ABSTRACT
                Bilingual Curriculum Content (BCC) is an
instructional component of the Transitional Bilingual Basic Skills
program offered to students with limited English proficiency (LEP) in
the Dade County Public Schools, Florida. In BCC instruction, students
learn mathematics and combined instruction (science, social studies,
and health/safety) in their native language. To evaluate student
achievement in content areas with or without bilingual instruction,
the BCC Pilot Project was implemented in 12 kindergarten classes in
February, 1984. The schools were randomly assigned to either BCC or
No-BCC instruction groups. Participants were Hispanic origin LEP
kindergarteners. A test of general cognitive ability was administered
at the beginning of the project. Content area and language skills
achievement tests were administered at the pretest (February) and
posttest (May). Program implementation characteristics and school
demographic data were also gathered for each school. Results showed
no indication that either strategy led to higher student achievement.
No significant differences were found between BCC and No-BCC groups
in either English or Spanish health/safety achievement measures. In
general, the BCC Pilot Project was implemented according to
guidelines with respect to class size, teacher training and
experience, and instructional materials. Conclusions should be
interpreted cautiously because they were based only on a four-month
period of project implementation. Appendices include questionnaires,
Pilot Project guide lines, tables and information on the reliability
and intercorrelations of the tests. (JAZ)

DADE COUNTY PUBLIC SCHOOLS

EVALUATION

OF THE BILINGUAL CURRICULUM CONTENT (BCC)

PILOT PROJECT: A THREE YEAR STUDY

FIRST INTERIM REPORT

OFFICE OF EDUCATIONAL ACCOUNTABILITY

JANUARY 1985

EVALUATION OF THE BILINGUAL
CURRICULUM CONTENT (BCC)
PILOT PROJECT:
A THREE-YEAR STUDY

FIRST INTERIM REPORT

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Bilingual Curriculum Content is part of the district's Transitional Bilingual Basic Skills Program (TBBS) which is provided for limited English proficient (LEP) students. It is offered to these students in compliance with the U.S. Office for Civil Rights (OCR) agreements, and Dade County School Board rule. The goal of the TBBS Program is to ensure that LEP students acquire a command of English as rapidly as possible, while maintaining and acquiring skills in content areas through home language instruction. This instruction consists of two programs: Home Language Arts and Bilingual Curriculum Content (BCC). In BCC, students learn mathematics and "combined instruction" (science, social studies and health/safety) with their native language as the medium of instruction. The intent of BCC is for LEP students to develop in the home language, as well as in English, the basic concepts and skills which form part of the English curriculum in these content areas.

In recent years, interest has developed among educators in exploring different approaches to the teaching of content subjects to LEP children, using English as the only language of instruction. In February, 1983, the Dade County School Board directed that a study be conducted of alternative strategies which could be used to teach curriculum content to LEP students. After negotiations with OCR in October, 1983, a three-year longitudinal study of BCC was initiated in the second semester of the 1983-84 school year by the Office of Educational Accountability (OEA). This report presents the findings of this one-semester period of the study.

In order to evaluate the effect of BCC instruction on student achievement in the content areas, the BCC Pilot Project was implemented in twelve schools during 1983-84. The project consists of using two alternative strategies in teaching content subjects to LEP students: "BCC" (subjects taught bilingually) and "No-BCC" (subjects taught in English). Participants are Hispanic origin kindergarten LEP students, who will continue in the project through Grades 1 and 2.

Evaluation of the BCC Pilot Project included the following procedures: schools selected for participation in the pilot project were drawn from results of a survey and subsequent observations conducted by OEA. They were randomly assigned to either the BCC or No-BCC strategy. Students were pre- and posttested in the content areas and on language skills with a standardized test, the TOBE (Test of Basic Experiences); and with a locally-developed test of Dade County Balanced Curriculum Objectives (BCC tests). They were also given a test of general cognitive ability, as measured by vocabulary acquisition. English and Spanish-language versions of tests were applied. Program implementation characteristics and school demographic data were also gathered for each pilot project school.

The evaluation addressed two questions:

1. Do limited English proficient kindergarten students achieve a higher degree of academic progress in the content areas with or without BCC?

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2. Was the pilot project implemented appropriately with respect to the guidelines and other relevant programmatic factors?

To answer the questions, a comparison of content achievement was made between students taught in the BCC strategy, and students taught in the No-BCC strategy. Implementation characteristics of the project, and their relationship to student achievement, were also examined.

Analysis of pretest scores revealed that students in both strategies had comparable achievement in content and language skills. Pilot project students were thus evenly matched at the onset of the study.

The conclusions which emerged from the findings are based on a four-month period of project implementation, and should be interpreted cautiously. With a full year of the program, the effect of the two strategies on student achievement may be more clearly demonstrated.

The conclusions were:

1. At the end of the four-month pilot project period, no clear pattern of results has emerged to indicate that either of the two strategies, BCC or No-BCC, consistently leads to higher student performance.

2. Limited English proficient kindergarten students in the BCC and No-BCC strategies performed at comparable levels at the posttest in science and social studies on the standardized TOBE test, and in mathematics and social studies on the locally-developed BCC test, in English and in Spanish. They also demonstrated comparable achievement in the three content areas on all tests in Spanish.

3. Limited English proficient kindergarten students achieved a higher degree of academic progress in mathematics with BCC instruction than without. An analysis of covariance applic: to this measure indicated that this difference was significant. This result was found on the TOBE Test, in English. BCC students also achieved a slightly higher degree of progress in science, on the BCC Science Test, in English. This difference was marginally significant on an analysis of covariance applied to this measure. These findings must be interpreted with caution, for when a correction procedure is used which takes into account the overall effect of using several individual analyses, the differences are not statistically significant. In addition, some variations in project guidelines were reported that could influence achievement; for example more teaching time in content subjects in the BCC schools than in the No-BCC schools. These variations have since been addressed by the Bilingual/Foreign Language Education Department.

4. No significant differences were found between BCC and No-BCC groups in either English or Spanish health/safety achievement measures. Limited English proficient kindergarten students achieved at comparable levels in the health/safety content area, with or without BCC.

5. In general, the BCC Pilot Project was implemented according to the guidelines, in the four-month period. Guidelines were met in BCC and No-BCC schools with respect to class size, teacher training and experience, and instructional materials, all of which were comparable in both strategies.

6. Variation from the guidelines was found in the amount of teaching time provided for mathematics and "combined instruction." Also, the use of Spanish in teaching content subjects did not conform to the guidelines in several BCC schools. Such modifications could affect student achievement. In the current year, steps have been taken by the Bilingual/ Foreign Language Education Department personnel to ensure that programmatic guidelines are implemented as specified.

7. Differences between BCC and No-BCC schools were identified in teaching strategies and in teacher/principal perceptions of project implementation. These included: No-BCC teachers reported more grouping of students for instruction, and overall, slightly more favorable perceptions of how the project was implemented, than did BCC teachers.

8. Teachers in both strategies felt that students' attitudes toward learning was positive and that they had progressed in content subjects during the four-month pilot project period.

The recommendations which emerged from the evaluation are:

1. More orientation and direction for implementing the BCC and No-BCC strategies should be provided to both teachers and principals by Bilingual/Foreign Language Education personnel. Closer supervision with respect to adherence to project guidelines is needed, particularly in terms of time allocation and the use of Spanish in teaching content subjects.

Status: Since the beginning of the 1984-85 school year, the Bilingual/ Foreign Language Education personnel have been meeting with project school personnel to give needed orientation and supervision.

2. Inservice training, special workshops on project operations, or other areas of concern related to the project should be made available to teachers and principals.

Status: In the fall of 1984-85, some pilot project personnel participated in the Methods of Teaching ESOL workshop. A countywide workshop to teach BCC or CCE/ESOL is planned for the second semester. Individual on-site inservice training for project teachers has begun. This on-site training is being provided by a teacher assigned half time to the Bilingual/Foreign Language Education Department for this project.

EVALUATION OF THE BILINGUAL CURRICULUM CONTENT (BCC) PILOT
PROJECT: A THREE-YEAR STUDY
FIRST INTERIM REPORT
JANUARY, 1985

INTRODUCTION

In February, 1983, the Dade County School Board directed the Office of Educa-
tional Accountability to conduct a study of alternative strategies used to
teach curriculum content to limited English proficient (LEP) students. The
study was to assess the impact of Bilingual Curriculum Content (BCC) instruc-
tion on the academic learning of LEP students, when compared with content
instruction solely in English. A three-year longitudinal study was initiated
at the beginning of the second semester of the 1983-84 school year by the
Office of Educational Accountability (OEA).

Bilingual Curriculum Content (BCC) is an instructional component of the
Transitional Bilingual Basic Skills program offered to limited English profi-
cient students in the Dade County Public Schools. During the 1983-84 school
year, 24,304 limited English proficient (LEP) students were enrolled in the
school system. Limited English proficient students are provided specialized
instruction to assist them while they adjust to a new educational and cultural
environment. This instruction includes English for Speakers of Other Lan-
guages (ESOL), an intensive English program; and Basic Skills in the Home
Language, consisting of 1) Home Language Arts and 2) curriculum content
subjects taught bilingually (BCC).

Since the early 1960's, the policy of Dade County Schools has been to
recognize and use the student's home language, and aspects of the home
culture, as instructional tools during the student's transition into an all
English curriculum. The rationale for this practice stemmed from the belief
that bilingual education, rather than an all English approach, is more
advantageous to LEP children's learning, development and self-esteem (Bell,
1967; Blanco, 1977; Cummins, 1982). In 1976, based on agreements with the
United States Office for Civil Rights, the use of the home language in
curriculum subjects (BCC) for LEP students was established as an instructional
strategy in elementary schools through the Transitional Bilingual Basic Skills
Program. The objective of BCC is to ensure that the students "develop in the
home language, as well as in English, basic concepts and skills which form
part of the English curriculum in the [content] areas of social studies,
science and mathematics" (Dade County Public Schools, 1978). The ultimate
goal of this instruction is to enable LEP students to maintain their academic
standing at a level equivalent to their English speaking peers, while in the
process of learning English.

In recent years, interest has developed among educators in exploring the
effect on academic achievement of different instructional approaches to the
teaching of content subjects to LEP children, using English as the only
language of instruction. One of these approaches is "Structured Immersion,"
whereby almost all instruction is given in English, using a curriculum which
is specially structured for LEP students (Birman et al, 1981). Teachers in
this approach are usually bilingual, and home language arts may be included in
the students' total program (Met, 1984).

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To evaluate LEP achievement in content areas with or without bilingual instruction, the BCC Pilot Project was implemented in twelve elementary kindergarten classes in February, 1984. The project consists of using two alternative strategies in teaching content subjects to LEP students: "BCC" (subjects taught bilingually) and "No-BCC" (subjects taught in English). Implementation of the two strategies is the responsiblity of the Division of Elementary and Secondary Instruction (DESI). The Office of Educational Accountability has the responsibility of evaluating the project, and developed the evaluation plan in conjunction with DESI. Approval of the project and the evaluation was obtained from the U.S. Office for Civil Rights.

The evaluation of the first year of the BCC Pilot Project addressed the following questions:

1. Do limited English-proficient kindergarten students achieve a higher degree of academic progress in the content areas with or without BCC?

2. Was the pilot project implemented appropriately with respect to the guidelines and other relevant programmatic factors?

Specific evaluation procedures used, and the results obtained, follow in the report. Recommendations for improving implementation of the BCC Pilot Project, based on this first year evaluation, are also presented.

EVALUATION PROCEDURES

Design

In order to compare the academic achievement in content areas of kindergarten students in BCC and No-BCC strategies, a pretest-posttest comparison group design was employed. Assignment of schools to either strategy was random. To determine the comparability of students in both strategies, a test of general cognitive ability, as measured through vocabulary acquisition, was administered at the beginning of the project. Additional baseline data for students were obtained by administering a standardized language arts achievement test to both groups. Finally, content achievement tests were administered at the pretest (February) and posttest (May); and project implementation data were gathered.

Follow-up of these pilot project students will continue for two years. It should be noted that due to the late start-up date, the pilot project is being repeated with a new group of kindergarten students, beginning in the Fall of the 1984-85 school year. In effect, two groups of students will be participating simultaneously throughout the length of the longitudinal study. These groups will be: Grade K students from the four-month "pilot" phase of 1983-84, and new Grade K students entering in 1984-85.

Sample Selection

Schools

Prior to developing the evaluation plan, a preliminary survey was conducted by OEA staff in September, 1983, to gather background information on the BCC program in Dade County's elementary schools. All elementary school principals in schools with LEP students in the kindergarten grade received an Administrator Questionnaire developed by OEA staff (see Appendix A). Of the 154 questionnaires sent, 131 were returned, or an 85% response rate.

Schools were selected for participation in the pilot project based on the number of LEP students enrolled in Grades K-2, their ESOL level, the percent of free and reduced lunch offered, the students' ethnicity, and subsequent observations conducted by OEA staff. Schools which met the criterion of an adequate number of Hispanic kindergarten students at ESOL Levels I and II were included. The schools with a large number of other than Spanish language origin students in kindergarten were deleted, leaving twenty schools in the sample.

These twenty schools were subsequently grouped by socioeconomic strata (based on percent of students receiving free/reduced priced lunch), and percent of LEP students. Information on ethnic composition was also reviewed and taken into account in the final selection. These data were used to determine matched pairs of schools of varying socioeconomic levels, and to randomly assign schools as BCC or No-BCC. Schools without a matched pair (n = 8) were excluded. The final twelve schools of the pilot project were then selected.

The schools selected to participate in the pilot project are representative of all the elementary schools where limited English proficient students are taught. These schools serve diverse language minority and socioeconomic communities, as indicated by the percent of students receiving free/reduced priced lunch, and percent of LEP students in the school. The BCC and No-BCC schools are comparable with regard to these characteristics.

Teachers

After the schools were selected, OEA staff visited the schools and/or interviewed administrators to discuss teacher and student participation in the Pilot Project program. Teachers were selected on the basis of their qualifications with respect to training and years of experience, so that BCC and No-BCC school teachers would be comparably qualified. A balance between bilingual and monolingual teachers in BCC and No-BCC schools was sought, but adjustments had to be made to accommodate the schools' staff resources. The final selection included one monolingual and five bilingual classroom teachers in BCC schools, and four monolingual and two bilingual classroom teachers in No-BCC schools.

In two of the BCC schools a special teacher was allocated to provide bilingual content area instruction. Both teachers were bilingual. In this report these special teachers are referred to as BCC supplementary teachers.

