaper concerning these two events, especially the Spring Festival. The Open House was held during the day at all schools in the city with the exception of Hartwell. The event, held on January 31, 1974, was generally poorly attended; however, no record was kept of the attendance of the bilingual students' parents. The Spring Festival was held on the campus of Bristol Community College on May 24-26, 1974. The Festival was sponsored by the Portuguese Heritage Founda-

tion (the Title VII program director sits on the Board of Directors). The Title VII program had an active part in the Festival activities. A group of program students performed a play which was written and produced by the Materials Development Coordinator (the Language Arts curriculum specialist); the program had a booth displaying various activities of the program; bilingual program students participated in the dancing and singing events; and the parent-community coordinator was one of the judges for selecting the best poems submitted. The result of the many and varied participatory activities of the Title VII program in the Festival was the attendance of at least 161 program parents. The second criterion was also met.

A Parent Survey instrument was constructed by the evaluators and the parent-community coordinator to assess parental attitudes toward bilingual-bicultural education as well as to collect sociological-demographic information. The Survey was administered in November-December and the section of the survey pertaining to bilingual education was administered again in May. The coordinator was greatly assisted in the administering of the instrument, which was done on an individual basis, by four community aides from the Multi-Service Center, the Center is an outgrowth of the PYCO (Portuguese Youth Cultural Organization) Information and Referral Center. The first administration of the survey was completed by 161 parents--136 Portuguese speaking and 25 English speaking parents; 80 parents--67 Portuguese and 13 English speaking completed the survey on the second administration.

Parental responses to the nine items on the Survey relating to bilingual education changed little from November to May. The responses suggest a very favorable parental attitude toward bilingual education and the Fall River Title VII program. Almost all of the parents in both groups thought that bilingual education was good for their children, and that it was desirable and potentially useful to learn to speak

both languages. This would enable their children "to understand one another better," and that "knowing both languages can only help in the future." The parents did show a change in their opinions concerning the desirability of their children studying their academic subjects in Portuguese. Eighty percent or more of the parents in both groups thought that this was desirable on the first administration. In May, however, only 50% of the English dominant parents still had this opinion; there was no change on the part of Portuguese dominant parents. On both administrations of the instrument, approximately 64% of both groups of parents did not think that bilingual education would slow down the Americanization process of the Portuguese dominant students. In general, the positive attitudes toward bilingual education expressed by the total parent group indicate that the third criterion was achieved. The objective, therefore was accomplished since the criteria were met. (For a complete discussion of the results of the Parent Survey instrument, see the section titled "Demographical and Sociological Survey Results" of this component.)

In addition to the activities previously presented, the coordinator held English as a Second Language classes. Originally he intended to offer both PSL (Portuguese as a Second Language) for English speaking parents as well as ESL for Portuguese parents. The coordinator perceived these classes as not only a way of establishing communication lines and promoting cultural understanding, but also as a way of increasing parental involvement in the overall program. Notices were sent to all parents informing them of the opportunity and class schedules. As a result an ESL class was formed and the class was held all year (September 17-June 5) at St. Michael's school on Monday and Wednesdays evenings from 7-9 P.M. No English-speaking parents, however, registered for the PSL class. This was somewhat contradictory to the expressed opinions of these parents on the Parent Survey. The Survey results

indicated that three-fourths of the parents were interested in learning to speak Portuguese, and that half would be interested in attending such a class.

Objective P-2.0

> The Advisory Board will be completely formed and functioning. Their involvement will be evidenced by their cooperation with Program Director and full participation at Board and parent meetings and other group meetings in the community that might be helpful in providing educational information and to help disseminate the objectives of the Bilingual Program. This will be measured by specially constructed rating scales completed by the Advisory Board members.

Evaluation

The Advisory Board was re-established on September 20, 1973. Notices were sent to all parents advising them of the meeting. The second meeting was held on October 25, 1973 at which officers were elected (president, vice-president, and secretary-treasurer) and the by-laws approved. This year the Board met 12 times: September 20, October 25, November 20, December 11, January 15, 17 and 24, February 19, March 12, April 9, May 21, and June 18. By June the board numbered 40 members: 38 Portuguese speaking people--35 representing the three schools and three community members; and two English-speaking parents representing one school.

The Council president presided at all meetings; the coordinator and the director attended most of the meetings. Staff members attended two meetings--November 20, and April 9. The Council members were active in program activities. They submitted to the director their recommendations for new bus routes for transporting students to and from school; they established and implemented

sign-off procedures for the 1974-1975 Continuation proposal, the PAC president attended the two Emergency School Assistance Act meetings (December 14, 18); and members of the Council attended the Spring Festival.

A Likert-type attitude instrument was completed by PAC members attending the May 21 meeting. The instrument, developed by the evaluators, was constructed to assess their opinions about the PAC and its relationship with the bilingual program. The instrument was completed by 17 members.

All members agreed that the PAC meetings were well organized, worthwhile, and conveniently scheduled. The majority of members also felt that attendance at the meetings were good, but that meetings should be held more often. Most members thought that the Council had a positive impact on the local school administrators, that the Council had been successful in involving more parents in the activities of the bilingual program, and that they would like to serve on the Council next year.

Concerning the bilingual program, almost all resondents indicated that the program was more valuable than most people think. They reported that they could visit the bilingual classrooms if they desired, and consequently agreed that they were familiar with the program as well as with the objectives of the parent-community component that pertained specifically with the PAC.

Some of the respondents offered the following comments or suggestions for improving the program: "the duties of a teacher is more than teaching, they should pay more attention to some personal problems the children may have...," "I have nothing to criticize...only that meetings should be on Saturday mornings," the meetings for me were very good...parents need strongly these orientations."

Additional comments were: "appears many parents have a low self-esteem of themselves...are culturally deprived...ashamed to participate because they are embarrassed of the deficiences...must have programs to improve parents self-image," "meetings were good and at convenient times, nevertheless, it should be twice a month," and "I agree completely with the work that has been done...I just see only benefits resulting."

Objective P-3.0

> The Community at large will have a better understanding of Bilingual-Cicultural Education as evidenced by the reception of at least 50 favorable letters from members of the community as a result of their exposure to the Program through the dissemination activities. These letters may be addressed to the Program Director or to any staff member.

Evaluation

A review of parent-community files suggest that this objective was at least partially achieved. Even though the files contained only six letters, three of the letters were written on behalf of groups of people--East Providence Public Schools, Rhode Island College, and Project Headstart, Fall River. The groups combined represented approximatley 210 people. In addition, the project director received many letters from individuals and groups thanking him for his appearances on bhealf of the program, requesting program information or thanking him and the materials development coordinator for the hospitality extended in their visit to the program. These letters were the result of the program's dissemination activities as were the numerous telephone calls that the coordinator and program director received.

The dissemination activities of the coordinator, director, and various staff members were numerous and varied. The coordinator met with many community people concerning the program; e.g., Most Rev. Bishop Daniel Cronin (September 4, 1973), Very Rev. Luiz Mendonia, V.G. (September 6, 1973), Mr. Martin Barney, Fall River Federal Projects Coordinator (December 14, 18, 1973; February 19, 22, 1974), and Mr. Ronald Halbardier, Adm. Asst. of Project Headstart (March 20, 1974). The coordinator also attended meetings of various community groups to disseminate program information on September 18, October 16, November 17 and 27 (1973), March 20 and 28, and May 30 (1974). He spoke at meetings of various Portuguese community groups on September 29, October 25, December 8 and 18, (1973), January 12, February 16, 18, 26, March 16, 30, April 27, and May 4, (1974). Moreover, he spoke to the senior class at Westport High School about the Fall River bilingual program (November 2, 1973); he addressed approximately 60 teachers of Portuguese immigrants at a conference held at Rhode Island College on bilingual education (March 29, 1974); and he attended a workshop for school administrators of the East Providence Public Schools at which the project director was one of the main speakers (February 19, 1974). Moreover, he met on twelve occasions with the Advisory Board of PYCO Center. As a direct result of these meetings, he established the Multi-Service Center which is staffed by three members of the PYCO staff under his direction. The Multi-Service Center was established to serve as a liaison between the bilingual program and other social service agencies or organizations by offering such services as family counseling, providing information concerning various matters to Portuguese immigrants, acting as interpreters, and disseminating information concerning the bilingual program to Portuguese families.

