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The third year of the partial immersion program in grades one through three at Key Elementary School (Arlington, Virginia), where half the day is taught in English and half in Spanish, is reported. The review includes classroom observations, student and teacher interviews, student assessment, and parent and staff interviews. Student assessments were also undertaken so that progress could be measured in both Spanish and English (standardized tests, oral language assessments, and teacher evaluations). The Language Assessment Scales and the Boehm Test of Basic Concepts were used respectively for language proficiency and mastery of concepts. Achievement in social studies and science was above average, and all but one student read at or above grade level in both English and Spanish. Parental response was enthusiastic, and the program had become a model two-way immersion program that attracted international visitors. Reasons for the program's success are identified as the following: teacher/staff dedication; coordination between the two immersion classes and between the English and Spanish parts of the day; development; and the active involvement of parents. Three major recommendations are offered: (1) continue and expand the program to include grades 1-4; (2) attract a wide variety of students from all over Arlington; and (3) implement a long-term plan for the continuation of Spanish instruction for immersion students in middle and high school. Contains 2 references. (LB)
Review of the Third Year of the Partial Immersion Program at Key Elementary School, Arlington, Virginia

Nancy C. Rhodes

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Center for Applied Linguistics
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Key Elementary School, Arlington, VA
1988-89

I. Introduction

The Center for Applied Linguistics has been involved in a review of the partial immersion program at Key School in Arlington since the program began three years ago. The annual review has included observing the partial immersion classes on a regular basis, interviewing students, teachers, other school staff and parents, and recommending student assessments so that the students' achievement could be measured in both Spanish and English (standardized tests, oral language assessments, and teacher evaluations).

A. Program Design

The partial immersion program at Key School teaches approximately half the day in English and half the day in Spanish. Adding one grade level per year, the program in its third year has expanded to grades 1 - 3 and plans have been made to continue expanding through grade 6. Each class contains 40-60% fluent Spanish speakers and 40-60% fluent English speakers.

The students in grades 1 and 2 change classrooms at noon, changing teachers and language of instruction. The grade 3 students have the same teacher all day, for both Spanish and English sessions. The program for grades 1 - 3 is set up as follows:

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>SPANISH</th>
<th>A.M.</th>
<th>Language Arts</th>
<th>Social Studies</th>
<th>Science/Health</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td>(Ms. Fernandez)</td>
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<tr>
<td>Grade 2</td>
<td>ENGLISH</td>
<td>A.M.</td>
<td>Language Arts</td>
<td>Math</td>
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<td></td>
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<td></td>
<td>(Ms. Bingham)</td>
<td></td>
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<tr>
<td>Grade 3</td>
<td>ENGLISH</td>
<td>A.M.</td>
<td>Language Arts</td>
<td>Math</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>(Ms. Cruz-Fridman)</td>
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<tr>
<td>P.M.</td>
<td>ENGLISH</td>
<td></td>
<td>Language Arts</td>
<td>Math</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(Ms. Bingham)</td>
<td></td>
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</tbody>
</table>
The "special" classes (music, physical education, and library) are typically conducted in English, but there has been an increased awareness of Spanish language activities overall throughout the school and other teachers have incorporated Spanish language and culture into their lessons.

B. Personnel

As with the previous year, Floe Bingham taught the English portion of the day for both the first and second grade immersion classes. Evelyn Fernandez taught the first grade Spanish portion of the day and Marta Guzman taught the second grade Spanish portion of the day. Mildred Cruz-Fridman, new to the Arlington Schools and the former Deputy Director for Curriculum and Instruction at the New York City Board of Education's Office of Bilingual Education, taught the third grade for both the English and the Spanish portions of the day. All three teachers of Spanish have native-like fluency, representing the cultures of the Dominican Republic, Mexico, and Puerto Rico, respectively. Dr. Paul Wireman, Principal, Jan Spees, Reading Specialist, and Marta Guzman in her role as ESOL/HILT Resource Specialist at Key gave ongoing support to the teachers and students in the program. In addition, the Arlington County Public Schools Acting Foreign Language Supervisor, Mary Ann Ullrich, assisted at the county level through support for staff and curriculum development.