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Students

In the schools selected for the study, intact classes of kindergarten ESOL students were chosen. In some cases it was necessary to form new classes by combining students from different classrooms. Random selection was employed in cases where individual students were asked to participate in the pilot project to maintain an adequate class size.

Instruments

For this evaluation, achievement tests were applied in English and Spanish to all children included in the sample of the BCC and No-BCC schools. In addition, survey data were collected from teachers and principals about program implementation. Classroom observations were carried out in a sample of BCC and No-BCC classes. Below is a description of the different instruments used.

Tests of Basic Experience (TOBE)

These tests are designed to measure the differences in children's awareness of the world around them, through testing skills in the three curriculum areas of mathematics, social studies and science; and in the language arts. English and Spanish versions of all tests are available (Moss, 1978).

Each TOBE is composed of 26 items in a multiple choice format. Tests are group administered; the examiner reads the questions and children select the correct answer from one of four options presented in pictorial form. Generally, administration of each test lasts between 25 and 40 minutes.

Bilingual Curriculum Content Tests (BCC)

These tests were designed by OEA to measure student achievement according to the DCPS Content Area Balanced Curriculum Objectives. Tests were developed in English and Spanish for the curriculum content areas of mathematics, social studies and science. Health/safety items are included in science and social studies tests.

Each BCC test is composed of 16 multiple choice items. Tests are administered in groups. The examiner reads the question and students select the correct answer from one of three options. Test administration usually lasts between 15 and 20 minutes.

Peabody Picture Vocabulary Test (PPVT)

The PPVT is designed to measure a student's receptive vocabulary (Dunn and Dunn, 1981). It also has been used extensively to provide an estimate of general cognitive ability as demonstrated through vocabulary acquisition.

By permission of the authors, the PPVT was especially adapted for this evaluation by OEA staff. Two forms of the test were developed: one in Spanish and one in English. The test is administered individually. The 20-item test and scoring procedures were adapted from the full published form of the English PPVT, and the full, experimental form of the Spanish PPVT. Due to the fact that the development of the PPVT Spanish form is behind schedule, data on

standardization, reliability and validity will not be available for another year (M. Malinchoc, personal communication, Oct. 18, 1984). While student performance on the OEA-adapted English version can be related to the full scale, a similar interpretation cannot be made for the OEA-adapted Spanish version. Since comparable information is not available for the English and Spanish PPVT, it is premature to present findings based on these tests, at this time.

Teacher Questionnaires

Questionnaires were designed by OEA staff to obtain data about attitudes toward and implementation of the program (see Appendix A). Issues addressed included: instructional strategies and resources, language usage in teaching content areas, program delivery, opinions on appropriate methodology for teaching LEP students, and teacher training and experience with LEP students.

A questionnaire was developed for teachers providing the different delivery systems used in the BCC and No-BCC programs, as described in the pilot project guidelines (Appendix B). Teachers included in the survey were: the classroom teacher who teaches the bilingual curriculum content; the classroom teacher whose students receive bilingual curriculum content from a BCC supplementary teacher; the BCC supplementary teacher; and the classroom teacher in the No-BCC schools. The same questionnaire, with minor modifications, was sent to each teacher participating in the project (see sample in Appendix A).

BCC Pilot Project Administrator Questionnaire

A similar questionnaire concerning program implementation and opinions about teaching methodology for LEP students was sent to the principals of the 12 pilot project schools (see Appendix A).

Demographic Data Collection Form

This form is designed to provide basic information on student enrollment, ethnic composition of staff and students, size of staff, percent of LEP students, and percent of students receiving free and reduced lunches (see Appendix A).

Testers

Two OEA staff assigned to the bilingual evaluation program were responsible for administering both pretests and posttests, assisted by contracted testers. In addition, a teacher assigned half time to the Bilingual/Foreign Language Education Department for this project participated in the data collection. All testers were bilingual; contracted personnel were native speakers of either Spanish or English.

All contracted personnel held either an undergraduate or masters' degree in education. They all received a half-day orientation to familiarize them with the tests and to the group testing procedures employed in this evaluation.

Data Collection

Three data collection procedures took place during the four months that the BCC Pilot Project was in effect. These were: individual testing of children's vocabulary acquisition in English and Spanish; group testing of children's content knowledge (achievement tests) in English and Spanish; and surveys of teachers and principals regarding program implementation. Testing of children took place twice: in January and February, 1984 (the pretest phase), prior to initiation of the BCC Pilot Project, and in May and June, 1984 (the posttest phase), prior to the end of the school year. Below, each one of these measurement aspects is described in more detail.

Peabody Picture Vocabulary Test (OEA Adaptation)

The OEA versions of the English and the Spanish Peabody Picture Vocabulary Tests were applied individually to each child in the sample by bilingual OEA and trained contracted personnel. The application of the tests occurred during the pretest phase (January/February, 1984). The order of the testing (English or Spanish first) was randomly assigned. Administration of the two versions of the test took place in the same day and usually was carried out by the same tester.

Achievement Testing

Pretesting consisted of administering 1) the Tests of Basic Experience (TOBE) subtests: mathematics, social studies, science and language; and 2) the Bilingual Curriculum Content (BCC) tests: mathematics, social studies and science, with health/safety included in the latter two tests. For each group (classroom) of program children, six testing sessions were scheduled. At each session two of the TOBE subtests or the three BCC tests were administered. Tests were randomly assigned to the six scheduled testing sessions. Each testing session was conducted in only one language. At least two testing sessions were interspersed between application of the same content area test in the other language. Testing in each language was conducted by a native speaker.

Posttesting procedures were basically the same as the pretesting, with minor modifications made in the testing schedule.

Administrator and Teacher Questionnaires

In June the principals and teachers participating in the BCC Pilot Project were asked to complete questionnaires and return them by mail. Ten principals and twelve teachers representing ten schools (five BCC and five No-BCC) completed the questionnaires.

RESULTS

This section of the report presents the findings of the four-month period of the 1983-84 BCC Pilot Project pertaining to 1) effect of the two instructional strategies on student achievement in the content areas of mathematics, science, and social studies, and 2) evaluation of the pilot project's implementation.

Student Achievement

The first question addressed was: "Do limited English proficient kindergarten students achieve a higher degree of academic progress in the content areas with or without BCC?".

In order to assess the effect of BCC, the schools selected were randomly assigned to one of two instructional approaches: BCC or No-BCC (see Sample Selection). While the selection procedure controlled for socio-economic status (matching the randomly selected schools by pairs, for SES), it was also necessary to determine that the two groups were similar along educationally relevant dimensions, e.g., content achievement, cognitive and language abilities. Groups which differ in terms of pretest scores in these dimensions would be a source of bias to the study. Comparability of BCC and No-BCC groups at the pretest is discussed below.

The effect of BCC and No-BCC on student achievement in the content areas was analyzed. Posttest results on achievement tests are compared and the findings are presented below. Pretest and posttest results are presented in the tables in Appendix C.

The pattern of relationships of tests that form the test batteries (TOBE and BCC) was examined to ensure that each test is making an independent contribution to the assessment of the student's academic achievement. These correlations are shown in Appendix D. Correlations between the TOBE (a national norm-referenced test) and the BCC tests (a locally-developed content-referenced test) were examined to determine the degree of relationship between tests measuring the same content area. These correlations are also presented in Appendix D. Correlations between English and Spanish versions of the tests were also examined and are shown in Appendix D. In addition, other technical properties of the tests, such as their reliability, were analyzed. These analyses are presented in Appendix D.

Comparability in Performance at the Pre-test

All of the analyses on comparability of performance between BCC and No-BCC groups were carried out on paired data (students who took both pre-and post-tests).

Language Skills, TOBE Tests

The TOBE Language Test measures language skills which are normally learned in kindergarten language arts instruction, e.g., visual discrimination, initial

and final sounds, rhyming, verb tense, space and location, comprehension, etc.

No significant differences were found between groups on either the English TOBE Language Test (t [209]-.09, p=.93), or on the Spanish TOBE Language Test (t [217]=-.82, p=.41). Group means on both language tests were quite similar, as shown in Tables 1 and 2. This suggests that BCC and No-BCC groups did not differ in overall languages skills at the pretest, in both English and Spanish.

Content Achievement, TOBE Tests

As presented in Tables 1 and 2, no significant differences were found between groups on English or Spanish TOBE content achievement tests, at the pre-test. This suggests that BCC and No-BCC students were comparable in subject (content) area background in February, 1984, as measured by a standardized content achievement test.

Content Achievement, BCC Tests .

No significant differences were found between groups on the BCC Mathematics or Science Tests, in English. Borderline significance was found on the BCC Social Studies Test, in English, favoring the No-BCC group (t[217]=-1.90, p=.06). No significant differences were found between groups on the BCC Mathematics or Social Studies Tests in Spanish. A significant difference was found on the BCC Science Test in Spanish, favoring the BCC group (t[215]=-2.13, p=.03). As shown in Tables 1 and 2, the groups did not differ significantly in achievement in the three subjects in English, and in two of the three subjects in Spanish, as measured by a criterion-referenced test at the pretest.

Effect of the BCC and No-BCC Instructional Strategies on Achievement

Analysis of covariance was used to test the significance of the difference between the posttest scores of the BCC and No-BCC groups on the TOBE and BCC Tests (science, mathematics and social studies, English and Spanish versions). Pretest scores for each group were used as covariates. This analytical technique produces "adjusted" mean posttest scores which take into account initial differences between the groups. In effect, this allows a direct test of the significance of the difference between posttest mean scores of the treatment and control groups. These adjusted means are interpreted as post-test means with the effects of pretest differences between the groups removed.

At this stage of the evaluation, a separate one-way analysis of covariance (ANCOVA) was carried out for each test in order to explore possible differential achievement outcomes of each strategy.

Content Achievement

A summary of the analysis of covariance is reported in Table 3. Only one significant difference was found favoring the BCC treatment group in twelve instances of comparisons of content achievement. This was found on the TOBE Mathematics Test in English. A borderline significant difference was found on one other measure, the BCC Science Test in English, also favoring the BCC

group. Tables 4 and 5 present the detailed results of the analysis of covariance on all posttests.

Since several different achievement tests were applied, and a one-way ANCOVA carried out on each, there is a strong possibility of finding a significant difference by chance alone, between the BCC and No-BCC strategies, on any one of the tests. To correct for this possibility, a statistical test, the Bronferroni F procedure (Huitema, 1980) was employed. This procedure controls for the fact that multiple ANCOVAS were carried out, by setting a critical value (F) that each ANCOVA must reach in order for the difference between strategies on a test to be considered significant. Since 14 tests were applied, on 190 or more students each time, a critical value (F) greater than 8.30 must be obtained for the results of an individual ANCOVA to be considered significant (Huitema, 1980 p.386).

When these results were evaluated using the Bronferroni F to correct for use of multiple achievement tests, none reached significance. However, although the differences are not statistically significant, they suggest some sensitivity to the BCC treatment, since both results favored the BCC group.

BCC and No-BCC students' scores on content achievement tests in both languages showed comparable increases from the pre- to posttest. These gains in mean scores can be seen in Tables 1 and 2 (for the pretest), and Tables 4 and 5 (for the posttests).

Achievement in Health/Safety

An analysis was carried out of the impact of the BCC and No-BCC strategies on achievement in the content area of health/safety. Health/safety had not been included as a content area subject prior to test selection, and specific measures of health/safety were not applied. In order to evaluate achievement in this content area, the TOBE and BCC Science and Social Studies tests in English and in Spanish were analyzed to determine which items assessed achievement in Health/Safety. A separate scale for each language was developed based on a total of eight items in English and nine items in Spanish.

These items were:

   1.   Four health or safety items embedded in TOBE Social Studies Test, English and Spanish versions;

   2.   One safety item in BCC Social Studies Test, English version; two safety items in BCC Social Studies Test, Spanish version;

   3.   Three health items in BCC Science Test, English version; two health and one safety item in BCC Science Test, Spanish version.

The percent of students in the BCC and No-BCC strategies that responded correctly to each of the items in English and Spanish is shown in Tables 6 and 7. A chi-square test of significance was applied to the health and safety items to test for differences in patterns of correct responses between BCC and No-BCC schools. No significant differences were found between the BCC and No-BCC schools in either the English or Spanish health/safety scales (English,

Chi-square =2.42, d.f.=7, p=.90; Spanish, Chi-square = 1.83, d.f.=8, p=.98). This suggests that at the posttest, there was no difference in the level of achievement in the content area of health/safety for children in BCC and No-BCC schools.

Overall, at the end of the four-month pilot project period, academic achievement of kindergarten LEP students was comparable, with or without BCC instruction. Only in mathematics, did students' achievement in the BCC program approach a significantly higher level than those in the No-BCC program. This difference in achievement was found on the English-language version of the norm-referenced test (TOBE). BCC students' achievement in science was also marginally significant, on the English-language version of the criterion-referenced test (BCC). These results should be interpreted cautiously, as when a correction factor is applied which takes into account the use of several different analyses, the differences are not statistically significant. In addition, the implementation time of the project was limited. With a full year of program implementation, the effect of the two strategies on student achievement may be more clearly demonstrated.

Pilot Project Implementation

The second question addressed by this evaluation was "Was the pilot project implemented appropriately with respect to the guidelines and other relevant programmatic factors? To respond to this question, data were gathered on major project implementation characteristics which were specified in the guidelines for implementation (see Appendix B), and others which were also relevant to the BCC pilot project. Specifically, the following implementation characteristics were examined:

I. Project Characteristics Specified in the Guidelines

    A. Time allocations

    B. Instructional materials

    C. Language of instruction

    D Teacher training and experience

    E. Class size

II. Project Characteristics Relevant to Implementation, Not Specified In the Guidelines

    A. Instructional approach

    B. Implementation of the pilot project: teacher and principal perceptions.

    C. Administrative, school and parental support: teacher and principal perceptions.

    D. Students' attitudes and performance: teacher perceptions

E. Methodologies for teaching LEP students: teacher and principal opinions.

To assess program implementation, questionnaires were developed for teachers and principals of BCC and No-BCC schools (see Appendix A). Teacher questionnaires had four versions, corresponding to the different BCC/No-BCC delivery systems. Similar questionnaires were developed for BCC and No-BCC principals, respectively.

In total, twelve teachers from ten pilot project schools completed the questionnaire. They were: three BCC classroom teachers responsible for bilingual content area instruction; two BCC classroom teachers who work with the specialized BCC supplementary teacher; two BCC supplementary teachers, and five No-BCC classroom teachers. Ten principals completed questionnaires: five BCC and five No-BCC principals. The total response rate was 86% for teachers and 83% for principals.