Seventeen articles about the Fall River program were printed in local and regional newspapers. Ten articles were published in Herald News: July 14,

November 2, October 13 and 18, (1973), April 13, May 23, 25, June 6, (1974); two other articles were undated. Three articles appeared in the Providence Journal: October 2, 1973, and May 20 and 24, 1974; and one each in the following publications--Portuguese Times (July 26, 1973, Point Blank (May, 1974), Boston Globe (May 27, 1974), and Bristol, the publication of the Greater Fall River Chamber of Commerce (Vol. 8, No. 1, 1974).

Three articles that appeared in Herald News were especially noteworthy. Two of the articles were related to the two-day working conference of federally funded Title VII Portuguese, bilingual projects hosted by the Fall River Bilingual program. The conference, sponsored by U.S.O.E., was held October 15 and 16, 1973 at the Hartwell Street school. Representatives of Portuguese bilingual programs from Massachusetts, Rhode Island, and California attended; also in attendance was the Fall River school superintendent, a program officer in the Division of Bilingual Education, U.S.O.E., a member of the California Task Force on bilingual-bicultural education, and representatives from the State Departments of Education of Massachusetts, Rhode Island, and California.

The third article in the Herald News reported on the program director's appearance before the United States Senate subcommittee on education. This article was published in the November 2, 1973 issue of the Herald. In October, the project director was invited by Senators Kennedy and Pell to testify before the subcommittee in support of continusing, expanding, and reforming the Bilingual Education Act. The program director was the only witness of Portuguese descent to appear before the Senate committee and therefore "as well as representing Fall River and its bilingual program, because of the nature of the hearing, I found myself representing the needs of Portuguese children all over the country...a very sobering experience."

## Headstart Workshop

As a result of the dissemination activities of the Title VII bilingual program, the director and parent-community coordinator were asked by the Fall River Headstart administrators to conduct a workshop for Headstart teachers. Consequently, the two Title VII administrators, in conjunction with the Headstart coordinators, planned, organized, and implemented a two-day workshop designed to sensitize the participants to the needs of Portuguese children and adults in Fall River. The sensitization process was to be accomplished through establishing an awareness of: (1) the geographical regions from which the Portuguese people emigrated, (2) the cultural differences between the regions of emigration and the United States (particularly Fall River), (3) the effects of these cultural differences on the immigrants adjustment to a new life, (4) the ways people often react to significant changes in their lives, (5) the problems encountered by immigrants in their attempt to obtain or utilize the services of specific agencies (e.g., educational, health, social), and (6) some of the services available to Portuguese immigrants in Fall River. These areas were explored through a thorough presentation and discussion of the myriad factors that fostered the concept of bilingual-bicultural education, the documentation of the need for such a program in Fall River, the realization and implementation of the Fall River program, and the implications and aspirations of the present program for the future.

To obtain a measure of certain attitudes and opinions brought to the workshop by the participants and the attitudinal changes that the participants may have experienced as a result of the workshop, an attitude instrument, developed by theevaluators, was administered before and after the workshop with intervening time interval of one week. The instrument contained 34 items and was constructed to measure attitudes

and opinions toward the following four areas: bilingual education in general (11 items), bilingual education in Fall River (9 items), minority groups (5 items), and non-native speakers of English (9 items). The workshop participants were asked to respond to each statement by circling one of five choices--Strongly Agree (SA), Agree (A), Uncertain (?), Disagree (D), and Strongly Disagree (SD). Discussion of the results of the four areas follows. The results are summarized in Table 63 by collapsing the SA-A and SD-D choices and labeling the new categories Favorable and Unfavorable.

Table 63

Attitudinal Results for Headstart Teachers by Areas of Concern and Response Categories in Percentages (Pre: N=42; Post: N=36)

| Areas of Concern | Testing Session | Opinion* | | |
|---|---|---|---|---|
| | | Favorable | Unfavorable | Uncertain |
| Bilingual Education in General | Pre | x 64 | 16 | 20 |
| | Post | x 73 | 16 | 11 |
| Bilingual Education in Fall River | Pre | x 56 | 28 | 16 |
| | Post | x 65 | 24 | 11 |
| Minority Groups | Pre | x 69 | 21 | 10 |
| | Post | x 73 | 22 | 5 |
| Non-Native Speakers of English | Pre | x 74 | 15 | 11 |
| | Post | x 76 | 15 | 9 |

* The table numbers are percentages and the symbol "x" indicates the majority opinion as determined by the percentage magnitudes

The workshop was held on April 16-17, 1974: the morning session on the 16th was at the Academy Building and the afternoon session at the Hartwell Street

School; both sessions on the 17th were held at St. Mark's Church. The workshop leaders were the director and parent-community coordinator of the Fall River bilingual program, and two consultants--one from Brown University and one from New Bedford.

## Discussion of Results

### Bilingual Education in General

The majority of the Headstart teachers had favorable attitudes concerning the concept of bilingual education. With slight pre-to-post changes in percentages, they agreed on the importance, value, and practicality of bilingual education. They also agreed that bilingual education was not fad, but a program that made it easier for non-English speaking students to adjust to the classroom where English was the instructional language; and that it was a program that provided students the opportunity to study the language and culture of a non-native group of people.

The majority of respondents also indicated that English speaking students in a bilingual program would receive an education equal to that provided to their non-program peers; and that the bilingual approach to the education of non-English speakers was more desirable than the use of the ESL (English as a Second Language) approach only. Their responses to these two statements, however, are significant, because they represent marked positive attitudinal changes. The data indicate that 51% of the teachers thought that English speaking students would stay abreast educationally with their non-program peers before the workshop experience, but the post-workshop data shows 80% of them agreeing with that statement. Concerning the preferability of bilingual instruction over ESL instruction, the data showed

a percentage change from a pre-workshop 30% to a post-workshop 66% of the teachers favoring bilingual instruction.

In general, the Headstart teachers exhibited post-workshop attitudes concerning Bilingual Education in General similar to those of the bilingual program teachers.

Bilingual Education in Fall River

A majority of the workshop participants indicated that the need for a bilingual program in Fall River was not overestimated (pre= 60%, post= 75%), that a bilingual education was good for the city's children (pre= 76%, post= 70%), and that the experience of participating in the program would enrich the lives of the participants (pre= 78%, post= 71%). The majority also agreed that it was practical and potentially useful for English speaking students to learn to speak the Portuguese language. Less than half of the teachers, however, thought that it was good for English speaking students to begin to study their academic subjects in Portuguese while still studying them in English (although the minority viewpoint showed a marked pre-post increase--19% to 46%).

Most of the teachers began and finished the workshop thinking that it was a good thing for Portuguese dominant students to study the Portuguese language in school. Less than half of them at the start of the workshop, however, thought that it was useful or practical for Portuguese students to learn Portuguese (47%) or that it was advantageous for them to study their school subjects in Portuguese (33%). As a result of the workshop, the teachers exhibited a change in attitude that indicated the majority now thought it not only practical for Portuguese students to study their native language in school (60%) but also valuable to receive instruction in the academic subjects in Portuguese (59%).

Minority Groups

As a group, the majority of the workshop participants indicated that they thought the schools were not doing enough to help minority groups, and their opinion was strengthened during the workshop experience (56% in agreement at the pretest administration and 72% of them in agreement at posttest administration). Most of them disagreed with the ideas that some races and nationalities are by native inferior to others; and that certain races are more fit for manual labor then skilled or professional jobs--however, the strength of this opinion diminished from pre to post, 80% to 65%. Nearly all the teachers (in fact, 100% on the posttest) indicated that it would not bother them at all to sit next to or near a person of another race. Concerning the idea that many of the problems faced by minority groups was caused by the groups themselves, there was not definitive answer. Half of the teachers agreed that this was so and half were either not certain (14%) or disagreed with (36%) with the statement on the first administration of the instrument. On the second administration, 37% of the teachers agreed with the statement and the rest of them were either not sure (14%) or in disagreement (49%). Nevertheless, Table 63 reflects the relatively high favorable opinion toward minority groups held by the Headstart teachers in general.

Non-Native Speakers of English

In general, the group of teachers had a favorable attitude toward people who spoke a language other than English. The majority of them discounted the notions that non-English speaking people lowered the standard of living in their neighborhoods and should have stayed in their own country. Furthermore, most of the teachers indicated that they were favorably impressed by immigrants and that they were not a "necessary evil" who had to be tolerated because they were here.

Although the majority of teachers agreed that there was nothing wrong in having native speakers of languages other than English as leaders and foreman over native English speakers, the size of the majority diminished from pre to post (75% to 63%) with the posttest data, with approximately 37% of the teachers either undecided or agreeing that this kind of situation would be a mistake.

