During the 1989-90 school year, Descubriendo la Lectura, a Spanish-language adaptation of the English Reading Recovery project was implemented in a large urban school district in Arizona. The program is designed to identify first-grade students at risk of becoming poor readers and to provide a series of intense short-term learning experiences that assist in acquisition of inner control needed to become independent readers. First-year research efforts in the program focused on construction of a Spanish observation survey and determination of its reliability and validity. For the study, data were collected on 144 first-graders who were ethnically Mexican-American and dominant Spanish-speaking; all were learning to read in Spanish. Data collection included administration of the English and Spanish versions of a language assessment scale, of a standardized Spanish reading achievement test, and of the Spanish version of the observation instrument designed for the program. Results established the survey instrument as reliable and valid for Mexican-American students in the study. Further, results compared favorably with validity and reliability of the English survey version. Further research on the instrument's use with other regional or dialectal populations is recommended. (MSE)

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Descubriendo La Lectura: An Early Intervention Spanish Language Literacy Project

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DESCUBRIENDO LA LECTURA: AN EARLY INTERVENTION SPANISH LANGUAGE LITERACY PROJECT

Kathy Escamilla  
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Abstract

During the 1989-90 school year, Descubriendo La Lectura, a Spanish language adaptation of the English Reading Recovery Project, was implemented in a large urban school district in Southern Arizona. It was the first such program of its kind in the U.S.

Descubriendo La Lectura, like its parent program, is designed to identify first grade students who are at risk of becoming poor readers, and to provide a series of intense short term learning experiences that assist identified students in the acquisition of inner control needed to become independent readers.

A pivotal aspect of the Reading Recovery English Program is the Observation Survey, which is used to identify, prescribe for and exit students from the program. Therefore, first year research efforts in Descubriendo La Lectura focused on the construction of an equivalent Spanish Observation Survey and the establishment of the validity and reliability of the survey.

For this study, data were collected on 144 first grade children who were ethnically Mexican-American and dominant Spanish speakers. All subjects were learning to read in Spanish. Data collection included the administration of the LAS (English and Spanish versions), and the administration of the La Prueba Spanish Reading Achievement Test and the Spanish Observation Survey which was developed for Descubriendo La Lectura. Data were collected from all subjects in the study in the fall of 1989.

Validity was established by comparing results of observation tasks on the Spanish Survey to the La Prueba Spanish Reading Test. Reliability was established via the Kuder Richardson test-item analysis.

Results established the Spanish Survey as valid and reliable for Mexican-American students in the study. Further, results compared favorably to validity and reliability studies conducted with the English Survey. Further study is needed, however, to establish whether or not the instrument, as is, would have to be modified or revised for use with students in different areas of the U.S. who may speak different dialects of Spanish.

Introduction

Considerable research suggests that for minority groups who experience disproportionate levels of academic failure, the extent to which students' language and culture are incorporated into the school program constitutes a
significant predictor of academic success. In programs where minority students' L1 skills are strongly reinforced, their success appears to reflect both the more solid cognitive/academic foundation developed through intensive L1 instruction and also the reinforcement of their cultural identity (Cummins 1989). Studies to support this statement include Leasher-Madrid and Garcia (1985), Krashen and Biber (1987), Willig (1985), Escamilla (1987), Medina (1988) and Troike (1978).

Without a doubt, the above research establishes a strong base of support for bilingual education and the use of a child's native language in initial literacy instruction. Further, it appears that for the majority of language minority students in the United States, initial success in native language literacy provides a base for subsequent success in second language literacy (Escamilla, 1987; Medina, 1988; Leyba, 1978; Thonis, 1983).

However, in spite of the above achievements and the overall positive impact of bilingual education programs, there are some language minority students who have not achieved the desired results in native language or second language literacy. These students, like their English speaking counterparts, have difficulty at the beginning stages of literacy acquisition, and require special attention or "something extra" in the way of instruction if they are to achieve the levels of literacy and biliteracy needed to be academically successful.