Data Analysis.

Both teachers and principals were asked to respond to the majority of items by using Likert-type rating scales. They used a five-point scale ranging from "strongly agree" to "strongly disagree," for items related to program implementation and opinions about teaching LEP students. They indicated use of general methodologies and instructional resources on a four-point rating scale ranging from "no use" to "extensive use."

Data were analyzed separately for BCC and No-BCC schools, and for teacher and principal responses (see Tables 8 to 20). Given the small number of respondents, no statistical analyses were carried out. Simple descriptive statistics (mean ratings) for item statements were calculated for BCC classroom teachers (n=5), No-BCC classroom teachers (n=5), BCC supplementary teachers (n=2), BCC principals (n=5) and No-BCC principals (n=5).

Since the objective of the BCC evaluation is to assess the outcome of the two strategies on student performance in content area achievement, it was necessary to determine that the two strategies were carried out comparably, when applicable, and correctly, i.e., following the project guidelines. It was necessary also that the specific requirements for carrying out each strategy were followed. If each strategy was not implemented fully, then the evaluation cannot answer the question of whether one strategy has more effect on student achievement than the other. In order to address these issues, program characteristics were examined to determine whether 1) they were comparable in BCC and No-BCC schools, 2) they were different in BCC and No-BCC schools, depending on the requirements, and 3) they might have had an effect on student achievement.

Project Characteristics Specified in the Guidelines

Time allocations. In both BCC and No-BCC schools, the program guidelines called for sixty minutes daily to be allocated for content instruction. Up to half of this time was to be allocated for mathematics, and half for "combined instruction" subjects.

As shown in Table 8, there was some variation in the amount of time reported for mathematics instruction among BCC schools. The range of time was 15-60 minutes. Two teachers taught mathematics for 60 minutes a day, two for 30 minutes and one for fifteen. No variation was reported among No-BCC schools; all of the No-BCC teachers reported 30 minutes of mathematics instruction daily. Therefore, the total teaching time per week for the five BCC schools was greater than for the five No-BCC schools. The finding that the BCC students performed significantly better on one of the mathematics achievement tests may be related to this difference in mathematics teaching time.

Instructional time in the "combined instructional" areas also was not equivalent for the BCC and No-BCC schools. The range of reported instructional time for the BCC and No-BCC schools was the same: between 30 and 60 minutes daily. However, the distribution of teachers reporting these instructional times was different. In the No-BCC schools, four of the five No-BCC schools responding to the questionnaire reported 30 minutes daily of instructional time. In the BCC schools, three out of five classes received a total of 60 minutes a day. In the two BCC schools where the BCC supplementary teacher taught "combined instruction", the classroom teacher also taught those subjects, accounting for part of the variation in time allocation between BCC and No-BCC. The finding of slightly better performance by BCC students on the criterion-referenced science test may be related to more teacher time for the "combined instructional" areas in BCC schools.

In summary, BCC teachers reported more variation in teaching time than did No-BCC teachers. BCC students apparently received more instructional time in mathematics and "combined instruction" content areas than did No-BCC students. These differences in instructional time between BCC and No-BCC schools could become a significant factor in the study. It is recommended that during orientation, contacts and school visits conducted by program personnel, time allocation guidelines should be reviewed, and their importance in the study stressed. In addition, closer monitoring of instructional time is recommended.

Instructional materials. According to the BCC project guidelines, instructional materials in BCC and No-BCC schools were to be of comparable quality and quantity. Teachers in both strategies reported the availability of the same or similar texts and other teaching materials.

For teaching mathematics, the extent of use of available instructional resources in English was very similar between the BCC and No-BCC strategies. Only a limited number of BCC schools reported the use of textbooks and supplementary materials in Spanish. The BCC schools reported minimal use (see Table 9) of available instructional materials. The No-BCC schools did not report the use of mathematics teaching materials in Spanish, indicating that the guidelines for carrying out the No-BCC strategy were followed correctly.

For "combined instruction" in English, BCC and No-BCC teachers used textbooks, in conjunction with other supplementary materials to the same extent (see Table 10). For "combined instruction" in Spanish, only BCC schools reported the availability and use of instructional resources, which is in accordance with the requirements of the strategy. Limited use of all instructional material in Spanish was reported by the BCC classroom teacher while the BCC supplementary teachers reported more extensive use of all materials, especially audiovisual. This indicates that "combined instruction" areas were taught bilingually more than mathematics was.

In summary, materials for mathematics and "combined instruction" in English were comparable for BCC and No-BCC schools, and the extent of use was similar. Use of materials in Spanish was reported only by the BCC schools, which is in compliance with project guidelines.

Language of instruction. In the BCC schools, the guidelines for teaching curriculum content called for Spanish to be used during the time allocated for BCC, and English to be used the rest of the school day, except for Spanish-S. In the No-BCC schools, English was to be the sole language of instruction, except for Spanish-S.

In Part A of the Teacher Questionnaire (see Appendix A), question 3 asks teachers to report on the language(s) used during mathematics and "combined instruction." At the initiation of the pilot project in February, three out of the five BCC schools reported that mathematics instruction was both in English and Spanish, or primarily in Spanish. By the end of the school year, all BCC schools reported that mathematics instruction was primarily in English, and, in three of these schools, Spanish was used to clarify English instruction as well.

In all No-BCC schools, at the initiation of the pilot project, English was the primary language of instruction in mathematics, with two schools reporting the use of Spanish for clarification. By the end of the year English was the sole language of instruction in all No-BCC schools.

At the initiation of the project, all BCC teachers reported that the "combined instruction" areas were being taught in both English and Spanish, or in Spanish primarily. At the end of the school year, "combined instruction" was reported being taught bilingually in four of five schools; however, in no school was Spanish the primarily language of instruction. In the No-BCC schools, the reported use of English as the language of instruction was the same for "combined instruction" as it was for mathematics.

In summary, in the BCC strategy, variations in the guidelines for the teaching of content area bilingually occurred. By the end of the school year, two of the five BCC schools reported no bilingual instruction in mathematics. The limited use of Spanish in teaching mathematics in the BCC schools suggests that the better performance demonstrated by BCC students on a mathematics achievement test may not be the result of bilingual instruction alone. Other program variables must be carefully studied.

In the No-BCC schools, at the end of the school year all content teaching was in English, in accordance with the guidelines. The variations reported at the beginning of the year (two schools using Spanish to clarify content instruction) were corrected.

Teacher training and experience. As stated in the guidelines, teachers in BCC and No-BCC schools were to be comparable in qualifications. BCC and No-BCC teachers were comparable with respect to degrees held (elementary education and early childhood). As can be seen in Table 11, overall, teachers in the

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two strategies were experienced teachers; four of the five BCC and all No-BCC teachers had had years of experience working with LEP students.

BCC students were taught primarily by bilingual classroom teachers and BCC supplementary teachers whose first language was Spanish. The No-BCC students were taught primarily by monolingual classroom teachers whose first language was English (See Table 12).

Teachers providing content area instruction were surveyed about the inservice training they had received in methodologies for teaching LEP students. The project guidelines generally stated that teachers assigned to teach content areas should have had training and/or experience in that component of the curriculum. It was found that more BCC teachers than No-BCC teachers reported having taken the following courses pertaining to methodologies for teaching LEP students in the home language: Teaching BCC, Teaching Basic Skills in the Home Language and Methods of Teaching Spanish-S, courses which are appropriate for teaching the BCC pilot classes (see Table 13).

The teachers also differed in the number that had taken methods of Teaching ESOL: more BCC than No-BCC teachers reported having taken this course. However, a comparable number of teachers (n=2) in both BCC and No-BCC schools reported having taken Teaching Curriculum Content in English Using ESOL Techniques.

Both BCC and No-BCC teachers (three of five) indicated that they would like to have more inservice training for the project. This opinion was shared by the No-BCC principals more than the BCC principals (see Table 14).

Three classroom teachers that had not received training in methods of teaching ESOL requested it (one BCC and two No-BCC), and two additional teachers (one BCC and one No-BCC) requested training in teaching curriculum content using ESOL techniques (see Table 15). The requests suggest that these are needed skills for instructing LEP students in the classroom.

In summary, in keeping with the guidelines, both BCC and No-BCC teachers had comparable levels of professional training, certification, and years of teaching experience. Most BCC teachers had received at least one inservice course related to teaching components of that strategy. No-BCC teachers, had not received as much inservice training as BCC teachers. Many project teachers felt they needed more training to carry out the project.

Class size. As stated in the BCC project guidelines, class size (teacher-pupil ratio) was to be as consistent as possible across both types of programs.

At the initiation of the study, class rosters indicated that the average class size for the BCC was 25 children, and ranged from 21-40. In the No-BCC schools, the average class size was 24, and ranged from 16-35. Team teaching and aides were used to reduce the student teacher ratio in the BCC class containing 40 students. The No-BCC large class was subsequently divided into two classes.

In summary, class size generally conformed to the project guidelines.

Project Characteristics Relevant to Implementation, Not Specified in the Guidelines

Instructional Approach. In order to determine if the BCC and No-BCC strategies were taught under similar educational conditions, several methodologies were sampled. These included: working with a classroom aide; dividing the class into instructional groups; grouping by achievement criteria, English proficiency, and Spanish proficiency; coordinating content instruction with Spanish "S" and ESOL instruction; incorporating language development into content instruction, and communicating with parents.

In Table 16, the distribution and mean rating of teachers' responses is shown. One clear trend was found: No-BCC classrooom teachers reported more dividing the class for instruction, and more grouping by achievement criteria and English proficiency than both the BCC classroom and supplementary teachers. For all other methodologies examined, the variations between BCC and No-BCC teachers were slight and did not suggest any consistent trends.

In summary, No-BCC teachers reported more grouping than BCC teachers. This was the only discernible trend. The reader is reminded that grouping was not required by the project guidelines, and is not an instructional methodology necessary for the implementation of the No-BCC Project. However, it is conceivable that this variation in teaching methodologies between the BCC and No-BCC schools could influence student achievement so that the effects of the BCC and No-BCC strategies is confounded or obscured. The differential use of this important teaching methodology should be carefully monitored in the 1984-85 project year.

Implementation of the Pilot Project: teacher and principal perceptions. Teachers and principals were asked about 1) their understanding of the goals and objectives of the project and of the criteria for selecting teachers and students, and 2) their opinions about the adequacy of the direction, orientation and resources provided for project implementation. In none of the individual items was there a large difference between the responses of BCC and No-BCC school personnel. However, across all items the No-BCC staff tended to be more positive than BCC staff (see Table 17).

In addition, it appears that the orientation and direction on the implementation of the project were perceived by the majority of the teachers to be inadequate. Mean ratings were at or below the midpoints of the scales addressing these questions. The principals perceived the direction provided by the district as slightly more adequate than did the teachers.

Finally, principals in both strategies strongly agreed that the project was operating in their schools according to the guidelines in the "Summary of Conditions and Activities of BCC/No-BCC Pilot Project, 1983-84" (see Appendix C). However, as reported above, teachers indicated they had modified a number of program aspects set forth in the guidelines.

In summary, No-BCC staff appeared to have more favorable opinions on project implementation than BCC teachers. However, the responses reported above suggest that there was some uncertainty about carrying out the pilot project in both the BCC and No-BCC strategies. This could have affected the outcomes

on student performance by limiting the degree of implementation, and there-
fore, the potential educational impact of each of the strategies.

Administrative, school and parental support: teacher and principal percep-
tions. In rating scales directed at teacher and principal opinions about the
degree of support for the project among school personnel and parents, it was
found once again that No-BCC teachers were more positive about the project
than the BCC teachers (see Table 18). Also, No-BCC teachers perceived the
school administration as being more enthusiastic about the project than the
BCC teachers. This difference between teachers of the two strategies was one
of the largest found among the various rating scales. Again, the implication
of these findings is that potential differences in achievement due to the
differential impact of each strategy may be obscured by a less than complete
implementation of each.

Interestingly, while No-BCC teachers appear more positive, the principals of
the No-BCC schools tended to view their teachers as having a less positive
attitude toward the project than did the principals of the BCC project. In
general, principals did not perceive faculty or parents as enthusiastic toward
the project. Teachers tended to be slightly more positive than did the
principals about the degree of support there was for the project.

In summary, No-BCC teachers were more positive about the support they received
from the administration and faculty than the BCC teachers. Teachers, more
than principals, perceived the faculty and parents as enthusiastic about the
project.

Students' attitudes and performance: teacher perceptions. Teachers were
asked to rate student attitudes toward learning content curriculum and the
improvement in performance in content subjects during the pilot project. No
differences were reported between BCC and No-BCC students. Both BCC and
No-BCC teachers reported that their students had a positive attitude toward
learning curriculum content. Also teachers in both strategies agreed that
students performance levels had improved during the pilot project (see Table
19).

In summary, students in both BCC and No-BCC schools were reported to have a
positive attitude toward learning curriculum content. The level of perform-
ance was also reported to have improved.

Methodologies for teaching LEP students: teacher and principal opinions.
Staff were asked opinions about the appropriate use of English and the home
language for teaching LEPs (see Table 20). BCC and No-BCC teachers held
similar opinions. The principals did show some differences, with No-BCC
principals appearing to be more favorable than BCC principals toward providing
basic instruction first in the home language. In general, however, principals
more than teachers in both strategies favor the use of English as the primary
instructional language.

For teachers of both strategies, there appeared to be strong disagreement with
the methodology of teaching mathematics in the home language until the stu-
dents become proficient in English. The disagreement was not found in the

case of "combined instruction," however. This may relate to the finding reported above that, in the BCC schools, mathematics was taught in English more than "combined instruction." This could mean that the full effect of BCC on mathematics achievement was diminished as a consequence of the teachers' disagreement with the educational methodology assigned them, and the resulting limited use of Spanish in teaching mathematics.

In summary, teachers of both strategies shared similar opinions on the use of English and Spanish to teach LEP students. They tend to see more need to use the home language to teach "combined instruction" than mathematics. Principals, in general, favored the use of English as the primary instructional language.

CONCLUSIONS

The conclusions which emerged from this evaluation are based on a four-month period of the BCC Pilot Project. In effect, this period may be considered as a "field trial" of the project, when new procedures are implemented and problems are identified. Because of the brief duration of the project, and the fact that it was in its first year, the conclusions on posttest results and project implementation should be interpreted cautiously.