Concerning the children of immigrant families, most of the teachers dismissed the usual stereotypic ideas. They agreed that students who are native speakers of a language other than English were not impolite, ill-mannered, or tactless; nor were they slow, unimaginative, or non-social; neither were they discourteous, inclined toward insubordination, or distinguishable by irritating customs. They found these students to be interested in learning and thought that they should be regarded as any other students. It is interesting to note, however, that approximately one-third of the teachers agreed that these students had insubordination tendencies, and irritating customs; that they also were unsocial and not interested in learning.

In conclusion, the workshop was considered successful by the organizers, workshop leaders, and the participants. Moreover, the bilingual program director and parent-community coordinator were requested to present a similar workshop for all Follow Through teachers and administrators this summer or fall.

## Demographic and Sociological Survey Results

### Introduction

The parents of the students in the bilingual program were asked to complete a questionnaire designed to gather information about 1) selected dimensions of their

sociological background, 2) their language dominance, 3) their attitudes toward education, and more particularly, toward the bilingual program, and 4) their attitudes about community problems. The questionnaire, written in both English and Portuguese, was administered by the staff of the Multi-Service Center under the direction of the Parent-Community Coordinator. Questionnaires were completed by 161 parents; of these 136 categorized themselves as Portuguese dominant and 25 considered themselves as English dominant. (Portuguese dominant and English dominant parents will be referred to as Portuguese and English parents respectively in this report.)

The discussion of the responses to this questionnaire is presented in four sections: Sociological Background, Language Dominance, Perceptions About Education, and Perceptions About Community Problems. The discussion concludes with a brief summary of the major findings reported in each section.

## Sociological Background

The sociological background information about parents of program participants included data about their age, occupation, number of children, length of residence in Fall River, birth place, and education level.

Age. Table 64 reports the ages of Portuguese and English parents as well as the median age for each group. Analysis of this table suggests that the Portuguese parents were slightly older than the English parents. More than one-half of the Portuguese parents were between 31 and 45 years old, and more than one-half of the English parents were between 31 and 45 years old. In both language groups, the husbands were older than the wives, with a difference in median age of five years between husbands and wives in both groups. A comparison of the median ages

indicates that the Portuguese husbands were the oldest group, followed by the Portuguese wives and English husbands, with the English wives the youngest group.

Table 64

Ages of Parent Groups

| | Ages | | | | | | |
|---|---|---|---|---|---|---|---|
| | 26-30 | 31-35 | 36-40 | 41-45 | 46-50 | 50+ | Median |
| Portuguese Husband (N=120) | 2 | 5 | 33 | 36 | 22 | 22 | 43 |
| Wife (N=126) | 3 | 29 | 35 | 30 | 19 | 12 | 38 |
| Anglo Husband (N=19) | 0 | 6 | 9 | 1 | 5 | 0 | 38 |
| Wife (N=25) | 6 | 8 | 3 | 5 | 3 | 0 | 33 |
| Total | 11 | 48 | 80 | 72 | 49 | 34 | 43 |

Occupations. Table 65 displays the occupations of the program parents in selected categories. Review of Table 65 indicates that there is a difference in the occupational patterns of the English and Portuguese parents. The largest percentage of Portuguese husbands and wives are factory workers (53% and 70% respectively). In contrast, only 30% of the English husbands are factory workers, and only 24% of the wives are employed in this way. The largest percentage of English husbands (35%) are skilled workers, whereas a much smaller percentage of Portuguese husbands (21%) hold skilled jobs. Comparison of the percentage of Portuguese and English

wives who are employed also indicates a substantial difference, as more than one-half of the English wives, compared to slightly less than one-fourth of the Portuguese wives, reported that they are housewives. The only parents professional employed are English wives.

Table 65

Occupations of Parent Groups

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=116) | Wife (N=121) | Husband (N=20) | Wife (N=25) |
| Professional | 0% | 0 | 0 | 8 |
| Skilled | 21 | 2 | 35 | 0 |
| Semi-Skilled | 16 | 2 | 20 | 4 |
| Unskilled | 3 | 2 | 5 | 12 |
| Factory | 53 | 70 | 30 | 24 |
| Housewife | - | 23 | - | 52 |
| Unemployed | 6 | 1 | 10 | 0 |

% Table values are percentages

Children. Tables 66 and 67 show the number of children in the Portuguese and English families, and the extent to which these children play with other Portuguese-speaking children. Table 66 shows that Portuguese families, on the average, have slightly more children than English families, 5.0 and 4.2, respectively. Twenty-five percent of the Portuguese families have more than six children, whereas only 16%

of the English parents have such large families. Examination of Table 67 also indicates a difference in the preference for playmates of the children of Portuguese and English parents. The majority of Portuguese children play with Portuguese-speaking children most or all of the time; in contrast, only 4% of the English children play with Portuguese-speaking children as frequently. It is important to note, however, that a very small percentage of both groups (8% of Portuguese and 4% of English children) never play with Portuguese-speaking children.

Table 66

Frequencies and Percentages of Children of Portuguese and Anglo Parents

| | Number of Children | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 0-3 | | 4-6 | | 7-10 | | 10 | | $\bar{X}$ |
| | N | % | N | % | N | % | N | % | |
| Portuguese (N=131) | 36 | 28 | 62 | 47 | 29 | 22 | 4 | 3 | 5.0 |
| Anglo (N=25) | 10 | 40 | 11 | 44 | 4 | 16 | 0 | 0 | 4.2 |

Table 67

Extent to Which Children of Parent Groups Play With Other Portuguese Speaking Children

| | Portuguese (N=136) | Anglo (N=24) |
|---|---|---|
| All of the Time | 22% | 0 |
| Most of the Time | 45 | 4 |
| Some of the Time | 25 | 91 |
| Never | 8 | 4 |

% Table values are percentages

Residence. Tables 68 and 69 describe the residence patterns of Portuguese and English parents. Table 68 reports the number of years parents have lived in Fall River. Examination of this table indicates that all English parents were either born in Fall River or lived there for more than ten years. As expected, the Portuguese parents' length of residence in Fall River is much less. Approximately one-fourth of the Portuguese husbands and wives have lived in Fall River for less than one year. Close to one-half of the Portuguese parents have lived in Fall River between one and three years. Only 2% of the Portuguese husbands and 4% of the Portuguese wives have lived in Fall River for more than 10 years. Within both groups, the residence patterns of husbands and wives are similar. Table 69 shows that the majority of Portuguese parents emigrated to Fall River from San Miguel, and the next largest group from other locations in the Azores; other program parents were native to the mainland of Portugal, Brazil, or the Cape Verde Islands. Identifying the different places of residence of program parents can assist in recognizing the differences in

the cultural backgrounds of the program participatns and addressing these differences in cultural activities.

Table 68

Number of Years Parent Groups
Have Lived in Fall River

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=125) | Wife (N=131) | Husband (N=23) | Wife (N=25) |
| 0-1 | 22% | 24 | 0 | 0 |
| 1-3 | 42 | 41 | 0 | 0 |
| 3-5 | 18 | 15 | 0 | 0 |
| 5-10 | 16 | 17 | 0 | 0 |
| 10+ (Not born here) | 2 | 4 | 22 | 28 |
| Born Here | 0 | 0 | 78 | 72 |

% Table values are percentages

Table 69

Native Cities of Portuguese Parent Groups Who Immigrated to the United States

| | Portuguese | |
|---|---|---|
| | Husband (N=107) | Wife (N=115) |
| San Miguel | 75% | 65 |
| Other Location in Azores | 13 | 17 |
| Mainland Portugal | 8 | 13 |
| Brazil | 4 | 4 |
| Cape Verde Islands | 1 | 1 |

% Table values are percentages

Education. Table 70 reports the amount of schooling completed by husbands and wives of the English and Portuguese groups. Only one of the Portuguese parents attended school in the United States. Of the Portuguese parents, almost one-half of the husbands and one-third of the wives have no formal schooling; about one-third of the husbands and two-fifths of the wives had between one and three years of school in Portugual; and one-fifth of the Portuguese parents had more than an elementary school education.

The English parents had relatively more schooling; 17% of the husbands attended only elementary level, approximately 40% attended junior high school, and 40% had a high school level education. Only one respondent had any college level courses. Of those English parents who attended Portuguese schools, three parents attended only the primary grades in Portugal, and one reached the 7a-8a level. Thus, the English

parents seem to have more formal education than the Portuguese parents, and in both groups the wives are slightly better educated than the husbands.