Typically, this "something extra" has taken the form of pull-out, compensatory programs, designed to remediate the student's academic weakness. Pull-out programs for language minority and majority students, largely funded through Chapter I programs in local elementary school districts, have been widely criticized during the past few years (Barrera, 1989; Allington, 1988). This criticism asserts that students who are identified for remediation are, in fact, never remediated. The same students continue to participate in remedial programs year after year. Further, there is little evidence to suggest that, as a result of participation in these programs, student achievement improves (Barrera, 1989; Allington, 1988).

In response to this criticism, some remediation programs have turned their attention toward early identification and intervention of reading difficulties. This is done with the hope of cycling students as quickly as possible into and out of intervention and back into a regular classroom experience. Educational innovations of this nature include a project called Reading Recovery which was first developed and implemented in New Zealand (Clay, 1989). The Reading Recovery program was first implemented in the United States in 1988 in a program in Ohio.

Reading Recovery programs in both places have focused their efforts on identifying students in early elementary grades who are at risk of becoming poor readers. These students are usually the students who are achieving in the lowest 20% in a school regardless of how the lowest 20% is defined. Once identified, these students are provided an experience known as "something extra." This "something extra" is a series of intensive one-on-one lessons that are designed to guide students in their efforts to become literate. The goal of the program is to help children develop an independent, self-generating system for reading, the kind that good readers have, so that they can keep on learning to read better as they gain experience (Pinnell, 1988). The intervention involves trained Reading
Recovery teachers who provide "something extra" lessons to students 4-5 times per week for 30 minutes each lesson. The recovery process generally lasts from 12-15 weeks. Again, the focus is to enable students to construct inner control and meaning which will enable them to be successful readers without additional remedial help. It is important to note that these lessons do not take the place of good classroom instruction. Rather, they supply the "something extra" that may be needed to help initial low achievers accelerate and catch-up with their peers.

The above approach has met with great success in many areas and with many children where it has been implemented (Clay, 1989; Pinnell, 1988, 1990; Pinnell, Fried & Estice, 1990). However, only recently has this approach been applied with Spanish speaking children in the Southwestern United States.

Beginning in school year 1988-89, a Reading Recovery Project conducted in Spanish for Spanish-speaking students was implemented in a large school district in Southern Arizona. The unique aspect of this program is that it has adapted the Reading Recovery model in a way that utilizes the student's native language for instruction and incorporates the cultural background of the students into the Reading Recovery situation. Culture is incorporated by using children's literature that is written in Spanish and which reflects the child's cultural experience, in this case, the Mexican-American experience in the Southwest U.S. There is a soundness for doing Reading Recovery in Spanish as one of the theoretical underpinning's of the program asserts that in order to encourage literacy acquisition, the most powerful teaching builds on competence instead of deficits (Pinnell, 1990). This program uses student competence in Spanish and the student's cultural background as a basis for developing literacy.

Research Questions:

As with any type of research that is designed to adapt a program that has been successful with one group of students to students of different cultural and linguistic groups, the problem of where to begin arises. Obviously a number of very interesting research projects could be conducted provided sufficient time and resources were available. However, the first year research efforts focused primarily on studying the adaptation of the Reading Recovery Observation Survey from English to Spanish. Such research is crucial to Descubriendo la Lectura efforts since this survey is used to identify students, plan instructional interventions and, finally, it is used to discontinue students from the program. Research in subsequent years will focus on the impact of the program on students, whether or not the initial program impact is sustained across grade levels and whether or not these strategies assist students as they begin to read in English.

Given the importance of the Observation Survey in English, the first need, for a comparable program in Spanish was to create and validate a Spanish Observation Survey that was equivalent to the English Survey used in Reading Recovery Programs. This need generated the following research questions that guided this study: 1) Is the Spanish version of the Observation Survey valid; and 2) Is the Spanish version of the Observation Survey reliable?
Research Design

Methods

The concurrent validity of the Spanish Observation Survey was established by administering the survey to 144 first grade students who were receiving their initial reading instruction in Spanish. Spanish observation surveys were individually administered in the fall of 1989.