The conclusions were:

1. At the end of the four-month pilot project period, no clear pattern of results has emerged to indicate that either of the two strategies, BCC or No-BCC, consistently leads to higher student performance.

2. Limited English proficient kindergarten students in the BCC and No-BCC strategies performed at comparable levels at the posttest in science and social studies on the standardized TOBE test, and in mathematics and social studies on the locally-developed BCC test, in English and in Spanish. They also demonstrated comparable achievement in the three content areas on all tests in Spanish.

3. Limited English proficient kindergarten students achieved a higher degree of academic progress in mathematics with BCC instruction than without. An analysis of covariance applied to this measure indicated that this difference was significant. This result was found on the TOBE Test, in English. BCC students also achieved a slightly higher degree of progress in science, on the BCC Science Test, in English. This difference was marginally significant on an analysis of covariance applied to this measure. These findings must be interpreted with caution, for when a correction procedure is used which takes into account the overall effect of using several individual analyses, the differences are not statistically significant. In addition, some variations in project guidelines were reported that could influence achievement; for example more teaching time in content subjects in the BCC schools than in the No-BCC schools. These variations have since been addressed by the Bilingual/Foreign Language Education Department.

4. No significant differences were found between BCC and No-BCC groups in either English or Spanish health/safety achievement measures. Limited English proficient kindergarten students achieved at comparable levels in the health/safety content area, with or without BCC.

5. In general, the BCC Pilot Project was implemented according to the guidelines, in the four-month period. Guidelines were met in BCC and No-BCC schools with respect to class size, teacher training and experience, and instructional materials, all of which were comparable in both strategies.

6. Variation from the guidelines was found in the amount of teaching time provided for mathematics and "combined instruction." Also, the use of Spanish in teaching content subjects did not conform to the guidelines in several BCC schools. Such modifications could affect student achievement. In the current year, steps have been taken by the Bilingual/ Foreign Language Education Department personnel to ensure that programmatic guidelines are implemented as specified.

7. Differences between BCC and No-BCC schools were identified in teaching strategies and in teacher/principal perceptions of project implementation. These included: No-BCC teachers reported more grouping of students for instruction, and overall, slightly more favorable perceptions of how the project was implemented, than did BCC teachers.

8. Teachers in both strategies felt that students' attitudes toward learning was positive and that they had progressed in content subjects during the four-month pilot project period.

RECOMMENDATIONS

The recommendations which emerged from the evaluation are:

1. More orientation and direction for implementing the BCC and No-BCC strategies should be provided to both teachers and principals by Bilingual/Foreign Language Education personnel. Closer supervision with respect to adherence to project guidelines is needed, particularly in terms of time allocation and the use of Spanish in teaching content subjects.

Status: Since the beginning of the 1984-85 school year, the Bilingual/ Foreign Language Education personnel have been meeting with project school personnel to give needed orientation and supervision.

2. Inservice training, special workshops on project operations, or other areas of concern related to the project should be made available to teachers and principals.

Status: In the fall of 1984-85, some pilot project personnel participated in the Methods of Teaching ESOL workshop. A countywide workshop to teach BCC or CCE/ESOL is planned for the second semester. Individual on-site inservice training for project teachers has begun. This on-site training is being provided by a teacher assigned half time to the Bilingual/Foreign Language Education Department for this project.

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APPENDIX A

Questionnaires

OFFICE OF EDUCATIONAL ACCOUNTABILITY

M E M O R A N D U M   RT-1014
                                                             September 8, 1983

TO: Selected Principals

FROM: Ray Turner, Assistant Superintendent
            Office of Educational Accountability

SUBJECT: SURVEY OF BILINGUAL CURRICULUM CONTENT PROGRAM IMPLEMENTATION

Pursuant to the School Board's directive to evaluate the Bilingual Curricu-
lum Content (BCC) program, the Office of Educational Accountability is con-
ducting a survey on the implementation of the program. A copy of the survey
instrument is enclosed and we request that it be completed by you or whom-
ever supervises the BCC program in your school.

The data collected in this survey will be used as part of the evaluation
activities planned for this year. We are interested only in Hispanic stu-
dents of limited English proficiency, i.e., students classified as ESOL
levels I, II, III, and IV. Your cooperation is appreciated in assisting us
in our efforts. Please return the completed survey in the enclosed envelope
by September 23, 1983.

If you have any questions, please call Maria Arizá or Carlos Martinez at
350-3447.

RT/MA/awoj

Enclosures:

cc: Mr. Paul W. Bell
      Area Superintendents
      Mr. Joseph Fernandez
      Mr. Richard O. White
      Mr. Ralph F. Robinett
      Dr. Rosa G. Inclan

DCPS
Bilingual Curriculum Content (BCC) Survey
Administrator's Questionnaire

School _____ Area _____

Who is directly responsible for the supervision of the Bilingual Program within your school?

___ The principal   Name: \: _____

___ The assistant principal   Name: _____

___ Other individual(s)   State name(s) and position(s):

_____

_____

(Please have the person who is primarily responsible for the supervision of the Bilingual Program complete the questionnaire.)

Number of Hispanic origin limited English proficient students (LEPs) _____

BCC students are grouped by:

___ Grade level   Circle the grades that are grouped together, if any

        Example: (K) (1) (2 3 4) (5 6)

        K   1   2   3   4   5   6

___ ESOL level   Circle the ESOL levels that are grouped together, if any.

        Example; (I) (II) (III IV)

        I   II   III   IV

___ Other (Please specify) _____

Total number of students in BCC (all grades) _____

Number of students in BCC by ESOL and Grade levels:

	K	1	5	6
ESOL level I	____	____	____	____
II	____	____	____	____
III	____	____	____	____
IV	____	____	____	____

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30

BCC teacher characteristics (at present)
_____ Number of staff teaching BCC

How many are:

_____ Full-time (BCC only)   Name(s): _____
_____ Classroom teachers   Name(s): _____
_____ Combined (with ESOL, Spanish S SL, etc.) Name(s):_____

Training:

_____ How many of the BCC teachers have been trained to teach BCC?
_____ By DCPS staff
_____ At other institutions
        (Specify.)

In terms of physical facilities where is BCC taught? Check the appropriate
location for each grade:

K 1 5 6

__ __ __ __ Student's homeroom

__ __ __ __ BCC classroom (used only for BCC at all times)

__ __ __ __ BCC classroom (used only for BCC at a given time—may be used
             for ESOL, Spanish S/SL at other times)

__ __ __ __ Classroom (shared with another teacher concurrently)

__ __ __ __ Classroom (vacant, varies with time of day)

__ __ __ __ Atypical classroom (library, stage, cafeteria used only for BCC)

__ __ __ __ Atypical classroom (library, stage, cafeteria used for BCC and
             other subject areas/activities concurrently)

__ __ __ __ Other (Specify.)_____

Upon what basis is the BCC program implemented?

K   1   5   6
__   __   __   __   Sequentially in terms of the Balanced Curriculum
                   Objectives by grade level (determined by BCC teacher)

__   __   __   __   Sequentially in terms of the Balanced Curriculum
                   Objectives by grade level (determined by BCC teacher
                   in correlation with classroom/homeroom teacher)

__   __   __   __   Incidentally determined by BCC teacher

__   __   __   __   Incidentally in correlation with classroom/homeroom
                   teacher

No BCC instruction

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC pulled-out

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC self-contained

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC partially self-contained

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC in-class (Spanish-English bilingual classroom teacher with LEP and non-LEP students)

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC teacher comes into LEP self-contained class

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

BCC teacher instructs LEP students within heterogeneous classroom

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

NA _____
Grade K _____
Grade 1 _____
Grade 5 _____
Grade 6 _____

24   32

Time for BCC instruction:
Please specify the time (minutes) for BCC instruction. Please indicate the students' ESOL level, the days of the week, and the BCC subject area.

Grade	Time (minutes for each ESOL level)	Days of Week (M, T, W, R, F)	Subject Area (M, Sc, SS)
	Example: I - 90 min. II - 60 min. III - 30 min. IV - 0	Example: I - M, T, W, R, F II - M, T, W, R, F III - M, T, W, R, F IV - No	Example: I - M, Sc, SS II - M, Sc, SS III - SS IV - No
	Example: I - IV - 30 min.	Example: I - IV - M, W, F I - IV - T I - IV - R	Example: I - IV M I - IV SS I - IV Sc
K			
1			
5			
6			

Is your BCC Program scheduled by alternate weeks? _____ Yes _____ No

by alternate grading periods? _____ Yes _____ No

If yes, describe:

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Materials Used in BCC:

Please indicate the materials used in each area to deliver BCC instruction and rank them according to the frequency of use: (1) being the most frequently used and (3) the least frequently used. Please indicate the publisher, the title and the language used.

Grade	Subject (M, Sc, SS)	Publisher, Title	Rating (1, 2, 3)	Language (English, Spanish)	Teacher Adapted Materials in Home Language
K					
1					
5					
6					

OEA 9-8-83
BSHL/PILOT/S.2:nmi
BCC/SURV.0 - 10

DADE COUNTY PUBLIC SCHOOLS
BOARD ADMINISTRATION BUILDING
OFFICE OF EDUCATIONAL ACCOUNTABILITY
1410 NORTHEAST SECOND AVENUE
MIAMI, FLORIDA 33132

DR. LEONARD BRITTON
SUPERINTENDENT OF SCHOOLS

DR. RAY TURNER
ASSISTANT SUPERINTENDENT
EDUCATIONAL ACCOUNTABILITY
(305) 350-3447

June 7, 1984

DADE COUNTY SCHOOL BOARD
MR. PAUL L. CEJAS, CHAIRMAN
MR. ROBERT RENICK, VICE-CHAIRMAN
MRS. ETHEL BECKHAM
MR. G. HOLMES BRADDOCK
DR. MICHAEL KROP
MS. JANET R. McALILEY
MR. WILLIAM H. TURNER

Dear BCC Pilot Project Teacher:

As part of the overall evaluation of the Bilingual Curriculum Content (BCC) Pilot Project, the Office of Educational Accountability is requesting that participating classroom and BCC supplementary teachers complete a questionnaire. Please complete the enclosed questionnaire, and return it in the attached, self-addressed envelope to this office no later than June 15, 1984. We realize that this is a very busy time for you, and we apologize for any inconvenience this may cause. However, your response is important, and needed in order to complete this year's evaluation of the BCC project.

The information gathered through these questionnaires will be used to develop an overall description of the pilot project's first year of functioning. We are interested in determining how the project was implemented in the classroom, what you think about its current operation and effectiveness, and what modifications need to be made. We are also interested in knowing your opinions about how limited English proficient students should be taught content subjects, and your training and experience in working with these students.

All results of the questionnaires will be treated in aggregate comparisons between "BCC" and "No-BCC" schools. No individual teacher or school will be named in any description, and all responses will remain anonymous.

If you have any questions concerning the questionnaire or any aspect of the evaluation, please contact Dr. Sylvia Rothfarb at the Office of Educational Accountability (350-3447).

Your cooperation is greatly appreciated.

Sincerely,

Ray Turner, Assistant Superintendent
Office of Educational Accountability

RT:SR:sh
enclosure

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DADE COUNTY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL ACCOUNTABILITY
BILINGUAL CURRICULUM CONTENT PILOT PROJECT (BCC/NO-BCC)
"BCC SCHOOL" - CLASSROOM TEACHER QUESTIONNAIRE - I

(This questionnaire should be filled in by the classroom teacher who is
bilingual and teaches curriculum content bilingually without the assis-
tance of a BCC Supplementary Teacher.)

School Name _____   1

PART A.   INSTRUCTIONAL APPROACH

Listed below are several instructional strategies and resources which can be
used in teaching BCC to limited English proficient children. Using the scale
below, indicate the extent to which you have used each strategy or resource
with BCC PILOT PROJECT STUDENTS, by placing the appropriate numerical code in
the space provided on the right. If you have used strategies/resources not
described below, please write these in (and provide appropriate use codes) in
the space provided at the end of each list.

No Use	Little Use	Moderate Use	Extensive Use
1	2	3	4

1. Instructional Strategies:

working with an aide under your supervision .... ____   2

dividing the class into groups for instruction .... ____   3

grouping students by achievement criteria .... ____   4

grouping students by English (L_2) proficiency .... ____   5

grouping students by Spanish (L_1) proficiency .... ____   6

coordinating BCC instruction with instruction provided by the
   Spanish S teacher .... ____   7

coordinating BCC instruction with instruction provided by the ESOL
   teacher .... ____   8

including Spanish language development activities (oral and
   written) in BCC lessons .... ____   9

including English language development activities (oral and
   written) in BCC lessons .... ____   10

communicating with parents of Pilot Project students on the stu-
   dents' progress .... ____   11

other (specify) _____ .... ____   12

28   Auth: MIS; Exp. Date: June 30, 1984

No Use	Little Use	Moderate Use	Extensive Use
1	2	3	4

2. Instructional Resources:

Mathematics textbooks in Spanish .... _____   13

supplementary Math materials in Spanish (dittos, workbooks) .... _____   14

audio-visual Math materials in Spanish (charts, cassettes-records,
films, filmstrips, games, computer programs) .... _____   15

other Math instructional resources in Spanish (specify):

_____ .... _____   16

Mathematics textbooks in English .... _____   17

supplementary Math materials in English (dittos, workbooks) .... _____   18

audio-visual Math materials in English (charts, cassettes, records,
films, filmstrips, games, computer programs) .... _____   19

other Math instructional resources in English (specify):

_____ .... _____   20

"Combined Instruction" (Science, Social Studies, Health/Safety)
textbooks in Spanish .... _____   21

supplementary "Combined Instruction" materials in Spanish (dittos,
workbooks) .... _____   22

audio-visual "Combined Instruction" materials in Spanish (charts,
cassettes, records, films, filmstrips, games, computer programs) _____   23

other "Combined Instruction" resources in Spanish (specify):

_____ ..... _____   24

"Combined Instruction" (Science, Social Studies, Health/Safety)
textbooks in English .... _____   25

supplementary "Combined Instruction" materials in English (dittos,
workbooks) .... _____   26

audio-visual "Combined Instruction" materials in English (charts,
cassettes, records, films, filmstrips, games, computer programs) _____   27

other "Combined Instruction" resources in English (specify):

_____ .... _____   28

29

3. Language Usage:

Please identify the language patterns used by you in teaching curriculum content to LEP students during 1984. Circle two numerals in each column for each subject: one for February usage and one for current (June) usage.