C. Class Composition

The third grade immersion class had 21 students. Of these, 11 were native Spanish speakers, 8 were native English speakers, and 2 had other native languages but had been mainstreamed into an English-medium class. Sixteen of the students had been in the immersion class the previous year while five were new to the program this year.

The second grade class had 17 students: 10 native Spanish speakers and 2
7 native English speakers. Fourteen of the students had been in the immersion class the previous year while three were new to the program this year.

At the end of the year, the first grade class had 20 students: 11 native Spanish speakers, 8 native English speakers, and 1 native speaker of another language who had been mainstreamed into an English-medium class. The paired first grade class (taught in English) that was used for comparative purposes had 10 students: 1 native Spanish speaker, 3 native English speakers, and 6 native speakers of other languages who had been mainstreamed.

II. Evaluation Procedures

Arlington staff requested that CAL provide an evaluation of the immersion program’s third year of operation. CAL staff who participated in the project included Donna Christian, JoAnn Crandall, Nancy Rhodes, and G. Richard Tucker. The evaluation was planned as a follow-up to the first and second year evaluations and addressed the same questions:

1. What is the English and Spanish proficiency of students in the immersion program, and how does it change over the year?

2. How well do the immersion students do in content area subjects? Do they make academic progress comparable to other first, second, and third graders?

3. Are cross-cultural and language attitudes enhanced by participation in the program?

4. How do parents view the program?

5. How might the program be improved?

As in the past two years, several types of information was collected for this review of the program. From January through May, CAL staff conducted classroom observations of the immersion class. Staff members spent time observing both the English and Spanish portions of the day in all three grade levels. CAL staff also had other opportunities to visit classes at other times before and after the observation period and to talk informally with the immersion teachers and other Key School staff. They also attended parent
meetings and student performances for parents which allowed informal interaction with parents as well.

As with the first two years, several kinds of test data were collected on the students to assess their academic progress and language development. The Language Assessment Scales (LAS) were administered in the fall and spring to the first, second, and third graders in the program to provide a measure of both English and Spanish proficiency for immersion students. The Student Oral Proficiency Rating (SOPR) was used by the teachers to assess Spanish speaking proficiency for all three grades. The Boehm R Test of Basic Concepts was administered to the first graders again this year to assess the students' conceptual development in English and Spanish. Finally, the students' mastery of content area subjects was examined from scores on end-of-unit tests in social studies, science, and reading.

Like the two previous years, parents of immersion students were interviewed to find out their views on the program. The focus this year was on first grade parents, and they were interviewed by phone in Spanish or English, whichever they preferred, during May 1989. Teachers and students in the program as well as the principal were interviewed during the course of the year to find out their opinions of the program.

The results of these information collection efforts are described in the following sections.

III. Student Progress

A. English and Spanish Language Development

The Language Assessment Scales (LAS) are used to measure English and Spanish language development through a five-part test that measures students' ability with minimal pairs (identifying words as being the same or different), vocabulary (naming an object represented by a drawing), pronunciation (repeating a word), comprehension (listening to a tape and then pointing to a picture that is described on the tape), and oral production.
(retelling a story). The first four parts of the test make up 50% of the total score while the story retelling makes up the other 50%. Students are rated on a scale from 0 - 5 with 0 indicating a "non-speaker" and 5 indicating a "fluent" (proficient) speaker. The students' LAS scores are presented below by grade, first for the native English speakers and then for the native Spanish speakers.

FIRST GRADE English speakers. On the LAS English test in the fall, of the seven English speakers, four were at level 4 and three were at level 5. By spring, the five remaining students were all at level 5. In addition, two English speakers arrived after the fall testing and scored at level 5 in the spring. The one native French speaker in the class went from a level 2 to a level 4 in English from fall to spring.