Table 70

Educational Levels of Parent Groups

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=122) | Wife (N=126) | Husband (N=18) | Wife (N=22) |
| U.S. Schools | | | | |
| 4-6 | - | 1% | 17 | 0 |
| 7-9 | - | - | 39 | 41 |
| 10-12 | - | - | 39 | 41 |
| College | - | - | 0 | 4 |
| Portuguese Schools | | | | |
| No Schooling | 49 | 37 | - | - |
| 1a-3a | 28 | 42 | 5 | 9 |
| 4a-6a | 21 | 20 | - | - |
| 7a-8a | 0 | 0 | 5 | - |
| 1o-3o | 2 | 0 | - | - |
| 4o-7o | 0 | 0 | - | - |
| University | 0 | 0 | - | - |

% Table values are percentages

Language Dominance

This section of the report presents information about 1) the extent of bilingualism of Portuguese and English parents, 2) the language preferences of these parents for various situations, and 3) the interest of these parents in learning a second language--Portuguese or English.

Extent of Bilingualism. Table 71 shows the extent of bilingualism of Portuguese husbands and wives. A review of this table indicates that most Portuguese husbands and wives report that Portuguese is their native language, and most English husbands and wives report that English is their native language. (One must question the responses of those Portuguese parents who indicated that they cannot speak Portuguese at all, and attribute the response to error in either understanding the question or classification of the parent into that group.)

Table 71

Extent of Bilingualism of Parent Groups

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=124) | Wife (N=128) | Husband (N=15) | Wife (N=18) |
| Portuguese | | | | |
| My native language | 98% | 98 | 27 | 39 |
| Speak it well | 1 | 1 | 0 | 0 |
| Do not speak it well | 1 | 0 | 7 | 6 |
| Cannot speak it at all | 1 | 2 | 67 | 56 |
| English | (N=123) | (N=126) | (N=23) | (N=25) |
| My native language | 1 | 0 | 96 | 88 |
| Speak it well | 7 | 5 | 4 | 12 |
| Do not speak it well | 7 | 5 | 0 | 0 |
| Cannot speak it at all | 85 | 90 | 0 | 0 |

% Table values are percentages

The degree of bilingualism of the English parents seems to be somewhat greater than that of the Portuguese parents. Almost one-sixth of the English husbands, and

approximately one-third of the English wives indicate that Portuguese is their native language. In contrast, less than 10% of the Portuguese parents indicate that they speak English with any kind of proficiency. Additional evidence is presented in Table 72. Only one English parent reports ever having to use his child as an interpreter, whereas 85% of the Portuguese husbands and 89% of the Portuguese wives report that they "sometimes" or "frequently" use their children or other people as interpreters. This difference in need for interpreters is, of course, related to the extent to which the parents find they must use their second language; it is most likely that Portuguese parents need to converse in English more often than English parents need to converse in Portuguese.

Table 72

Extent to Which Parent Groups Use Their Children or Other People as Interpreters

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=120) | Wife (N=125) | Husband (N=21) | Wife (N=24) |
| Frequently | 54% | 59 | 0 | 0 |
| Sometimes | 31 | 30 | 0 | 0 |
| Rarely | 6 | 3 | 5 | 0 |
| Never | 9 | 8 | 95 | 100 |

% Table values are percentages

Language Preference. Table 73 displays the language preferences of the parent groups at home, with their children, and with other adults. As expected,

Table 73

Language Preferences of Parent Groups At Home, With Their Children, and With Other Adults

| | At Home | | | | With Their Children | | | | With Other Adults | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Portuguese | | Anglo | | Portuguese | | Anglo | | Portuguese | | Anglo | |
| | H* | W** | H | W | H | W | H | W | H | W | H | W |
| N= | 121 | 129 | 23 | 25 | 121 | 127 | 20 | 22 | 121 | 126 | 23 | 25 |
| Portuguese Only | 95% | 95 | 4 | 4 | 96 | 97 | 5 | 5 | 95 | 98 | 4 | 4 |
| Mostly Portuguese | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Half Portuguese and Half English | 3 | 4 | 9 | 8 | 3 | 3 | 0 | 9 | 2 | 2 | 9 | 8 |
| Mostly English | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| English Only | 0 | 0 | 87 | 88 | 0 | 0 | 85 | 86 | 0 | 1 | 87 | 88 |

% Table values are percentages

* H= Husband
** W= Wife

the largest percentage of all groups prefer to use their native language in these three situations. A small number of parents (less than 5% of the Portuguese and no more than 10% of the English) report that they use half Portuguese and half English in these three situations.

When asked, "What language do you need most in your daily life?" All English and the majority of Portuguese parents indicate that they need English most of their daily life, as shown in Table 74. It appears that despite the almost exclusive use of Portuguese by Portuguese parents at home, with their children, and with other adults, they feel that English is the language they need most in their daily lives. Table 75 shows, however, that even with this perceived need for English, only 33% of the Portuguese husbands and 30% of the Portuguese wives indicated that they would be interested in attending classes to learn the English language and American culture. These data suggest that the bilingual program could focus effort on showing the parents the importance of attending English language classes as a means of acquiring the English they report they need in their daily lives.

Table 74

Language Needed by Portuguese Parents in Daily Life

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Husband (N=120) | Wife (N=123) | Husband (N=18) | Wife (N=21) |
| Portuguese | 13 | 17 | 0 | 0 |
| English | 87 | 83 | 100 | 100 |

% Table values are percentages

Table 75

Percentages of Portuguese Parents Desiring to Learn the English Language and American Culture

| | Husband (N=121) | | Wife (N=123) | |
|---|---|---|---|---|
| | Yes | No | Yes | No |
| Would you be interested in going to classes to learn the English language and American Culture? | 33% | 67 | 30 | 70 |

% Table values are percentages

The perceptions of the English parents about the usefulness of their speaking Portuguese is similar to that of the Portuguese parents perception of the usefulness of English. Table 76 reports that three-fourths of both English husbands and wives indicated that they would find it useful to speak Portuguese. Like the Portuguese parents, their willingness to spend time taking a course in Portuguese language and culture is not congruent with the perceived usefulness of the language. Table 76 reports that only one-half of the English parents are interested in taking such a course. It is interesting to note, however, that a larger percentage of English parents are interested in taking a course in their second language than are the Portuguese parents, in spite of the seemingly greater need by the Portuguese parents to use the second language in their daily lives. (In reality, the Portuguese parents responded to the ESL classes ofered by the project, while the English parents did not attend the second language classes offered. See Parent Community Component.)

Table 76

Perceptions of Anglo Parents Concerning Ability to Speak Portuguese

| | Husband | | | Wife | | |
|---|---|---|---|---|---|---|
| | N | Yes | No | N | Yes | No |
| Would it be useful for you to speak Portuguese? | 14 | 79% | 21 | 15 | 84 | 16 |
| Would you be interested in taking a course in Portuguese language and culture? | 11 | 45 | 55 | 12 | 50 | 50 |

% Table values are percentages

Perceptions About Education

This section contains data concerning: 1) parents' perceptions of the value of school for their children, and 2) parents' perceptions of the benefits their children receive as participants in the Bilingual Program.

Value of Schooling. In discussing the value of schooling to the Fall River parents, it seems important to first consider how these parents define "the good life" for their children, and then relate the benefits of attending school to this "good life." Table 77 presents the responses of parents about what they consider "the good life" for their sons and daughters. Table 78 reports the expected benefits of schooling as defined by the parents, and the number of parents in each group who listed such a benefit for their children.

Analysis of Table 77 indicates that the Portuguese parents most frequent definition of "the good life" for their children specified a good job or to work; the

next most frequent response specified an education. In contrast, the most frequent response by the English parents was that education and happiness constituted "the good life" for their children. Review of Table 78 indicates that there is a limited congruence between the benefits of schooling and what the parents consider a good life for their children. The majority of both English and Portuguese parents consider a good education the outstanding benefit of attending school. This suggests for the English parents that the value of schooling is closely related to their children's achievement of "the good life" as defined in Table 77. However, this may not be the case for the Portuguese parents who rated obtaining a "good job" as an expected benefit from school well below "good education." Yet, these parents define the "good life" for their children as a good job. Thus for the Portuguese parents this may suggest the limited value of school to the children's attaining "the good life."