CURRICULUM CONTENT SUBJECTS

LANGUAGE USAGE	Mathematics Feb.　June	"COMBINED INSTRUCTION"		
		Science Feb.　June	Social Studies Feb.　　June	Health/Safety Feb.　　June
All instruction is in Spanish	1 ..... 1 ..	. 1 .... 1 .	.... 1 ..... 1 .	... 1 1
Instruction is in Spanish, English is used to supplement instruction	2 ..... 2 ..	. 2 .... 2 .	.... 2 ..... 2 .	... 2 2
Instruction is in both English and Spanish	3 ..... 3 ..	. 3 .... 3 .	.... 3 ..... 3 .	... 3 3
Instruction is in English, Spanish is used to clarify, explain and support instruction	4 ..... 4 ..	. 4 .... 4 .	.... 4 ..... 4 .	... 4 4
All instruction is in English	5 ..... 5 ..	. 5 .... 5 .	.... 5 ..... 5 .	... 5 5

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3C

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4. Implementation:

A. For each of the following statements on the BCC Pilot Project implementation, please indicate the extent of your agreement or disagreement. Using the scale below, select the appropriate number and write it in the space provided on the right.

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

I understand the goals and objectives of the BCC Pilot Project. _____ | 39

I understand the criteria used to select students for this project... _____ | 40

I have been provided adequate direction in the implementation of the project... _____ | 41

The orientation I received for this program was adequate........ _____ | 42

I would like to have more inservice training for this program... _____ | 43

The BCC Pilot Project students have a positive attitude toward learning curriculum content bilingually......................... _____ | 44

The BCC Pilot Project students have improved their levels of performance in content subjects, between February and June......... _____ | 45

Teachers in the school have a positive attitude toward the project.. _____ | 46

Parents are enthusiastic toward the project.................... _____ | 47

The school administration is enthusiastic toward the project.... _____ | 48

Pilot Project LEP students have opportunities during the school day to interact with non-LEP students.......................... _____ | 49

I would like my kindergarten LEP students to have opportunities to interact with kindergarten non-LEP students during the school day... _____ | 50

I think the classroom teacher of LEP students in kindergarten should be able to use Spanish at his/her discretion during the school day .... _____ | 51

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6. Following are three questions on current and future implementation of the BCC Pilot Project. Please fill in the information requested, using additional paper if necessary.

(1) The BCC Pilot Project Schools were provided the following guidelines for the implementation of the Project:

"All participants in all project schools will receive content area instruction for one hour daily, 30 minutes for Math and 30 minutes for 'Combined Instruction.' In project schools providing BCC, one half of the time for Math and one half the time for 'Combined Instruction,' a total of thirty minutes will be devoted to program delivery in Spanish."

Did you have to modify these guidelines?   Yes _____   No _____   52

What were the reasons for your changes? _____

_____

_____

_____

_____

_____

(2) What is the daily number of minutes you teach BCC to Pilot Project students (fill in):

(a) Mathematics   _____ minutes daily   53-55

(b) "Combined Instruction" (Science, Social Studies, Health/Safety)
_____ minutes daily   56-58

(3) In order to improve our procedures for implementing the BCC Pilot Project next year, what recommendations would you make?

_____

_____

_____

_____

_____

Auth: MIS; Exp. Date: June 30, 1984

5. Opinions on Methodologies for Teaching LEP Students:

Following are statements of opinions on methodologies for teaching LEP students. Using the scale below, please indicate the extent of your agreement or disagreement with each statement by selecting the appropriate numeral and writing in on the line next to each item.

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

LEP students should learn mathematics in their home language (Spanish) until they become proficient in English.............................. _____   59

If students learn to read first in the language they know best (their home language), learning to read in English will be enhanced....... _____   60

LEP students should learn "Combined Instruction" subjects (Science, Social Studies, Health/Safety) in their home language, until they become proficient in English..................................... _____   61

Use of the home language in teaching curriculum content subjects should decrease as students' English proficiency increases......... _____   62

LEP students should be taught curriculum content subjects in English, using ESCL-oriented materials and techniques. This method should extend and support BCC instruction.............................. _____   63

LEP students should be taught curriculum content subjects in English, using ESCL-oriented materials and techniques, without BCC instruction.. _____   64

Even with Level I (non-independent ESCL) students, the home language is best used to clarify, explain and support instruction given in English, rather than being the dominant language of instruction, in curriculum content... _____   65

Continuous translating from the home language (Spanish) to English is an effective way to teach curriculum content to LEP students.... _____   66

Cognitive development in LEP students is strengthened when they acquire parallel skills and concepts in the home language and English _____   67

PART 6: TRAINING AND EXPERIENCE IN TEACHING
LIMITED ENGLISH PROFICIENT STUDENTS

6. The following questions concern your training and experience in teaching limited English proficient students. Please circle all numbers that apply in each question, or fill in the information requested.

(a) What degree(s) do you have? (Circle all that apply)

bachelor's 1	educational specialist 3	68
		69
master's 2	doctorate 4	70
		71

(b) How many years have you been a teacher?

1 year 1	11 - 15 years 4
2 - 3 years 2	16 - 25 years 5
4 - 10 years 3	25+ years 6

72

(c) How many years have you taught LEP students? (Include years you have taught in a foreign country, and years you worked as an aide, if applicable.)

1 year 1	11 - 15 years 4
2 - 3 years 2	16 - 25 years 5
4 - 10 years 3	25+ years 6

73

(d) In which areas do you hold Florida certification?

Elementary 1	ESOL 8	74
Early Childhood ... 2	Languages, Spanish 9	75
Junior High/Middle	English 10	76
School 3	Mathematics 11	77
Secondary 4	Social Studies 12	78
Supervision 5	Science 13	79
Administration 6	Other: (specify)	80
Bilingual Education 7	_____ 14	81
		82

(e) If you hold teaching credentials or certification from another state, please describe: _____

83-84
85-86
87-88

(f) What language(s) other than English do you speak? (specify)

89-90
91-92

_____   _____

34

42

Auth: MIS; Exp. Date: June 30, 1984

(g) Do you read and write any of these languages? (Specify which language[s])

_____   _____

(h) Which of the following inservice courses for teaching LEP students have you taken?

Teaching Bilingual Curriculum Content 1   93

Teaching Basic Skills in the Home Language 2   94

Methods of Teaching Spanish S 3   95

Methods of Teaching ESOL 4   96

Curriculum Content in English Using ESOL Techniques 5   97

Other (specify): _____ .   6   98

_____   7   99

(i) What inservice training would be most useful to you in implementing the BCC Pilot Project next year?

_____

_____

_____

_____

_____

_____

35

OEA: 5/15/84
SURVEY:sh BCC Question/I

OFFICE OF EDUCATIONAL ACCOUNTABILITY

M̲ E̲ M̲ O̲ R̲ A̲ N̲ D̲ U̲ M̲   RT-1398
                                                           June 18, 1984

TO: All BCC Pilot Project Principals

FROM: Ray Turner, Assistant Superintendent
             Office of Educational Accountability

SUBJECT: BCC PILOT PROJECT ADMINISTRATOR QUESTIONNAIRE

As part of the overall evaluation of the Bilingual Curriculum Content (BCC)
Pilot Project, the Office of Educational Accountability is requesting that prin-
cipals of participating schools complete the attached questionnaire. It is very
important that we have your responses, in order to understand from the adminis-
trator's perspective the impact the project has had on your school. A separate
questionnaire is being sent to pilot project teachers, a copy of which is en-
closed for your information.

The data gathered through these questionnaires will be used to develop an over-
all description of the pilot project's first year of functioning. We are inter-
ested in determining how the project was implemented in your school, what you
think about its current operation and effectiveness, and what modifications need
to be made. We are also interested in knowing your opinions about how limited
English proficient students should be taught content subjects. Your comments
and recommendations regarding the implementation of the project for the academic
year 1984-85 are important to the success of the evaluation.

All results of the questionnaires will be treated in aggregate comparisons be-
tween "BCC" and "No-BCC" schools. No individual principal or school will be
named in any description, and all responses will remain anonymous. Please com-
plete the enclosed questionnaire and return it in the attached, self-addressed
envelope to this office by June 22, 1984.

If you have any questions concerning the questionnaire or any aspect of the
evaluation, please contact Dr. Sylvia Rothfarb at the Office of Educational
Accountability (350-3447).

RT:SR:sh
attachments

SAMPLE
DADE COUNTY PUBLIC SCHOOLS
OFFICE OF EDUCATIONAL ACCOUNTABILITY
BILINGUAL CURRICULUM CONTENT PILOT PROJECT (BCC/NO-BCC)
"BCC SCHOOL" - ADMINISTRATOR QUESTIONNAIRE

School Name _____   1

1.   Implementation:

A.   For each of the following statements on the BCC Pilot Project im-   _._
     plementation, please indicate the extent of your agreement or dis-
     agreement. Using the scale below, select the appropriate number
     and write it in the space provided on the right.

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

The BCC Pilot Project is operating in my school as stated in the
guidelines, "Summary of Conditions and Activities of BCC/No-BCC
Pilot Project - 1983-84" (Memorandum of December 22, 1983)........ _____   2

There was adequate direction from the district regarding goals and
objectives... _____   3

I understand the criteria used to select students for this project _____   4

I understand the guidelines used to select classroom teachers for
this project... _____   5

Parents have been adequately informed as to the BCC Pilot Project
goals, objectives, and curriculum.................................... _____   6

Parents are enthusiastic toward the project....................... _____   7

Teachers in the BCC Pilot Project have a positive attitude toward
the project... _____   8

Teachers in the school have a positive attitude toward the BCC Pilot
Project... _____   9

Additional resources (personnel) provided by the district have been
helpful in implementing the project................................ _____   10

Additional inservice for the project teachers would be desirable.. _____   11

The BCC Pilot Project students have a positive attitude toward
learning curriculum content bilingually............................ _____   12

Pilot Project LEP students have opportunities during the school day
to interact with non-LEP students.................................. _____   13

. Auth: MIS; Exp. Date: June 30, 1984

37

45

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

I would like kindergarten LEP students to have opportunities to
interact with non-LEP students during the school day............... _____   _14

I think the classroom teacher of LEP students in kindergarten should
be able to use Spanish at his/her discretion during the school day. _____   15

B.   Following are three questions on current and future implementation of
the BCC Pilot Project. Please fill in the information requested,
using additional paper if necessary.

    (1)   The BCC Pilot Project schools were provided the following guide-
lines for the implementation of the Project:

      "All participants in all project schools will receive content
area instruction for one hour daily, 30 minutes for Math and
30 minutes for Combined Instruction. In project schools pro-
viding BCC, one half of the time for Math and one half the time
for 'Combined Instruction,' a total of thirty minutes will be
devoted to program delivery in Spanish."

      Were these guidelines modified? Yes _____ No _____   16

      What were the reasons for the changes? _____

      _____

      _____

      _____

      _____

      _____

      _____

    (2)   What difficulties did you have in implementing the BCC Pilot
Project?

      _____

      _____

      _____

      _____

      _____

38

(3) In order to improve our procedures for implementing the BCC Pilot Project next year, what recommendations would you make?

_____

_____

_____

_____

_____

_____

2. Opinions on Methodologies for Teaching LEP Students

Following are statements of opinions on methodologies for teaching LEP students. Using the scale below, please indicate the extent of your agreement or disagreement with each statement by selecting the appropriate numeral and writing it on the line next to each item.

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

LEP students should learn Mathematics in their home language (Spanish) until they become proficient in English............................ _____   17

If students learn to read first in the language they know best (their home language), learning to read in English will be enhanced....... _____   18

LEP students should learn "Combined Instruction" subjects (Science, Social Studies, Health/Safety) in their home language, until they become proficient in English .... _____   19

Use of the home language in teaching curriculum content subjects should decrease as students' English proficiency increases......... _____   20

LEP students should be taught curriculum content subjects in English, using ESOL-oriented materials and techniques, with BCC instruction. _____   21

LEP students should be taught curriculum content subjects in English, using ESOL-oriented materials and techniques, without BCC instruction.. _____   22

Even with Level I (non-independent ESOL) students, the home language is best used to clarify, explain and support instruction given in English, rather than being the dominant language of instruction, in curriculum content... _____   23

39

Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1	2	3	4	5

Continuous translating from the home language (Spanish) to English
is an effective way to teach curriculum content to LEP students ... _____   24

Cognitive development in LEP students is strengthened when they ac-
quire parallel skills and concepts in the home language and English. _____   25

3. Composition of the Kindergarten Program in Your School.

The following questions refer to the composition of your kindergarten pro-
gram. Please base your answers on current enrollment and the present or-
ganization of your kindergarten classes. For each of the questions, please
write in the total number in the space provided.

What is the total number of kindergarten classroom teachers?   _____   26

What is the total number of kindergarten classroom aides? ...   _____   27

What is the total number of kindergarten students (LEP and
non-LEP)? ....   _____   28-30

What is the total number of K-LEP students (ESOL Levels I, II,
III, and IV)? ....   _____   31-32

What is the total number of kindergarten classes? ....   _____   33

What is the total number of kindergarten self-contained classes
that have only LEP students? ....   _____   34

Auth: MIS; Exp. Date: June 30, 1984

OEA: 6/5/84
EY:sh   Admin/BCC

BCC Pilot Project Evaluation

School Demographic Information

1. Name of School _____   1. _____

2. Area _____   2. _____

3. Number of students (total enrollment) _____   3. _____

Questions 4 - 7 refer to ethnic composition of students.

4. % W _____   4. _____

5. % B _____   5. _____

6. % H _____   6. _____

7. % A _____   7. _____

8. Number of staff teaching full time _____   8. _____

Questions 9 - 12 refer to ethnic composition of
full time staff

9. % W _____   9. _____

10. % B _____   10. _____

11. % H _____   11. _____

12. % A _____   12. _____

13. % of students F/R Lunch _____   13. _____

14. % of LEP students _____   14. _____

Write "1" if the answer is Yes, "2" if the answer is No.

15. Chapter I School? _____   15. _____

16. Exceptional Student Center? _____   16. _____

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APPENDIX B

Pilot Project Guidelines

M E M O R A N D U M

TO: Dr. Ray Turner, Assistant Superintendent
            Office of Educational Accountability

FROM: Paul W. Bell, Associate Superintendent
            Bureau of Education

SUBJECT: RESPONSE TO "REVISED LIST OF BCC PILOT PROJECT SCHOOLS,
            RECOMMENDATIONS FOR MODIFICATIONS OF PROGRAM CONDITIONS"

Your memorandum of December 15, 1983 setting forth revisions in the list of
BCC Pilot Project schools and recommendations for modifications of program
conditions has been reviewed by staff of the Bureau of Education. The revised
list and modifications of program conditions are consistent with our under-
standing of Board direction with respect to this pilot project.