On the Spanish test in the fall, all seven non-native Spanish speakers scored at level 1. By spring, two had moved up to a level 2 and two had moved up to a level 3. (Two students did not participate in the spring testing and the two late arrivals scored at levels 1 and 3 in the spring). When comparing student gains, the improvement in this first grade class is comparable to that of the 1987-88 first grade class. Furthermore, they showed more improvement during the year than the 1986-87 pilot class during their first year.

FIRST GRADE Spanish speakers. On the English test in the fall, among the twelve native Spanish speakers, five students were at level 3 and seven at level 4. By the spring test, only one student was at level 3, two at level 4, and eight at level 5. (One student did not take the test.)

In the fall on the Spanish test, one student was at level 2, five students were at level 3, four were at level 4, and two were at level 5. By spring, three were at level 4 and the other seven were at level 5. (Two students did not take the test.)
SECOND GRADE English speakers. On the LAS English test, of the nine native English speakers, all scored at level 5 in fall and spring.

On the Spanish test in the fall, this same group had three scoring at level 1, two at level 2, two at level 3, and two at level 5. By spring, two students scored at level 3, two at level 4, and three at level 5. (Two students were not tested in the spring.)

SECOND GRADE Spanish speakers. On the English test in the fall and spring, the ten native Spanish speakers all were at level 5. (One latecomer who was not tested until the spring also scored at level 5.)

On the Spanish test in the fall, one student scored at level 3, three at level 4, and five at level 5. By spring, two students were at level 4 and the rest at level 5. The latecomer also scored at level 5 in Spanish.

THIRD GRADE English speakers. On the LAS English test, of the ten native English speakers or native speakers of languages other than English or Spanish, all scored at level 5 in the fall and in the spring.

On the Spanish test in the fall, this same group had three scoring at level 3, six at level 4, and one at level 5. By spring, only one student scored at level 3, five at level 4, and four at level 5.

THIRD GRADE Spanish speakers. On the LAS English test, all but one student scored at level 5 in the fall (one student scored at level 4). By spring, all scored at level 5, including five additional newcomers to the class.

On the Spanish test in the fall and spring, all native Spanish speakers, including the newcomers in the spring testing, scored at level 5.

A few conclusions can be drawn from the pre and post LAS scores: (1) all first grade students made gains in both English and Spanish; (2) all the second and third grade students (both native Spanish and native English speakers) had "topped off" in their English by the beginning of grade 2, scoring
at the "fluent" level; (3) in Spanish, the second grade native English speakers improved from fall to spring, while the native Spanish speakers improved and performed at nearly the highest level by spring; and (4) the third grade native English/other language speakers continued to improve their Spanish from fall to spring while the native Spanish speakers all performed at the highest level in Spanish.

B. Spanish Oral Language Skills

Like last year, the Student Oral Proficiency Rating (SOPR) was used by the teachers to assess Spanish speaking skills. The SOPR provides a measure of a student's ability to understand, speak, and be understood by others in the language he or she is learning. It is focused on oral communication ability considered apart from the ability to read or write in the language. Instead of rating the students during a specific testing time, the teachers use their observations over the year as the basis for rating a student's level of ability. Each student is rated on five categories of oral language proficiency: comprehension, fluency, vocabulary, pronunciation, and grammar. For each category, the student is rated in one of five levels, ranging from 1, indicating little or no ability, to 5, indicating a level of ability equivalent to that of a native speaker of the language. The scores reported below are the averages for the five categories.

FIRST GRADE English speakers. Of the eight native English speakers and one native speaker of a language other than English or Spanish, four scored at level 1 (very limited oral), two scored at level 2 (limited oral), and two scored at level 3 (functional oral) during the end of the year Spanish oral proficiency testing.

FIRST GRADE Spanish speakers. Of the eleven native Spanish speakers, two scored at level 3 (functional oral) and nine scored at level 4 (fluent oral).
SECOND GRADE English speakers. Of the seven native English speakers, one scored at level 2 (limited oral), three scored at level 3 (functional oral), and three scored at level 4 (fluent oral).