Tuckman (1978) established that concurrent validity can be determined by comparing results of one measure designed to test a group's ability to subsequent measures of their success on a test whose validity has already been established. Therefore, to establish validity for the Spanish Observation Survey, results from each observational task of the survey were compared to results of the same students on the La Prueba Spanish Achievement Test (reading section), also administered in the fall of 1989. Correlation coefficients were then calculated to assess validity. The La Prueba Spanish Achievement Test (reading section) was used as the criterion variable since its validity had already been established (La Prueba, 1984). Concurrent validity of the English Observation Survey was similarly established by Clay (1989) by comparing the Reading Recovery English Observation Survey to the Word Test, an English standardized reading achievement test.

To assess the reliability of the Spanish Observation Survey, test results on each observational task which were individually administered to the 144 first grade students in the study were once again used. Reliability was established by calculating the Kuder-Richardson reliability co-efficients of the results obtained from test administration. The Kuder-Richardson reliability co-efficient was deemed to be the most appropriate for this study, as it involves only one test administration and allows reliability to be established from item statistics. Since the Spanish Observation Survey is in the first draft of an adaptation from the English Survey, other procedures, such as reliability testing via equivalent forms of the test, were not appropriate to conduct at this time. Finally, the Kuder-Richardson formula was chosen to establish reliability since the same analyses were used to establish reliability of the English Observation Survey (Clay, 1989).

Subjects

Subjects for the study were 144 first grade students who had been identified as being either Spanish dominant or bilingual via the Language Assessment Scales (LAS Test). This test was administered by trained testers in Sept. 1989. All students were participating in bilingual education classrooms and all were receiving their initial reading instruction in Spanish. All students met state criteria for being considered limited English proficient students meaning that their score on the English version of the LAS was 3 or below on a scale of 1 - 5. Subjects included 77 girls and 67 boys. All subjects were considered to be low-income based on free and reduced lunch information from their schools. With regard to ethnicity, all subjects were of Mexican-American descent with the majority of students being from families who are first generation U.S. residents. Students were identified as Spanish dominant or bilingual based on the results of the state mandated Language Assessment Test (LAS). Of the study subjects
75% were monolingual Spanish, 22% were Spanish dominant and 3% were bilingual.

All 144 students received the Language Assessment Scales Test, the Spanish Diagnostic Survey, and the La Prueba Spanish Achievement Test in the fall of 1989. Specific stages of data collection included the following steps. First, all students in bilingual classrooms were given the LAS test English and Spanish version in Sept. 1989. Results were used to identify first grade students who were monolingual Spanish, Spanish dominant or bilingual. After initial identification, lists of students were given to classroom teachers to identify which students were reading in Spanish. A pool of 150 students for the study was initially identified from the LAS test and Spanish reading data.

In Oct. 1989, data collection of the La Prueba Test and Spanish Observation Survey were collected via the following procedures. La Prueba (reading test only) was administered according to test administration directions by individual classroom teachers. La Prueba is a group administered test. The Spanish Observation Survey was individually administered to students by a tester who was trained in Reading Recovery assessment techniques.

In order to eliminate the possibility of practice test effects, some of the students took the La Prueba test first and the Spanish Observation Survey second. Others took the Spanish Observation Survey first and the La Prueba second. All data collection was complete by Nov. 1989.

**Instrumentation**

**The Spanish Observation Survey**

During school year 1988-89, the Spanish Observation Survey was constructed with the intention of being equivalent to the English version in both content and form. As an equivalent version, however, it is important to note that it was not a direct translation. As with the English Survey, the Spanish Survey has six observational tasks. Clay (1989) has found that these observational tasks are highly correlated to initial success in literacy. Children who are successful readers not only build up knowledge of individual items related to each observational task, but more importantly, learn to utilize all of the tasks as needed when they engage in reading activities.

Each of the six observational tasks is discussed below along with a discussion of how the Spanish version differs from the English.

1. **Letter Identification** (identificación de letras) - This observation measure consists of 61 items in which children are asked to identify different characters, including upper and lower case letters and conventional print for the letters "a" and "g." In Spanish, the letters ch, ñ, rr, and ll were also added as they exist in Spanish but not English. Children's responses were considered to be correct if they identified the name of the letter, its sound or a word that begins with the letter. This observational task provides information about a child's awareness of letters. The letters k and w were not dropped from this task as children in this project, by virtue of living in the United States are exposed to these letters in their print environment.