Table 77

Parent Group' Reactions About "The Good Life" for Their Children

| Definitions of "The Good Life" | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Sons | Daughters | Sons | Daughters |
| Good Job/To Work | 43 | 43 | 1 | 1 |
| Education | 29 | 30 | 7 | 7 |
| What Children Want From Life | 14 | 15 | 3 | 3 |
| Good Future | 3 | 2 | 1 | 1 |
| Good Health | 2 | 4 | 1 | 1 |
| Happiness | 4 | 11 | 7 | 7 |
| Other/Don't Know | 25 | 17 | 1 | 2 |

Table 78

Expected Benefits of Attending School as Perceived by Parent Groups

| Benefits | Portuguese | Anglo |
|---|---|---|
| Good Job | 13 | 2 |
| Good Education | 41 | 12 |
| Better Life Than at Present | 4 | 0 |
| Learn Both Languages | 10 | 0 |
| Good Manners | 3 | 0 |
| Other/Don't Know | 53 | 8 |

Although the parents view schooling as assisting their children in attaining the benefits which contribute to "the good life," they differ considerably in the amount of schooling they think their children need, as shown in Table 79. Especially noteworthy is the difference between Portuguese and English parents in this matter. All English parents felt that their children needed at least a high school education, and 60% of the English parents stated that their children, both male and female, needed at least a college education. In contrast, only one-half of the Portuguese parents felt their children needed at least a high school education. The importance of their children leaving school to contribute to the family's income by working or by taking care of the home while the parents worked is reflected by 39% of the Portuguese parents who feel that their children should leave school at 16. Convincing the Portuguese parents of the importance of a high school, and, if possible, a college education for their children could be a priority of the Bilingual Program's community education effort. On the other hand, the program may want to

consider a pre-vocational or career education program. These career oriented programs would introduce the children to the "world of work" and bring the school closer to the cultural influences of the home. A pre-vocational training program would introduce skills and competencies to students who will in most cases, move into the work arena when he graduates from high school. As the students progressed to higher grades they would enter work-study programs, which would allow students to continue their education and be a wage earner augmenting family income.

Table 79

Perception of Parent Groups Concerning Amount of Schooling Needed by Male and Female Students

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Male Students (N=130) | Female Students (N=125) | Male Students (N=25) | Female Students (N=25) |
| AT LEAST: | | | | |
| Less Than High School | 1% | 1 | 0 | 0 |
| Some High School | 0 | 0 | 0 | 0 |
| Leave School at 16 | 39 | 39 | 0 | 0 |
| High School Education | 19 | 22 | 32 | 32 |
| High School Plus Technical School | 3 | 0 | 8 | 8 |
| College Education | 29 | 26 | 60 | 60 |
| Other Response | 11 | 11 | 0 | 0 |

% Table values are percentages

Bilingual Program. Parent perceptions about the value of the Bilingual Program are summarized in Tables 80 and 81. Table 80 reports the overwhelmingly favorable response of program parents toward bilingual education. Almost all parents who had an opinion about bilingual education rated it as either "very good" or "good" for their children. A review of Table 81 indicates that the parent's positive attitude toward bilingual education also extends to the Bilingual Program. All parents who expressed an opinion agreed that the Bilingual Program enriches their children's lives.

Table 80

Extent to Which Parent Groups Perceive Bilingual Education as "Good" for Their Children

| | Portuguese (N=128) | Anglo (N=25) |
|---|---|---|
| Very Good | 44% | 20 |
| Good | 53 | 56 |
| Fair | 0 | 0 |
| Poor | 0 | 4 |
| No Opinion | 3 | 20 |

% Table values are percentages

Table 81

Extent to Which Parent Groups Think the Bilingual Program Enriches Their Children's Lives

| | Portuguese (N=120) | Anglo (N=24) |
|---|---|---|
| Yes | 85% | 88 |
| No | 0 | 0 |
| Undecided | 8 | 8 |
| No Opinion | 7 | 4 |

% Table values are percentages

The parents were also in almost unanimous agreement about the value of their children learning Portuguese in schools; Table 82 summarizes the responses about this aspect of bilingual education. Ninety-nine percent of the Portuguese parents and 92% of the English parents responded affirmatively to the question, "Do you think that it is useful for your child to learn Portuguese in school?" Similarly, 98% of the Portuguese parents and 92% of the English parents responded positively to the question, "Do you think it is good for your child to learn Portuguese in school?"

The positive attitude by both groups of parents toward their children's learning Portuguese in school extends to the value of their children studying school subjects in Portuguese. Ninety-six percent of the Portuguese parents and 80% of the English parents also agreed that it was good for their child to study his school subjects (such as mathematics, science, etc.) in Portuguese. Table 83 reports these data.

Table 82

Extent to Which Parent Groups Perceive the Learning of of Portuguese in School as "Useful" and "Good" for Their Children

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Useful (N=126) | Good (N=136) | Useful (N=25) | Good (N=24) |
| Yes | 99% | 98 | 92 | 92 |
| No | 0 | 0 | 4 | 4 |
| Undecided | 1 | 1 | 0 | 0 |
| No Opinion | 0 | 1 | 4 | 4 |

% Table values are percentages

Table 83

Extent to Which Parent Groups Perceive the Study of School Subjects in Portuguese as "Good for Their Children"

| | Portuguese (N=126) | Anglo (N=25) |
|---|---|---|
| Yes | 96% | 80 |
| No | 1 | 5 |
| Undecided | 2 | 5 |
| No Opinion | 1 | 12 |

% Table values are percentages

Although the parents have very positive attitudes toward bilingual education and the Bilingual Program, they still expressed some concern about the ability of bilingual program English-speaking students to keep up with their non-bilingual program English-speaking classmates. Table 84 reports that one-fourth of the English parents expressed this concern, whereas a smaller percentage of the Portuguese parents, 15%, thought the English students might be unable to keep up with their classmates. Almost one-half of both parent groups, however, were either undecided or had no opinion about this question, suggesting that they were unsure about the impact of Bilingual Program participation.

Table 84

Extent to Which Parent Groups Think the Bilingual Program English Speaking Students Will be Unable to Keep Up With Their Non-Bilingual Program English Speaking Classmates

| | Portuguese (N=124) | Anglo (N=24) |
|---|---|---|
| Yes | 15% | 25 |
| No | 40 | 33 |
| Undecided | 27 | 25 |
| No Opinion | 19 | 17 |

% Table values are percentages

Table 85 lists the expected benefits of participation in the Bilingual Program as perceived by the parent groups. The Portuguese parents most frequently described the benefits as being a good job, good education, and bilingual skills. The

English parents most frequently described the benefits of program participation as a good future, a good job, and bilingual skills.

Table 85

Expected Benefits of Participation in the Bilingual Program as Perceived by Parent Groups

| Benefit | Portuguese (N=119) | Anglo (N=24) |
|---|---|---|
| Good Job | 45 | 5 |
| Good Education | 22 | 4 |
| Bilingual Skills | 15 | 5 |
| Good Life | 8 | - |
| Good Manners | 2 | - |
| Good Future | 6 | 7 |
| Other/Don't Know | 21 | 3 |

Table 86 reports the extent to which the parent groups think bilingual education retards the "Americanization" process of immigrant children. Only a small percentage of parents (5% of Portuguese and 13% of English) felt that bilingual education has this effect. Also noteworthy is the response by 30% of the Portuguese and 25% of the English parents that they were either undecided or had no opinion about the effect of bilingual education in this regard.

Table 86

Extent to Which Parent Groups Think Bilingual Education Retards the "Americanization" Process of Immigrant Children

| | Portuguese (N=123) | Anglo (N=24) |
|---|---|---|
| Yes | 5% | 13 |
| No | 65 | 63 |
| Undecided | 18 | 13 |
| No Opinion | 12 | 13 |

% Table values are percentages

Perceptions About The Community

The discussion contained in this section of the report focuses on 1) the parents' perception of the major community problems in the Fall River area, and 2) parents' attitudes about the success of the Fall River Public School system.

Problems of the Community at Large. Parents were asked to rank eleven potential community problems from the "biggest problem" to the "smallest problem" in order to determine the impact of these problems on their lives. Table 87 summarizes these rankings by reporting the number of rankings of 1 (biggest problem) and 2 (next biggest problem) for each problem area, as well as the overall rank of the problem area based on these frequencies. Examination of Table 87 indicates that drugs was overwhelmingly considered the biggest problem by both Portuguese and English parents. Alcoholism was identified as the second biggest problem by both groups, although job opportunities was ranked as

an equally large problem area by the English parents. A comparison of the overall rank of problem areas by the Portuguese and English parents indicates a slight difference in the impact of some of these community problems on the different groups; however, the majority of community problems were ranked as significant by only a very small percentage of parents.