SECOND GRADE Spanish speakers. Of the nine native Spanish speakers, five scored at level 3 (functional oral) and four scored at level 4 (fluent oral).

THIRD GRADE English speakers. Of the ten native English speakers and native speakers of languages other than English or Spanish, one scored at level 2 (limited oral), four at level 3 (functional oral), and five at level 4 (fluent oral).

THIRD GRADE Spanish speakers. Of the eleven native Spanish speakers, one scored at level 2 (limited oral) (a newcomer to the class), four scored at level 4 (fluent oral), and six scored at level 5 (native-speaker oral).

These results indicate that the teachers observe a wide range of Spanish proficiency levels at each grade level, confirming the LAS scores, and that the students improve their skill level as they continue in the program. As the students progress from first through third grades, there are fewer scores at the lower 1 and 2 levels and more at the higher four and five levels (see chart below).
Results of Spring 1989 SOPR Test, Grades 1 - 3
Spanish Oral Proficiency of All Students

<table>
<thead>
<tr>
<th></th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very limited proficiency</td>
<td>1111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited proficiency</td>
<td>22</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Functional proficiency</td>
<td>3333</td>
<td>3333333</td>
<td>3333</td>
</tr>
<tr>
<td>Fluent proficiency</td>
<td>44444444</td>
<td>44444444</td>
<td>44444444</td>
</tr>
<tr>
<td>Native-speaker proficiency</td>
<td></td>
<td></td>
<td>555555</td>
</tr>
</tbody>
</table>

*Note: The number of digits indicates number of students with that score.*

In addition, when doing a student-by-student analysis of the Spanish language development of the original pilot class (now in third grade) by comparing their second grade SOPR scores with this year's, their improvement is impressive. **Every student, whether native Spanish speaker or native English/other language speaker, improved his or her Spanish proficiency by at least one level, with three students jumping two levels.** The English/other languages native speaker scores went from (grade 2 to grade 3): 2->3, 2->3, 2->4, 3->4, 3->4, 1->2, 3->4, 2->3, 3->4, and 2->3. The native Spanish speaker scores went from: 3->4, 4->5, 3->5, 3->4, 3->4, and 3->5. These results confirm the LAS scores and support the hypothesis concerning two-way immersion programs that both language groups will benefit from instruction in Spanish: the native English/other language speakers as well as the native Spanish speakers are continuing to improve their oral Spanish skills.

C. Conceptual Development

The Boehm Test of Basic Concepts is designed to measure children's mastery of concepts considered necessary for achievement in the first years
of school. Boehm test results may be used both to identify children with deficiencies in this area and to identify individual concepts on which the children could profit from instruction. The test consists of 50 pictorial items arranged in approximate order of increasing difficulty. The examiner reads aloud a statement describing each set of pictures and instructs the children to mark the one that illustrates the concept being tested. In Arlington this year, the Boehm test was administered to first graders only in the spring. (The test is not administered to second or third graders.) Scores reported below represent the group average for the 18 immersion students and also for the paired non-immersion class of 10 students.

On the English version of the Boehm, the immersion first graders averaged 46.5 items correct (Spanish speakers 46; English speakers 48; and (one) other native language speaker 38). In the paired class, first graders averaged 47.5 items correct (Spanish speakers 47; English speakers 50; and other native language speakers 47).

On the Spanish version of the Boehm, the immersion first grade averaged 42 items correct (Spanish speakers 45; English and other native language speakers 37). The paired class, of course, did not take the Spanish version.

Although there are no Boehm scores available from the fall this year to show gains in understanding concepts, the spring Boehm scores can be compared to the spring scores of the two previous immersion first grades. These comparisons show that there are no major differences in the English or Spanish scores when comparing the first grade immersion classes for the last three years. And most importantly, the English scores of the immersion first grade class do not differ significantly from those of the first grade paired class.
D. Social Studies, Science, and Reading Achievement

FIRST GRADE Social Studies and Science. Students in the first grade immersion class were given chapter tests in social studies and science throughout the year. Since the social studies class is taught in Spanish, the tests were also given in Spanish. The class average was 86%.