2. **Word Test** (prueba de palabras) - This observational task consists of a list of 20 words that children are asked to read. While children in Reading
Recovery are never asked to read isolated words, this section provides information about a child's basic sight vocabulary and any reading strategies he/she may have. The English Word Test, used in Reading Recovery Projects in Ohio, was developed from high frequency sight words used in an English basal reading series (Pinnell, 1988). The Spanish Word Test selected words from the Cornejo list of high frequency words in Spanish (Cornejo, 1980), and from the Brigance Diagnostic Assessment of Basic Skills (1984). A major difference between the two lists is that the Spanish word test, consistent with the high frequency words in the language, consists of words that are phonetically regular in the language. The English word test consists primarily of words that are phonetically irregular. As this list was developed, careful consideration was given to the selection of words that do not vary greatly across dialects of Spanish. This was done so as not to bias the test in favor of speakers of one dialect of Spanish over another. This will be important as Reading Recovery in Spanish expands to other sites in the U.S.

3. Concepts About Print (conceptos del texto impreso) - This observational task is designed to note a child's awareness of significant concepts about print. To observe these concepts, a teacher reads a little book with pictures to a child and then interacts with her/him about the book. The 24 items included in this task provide information about print concepts such as book handling, directional behavior, concepts about printed language such as punctuation marks, and hierarchical concepts such as seeing letters, letters within words, and words within sentences. The English book Stones was translated into Spanish to be used in this task.

4. Writing (prueba del vocabulario escrito) - Given ten minutes, children are asked to write as many words as they know. After the children have exhausted their own supply of words, the teacher provides prompts such as, "Can you write your name?" "Can you write the name of a friend? ..." In the Spanish version, the teacher provides these prompts in Spanish, but accepts as correct, words that the student produces in either Spanish or English.

5. Dictation Test (dictado) - This task includes 39 items where the teacher reads a simple story, and asks the child to try to write it. The teacher notes the child's ability to hear sounds in words and reproduce them in print. In Spanish many letters make the same sound, for example, c, z, s and 11 and y, and this was considered when developing the task. Therefore, the child is given credit for a word if he/she writes a word that is phonetically correct even if it is misspelled (e.g. yevo for llevo; substituting y for 11; substituting ce for que; substituting c or z for s; and omitting h from a word - in Spanish, h is a silent letter). Given the differences in Spanish and English, it would have been inappropriate to simply translate the English dictation sentences into Spanish. Therefore, original Spanish dictation sentences were developed for this task with the intent of creating a task equivalent to the English task which allows for observation of a child's ability to apply concepts of sound/symbol correspondence.

6. Text Reading - An observation of the child's reading behavior which determines the child's instructional level. Text reading is not a separate observational task, but an integration of all other observational tasks. The teacher takes a "running record" (a type of miscue analysis) while the child reads
an extended piece of text. In certain texts, the teacher provides a prompt to give background information and an introduction to facilitate having the child read the text. In the beginning level texts, 1-3, the teacher does most of the reading and asks the child to read predictable language patterns in stories that are repeated after modeling. Beginning with level 4 books, children are asked to read independently. The running record is later analyzed for information about how the child was able to use the cueing systems of meaning, language structure, and visual information (MSV). The text-reading level score represents the level of difficulty at which the child can read with at least 90-per cent accuracy. The major differences between Spanish and English for this task was the need to identify and level books in Spanish. Using the criteria proposed by Petersen (1988), for leveling books for English Reading Recovery Programs, Spanish books were identified and grouped into levels from A to 20, A being the easiest and 20 being the most difficult. These Spanish books included books that were originally written in Spanish, as well as English books that had been translated into Spanish.

La Prueba Riverside de Realización en Español - Spanish Achievement Test

The La Prueba Spanish Achievement Test (reading section) was used as the criterion variable in the validation of the Spanish Diagnostic Survey. The instrument has been designed to determine the degree to which students are literate in Spanish, and to assess the achievement of students whose primary language is Spanish (La Prueba, 1984).