As early in January as is feasible, the following should occur:

1. A meeting of selected staff of the Office of Educational Accountabil-
    ity and the Bureau of Education to establish tentative procedures and
    timeline for implementation of the pilot project. Mr.   Joseph
    Fernandez should be invited to this meeting.

2. A meeting of selected OEA and Bureau of Education staff with Mr.
    Fernandez, Area Superintendents or their representatives of the
    North, North Central, and South Central Areas, and appropriate Area
    Directors from those Areas to review tentative procedures and time-
    line, with opportunity to provide input prior to finalization of the
    plan of implementation.

3. A meeting of selected OEA and Bureau of Education staff and a school
    administrator from each of the participating schools to review tenta-
    tive procedures and timeline, with opportunity to provide input prior
    to finalization of the plan of implementation. Appropriate Area Di-
    rectors should be invited to this meeting.

4. Finalization of the plan of implementation by OEA and Bureau of Edu-
    cation staff.

Based on previous meetings and memorandums, and on proposed activities of
staff of the Division of Elementary and Secondary Instruction, our understand-
ing of the status of this pilot project is that the plan of implementation
will be in full operation by mid January, or no later than the end of the
first semester.

Attached is a summary of our understanding of conditions and activities re-
lated to the pilot project plan and its implementation.

PWB/RFR/mc .

Attachment

cc: Mr. Joseph Fernandez   43   Mr. Ralph F. Robinett
     Mrs. Angeline S. Weity   51   Mrs. Mercedes Toural
     Mr. Richard O. White

Purpose of the pilot project. The purpose of the BCC/No-BCC Pilot Project is to determine the impact of providing bilingual curriculum content versus not providing bilingual curriculum content to limited English proficient students, as reflected in their academic performance after they have achieved independence in English.

. Duration of the pilot project. Program participants will be followed-up and evaluated for the current and two subsequent years, that is, through 1985-86.

Selection of pilot project sites and participants. During 1983-84, the pilot project participants will be students in Kindergarten who are classified as ESOL Level I (Nonindependent) and ESOL Level II (Low Intermediate). Participating schools are as follows:

With BCC	Without BCC
Citrus Grove	Banyan
Coral Park	DuPuis
Coral Terrace	Fairlawn
Royal Palm	Greenglade
Shenandoah	Kinloch Park
Mae Walters	South Hialeah

Responsibility for the identification of participants lies with the Office of Educational Accountability.

Exclusion from participation in pilot project. In all project schools, a child whose parent(s) or guardian has requested that the child not participate in Spanish-S will be excluded from participation in the pilot project and re-assigned to another, non-project, teacher. In project schools providing BCC, a child whose parent(s) or guardian has requested that the child not participate in BCC will be excluded from participation in the pilot project and re-assigned to another, non-project, teacher. Monitoring the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Assessment of pilot project participants. In order to ensure that students exiting the programs have reasonably comparable levels of English proficiency, exit criteria and instrumentation will be determined by the Office of Educational Accountability. To ensure that students remain in the two types of program delivery for comparable lengths of time, there will be no change of students' ESOL level designation until the end of a semester. Monitoring implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction. Longitudinal achievement testing in the areas of Mathematics and "Combined Instruction" (Social Studies, Science, Safety/Health) will be the responsibility of the Office of Educational Accountability.

Languages employed in the instructional program. In the schools providing no bilingual curriculum content instruction, English will be the sole language of instruction, with the exception of delivery of the program of Spanish for Spanish Speakers. In the schools providing bilingual curriculum content instruction, Spanish will be used during the time allocated for BCC and for Spanish-S, and English will be the language of instruction for the rest of the school day.

BEST COPY AVAILABLE

Monitoring implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Time for instruction. All participants in all schools will receive Language Arts instruction for two hours daily. Language Arts instruction will consist of two components: ESOL instruction for 90 minutes daily or 450 minutes per week, and Spanish-S instruction for 30 minutes daily or 150 minutes per week.

All participants in all project schools will receive content area instruction for one hour daily, 30 minutes for Math and 30 minutes for "Combined Instruction". In project schools providing no BCC, this hour of instruction will be provided in English only. In project schools providing BCC, one half of the time for Math and one half the time for "Combined Instruction", a total of thirty minutes, will be devoted to program delivery in Spanish. Monitoring the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Integrity and comparability of bilingual component delivery. In all project schools, the programs of ESOL and Spanish-S will be delivered following guidelines established for each program. In Spanish-S, the content and instructional materials will be those recommended, and the Spanish-S program will not be utilized to introduce or reinforce the content areas (Math, Science, Social Studies, Health/Safety) unless such utilization is inherent and overt in the approved program of Spanish-S for Kindergarten.

Instructional materials for all program participants will be comparable and consistent in quality and quantity. Should it be necessary to change or supplement current basic instructional materials for any bilingual program component, such materials will be provided by the Division of Elementary Instruction at no cost to the school.

Monitoring the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Grading of program participants. Guidelines for reflecting student progress for all participants will be consistent with provisions for students of limited English proficiency as set forth in the Pupil Progression Plan, with the exception of grades for Math and for "Combined Instruction". For participants in schools not providing BCC, Comment No. 1, "Receiving bilingual instruction in this area", will not be used; all other guidelines are applicable. Monitoring the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Allocation of supplementary units under Programs 6600/01, 6610, 6630. While for the county as a whole the allocation of personnel to provide Basic Skills in the Home Language (Home Language Arts, e.g.; Spanish-S, and Bilingual Curriculum Content) is based on a formula of 1 teacher to 150 students, for purposes of this pilot project the supplementary teachers will be allocated separately for the two dimensions of Basic Skills in the Home Language.

Allocation of supplementary teacher units for project participants will be based on the following formula modifications:

45

Participants in all project schools will be assured allocations for Spanish-S (Home Language Arts) instruction based on a teacher-pupil ratio of 1 teacher for each 200 students.

Participants in project schools providing BCC instruction will be assured allocations for BCC instruction based on a teacher-pupil ratio of 1 teacher for each 200 students.

Participants in all project schools will be assured allocations for ESOL instruction based on a teacher-pupil ratio of 1 teacher for each 100 students.

Monitoring of the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Utilization of supplementary and regular personnel for program delivery. Whenever feasible, instruction for program participants will be carried out within the students' regular classroom. Recommended program delivery is as follows:

ESOL instruction. As a basic pattern for ESOL program delivery, the specially allocated ESOL teacher will go into the participants' classroom for one hour daily during the Language Arts block in order to deliver the oral language development portion of ESOL. The regular classroom teacher is responsible for delivering the reading and writing portions of the ESOL program. A second basic pattern for ESOL program delivery provides for the special ESOL teacher to deliver oral language development to one half of the group for one half hour, after which he/she provides such instruction to the other half of the group for the second half hour. Such instruction may occur within the students' regular classroom or may occur in a nearby room. The remaining portions of the ESOL program are provided by the regular classroom teacher.

Spanish-S (Home Language Arts) instruction. Instruction in Spanish-S will be provided within the students' regular classroom for 30 minutes daily or 150 minutes weekly. Such instruction is provided by a teacher specially allocated under Program 6610 or Program 6630.

Instruction in the content areas. In project schools not providing BCC, all instruction in Math and in "Combined Instruction" will be delivered in English by the regular classroom teacher in his/her own classroom. In project schools providing BCC, a special teacher allocated under Program 6630 or 6610 will go into the students' classroom for one half hour daily or 150 minutes weekly to provide instruction in Math and in "Combined Instruction" in Spanish.

Teachers assigned to the above components should have had training and/or experience in the component for which they are responsible.

A concerted effort will be made in preparing individual schedules to allow teachers serving the same students to have common planning time.

Monitoring of the implementation of these conditions will be the responsibility of the Division of Elementary and Secondary Instruction.

Qualifications of personnel in pilot project schools. A concerted effort will be made to select teachers of comparable quality as evidenced by years of experience and levels of training. Responsibility for securing such comparability lies with the Office of Educational Accountability.

Consistency of class size. A concerted effort will be made to maintain consistency of class size (teacher-pupil ratio) across both types of program delivery (BCC and No-BCC pilot project schools). Responsibility for securing such consistency lies with the Office of Educational Accountability.

Data collection. Collection and maintenance of data required of participating teachers will be governed by established procedures and will be consistent with contractual obligations. Responsibility for monitoring data collection lies with the Office of Educational Accountability.

Assurances. No results will be reported in a manner that identifies a particular school, classroom, or student. Responsibility for monitoring this condition lies with the Office of Educational Accountability.

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APPENDIX C

Tables

Table 1

Selected Statistics on Paired Pretest Data
for BCC and No-BCC Students, English Language Tests

Achievement Test	Schools						
	BCC			No - BCC			t^a
	n	Mean	SD	n	Mean	SD	
TOBE							
Mathematics	93	15.15	4.10	97	15.25	4.89	.15
Social Studies	109	15.92	4.15	108	16.56	5.11	1.01
Science	99	16.19	4.31	93	15.71	5.19	-.70
Language	111	16.11	4.10	94	16.05	4.73	-.09
BCC Tests							
Mathematics	114	11.90	2.63	105	11.96	3.07	.15
Social Studies	115	10.83	2.54	104	10.10	3.14	-1.90
Science	114	10.90	2.48	106	11.17	3.11	.71

Note: Data for each measure are based on students who took both the pre- and posttest.
[a] No t-test was significant at the .05 level.

49

Table 2

Selected Statistics on Paired Pretest Data
for BCC and No-BCC Students, Spanish Language Tests

Achievement Test	BCC Schools			No - BCC Schools			t^a
	n	Mean	SD	n	Mean	SD	
TOBE							
Mathematics	100	13.82	3.97	111	14.63	4.61	1.36
Social Studies	105	16.47	3.98	108	17.06	4.31	1.04
Science	100	17.03	3.96	104	17.04	4.48	.01
Language	108	16.66	3.74	111	16.23	3.92	-.82
BCC Tests							
Mathematics	111	11.22	2.30	104	10.79	2.30	-1.47
Social Studies	110	12.17	2.16	106	11.94	2.49	-.72
Science	111	13.23	1.65	106	12.68	2.16	-2.13*

Note: Data for each measure are based on students who took both the pre- and posttest.
*p < .05

Table 3

TOBE and BCC Tests
Summary of Results of Analysis of Covariance
Comparing Posttest Mean Scores of
BCC and No-BCC Groups

Test	Difference	Probability Level
TOBE, Grade K		
Mathematics		
English	Difference favoring BCC Group	.03
Spanish	Not significant	.94
Social Studies		
English	Not significant	.41
Spanish	Not significant	.78
Science		
English	Not significant	.09
Spanish	Not significant	.61
BCC, Grade K		
Mathematics		
English	Not significant	.52
Spanish	Not significant	.68
Social Studies		
English	Not significant	.28
Spanish	Not significant	.27
Science		
English	Difference favoring BCC Group	.06
Spanish	Not significant	.58

Note: When controlling for multiple analyses of covariance using Bronferroni F, none of the above results reach statistical significance.

Table 4

Means, Adjusted Means and Analysis of Covariance on
Posttest Achievement Tests, English Versions

Achievement Test	B C C			No - B C C			F	Probability Level
	n	Mean	Adjusted Mean	n	Mean	Adjusted Mean		
TOBE								
Mathematics	93	18.75	18.79	97	17.79	17.76	5.06	.03
Social Studies	109	19.41	19.63	108	19.49	19.27	0.68	.41
Science	99	18.06	17.90	93	18.55	18.72	2.87	.09
Language	111	19.24	19.23	94	19.24	19.26	0.00	.94
BCC Tests								
Mathematics	114	13.49	13.51	105	13.37	13.35	0.42	.51
Social Studies	115	11.78	11.57	104	11.62	11.86	1.19	.28
Science	114	12.78	12.84	106	12.42	12.36	3.60	.06

Note: One-way analysis of covariance was carried out on each of the achievement tests, using the corresponding pretest as the covariate. The Bronferroni F procedure was applied to these results in order to account for error produced by calculating multiple ANCOVAS. Using this procedure, none of the tests showed a significant difference between BCC and No-BCC.

Table 5

Means, Adjusted Means and Analysis of Covariance on Posttest Achievement Tests, Spanish Versions

Achievement Test	B n	C Mean	C Adjusted Mean	No - B n	C Mean	C Adjusted Mean	F	Probability Level
TOBE								
Mathematics	100	16.84	17.12	111	17.34	17.08	0.00	.94
Social Studies	105	18.24	18.43	108	18.72	18.54	0.07	.78
Science	100	19.19	19.19	104	18.96	18.95	0.26	.61
Language	108	18.16	18.03	111	17.95	18.07	0.01	.91
BCC Tests								
Mathematics	111	12.38	12.26	104	12.05	12.17	0.17	.68
Social Studies	110	13.19	13.15	106	12.86	12.90	1.24	.27
Science	111	13.97	13.84	106	13.56	13.70	0.30	.58

Note: One-way analysis of covariance was carried out on each of the achievement tests, using the corresponding pretest as the covariate. The Bronferroni F procedure was applied to these results in order to account for error produced by calculating multiple ANCOVAS. Using this procedure, none of the tests showed a significant difference between BCC and No-BCC.

Table 6

Percent of Students in BCC and No-BCC Schools
Responding Correctly to Health/Safety Items
in English at the Posttest

| Test Item | Schools | |
Number	BCC	No-BCC
TOBE		
Social Studies		
6	88	80
20	38	40
21	91	88
26	91	87
BCC		
Social Studies		
10	97	85
Science		
7	93	93
10	71	63
14	83	83

Table 7

Percent of Students in BCC and No-BCC Schools
Responding Correctly to Health/Safety Items
in Spanish at the Posttest

| Test Item | Schools | |
Number	BCC	No-BCC
TOBE		
Social Studies		
6	88	77
20	28	35
21	85	80
26	81	79
BCC		
Social Studies		
7	96	90
11	90	89
Science		
2	99	99
12	83	78
15	97	96

Table 8

Teaching Time for Content Area Instruction
by Type of Program Delivery

Type of Program Delivery	Number of Schools[a] per Type	Number of Teachers per Type	Daily Teaching Time in Minutes						
			Mathematics				Combined Instruction Areas		
			0	15	30	60	15	30	60
BCC Schools									
1. Instruction provided by the classroom teacher bilingually	3	3			1	2		2	1
2. Instruction provided by both classroom and BCC supplementary teacher	2								
Classroom teacher in English		1			1		1		
Classroom teacher bilingually		1		1			1		
BCC supplementary teacher		2	2				2		
No-BCC Schools									
3. Instruction provided by classroom teacher in English only	5	5			5			4[b]	1

[a] One BCC and one No-BCC school not reported. [b] One No-BCC school reported 30 minutes daily four times per week.