The class average for the science chapter tests in Spanish was 90%. For an interesting comparison, the students were also administered end of chapter tests in English, even though all their science instruction was in Spanish. The class average for the science tests in English was 91%. The fact that these students were able to score this high in science in English, despite having received their instruction in Spanish, demonstrates that the students were acquiring the science concepts in Spanish and were also able to apply these concepts when tested in English. Thus these results support the assumptions about achievement underlying the two-way immersion model that content learned in Spanish will be available in English as well. The fact that the students were able to score as well as they did demonstrates that the concepts were available to them in both languages.

SECOND GRADE Social Studies and Science. As with the first grade students, the second grade immersion students were administered end of chapter social studies and science tests in Spanish throughout the year. The class average for social studies was 84% and for science was 75%.

THIRD GRADE Social Studies and Science. The third graders also were tested in social studies and science in Spanish throughout the year and the class averages were 78% and 83% respectively.

As the test results show, both the native Spanish and native English speaking children in all three grades scored above average in achievement in
social studies and science. There were no comparison group test scores available for social studies or science.

FIRST, SECOND, and THIRD GRADE Spanish Reading. All immersion students' Spanish reading skills were assessed by their progress in the McGraw-Hill *Hagamos Caminos* reading series. This literature-based elementary school reading program has five levels that are not necessarily the equivalent of grade levels. Out of the 17 first grade immersion students at the end of the year, two were reading at the first level, five had completed the first level, and ten had completed the second level. All 16 second grade students had completed the third level and all 21 third grade students were reading at the fourth level.

FIRST, SECOND, and THIRD GRADE English Reading. All immersion students' English reading skills were assessed by their progress in the Ginn reading series. In the first grade class, one student was below grade level, four had completed the first grade reader, seven had completed the first half of the second grade reader, six had completed the second half of the second grade reader, and one student was reading at the third grade level.

In the second grade class, seven students had completed the reader for the first half of third grade, and the rest of the 10 students had completed the reader for the second half of third grade.

In the third grade class, of the five newcomers (all ESOL students), three had completed the second grade reader and two had completed the first half of the third grade reader (along with two other students). The remaining 14 students had completed the third grade reader. It should be noted that the third grade students also read a lot of supplementary materials and children's literature during their regular reading period.

A conclusion that can be made from the reading results is that the Spanish immersion instruction did not have a negative effect on students'
reading skills, since all students (except one) ended the year reading at or above grade level in both English and Spanish.

E. Attendance

The classroom teachers reported that student attendance in the first, second, and third grade immersion classes was normal throughout the year and was comparable in attendance to other classes.

IV. Parents' Comments

This year we focused our interviews on the first grade parents because we wanted to hear the opinions of new immersion parents. Across the board, parents of both native Spanish-speaking and native English-speaking children spoke very favorably of the program. One parent summed up what the others had expressed, "Estamos muy contentos con el programa. Mi niño siente muy feliz y le gusta mucho leer y escribir en español y en inglés también." (We're very pleased with the program. My child is very happy and likes to read and write in Spanish as well as English).

Why did these parents enroll their children in the program? Most cited the benefits of early bilingualism and said that they realized the importance of knowing another language and understanding other cultures. The ethnic mix in the immersion class was another factor that influenced parents to enroll their children.

Many of the Hispanic parents mentioned their delight in the opportunity for their children to learn to read and write in Spanish as well as English. One parent commented, "We speak Spanish at home, but of course when my daughter started the program she couldn't read or write in Spanish. Now she can. I wish every Hispanic child in the U.S. could take advantage of this type of program." Another Hispanic parent mentioned that they had been discouraged with their son's lack of interest in speaking Spanish at home so were overjoyed when he
became interested in Spanish in the immersion class.