Content validity for the test has been established. Translations of the reading, language arts and mathematics test were carefully reviewed by persons who were native Spanish speakers and content area specialists to verify that the items measure the same content skills found in the 3R’s Test (La Prueba, 1984).

The Kuder-Richardson Formula 20 test-retest procedure was used to establish the reliability for the test. The reliability estimate for the Spanish reading test yielded reliability values with a median of .77 establishing the test as reliable. Other reliability and validity information on La Prueba can be found in the Technical Summary (1984).

Language Assessment Scales (LAS)

The Language Assessment Scales (LAS short form) was used in the study to identify the language dominance and relative language proficiency of subjects in the study. The LAS has both a long and short form and Spanish and English versions. The LAS Technical Manual (1983) incorporates five years of research on issues related to the reliability and validity of the instrument.

Construct validity of the LAS short form was established by the correlation between long and short total raw scores which was .98 and between oral proficiency levels on the two versions which was reported as .97 (DeAvila & Duncan, 1983).

The LAS short form has 3 sub-scales (listening, comprehension and oral production). Results of sub-scale scores are converted to five oral language proficiency levels for the purposes of normative interpretation. Students are considered to be proficient in a language if their overall levels are 4 or 5. Level 3 is considered to be indicative of a limited speaker and levels 1 and 2 are
considered to be non-speakers (Duncan & DeAvila, 1983). A student is considered to be dominant in a language if the language score in one language (e.g. Spanish) is higher than the score in the other language. Students are considered to be bilingual if they score at level 4 or 5 on both language versions.

**Data Analysis**

**Results**

In the fall of 1989, all 144 subjects took the Spanish Diagnostic Survey, and the La Prueba Test (reading section). All subjects had previously been given the Language Assessment Scales (LAS) Test, in English and in Spanish, and had been assessed to be either monolingual Spanish, Spanish dominant or bilingual. All subjects met state requirements as being limited-English proficient. Mean scores for each observational task of the Spanish Diagnostic Survey and the La Prueba Test are reported in Table 1 below.

<table>
<thead>
<tr>
<th>Observational Task</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Identification (61 items)</td>
<td>29.0</td>
<td>24.9</td>
</tr>
<tr>
<td>Word Test (20 items)</td>
<td>2.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Concepts about Print (24 items)</td>
<td>8.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Writing Vocabulary (open ended)</td>
<td>7.0</td>
<td>10.2</td>
</tr>
<tr>
<td>Dictation (39 items)</td>
<td>8.2</td>
<td>9.4</td>
</tr>
<tr>
<td>Text Reading (20 levels)</td>
<td>1.1</td>
<td>3.3</td>
</tr>
<tr>
<td>La Prueba Test</td>
<td>12.5</td>
<td>4.0</td>
</tr>
</tbody>
</table>

N=144

From table 1 (above), it is apparent that these measures appeared to be difficult for the students in the study. These measures are intended for first grade students and study subjects were, in fact, first grade students. However, these subjects were at the beginning of their first grade year and had not yet completed two months of instruction before being tested. This could account for the skewing of results toward the lower end of the scale. Further, subjects in the study were not randomly selected. All first grade students reading in Spanish were tested. This population represents the population of students from which Spanish Reading Recovery students will be selected and therefore, it was
necessary to establish validity and reliability with them.

In order to conduct the validity analyses for this study, the raw scores noted in Table 1 above were converted to standard scores to calculate correlation coefficients for the 6 observation tasks of the Spanish Diagnostic Survey. They were then compared to the La Prueba Spanish Reading Test. Analyses were conducted using the Pearson Product-Moment Correlation Formula. They are presented in Table 2 below.

Results of the analyses indicated that the observational tasks of Letter Identification, Word Test, Concepts about Print, Writing Vocabulary, and Text Level Reading were moderately correlated to La Prueba. The dictation results showed a modest correlation to La Prueba. Overall, however, results from this analysis established the validity of the Spanish Diagnostic Survey. Correlation coefficients are presented in Table 2 below.