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Table 9

Use of Instructional Materials in Mathematics

Teachers	Instructional Materials				
	Extent	of	Use		
	No 1	Little 2	Moderate 3	Extensive 4	Mean Rating
Textbooks (English)					
BCC Teacher			1	4	3.8
BCC Supplementary Teacher	2				1.0
No-BCC Teacher				5	4.0
Supplementary Materials (English)					
BCC Teacher			1	4	3.8
BCC Supplementary Teacher	2				1.0
No-BCC Teacher			1	4	3.8
Audiovisual Materials (English)					
BCC Teacher		1		4	3.6
BCC Supplementary Teacher	2				1.0
No-BCC Teacher		1	2	2	3.2
Textbooks (Spanish)					
BCC Teacher	5				1.0
BCC Supplementary Teacher	2				1.0
No-BCC Teacher	5				1.0
Supplementary Materials (Spanish)					
BCC Teacher	4	1			1.2
BCC Supplementary Teacher	2				1.0
No-BCC Teacher	5				1.0
Audiovisual Materials (Spanish)					
BCC Teacher	3	1	1		1.6
BCC Supplementary Teacher	2				1.0
No-BCC Teacher	5				1.0

Note: N = 5 BCC teachers, 2 BCC supplementary teachers, and 5 No-BCC teachers.

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Table 10

Use of Instructional Materials in Combined Instructional Areas

Teachers	Instructional Materials				
		Extent	of	Use	
	No	Little	Moderate	Extensive	Mean
	1	2	3	4	Rating
Textbooks (English)					
BCC Teacher	1		3	1	2.8
BCC Supplementary Teacher		1	1		2.5
No-BCC Teacher		2	1	2	3.0
Supplementary Materials (English)					
BCC Teacher			4	1	3.2
BCC Supplementary Teacher		1	1		2.5
No-BCC Teacher			2	3	3.6
Audiovisual Materials (English)					
BCC Teacher			4	1	3.2
BCC Supplementary Teacher		1	1		2.5
No-BCC Teacher			3	2	3.4
Textbooks (Spanish)					
BCC Teacher	4		1		1.4
BCC Supplementary Teacher		1		1	3.0
No-BCC Teacher	5				1.0
Supplementary Materials (Spanish)					
BCC Teacher	2	1	2		2.0
BCC Supplementary Teacher		1		1	3.0
No-BCC Teacher	5				1.0
Audiovisual Materials (Spanish)					
BCC Teacher	3	1	1		1.6
BCC Supplementary Teacher				2	4.0
No-BCC Teacher	5				1.0

Note: N = 5 BCC teachers, 2 BCC supplementary teachers, and 5 No-BCC teachers.

Table 11

Summary of Pilot Project Teachers Experience in Teaching

Teaching Experience	Number of Years	Teachers		
		BCC Classroom (n=5)	BCC Supplementary (n=2)	No-BCC Classroom (n=5)
Classroom Teacher				
	1	1		
	4-10		1	
	11-15	1		1
	16-24	2		4
	25+	1	1	
Teacher of LEP Students				
	1	1		1
	2-3	1		
	4-10			2
	11-15	3		1
	16-25	1		1
	25+		1	

Table 12

Distribution of Teachers by Language Background

Native Language	Teachers		
	BCC Classroom	BCC Supplementary	No-BCC Classroom
English	2		4
Spanish	4	2	2

Table 13

Inservice Courses on Methods of Teaching LEP Students
Taken by Pilot Project Teachers

Inservice Course	Number of Teachers Receiving Each Course		
	BCC Teachers	BCC Supplementary Teachers	No-BCC Teachers
Teaching BCC Content	2	1	1
Teaching Basic Skills in Home Language	2	2	1
Methods of Teaching Spanish-S	2	2	1
Methods of Teaching ESOL	4		2
Curriculum Content in English Using ESOL Techniques	2		2

Note: N = 5 BCC teachers, 2 BCC supplementary teachers, and 5 No-BCC teachers.

Table 14

Opinion about Need for Further Inservice for Pilot Project

Opinion	No Response	Rating Scale					
		Strongly Disagree 1	Disagree 2	Uncertain 3	Agree 4	Strongly Agree 5	Mean Rating
I would like to have more inservice training for this program.							
BCC Teachers (n=4)			1		2	1	3.8
No-BCC Teachers (n=5)	1		1		1	2	4.0
BCC Supplementary Teachers (n=2)		1			1		2.5
Additional inservice for the project teachers would be desirable.							
BCC Principals (n=5)			1	3	1		3.0
No-BCC Principals (n=5)			1	1	2	1	3.6

Table 15
Inservice Courses Requested By Pilot Project Teachers

Inservice Course	Number of Teachers Receiving Each Course		
	BCC Teachers	BCC Supplementary Teachers	No-BCC Teachers
Methods of Teaching ESOL	1		2
Curriculum Content in English Using ESOL Techniques	1		1
Teaching BCC		2	
Materials Preparation	1		
Planning	1		
Don't Know/No Request	2		1

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Table 16

General Methodology Used by Pilot Project Teachers

Instructional Strategy	None 1	Little 2	Moderate 3	Extensive 4	Mean Rating
1. Working with an aide under your supervision					
BCC classroom teacher	4		1		1.4
BCC supplementary teacher	2				1.0
No-BCC classroom teacher	1	4			1.8
2. Dividing the class into groups for instruction					
BCC classroom teacher		2	2	1	2.8
BCC supplementary teacher	2				1.0
No-BCC classroom teacher			2	3	3.6
3. Grouping students by achievement criteria					
BCC classroom teacher	1	1	3		2.4
BCC supplementary teacher	2				1.0
No-BCC classroom teacher			2	3	3.6
4. Grouping students by English (L_2) proficiency					
BCC classroom teacher	3	1	1		1.6
BCC supplementary teacher	1	1			1.5
No-BCC classroom teacher[a]	1		2	1	2.8
5. Grouping students by Spanish (L_1) proficiency					
BCC classroom teacher	4		1		1.4
BCC supplementary teacher	1		1		2.0
No-BCC classroom teacher	3		2		1.8
6. Coordinating content instruction with instruction provided by the Spanish-S teacher					
BCC classroom teacher	3	2			1.4
BCC supplementary teacher	1			1	2.5
No-BCC classroom teacher	2	1	2		2.0
7. Coordinating content instruction with instruction provided by the ESOL teacher					
BCC classroom teacher	2		1	2	2.6
BCC supplementary teacher	1			1	2.5
No-BCC teacher	2		2	1	2.4

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Table 16 (Cont'd)

General Methodology Used by Pilot Project Teachers

Instructional Strategy	Extent of Use				Mean Rating
	None 1	Little 2	Moderate 3	Extensive 4	
8. Coordinating curriculum content instruction with instruction provided by the BCC itinerant teacher					
BCC classroom teacher[b]				2	4.0
BCC supplementary teacher				2	4.0
No-BCC teacher			NA		
9. Including Spanish language development activities (oral and written) in content lessons taught bilingually					
BCC classroom teacher[c]	1		2		2.3
BCC supplementary teacher				2	4.0
No-BCC teacher			NA		
10. Including Spanish language development activities (oral and written) in content lessons taught in English					
BCC classroom teacher[d]	1		1		2.0
No-BCC teacher			NA		
11. Including English language development activities (oral and written) in content lessons taught bilingually					
BCC classroom teacher[c]		1	2		2.7
BCC supplementary teacher		2			2.0
No-BCC teacher			NA		
12. Including English language development activities (oral and written) in content lessons taught in English					
BCC classroom teacher[d]				2	4.0
No-BCC classroom teacher			1	4	3.8
13. Communicating with parents of Pilot Project students on the students' progress					
BCC classroom teacher		1	2	2	3.2
BCC supplementary teacher			1	1	3.5
No-BCC classroom teacher		1	1	3	3.4

Note: N = 5 BCC classroom teachers, 2 BCC supplementary teachers, 5 No-BCC teachers, 5 BCC principals and 5 No-BCC principals.
[a] One teacher did not respond to this item. [b] In two BCC schools, content instruction was provided by the classroom and the supplementary teacher. [c] n = 3. [d] n=2.

Table 17

Perceptions of Guidelines, Orientation and Support for Implementing the Pilot Project

Statements about Implementation	No Response	Rating Scale					Mean Rating
		Strongly Disagree 1	Disagree 2	Uncertain 3	Agree 4	Strongly Agree 5	
1. The BCC Pilot Project is operating in my school as stated in the guidelines, "Summary of Conditions and Activities of BCC/No-BCC Pilot Project - 1983-84" (Memorandum of December 22, 1983).							
BCC Principals	1				2	2	4.5
No-BCC Principals					2	3	4.6
2. I understand the goals and objectives of the BCC Pilot Project.							
BCC Teachers				2	2		3.5
No-BCC Teachers				2	2	1	3.8
BCC Supplementary Teachers						2	5.0
3. There was adequate direction from the district regarding goals and objectives							
BCC Principals			1	3	1		3.0
No-BCC Principals			1	1	2	1	3.6
4. I understand the guidelines used to select classroom teachers for this project.							
BCC Principals			1	2	2		3.2
No-BCC Principals	1			1	1	2	3.6
5. Additional resources (personnel) provided by the district have been helpful in implementing the project.							
BCC Principals			2		3		3.2
No-BCC Principals	1			1	1	2	3.6

Table 17 (Cont'd)

Perceptions of Guidelines, Orientation and Support for Implementing the Pilot Project

Statements about Implementation	No Response	Rating Scale					Mean Rating
		Strongly Disagree 1	Disagree 2	Uncertain 3	Agree 4	Strongly Agree 5	
6. I understand the criteria used to select students for this project.							
BCC Teachers			1		3		3.5
No-BCC Teachers				2	1	2	4.0
BCC Supplementary Teachers					1	1	4.5
BCC Principals			1	1	2	1	3.6
No-BCC Principals				2	2	1	3.8
7. I have been provided adequate direction in the implementation of the project.							
BCC Teachers		1	1	1	1	1	2.5
No-BCC Teachers		2			2	1	3.0
BCC Supplementary Teachers						2	5.0
8. The orientation I received for this program was adequate.							
BCC Teachers		2		1	1		2.3
No-BCC Teachers	1	2			1	1	2.8
BCC Supplementary Teachers						2	5.0

Note: N = 4 BCC teachers, 5 No-BCC teachers, 2 BCC supplementary teachers, 5 BCC principals and 5 No-BCC principals

Table 18

Perception of School and Parental Support

Statements about Support	Strongly Disagree 1	Disagree 2	Uncertain 3	Strongly Agree 4	Agree 5	Mean Rating
1. The school administration is enthusiastic toward the project.						
BCC Teachers	1		2	1		2.8
No-BCC Teachers			2	1	1	3.8
BCC Supplementary Teachers					2	5.0
2. Teachers in the school have a positive attitude toward the project.						
BCC Teachers	1		2	1		2.8
No-BCC Teachers			3		1	3.5
BCC Supplementary Teachers					2	5.0
BCC Principals	1	1	2	1		2.6
No-BCC Principals	1	1	1	1	1	3.0
3. Teachers in the BCC Pilot Project have a positive attitude toward the project.						
BCC Principals		1	2	2		3.2
No-BCC Principals	1	2		1	1	2.8
4. Parents have been adequately informed as to the BCC Pilot Project goals, objectives, and curriculum.						
BCC Principals			4		1	3.4
No-BCC Principals	1	1	1	1	1	3.0
5. Parents are enthusiastic toward the project.						
BCC Teachers			2	2		3.5
No-BCC Teachers			3	1		3.3
BCC Supplementary Teachers					2	5.0
BCC Principals		2	3			2.6
No-BCC Principals		4	1			2.2

Note: N = 4 BCC teachers, 4 No-BCC teachers, 2 BCC supplementary teachers, 5 BCC principals and 5 No-BCC principals

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Table 19

Perceptions of Students' Attitudes and Perf>rmance

Statement	Rating Scale					
	Strongly Disagree 1	Disagree 2	Uncertain 3	Strongly Agree 4	Agree 5	Mean Rating
1. The BCC Pilot Project students have a positive attitude toward learning curriculum content bilingually.						
BCC Teachers				3	1	4.3
BCC Supplementary Teachers					2	5.0
BCC Principals			3	2		3.4
2. The BCC Pilot Project students have a positive attitude toward learning curriculum content (in English only).						
No-BCC Teachers			1	1	2	4.3
No-BCC Principals			1	2	1	4.0
3. The BCC Pilot Project students have improved their levels of performance in content subjects, between February an June.						
BCC Teachers			1	2	1	4.0
No-BCC Teachers			2	1	1	3.8
BCC Supplementary Teachers					2	5.0

Note: N = 4 BCC classroom teachers, 2 BCC supplementary teachers and 4 No-BCC classroom teachers, 5 BCC principals and 4 No-BCC principals

Table 20

Opinions on Methodologies for Teaching Content Subjects to LEP Students

Opinion	Rating Scale					
	Strongly Disagree 1	Disagree 2	Uncertain 3	Agree 4	Strongly Agree 5	Mean Rating
1. LEP students should learn mathematics in their home language (Spanish) until they become proficient in English.						
BCC Teachers		4		1		2.4
No-BCC Teachers	2	3				1.6
BCC Supplementary Teachers				1	1	4.5
BCC Principals	2		3			2.2
No-BCC Principals		2	1	1	1	3.2
2. LEP students should learn "combined Instruction" subjects (science, social studies, health/safety) in their home language, until they become proficient in English.						
BCC Teachers		3			2	3.2
No-BCC Teachers		1	2	2		3.2
BCC Supplementary Teachers					2	5.0
BCC Principals	1	1	2	1		2.6
No-BCC Principals		1	2	2		3.2
3. Continuous translating from the home language (Spanish) to English is an effective way to teach curriculum content to LEP students.						
BCC Teachers	1	3	1			2.0
No-BCC Teachers[a]	2		1	1		2.2
BCC Supplementary Teachers	2					1.0
BCC Principals	2	2			1	2.2
No-BCC Principals	3	1		1		1.8