In discussing the benefits of the program, a first grade mother of a native English-speaking child mentioned that it is not only the fact that the children are learning two languages, but that the activities the teachers use to teach both languages are creative and motivating. Others commented on the high quality of the teachers in the immersion program. Many parents felt that the teachers made a big difference in the program and that they were lucky to have such outstanding teachers as Ms. Bingham, Ms. Fernandez, Ms. Guzman, and Ms. Cruz-Fridman.

There was one overall concern, however, expressed by Key parents which related to the future of the program. The parents wanted to make sure that their children would be able to continue in the immersion program through the end of the sixth grade at Key. In addition, at least one parent was concerned with the continuation of the program in the middle school and high school and wanted to make sure that Arlington Public Schools were starting to think about ways that immersion students could continue their study of Spanish.

IV. Increase in Visibility

Looking at the overall program during the past three years, we have been able to observe a dramatic change in the nature of the program. Starting out as a fledgling pilot program in a school that few people outside of Arlington were aware of, in just three years it has turned into a "model" two-way immersion program that educators from around the country and even overseas are coming to visit.

Just this past year the school has had visitors from the Ministry of Education of the Soviet Union and from the Peace Corps' Teacher Training Program in Thailand. In addition, the media caught wind of Key's innovative program and the school has since been featured in a local television news show as well as in the Arlington Journal, the Basic Education Journal of the
Council for Basic Education ("Spanish Afternoons" by Douglas Vamery; v.33, n.7, March 1989), and the National Network for Early Language Learning's FLES NEWS (Spring 89). Interestingly, the American Association of Teachers of French (AATF) has included a photo essay of Key School's program in their 1989 report on the teaching of foreign languages to children because of the applicability of the model to other languages.

Information about Key's program has also been presented at two national conferences, the National Association of Bilingual Education in Miami (April 1989) and Advocates for Language Learning in San Francisco (October 1988). Because of all the publicity, the four immersion teachers at Key as well as Dr. Wireman have taken on additional roles as outreach spokespersons for immersion. As an example, they have been instrumental in the advising of Fairfax County's new pilot immersion programs which will be located in eight different schools in the fall of 1989.

V. Recommendations

The reasons for the success of the program are quite apparent: the teachers and staff are very dedicated to the program, the Spanish and English portions of the day are well coordinated, and the parents are actively involved. The parents have continued to publish a bilingual newsletter about the program called Key Amigos, and they participate in special programs regularly.

Our major recommendation is that the program be continued and expanded to involve grades 1 - 4. In addition, we encourage the program to attract a wide variety of students from all over Arlington. In that way, the program will be guaranteed enough native Spanish speakers and native English speakers for each grade level. Lastly, we suggest that a long-term plan be implemented for the continuation of Spanish instruction for immersion students in middle and high school in Arlington. A critical element to the long-term success of Key's program will
be the options available to the students to continue their studies in Spanish.

VI. Conclusion

All aspects of the program have proven to be highly successful at the end of three years. Test results have shown that students in the partial immersion program progressed in academic areas as well as other students at their grade level. Further, when measured on the LAS test, the Spanish speakers and the English speakers in the classes made significant progress in both languages. Most importantly, test results also show that content that is studied in Spanish can be tested in Spanish or English with similar results. Once students learn a concept, they will "know" it, regardless of what language they are tested in.

The findings from the first three years of Key School's immersion program are comparable to the results of four other two-way immersion programs in California (Lindholm: 1987, 1988). The consistency of the finding across other school programs also adds validity to the achievement and language assumptions underlying the two-way immersion model at Key.

Interviews with parents have shown that the attitudes towards the program are highly positive. An increase in parent involvement over the three years underlines the parents' satisfaction. After three years in operation, the partial immersion model at Key School has proven to be a very successful model for educating both Spanish and English speaking children. All of the children have benefited because they have the opportunity to achieve academically and learn in two languages.