Table 87

Rank Order of Community Problems in Fall River as Perceived by Parent Groups

| | Portuguese | | Anglo | |
|---|---|---|---|---|
| | Number Ranking Area 1 or 2 | Overall Rank | Number Ranking Area 1 or 2 | Overall Rank |
| Drugs | 95 | 1 | 17 | 1 |
| Alcoholism | 41 | 2 | 6 | 2 |
| Judiciary System | 17 | 3 | 1 | 6 |
| Transportation | 7 | 4 | 1 | 6 |
| Housing | 5 | 5 | 3 | 4 |
| Public Education | 5 | 5 | 2 | 5 |
| Underemployment | 5 | 5 | 4 | 3 |
| Child Care Centers | 3 | 6 | 0 | - |
| Job Opportunities | 3 | 6 | 6 | 2 |
| Medical Services | 3 | 6 | 2 | 5 |
| Community Spirit and Friendliness | 0 | - | 1 | 6 |
| Don't Know | 19 | - | 0 | - |

The Public Schools. Table 88 describes the program parents perceptions of the quality of the Fall River Public School system. Almost all program parents (95% of Portuguese and 92% of English) rated the system as being "excellent" or "good."

Table 88

Parent Groups' Perceptions of the Fall River Public School System

| | Portuguese (N=128) | Anglo (N=25) |
|---|---|---|
| Excellent | 16% | 16 |
| Good | 79 | 76 |
| Fair | 1 | 0 |
| Poor | 0 | 8 |
| Don't Know | 4 | 0 |

% Table values are percentages

Summary

Sociological Background. English parents were, on the average, 5 years younger than the Portuguese parents. The variability of ages of the Portuguese parents was slightly less than the English parents, with the majority of the former group between 36 and 45 years old, and the majority of the latter group between 31 and 45 years old.

The majority of the Portuguese parents were employed as factory workers. In contrast, the largest percentage of English husbands were skilled workers, and the largest group of employed English wives were factory workers. A larger percentage of English wives were housewives than were Portuguese wives.

The Portuguese parents had, on the average, more children than the English families. The Portuguese children play with Portuguese speaking children much

more frequently than do the English children. However, only 4% of the English children never play with other Portuguese speaking children.

The majority of Portuguese husbands and wives have resided in Fall River for less than three years; almost one-sixth of the Portuguese parents have resided in Fall River for less than one year; only 2% of the Portuguese husbands and 4% of the Portuguese wives have resided in Fall River for more than ten years. The majority of Portuguese emigrated to Fall River from San Miguel. In contrast, all English parents have lived in Fall River for more than ten years, and approximately three-fourths of them were born in Fall River.

Only one Portuguese parent was educated in U.S. schools. Only 2 Portuguese parents received more than an elementary level education (1a-6a) in Portugual. The English parents were somewhat better educated according to U.S. standards, with the majority receiving at least an elementary school education, and about 40% receiving at least a ninth grade education.

Language Dominance. English parents were more bilingual than Portuguese parents. More than 85% of the Portuguese parents cannot speak English at all. The majority of Portuguese (85% of husbands and 89% of wives) use their children or other people as interpreters frequently or sometimes, whereas only one English parent reported ever using anyone as an interpreter.

Portuguese is the language most frequently used by Portuguese parents at home, with their children, and with other adults. Similarly, English is the language preferred by English parents in these three situations. A very small number of English and Portuguese use half Portuguese in these situations. The majority of Portuguese (87% of husbands and 83% of wives) and all English agreed that English

is the language they need in their daily life. Yet, only 33% of the Portuguese husbands and 30% of the Portuguese wives reported interest in attending classes to learn English. In contrast approximately 80% of the English agreed it would be useful to speak Portuguese, and approximately one-half of the English expressed interest in taking a course to learn Portuguese language and culture.

Perceptions About Education. The parents most frequently perceived "the good life" for their children as meaning a good job or a good education. Similarly, the majority of respondents noted these outcomes as the benefits of attending school.

The Portuguese and English parents differed considerably in the amount of school they felt male and female students needed. Thirty-nine percent of the Portuguese parents wanted their children to leave school at 16, whereas all English parents felt their children should have at least a high school education, and more than one-half of these wanted their children to have at least a college education. Only one-half of the Portuguese parents felt their children should have at least a high school education.

The parents' attitudes toward bilingual education and the Bilingual Program in particular were highly positive. All parents but one, perceived bilingual education as either "good" or "very good" for their children. Similarly, 85% of the Portuguese and 88% of the English parents felt the bilingual program enriched their children's lives; the remaining parents were either undecided or had no opinion about this issue. Almost all parents perceived the learning of Portuguese in school as useful and good for their children. They also agreed that the study of school subjects in Portuguese was good for their children. Some parents did express concern, however, about the ability of the English speaking students in the program

to keep up with their non-bilingual program English-speaking classmates, although a larger percentage were undecided or had no opinion about this issue.

Portuguese and English parents saw the primary benefits of participation in the bilingual program as obtaining a good job, good education, a good future and bilingual skills. Few parents (5% of Portuguese and 13% of English) agreed that bilingual education retards the "Americanization" process of immigrant children.

Perceptions About the Community. Parents ranked drugs as the major problem in the Fall River community; the second biggest problem was alcoholism for both groups, although both opportunities were ranked as an equally large problem by the English parents.

Ninety-five percent of the Portuguese parents and 92% of the English parents rated the Fall River Public School System as "excellent" or "good".

## GUIDANCE COMPONENT

### Introduction

The Guidance Component included six product objectives. A series of processes were specified to contribute to the accomplishment of the objectives. The objectives were concerned with the revision of the fifth grade guidance curriculum, the formulation of a sixth grade curriculum, and the regular counseling of program students in need of this treatment. The activities of the Guidance Component were the responsibility of the guidance counselor. The counselor was to interview program students individually in an attempt to identify their socio-emotional problems, their needs, and interests; meet regularly with classroom teachers and school administrators to obtain referrals, and to report and discuss the progress of students involved in the counseling process; and to organize and maintain records of students counseled and of the needs and interests of students generally. The fifth grade guidance curriculum was to be revised and sixth grade planned to include activities related to the identified problems, needs, and interests of the students.

Shortly after the beginning of the program, problems began to mount in the guidance component. The problems centered on the performance of the guidance counselor. Complaints concerning the counselor were coming from administrators, teachers, and the evaluators. By December the complaints had become numerous. A review of the counselor's records revealed a series of missed appointments, unexplained absences, and a weekly pattern of being out "sick." The Director intensified his efforts to alleviate the problems. During the period from December to March, the director had a number of meetings with the counselor.

In general, the meetings were an attempt to get the counselor "on track". The director probed for problems (program or personal) that may have been interfering,

offered encouragement, set time frames for program reports, etc. The period following each meeting was marked by a slight flurry of activity by a compunctious counselor. These periods, however, were short-lived, and he soon reverted to former patterns of behavior. During the same time period, the evaluators also met with the counselor--two of the meetings were noteworthy. Because the counselor's first progress reports were due in February, the evaluators met with the counselor in January and his objectives were thoroughly reviewed. It was decided at the meeting that it was not too late to accomplish the objectives of the component if, in fact, he had been carrying out the process activities as he said. Because of limited progress after the January meeting, a second meeting in March was held to determine and implement a strategy to salvage the component. Both meetings, however, were to no avail. In May, the counselor resigned, leaving the component in a state of incompleteness and disorganization.

This chronology of events is provided to alert the reader to exercise caution in interpreting the following discussion of the evaluating of the objectives.

## Evaluation of Objectives

### Objective G-1.0

> The guidance counselor will identify the bilingual program students' needs, abilities, and interests. These will be described in a written report to the director.

### Evaluation

No written report was submitted to the director. In February, however, the counselor did show the evaluator what he claimed was the first draft of the report

stating the needs, abilities, and interests of all program students. Data for the report, he said, was obtained from interviewing the students, and from discussions with school administrators, teachers, and parents. Data gathered by the evaluator from principals, a teacher-in-charge, program administrators and teachers tend to negate the counselor's claim. These people indicate that they and the students saw little of the counselor, and that they were generally dissatisfied with his services. Additionally, there were no records available of these student interviews, and no files or records on any students, which were to be kept, containing relevant program information such as family background, test scores, grades, etc. There was a record, though, of five home visits--three of which were to the same family.

This objective can not be rated as accomplished. The speculation is that the evaluator was shown the rough draft of last year's report.

Objective G-2.0

> The program's teachers will know and understand the nature of the students' socio-emotional problems as evidenced by responses to interviews conducted by the counselor using an instrument specially prepared by the evaluators. Evidence of success will be a 70% correct response to the items.