<table>
<thead>
<tr>
<th>Observation Task</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Identification</td>
<td>.68</td>
</tr>
<tr>
<td>Word Test</td>
<td>.53</td>
</tr>
<tr>
<td>Concepts about Print</td>
<td>.66</td>
</tr>
<tr>
<td>Writing Vocabulary</td>
<td>.52</td>
</tr>
<tr>
<td>Dictation</td>
<td>.37</td>
</tr>
<tr>
<td>Text Level Reading</td>
<td>.68</td>
</tr>
<tr>
<td>N = 144</td>
<td></td>
</tr>
</tbody>
</table>

In order to examine the reliability of the Spanish Diagnostic Test, test reliability was estimated using item statistics from the test administration in October 1989 to 144 first grade students who were receiving their initial reading instruction in Spanish. The method of analysis is known as the Kuder-Richardson procedure and provides a reliability coefficient. The Kuder-Richardson procedure was applied to 5 of the 6 observational tasks in the study. These included Letter Identification, Word Test, Concepts about Print, Dictation, and Text Reading.

It was not possible to apply the Kuder-Richardson procedure to the Writing Vocabulary observational task since it is an inappropriate procedure for timed tests and the writing vocabulary observation task is timed (a student has 10 minutes to write words) (Tuckman, 1978). This entire study will be replicated during the 1991-92 school year with a larger sample of first grade students at
different sites. Reliability of the Writing Vocabulary observational task will be established at that time. It is important to note that the results of the observational task titled "Text Reading" are reported in levels (e.g. A, B, 1, 2, etc.). However, to establish reliability, it was necessary instead to convert all of the book levels to numeric levels. Thus, levels A and B became levels 1 and 2 and therefore there were a total of 22 levels.

Reliability coefficients for each of the five observational tasks on the Spanish Diagnostic Survey are reported in Table 3 below.

<table>
<thead>
<tr>
<th>Observation Task</th>
<th>KR 21r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Identification</td>
<td>.96</td>
</tr>
<tr>
<td>Word Test</td>
<td>.92</td>
</tr>
<tr>
<td>Concepts about Print</td>
<td>.64</td>
</tr>
<tr>
<td>Writing Vocabulary</td>
<td></td>
</tr>
<tr>
<td>Dictation</td>
<td>.95</td>
</tr>
<tr>
<td>Text Reading</td>
<td>.98</td>
</tr>
<tr>
<td>N = 144</td>
<td></td>
</tr>
</tbody>
</table>

Results of both the validity and reliability analyses conducted in this study compare very favorably to results obtained in the validity and reliability tests conducted by Clay (1985) on the original version of the English Diagnostic Survey.

Summary and Future Research

To summarize, from the results reported above, it has been established that the Spanish Diagnostic Survey is both valid and reliable for the purposes of use in Spanish Reading Recovery Programs involving Mexican-American students in the Southwestern U.S. Using these data, normalized scores can be established, thus making the survey an appropriate vehicle for identifying students in the lowest 20% who may benefit from the Descubriendo la Lectura Project. In the fall of 1991, this research project will be replicated at different school sites and with students who speak different dialects of Spanish. This will further enable the researchers to establish the validity and reliability of this survey. The establishment of a valid, reliable observational instrument also
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forms the basis for future research in the Descubriendo la Lectura Project. Proposed research projects include: 1) Case studies of students who have participated in the Descubriendo la Lectura Project and have subsequently been discontinued to determine the project impact on their literacy development in Spanish; 2) Follow-up studies with the same children to assess the impact of Descubriendo la Lectura in subsequent school years on the acquisition of Spanish and English literacy; and 3) Further identification and leveling of literature materials, particularly those originally written in Spanish, for use in the project.

Finally, it must once again be stated, that this project, by definition and design is truly innovative, for it is the only such project, to date, that is applying Reading Recovery concepts to language minority, LEP students using their native language (Spanish), and incorporating the student's culture. It is, therefore, a true attempt to fully utilize a student's strengths to develop literacy.
References


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