Table 20 (Cont'd)

Opinions on Methodologies for Teaching Content Subjects to LEP Students

Opinion	Strongly Disagree 1	Disagree 2	Uncertain 3	Strongly Agree 4	Agree 5	Mean Rating
4. Use of the home language in teaching curriculum content subjects should decrease as students' English proficiency increases.						
BCC Teachers		1		1	3	4.2
No-BCC Teachers	1	1			3	3.6
BCC Supplementary Teachers					2	5.0
BCC Principals				1	4	4.8
No-BCC Principals				2	3	4.6
5. LEP students should be taught curriculum content subjects in English using ESOL-oriented materials and techniques. This method should extend and support BCC instruction.						
BCC Teachers				4	1	4.2
No-BCC Teachers			1	2	2	4.2
BCC Supplementary Teachers	1				1	3.0
BCC Principals	1	1	1	1	1	3.0
No-BCC Principals		2	2	1		2.8
6. Even with Level I (non-independent ESOL) students, the home language is best used to clarify, explain and support instruction given in English, rather than being the dominant language of instruction, in curriculum content.						
BCC Teachers		1		2	2	4.0
No-BCC Teachers[a]			1	3		3.8
BCC Supplementary Teachers	1				1	3.0
BCC Principals			2	1	2	4.0
No-BCC Principals		1		2	2	4.0

Table 20 (Cont'd)

Opinions on Methodologies for Teaching Content Subjects to LEP Students

Opinion	Rating Scale					
	Strongly Disagree 1	Disagree 2	Uncertain 3	Strongly Agree 4	Agree 5	Mean Rating
7. LEP students should be taught curriculum content subjects in English, using ESOL-oriented materials and techniques, without BCC instruction.						
BCC Teachers	1	2	1		1	2.6
No-BCC Teachers[a]		2	2			2.5
BCC Supplementary Teachers	2					1.0
BCC Principals			2	1	2	4.0
No-BCC Principals	1	1	2	1		2.6
8. Cognitive development in LEP students is strengthened when they acquire parallel skills and concepts in the home language and English.						
BCC Teachers		1	1	1	2	3.8
No-BCC Teachers			2	3		3.6
BCC Supplementary Teachers					2	5.0
BCC Principals		3	1	1		2.6
No-BCC Principals			3	2		3.4
9. If students learn to read in their home language, learning to read in English will be enhanced.						
BCC Teachers		3		1	1	3.0
No-BCC Teachers		2	3			2.6
BCC Supplementary Teachers	1				1	3.0
BCC Principals		2	3			2.6
No-BCC Principals		2	1	2		3.0

Note: N = 5 BCC classroom teachers, 2 BCC supplementary teachers, 5 No-BCC teachers, 5 BCC principals and 5 No-BCC principals.
[a] One teacher did not respond

APPENDIX D

Reliability and Intercorrelations of the Tests

APPENDIX D

Reliability and Intercorrelations of TOBE and BCC Tests

Internal Consistency

English Tests

The internal consistency of each test of the TOBE and BCC batteries was obtained by calculating Cronbach Alpha coefficients. For the tests in English these coefficients are strong and positive. In general, they are higher for the TOBE tests than the BCC tests. The Alpha Coefficients for the TOBE tests range from .67 to .84 at the pretest and from .66 to .86 at the posttest. For the BCC tests, the coefficients range from .56 to .77 at the pretest and .54 to .73. at the posttest. Internal consistency data for English language tests are presented in Table 21.

Spanish Tests

Cronbach Alpha coefficients are strong and positive for TOBE tests in Spanish (pretest: .63 to .77; posttest: .63 to .81). Coefficients for the BCC tests are positive, but weaker (pretest: .31 to .59, posttest .40 to .67). These data are presented in Table 22.

Pre- to posttest, TOBE and BCC. As shown in Tables 21 and 22, the pattern of internal consistency of the TOBE tests, from pretest to posttest, is stable in both English and Spanish. The internal consistency of the BCC tests from pretest to posttest is more stable in English than in Spanish.

Revision of BCC Items

Several items on the English and Spanish language BCC tests were revised. Items where students who generally performed well on the tests, did poorly, were re-examined. Mainly, corrections were made in terminology of instructions, and in clarifying visuals where data indicated that the distractors were not of equivalent difficulty.

Intercorrelations among TOBE and BCC Tests

English Language Tests

TOBE. Tables 23 and 24 present the intercorrelations among all tests of the TOBE and BCC batteries, at pre- and posttest times. The correlations among the English version TOBE tests are positive and moderately strong, ranging from .61 to .72 at the pretest and from .63 to .71 at the posttest. The pattern of correlations among the tests is highly stable from pretest to posttest. The correlations are similar to those found in the national sample reported by the test's author (Moss, 1978).

BCC. The intercorrelations among the BCC tests in English, also, are moderately strong and positive. They range from .66 to .73 at the pretest and from .63 to .70 at the posttest. The relation between BCC tests is highly stable from pretest to posttest.

TOBE with BCC. The intercorrelations between TOBE and BCC tests were also examined. Overall, the correlations are all moderately strong and positive, ranging from .54 to .66 at the pretest and from .58 to .67 at the posttest.

Spanish Tests

TOBE. Tables 25 and 26 present the intercorrelations of all TOBE and BCC tests at the pre- and posttest. The correlations among the Spanish version TOBE tests at the pretest are moderate and positive. The correlations range from .51 to .64 at the pretest and from .55 to .70 at the posttest. The pattern is stable over time.

BCC Tests. Overall the intercorrelations among the BCC tests tend to be lower than the intercorrelations among the TOBE tests at both the pretest and posttest. The correlations range at the pretest from .42 to .51 and at the posttest from .41 to .55; slightly lower than the intercorrelations among the BCC tests in English.

TOBE with BCC. The intercorrelations between TOBE and BCC tests are low to moderate. At the pretest the correlations range from .33 to .61, and at the posttest from .37 to .59. These are lower than those found in the English language tests as was the case in the intercorrelations within the BCC battery.

Correlations of English and Spanish TOBE and BCC Tests

This section examines the relation of the English and Spanish TOBE mathematics, social studies, science and language subtests, and the English and Spanish versions of the BCC mathematics, social studies and science (see Table 27). The TOBE tests in Spanish are identical, translated versions of the English. Each content area BCC test in Spanish mainly assesses the same curriculum objectives as in English; however, each language version is composed of different items.

TOBE

The correlations of each of the TOBE tests in English with its Spanish version are moderately strong and positive. This in part reflects the fact that the tests are identical versions and that the Spanish is a translated version of the English. The correlations might have been higher except that the Spanish translation used terms, at times, unfamiliar to the Spanish speaking kindergarten population of Miami. The correlations from the pretest to the posttest are stable except that the correlation of the TOBE Language test is stronger at the posttest than at the pretest.

BCC

The BCC tests are content-referenced tests developed by OEA for this evaluation. The intercorrelation among these tests in English and Spanish are low to moderate, at the pretest ranging from .35 to .48, and at the posttest ranging from .36 to .50. The pattern of correlations is stable over time.

The weaker correlation coefficients for the BCCs as compared to the TOBEs may be attributed to the fact that the BCCs are not parallel versions and,

although they generally tap the same objectives in the two languages, are composed of different items. Other contributing factors are that the BCC scales are shorter (16 items versus 26 items) and the item difficulty levels of the BCC items in Spanish are lower than for the BCC in English. The BCC tests have been revised to correct problems that were identified.

Pre to the Posttest Correlations of The TOBE and BCC

The correlations of each test with itself over time (four months) were examined for the TOBE and the BCC in both English and Spanish (see Table 28). The TOBE correlations are moderately strong and very similar in both languages.

The correlations between the BCC tests are similar in English to the TOBE. However, the correlations over time among the Spanish version of the BCC tests are weaker than for the BCC tests in English or the TOBEs. These results, as well as those discussed above, indicate that there were problems with the Spanish version of the BCC tests. The tests were revised to correct these problems.

Table 21

Internal Consistency Coefficients[a] of Achievement
Pretest and Posttests in English
for Pilot Project Students

Tests	Students		
	BCC	No-BCC	All
Pretest			
TOBE			
Math	.70	.79	.75
Social Studies	.75	.84	.80
Science	.73	.81	.76
Language	.67	.73	.70
BCC			
Math	.63	.77	.71
Social Studies	.56	.68	.62
Science	.58	.73	.67
Posttest			
TOBE			
Math	.77	.86	.83
Social Studies	.77	.86	.82
Science	.76	.82	.79
Language	.66	.84	.78
BCC			
Math	.57	.73	.66
Social Studies	.56	.71	.65
Science	.54	.67	.61

Note: All correlations are significant beyond the .001 level

[a]Cronbach Alpha.

Table 22

Internal Consistency Coefficients[a] of Achievement
Pretest and Posttests in Spanish
for Pilot Project Students

Tests	Students		
	BCC	No-BCC	All
Pretest			
TOBE			
Math	.75	.77	.76
Social Studies	.70	.71	.71
Science	.69	.74	.71
Language	.65	.63	.64
BCC			
Math	.31	.37	.33
Social Studies	.45	.59	.53
Science	.42	.57	.51
Posttest			
TOBE			
Math	.76	.78	.77
Social Studies	.74	.75	.74
Science	.73	.81	.77
Language	.63	.76	.71
BCC			
Math	.40	.55	.48
Social Studies	.47	.39	.43
Science	.54	.67	.61

Note: All correlations are significant beyond the .001 level.

[a]Cronbach Alpha

Table 23

Correlation Coefficients among Achievement Pretests in
English for Pilot Project Students

Achievement Test		TOBE				BCC		
		Math	Social Studies	Science	Language	Math	Social Studies	Science
TOBE								
Mathematics	r	--	.68	.61	.66	.62	.58	.66
	n		226	223	224	215	215	218
Social Studies	r		--	.72	.65	.61	.63	.64
	n			221	223	212	210	212
Science	r			--	.66	.54	.59	.63
	n				230	214	214	216
Language	r				--	.63	.62	.61
	n					212	210	213
BCC Tests								
Mathematics	r					--	.66	.73
	n						231	233
Social Studies	r						--	.70
	n							234
Science	r							--
	n							

Note: All correlations are significant beyond the .001 level.

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Table 24

Correlation Coefficients among Achievement Posttests in
English for Pilot Project Students

Achievement Test		TOBE				BCC		
		Math	Social Studies	Science	Language	Math	Social Studies	Science
TOBE								
Mathematics	r	--	.71	.63	.65	.65	.67	.67
	n		214	203	201	205	207	207
Social Studies	r		--	.64	.63	.58	.64	.63
	n			206	223	229	231	230
Science	r			--	.68	.63	.62	.63
	n				207	201	203	203
Language	r				--	.64	.59	.59
	n					218	220	219
BCC Tests								
Mathematics	r					--	.63	.70
	n						241	240
Social Studies	r						--	.63
	n							242
Science	r							--
	n							

Note: All correlations are significant beyond the .001 level.

Table 25

Correlation Coefficients among Achievement Pretests in
Spanish for Pilot Project Students

Test		TOBE				BCC		
		Math	Social Studies	Science	Language	Math	Social Studies	Science
TOBE								
Math	r	--	.64	.63	.51	.59	.38	.44
	n		223	226	236	210	211	211
Social Studies	r		--	.60	.62	.61	.45	.50
	n			225	235	207	206	208
Science	r			--	.53	.54	.33	.44
	n				221	202	201	203
Language	r				--	.51	.34	.48
	n					212	213	213
BCC								
Math	r					--	.42	.55
	n						232	234
Social Studies	r						--	.41
	n							234
Science	r							--
	n							

Note: All correlations are significant beyond the .001 level.

Table 26

Correlation Coei.icients among Achievement Posttests in
Spanish for Pilot Project Students

Test		TOBE				BCC		
		Math	Social Studies	Science	Language	Math	Social Studies	Science
TOBE								
Math	r	--	.69	.61	.70	.54	.48	.56
	n	231		228	228	220	220	220
Social Social	r		--	.64	.58	.37	.59	.54
	n			228	230	224	224	224
Science	r			--	.55	.40	.51	.49
	n				231	223	223	223
Language	r				--	.50	.47	.41
	n					222	222	222
BCC Math	r					--	.46	.42
	n						237	237
Social Studies	r						--	.51
	n							237
Science	r							--
	n							

Note: All correlations are significant beyond the .001 level.

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Table 27

Correlation Coefficients between English and Spanish Pretest and Posttests
for Pilot Project Students

| Test | Correlation Coefficients between English and Spanish | | | | |
| | Pretest | | | Posttest | |
	n	r		n	r
TOBE					
Math	211	.73		204	.76
Social Studies	217	.66		206	.65
Science	207	.67		206	.65
Language	213	.62		204	.76
BCC					
Math	221	.48		223	.43
Science	221	.48		223	.50
Social Studies	218	.35		224	.36

Note: All correlations are significant beyond the .001 level.

Table 28

Pretest and Posttest Correlations of Achievement
Tests in English and Spanish

| Test | Pre- and Posttest | | Correlation Coefficients | |
| | English | | Spanish | |
	n	r	n	r
TOBE				
Mathematics	192	.68	212	.67
Social Studies	217	.70	213	.67
Science	192	.69	205	.63
Language	205	.59	220	.58
BCC Tests				
Mathematics	210	.66	215	.57
Social Studies	219	.67	216	.41
Science	220	.57	217	.49

Note: All correlations are significant beyond the .001 level.

The School Board of Dade County, Florida adheres
to a policy of nondiscrimination in educational
programs/activities and employment and strives
affirmatively to provide equal opportunity for all
as required by:

Title VI of The Civil Rights Act of 1964 - pro-
hibits discrimination on the basis of race, color,
religion, or national origin.

Title VII of The Civil Rights Act of 1964, as
amended - prohibits discrimination in employment
on the basis of race, color, religion, sex, or
national origin.

Title IX of the education amendments of 1972 -
prohibits discrimination on the basis of sex.

Age Discrimination Act of 1967, as amended -
prohibits discrimination on the basis of age
between 40 and 70.

Section 504 of the Rehabilitation Act of 1973 -
prohibits discrimination against the handicapped.

Veterans are provided re-employment rights in
accordance with P.L. 93-508 (Federal) and Florida
State Law, Chapter 77-422, which also stipulates
categorical preferences for employment.