Evaluation

In February, the counselor provided the interview instruments completed by the counselor and the teachers. The instrument was designed to provide data concerning students suspected of having socio-emotional problems, to describe the nature and perceived cause of the problem, and to list any action or progress made by the student. Representative of the questions on the interview instrument are the following: When was the student first referred to the guidance counselor? What did you perceive the problem to be? What behavior(s) suggested this

problem? Have you discussed this child and the problem with the guidance counselor (teacher)? The teacher's schedule contained nine questions; the guidance counselor's contained eight.

Five teachers completed the instrument for 23 students. The counselor personally interviewed the students and then completed his instrument. The data provided indicate that the counselor agreed with the teachers on 13 students. The counselor's evaluation of remaining ten students suggested that they did not have socio-emotional problems. This represents a 56% agreement rate. Furthermore, of the 13 students identified by both the teachers and the counselor as experiencing problems, they agreed on the nature of the problems in nine of the cases. This represents an agreement rate of 69% on the nature of the problem. Most of the diagnosed problems concerned behaviors that were immature, anti-social, and aggressive. Since both rates of agreement were below 70%, the objective was not accomplished. A summary of the data is presented in Table 89.

The process underlying the product objective was for the counselor to meet bi-weekly with the teachers individually to report the progress of students undergoing counseling therapy, and to receive any new referrals. There was, however, no record of these bi-weekly meetings or of the counseling sessions held with the students.

Table 89

Comparison of Guidance Counselor's and Teachers' Responses on the Socio-Emotional Interview Instrument

| | September-February | |
|---|---|---|
| | N | % |
| Number of Students Suspected of Having Problems | 23 | - |
| Agreement on Existence or Non-Existence of Problem | 13 | 56 |
| Disagreement on Existence or Non-Existence of Problem | 10 | 44 |
| Number of Problems Identified by Counselor and Teacher | 13 | - |
| Agreement on Nature of Problem | 9 | 69 |
| Disagreement on Nature of Problem | 4 | 31 |

Objective G-3.0

The majority of students with socio-emotional problems, as identified by the program teachers and guidance counselor, will show improvement in behavior as measured by the Pupil Behavior Inventory. Evidence of gain will be any positive change in raw score on at least one of the four subtests or total score.

Evaluation

This objective cannot be evaluated. No data was available.

The Pupil Behavior Inventory was to be completed by the classroom teachers for students in their classes who were diagnosed as having socio-emotional problems

in October, 1973 and May, 1974. In January, the date of the pre-ratings was changed to February, 1974. The Inventory is a 28 item scale composed of four subscales: Classroom Conduct, Academic Motivation and Performance, Socio-Emotional State, and Teacher Dependence. Students are rated on each item using a five-point scale ranging from "very frequently to very infrequently."

Objective G-4.0

The guidance counselor will write a sixth grade counseling curriculum focusing primarily on group counseling.

Evaluation

In February, the evaluator was shown the first draft of the outline for sixth grade counseling curriculum. Discussion with the counselor suggested that the curriculum outline focused on the group counseling method and would incorporate the identified needs and interests of the students. Data, however, was not available indicating whether or not the curriculum ever went beyond the outline stage. The objective was considered as being partially accomplished.

Objective G-5.0

Sixth grade program students will show satisfactory or improved self-concept as measured by the Inferred Self-Concept scale. Evidence of satisfactory behavior will be a post-rating mean score of at least three (3) or a significant ($p < .05$) gain in raw score means.

Evaluation

The Inferred Self-Concept Scale was to be completed by the classroom teachers in October, 1973 (later changed to February) and May, 1974 to all sixth grade students, i.e., six classes, two in each school. Pre test data were received in February for the six classes. The Scale was completed in February for three

of the classes, and in September and October for the remaining classes. The instrument contains 30 items which are rated on a five-point scale, "one" through "five" with "one" as the lowest rating, etc. The item ratings are then summed and divided by 30 (the number of items) to provide a self-concept score between "one" and "five" with "one" representing a socially undesirable ( or negative) and "five" representing a socially desirable (or positive) self-concept as generated by and in the school setting.

The pre-rating data for the four Portuguese dominant classes and the two English dominant classes are presented in Table 90. No post-rating data was available.

Inspection of the data presented in Table 90 indicates that the sixth graders view-of-themselves as perceived by their classroom teachers was quite high on the self-concept desirability scale. There was little difference between the Portuguese and English dominant students as groups. There was, however, a relatively large difference between the Portuguese and English dominant students compared to the group of students with identified behavioral problems. It appears that counseling therapy (which they apparently did not receive) would have been helpful for these students.

Table 90

Statistical Results for Sixth Grade Students on the Inferred Self-Concept Scale

| School | Language Dominance | Raw Score $\bar{X}$ | S |
|---|---|---|---|
| McDonough | Portuguese (N=14) | 3.9 | 0.4 |
| Watson | Portuguese (N=20) | 3.8 | 0.6 |
| Hartwell-Class R | Portuguese (N=17) | 4.4 | 0.3 |
| Hartwell-Class L | Portuguese (N=19) | 3.8 | 0.3 |
| Schools Combined | Portuguese (N=70) | 4.0 | 0.5 |
| McDonough | English (N=8) | 4.0 | 0.3 |
| Watson | English (N=12) | 4.5 | 0.2 |
| Combined Schools | English (N=20) | 4.3 | 0.3 |
| Identified Students With Socio-Emotional Problems | Mixed (N=12) | 3.1 | 0.3 |

Objective G-6.0

By June, 1974 the guidance counselor will have a revised fifth grade bilingual counseling curriculum based on any change in needs of the project's fifth grade students.

Evaluation

Three meetings with the counselor (January, February, and April) indicated that the revision of the fifth grade counseling curriculum had not begun. There was no data available after April to suggest otherwise. This objective, therefore, cannot be evaluated and remains not accomplished.

# SUMMARY AND RECOMMENDATIONS

The Fall River Title VII Bilingual Project continued its successful operation during the 1973-1974 school year. Table 91 summarizes the degree of accomplishment of program objectives. Tabulation of the status of accomplishment of the 35 program objectives (including Guidance Component objectives) indicates that 51% of the objectives were completely accomplished, 31% were partially accomplished, and 17% were not accomplished. If the Guidance Component objectives are excluded, 62% of 29 objectives were completely accomplished, 29 were partially accomplished, and 3 were not accomplished. The following narrative summarizes the accomplishments of the objectives by component.

## Instructional Component

Program instruction was conducted in language arts, mathematics, science, and social studies in the students' first language, and in the comprehension and oral production of Portuguese and English as Second Languages. Student achievement in these areas was measured either through the tabulation of the number of instructional units completed by the students and/or the administration of teacher-made tests or through the administration and analysis of standardized achievement tests. Because no standardized tests are available to measure content area skill acquisition in Portuguese, the Portuguese dominant program students' achievement was assessed by identifying whether 75% of the students had completed the number of units from the project-developed curricula specified as the criterion level in each program objective. Although more than one-half of the students completed the required number of language arts/reading units, the percentage was too low to result in the complete demonstration of increased proficiency in language arts/reading (I-5-P-1.0). Similarly, the percentage of students who demonstrated increased proficiency in social

Table 91

Summary of the Degree of Accomplishment of Program Objectives

| Objective Number | Accomplished | Partially Accomplished | Not Accomplished |
|---|---|---|---|
| I-5-P-1.0 | | ✓ | |
| I-5-P-2.0 | ✓ | | |
| I-5-P-3.0 | ✓ | | |
| I-5-P-4.0 | | ✓ | |
| I-5-P-5.0 | ✓ | | |
| I-5-E-1.0 | ✓ | | |
| I-5-E-2.0 | ✓ | | |
| I-5-E-3.0 | | ✓ | |
| I-5-E-4.0 | ✓ | | |
| I-5-E-5.0 | ✓ | | |
| I-6P-1.0 | | ✓ | |
| I-6-P-2.0 | | ✓ | |
| I-6-P-3.0 | | ✓ | |
| I-6-P-4.0 | ✓ | | |
| I-6-P-5.0 | ✓ | | |
| I-6-E-1.0 | | ✓ | |
| I-6-E-2.0 | | ✓ | |
| I-6-E-3.0 | | | ✓ |
| I-6-E-4.0 | | ✓ | |
| I-6-E-5.0 | ✓ | | |
| MD-1.0 | ✓ | | |
| SD-1.0 | ✓ | | |
| SD-2.0 | ✓ | | |
| SD-3.0 | ✓ | | |
| SD-4.0 | ✓ | | |
| SD-5.0 | ✓ | | |
| P-1.0 | ✓ | | |
| P-2.0 | ✓ | | |
| P-3.0 | | ✓ | |
| G-1.0 | | | ✓ |
| G-2.0 | | | ✓ |
| G-3.0 | | | ✓ |
| G-4.0 | | ✓ | |
| G-5.0 | | | ✓ |
| G-6.0 | | | ✓ |

studies was below the criterion (I-5-P-4.0). Achievement in mathematics and science was sufficient to result in the accomplishment of the relevant objectives (I-5-P-2.0 and I-5-P-3.0, respectively). In all four subject areas, Portuguese dominant fifth grade students demonstrated statistically significant gains in teacher-made achievement tests, so all objectives were rated as either completely or partially accomplished. Portuguese dominant students were also administered the Michigan Oral Language Productive Test to assess their oral English skills. Fifth grade students demonstrated increased proficiency in English as a Second Language (I-5-P-5.0).

The sixth grade Portuguese dominant students experienced more difficulty in completing the required number of instructional objectives. Less than 75% of the students completed 7 language arts units (I-6-P-6.0), 6 mathematics units (I-6-P-2.0), and 7 science units (I-6-P-3.0). Ninety percent of the sixth grade students, however, completed the required number of social studies units (I-6-P-4.0). Nevertheless, the sixth graders made significant gains on the teacher-made tests in the four content areas, resulting in the objectives being rated as partially or completely accomplished. Sixth grade Portuguese dominant students also demonstrated increased proficiency in English as a Second Language, as reflected in the significant gains on the Michigan Oral Language Productive Test (I-6-P-5.0).

English dominant students' achievement in reading/language arts, mathematics, and science was measured by comparing their performance on the Metropolitan Achievement Test, Intermediate Level, to that of a comparison group of non-program students. The instructional objectives specified that the English dominant program students would achieve an average percentile rank equivalent to that earned by the comparison group students Fifth grade students earned comparable scores to the

non-program students in reading/language arts (I-5-E-1.0); in contrast, sixth grade program students performed significantly below the comparison group on this skill area (I-6-E-1.0). (The objectives were rated as partially accomplished if the students improved their scores from pre to post-test but did not earn scores equivalent to those of the comparison group.)

In mathematics, the fifth grade program students again scored above the comparison group students (I-5-E-2.0), whereas the sixth grade program students earned lower scores than the comparison group students (I-6-E-2.0). On the science subtest, however, both grade five and grade six program groups scored at percentile ranks below those of the corresponding comparison group (I-5-E-3.0 and I-6-E-3.0). Social studies achievement was not measured by the Metropolitan; instead, like the majority of the Portuguese dominant objectives, English dominant students were required to complete a pre-specified number of units in the Continuous Progress Laboratories. All fifth grade students (I-5-E-4.0) completed at least seven social studies units. Students in both grades five and six demonstrated increased proficiency in Portuguese as a Second Language, as reflected by significant gains in their scores on the Portuguese Oral Production Test (I-5-E-5.0 and I-6-E-5.0).

Materials Development Component

The Materials Development Component involved a continuation of the development of an individualized curriculum for Portuguese dominant students in grades five through nine. During the summer of 1973, the curriculum specialists revised the fifth grade curriculum. During the 1973-1974 school year they developed the sixth grade curriculum, which, like the fifth grade curriculum, included a series of units in each of specified content areas--language arts, mathematics, science,

(MD-1.0). Each unit included an outline of the topical areas covered, instructional objectives in behavioral terms, written material for teaching the objectives, practice exercises, suggested supplementary activities, audio-visual materials, reference sources, and pre and post mastery tests.

Preliminary development of ESL materials was initiated during 1973-1974; the E.S.L. Coordinator completed three booklets for students and an E.S.L. manual to supplement these reading materials. The Audio-Visual Production-Reproduction Center at the Hartwell Street School also became operative during this school year. The Center staff prepared slides, transparencies, enlargements, sound recordings, and mountings and laminations to accompany the curricula developed in the project. Also, the program staff cooperated with the Massachusetts Executive Committee for Educational Television and produced, to date, a television program for English speaking and Portuguese speaking parents and students; two other programs were expected to be completed by June 30, 1974.

Staff Development Component

The Staff Development Component included a wide variety of activities designed to increase the professional competence of the program staff. Pre-service and in-service activities included participation in 1) the Bilingual Institute at Brown University, 2) release time workshops on a variety of topics, 3) learning packet workshops offered by Project Spoke, and 4) workshops in Individualized Guided Instruction using a Multi-Unit Structure (IGE-MUS). As a result of participation in these activities and interaction with the Staff Development Specialist who regularly observed program classes and met with the staff, program teachers demonstrated increased knowledge of bilingual instructional materials (SD-1.0), utilized the new curricula developed by the curriculum specialists (SD-2.0), evaluated the new

curriculum materials developed by the curriculum specialists (SD-3.), showed empathy toward the problems of the children in the bilingual program (SD-4.0), and showed improvement in their teaching methods (SD-5.0).

Parent-Community Component

The Parent-Community Component included activities designed to involve parents of program students and the community-at-large in the bilingual project, and to disseminate information about the project to them. The Parent-Community Coordinator planned, implemented, and coordinated activities related to the accomplishment of the component objectives. The Coordinator established an Advisory Council, a Multi-Service Center, conducted an in-service program for Headstart teachers, submitted press releases and bi-monthly issues of the Bulletin, talked to community groups, and sent letters to parents.

Twenty-five percent of the parents were in attendance at each of three parent group meetings held; 25% of the parents also attended the Open House or the Bilingual Festival. Positive and improved responses from pre to post on an attitude questionnaire about the program were also recorded (P-1.0). During 1973-1974 the Advisory Board was re-established; it met twelve times during the school year and was involved in the bilingual program by offering suggestions for program modifications and by disseminating information to the parents and the community. The program staff also received favorable letters from members of the community as a result of dissemiantion activities, suggesting that the community at large developed a better understanding of bilingual-bicultural education (P-3.0).

Another activity of this component was the conducting of a workshop for Headstart teachers designed to sensitize the participants to the needs of Portu-

guese children and adults in Fall River. Also, a sociological data questionnaire was completed by program parents.

## Guidance Component

The Guidance Component included six product objectives which focused on revising the fifth grade guidance curriculum, developing a sixth grade guidance curriculum, and providing regular counseling of program students. The Guidance Counselor was responsible for performing the component's activities to insure the accomplishment of the Guidance objectives. Due to problems with the performance of the Guidance Counselor only one of the six objectives of this component was accomplished to any degree. The sixth grade counseling curriculum was outlined (G-4.0); but the fifth grade curriculum was not revised (G-6.0). No identification of bilingual program students' needs, abilities, and interests occurred in a written report (G-1.0). The program's teachers also did not demonstrate sufficient knowledge or understanding of the nature of the students' socio-emotional problems (G-2.0), most likely due to the limited contact they had with the guidance counselor. Since the Pupil Behavior Inventory was not administered it was not possible to determine changes in the behavior of students with identified problems. However, administration of the Inferred Self-Concept Scale revealed a satisfactory level of self-concept in sixth grade students.

## Recommendations

The evaluators offer the following recommendations for program improvement during 1974-1975:

1. The quality of the in-service program should be maintained or increased. The program teachers, however, should be more involved in the planning activities.

2. Staff meetings should continue to be held on a regularly scheduled basis, allowing time for staff interaction as a regular feature.

3. A mature person with a counseling and social service background should be sought for the guidance counselor position.

4. Revision of the Guidance Component should continue.

5. The instituting of a career education or pre-vocational training program should be considered.

6. A record keeping system, similar to Parent-Community coordinator's, should be implemented and maintained by the Staff Development and Materials Development Components.

7. Additional emphasis should be directed toward the reading in English curriculum for Portuguese dominant students.

8. Publication of the program newsletter and year book should be continued.

9. Methods of attracting parents for the second language courses should be pursued.

10. Methods of increasing parental involvement should be continued.

11. Classroom observation by the ESL coordinator should be instituted.

12. Classroom observations by the staff development and curriculum specialists should be continued.

13. Workshops conducted by the curriculum specialists for the teachers should be continued.

14. Workshops conducted by the staff of the Audio-Visual Production-Reproduction Center for program staff should be implemented.

15. The high quality of materials produced in the Audio-Visual Production-Reproduction Center should be maintained.

16. Additional reading instruction should be provided to English dominant students in the program.

17. The curriculum units should be revised where indicated by the test results and teacher feedback.

18. The curriculum specialists should increase their classroom contact time for observing, reviewing and analyzing curriculum and methods, and demonstrating lessons and techniques.