

Teacher/Student Interaction and Fidelity of Implementation: Factors of Success in Implementing a Spanish Reading Intervention

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Resumen

El propósito de este estudio fue evaluar la eficacia de una intervención de lectura intensiva para estudiantes hispanos de inglés como segunda lengua en aulas de primero y segundo grados de un programa de transición de educación bilingüe, español/ inglés, utilizando un diseño de caso único. El estudio incluyó tres grupos de tratamiento en cuatro aulas, con un total de 74 estudiantes durante un período de 12 semanas. Las medidas dependientes incluyeron los puntajes de fluidez y comprensión en lectura oral. Se concluyó que esta intervención fue eficaz en algunas áreas. Esta intervención fue especialmente eficaz en darles a los estudiantes un avance inicial rápido y eficaz en su nivel de lectura. El análisis cualitativo reveló la importancia de la interacción del maestro con el estudiante y de la fidelidad de la implementación como factores importantes en la implementación de una intervención de lectura en español.

<Investigación sobre la lectura> <programa de lectura> <lengua inglesa> <estudio de caso> <alumnos bilingües> <relación profesor - alumno> <Estados Unidos de América>

Abstract

The purpose of this study was to evaluate the effectiveness of an intensive reading intervention for Hispanic English language learners in first and second grade Spanish/English transitional bilingual classrooms using a single-case design. The study included three treatment groups in four classrooms, a total of 74 students over a period of 12 weeks. Dependent measures included oral reading fluency scores and comprehension scores. It was concluded that this intervention was effective in some areas. This intervention was especially effective in giving the students a jump-start in their reading level. Qualitative data revealed the importance of teacher/student interaction and fidelity of implementation as important factors in implementing a Spanish reading intervention.

<Reading research> <Reading programmes> <English> <case studies> <bilingual students> <student teacher relationship> <USA>

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Introduction

"Maestra, did I reach my reading goal? Maestra, can you time me while I read to you? Maestra, can I go to the next reading level now! "

These questions were posed to one of the teachers who were implementing a Spanish reading fluency intervention to first and second graders. This teacher asked herself, how come Juanito, Ruby, and Victor became so interested in reading? In the previous months before this intervention was implemented, these children were not fluent in Spanish reading. They were not even interested in reading when the teacher asked them to read silently or out loud. The children were limited English proficient or English language learners (ELLs) and were enrolled in a second grade transitional bilingual program in a small town of southeast Texas. Every fall, this teacher would see that the number of ELLs would increase in her school as well as in her classroom. This number would grow even after the first day of school, and way into the first month of classes. It is important to note that some of these new comers were struggling readers. This teacher sought help and volunteered to participate in a Spanish reading fluency intervention that could help her students accelerate Spanish reading so that they could later transfer this skill into the English language. Throughout the intervention, this teacher discovered that she was spending more time with her struggling readers than before the intervention took place. She also learned the importance of having these students accessing this intervention with fidelity. Thus, teacher/student interaction as well as fidelity of implementation may have played an important role in the

success of this intervention.

Background

Traditionally, Hispanic students enrolled in United States' public schools have had the lowest levels of education and the highest dropout rates of any ethnic group in the United States (Kaufman & Frase, 1990; Snow, Burns, & Griffin, 1998; U.S. Department of Education, 2006). The performance of bilingual Hispanic students has been low on individual statewide academic assessments. The passing rate among Hispanics for the Texas Assessment of Knowledge and Skills (TAKS) for mathematics, reading, science, social studies and writing was 58% as compared to 81% for Anglos during the 2005-2006 school year (TEA, 2006). This may be in part because bilingual Hispanic students must learn, in addition to academic subjects such as math, science, and social studies, a second language of instruction - English.

One of the goals of United States' Bilingual Education federal law is to assist LEP (limited English proficient) students to acquire a second language and eventually to be included fully into a monolingual English program (Bilingual Education Act, 1968). A considerable quantity of literature asserts that instruction in a student's first language (L1) facilitates acquisition of a second language (L2) (Cummins, 2000; Escamilla, 1987; Genesee, 1987; Jimenez, Garcia & Pearson, 1995; Krashen, 2003). It is upon this premise that some of the guidelines for transitional bilingual education are based: starting academic instruction in L1, including reading, and transitioning students in academic instruction in L2 as their acquisition of L2 strengthens (Gonzalez, 1994; Prado & Tinajero, 2000). Transitional bilingual education is the traditional elementary, dual language model of instruction

approved by the federal and state government (TEA, 2000).

In Texas, the bilingual education transitional program spans from Pre-Kindergarten (age 5) to 5th grade (age 10) (Texas Education Agency, 2000). Hispanic bilingual students are expected to learn how to read in Spanish and to start making the transition to English around the third grade level, providing that the students have attended school in the United States from Pre-Kindergarten or Kindergarten. Hispanic bilingual students must accomplish academically what is expected from monolingual students, and in addition, they need to learn a second language within the same time span (Thomas & Collier, 1997). However, continuing public challenges have been questioning the efficacy of transitional bilingual programs (August & Hakuta, 1997). This has created pressure on these programs to more efficiently increase Spanish reading competency of young bilingual students. More rapid development of Spanish reading competence should lead to more rapid competency in English reading. The No Child Left Behind Act, federal legislation signed into law in 2002, has also significantly challenged transitional bilingual programs by requiring all schools and districts to be accountable for all academic results. Bilingual teachers and program administrators are therefore seeking intensive, research-supported Spanish language reading interventions, especially those suitable for low achieving students in grades 1-4.

There has been little research on the effectiveness of reading intervention programs in the United States designed to assist bilingual Hispanic students in their native language, Spanish. The principal investigator, undertook to investigate this issue. In planning the

research design, a reading intervention program for monolingual English students was chosen as a model to use.

Theoretical Support for Repeated Reading, Teacher Modeling, and Progress Monitoring.

S. J. Samuels first proposed the method of repeated reading (Lagerge & Samuels, 1974; Samuels, S.J., 1997). Several research studies support the theory that speed of response could indicate automaticity (Lagerge, 1973; McCormick & Samuels, 1976). The automaticity theory states that a fluent reader decodes text automatically - that is, without conscious direction - leaving attention free to be used for comprehension. Repeated reading focuses on reading and rereading a passage until fluency is acquired. Empirical research has demonstrated that the method of repeated reading improves reading fluency and comprehension. (Dahl, 1974; Gonzalez and Elijah, 1975; Kann, 1983; Terry, 1974).

Teacher modeling is another instructional technique that has been extensively documented (Huck, Hepler, & Hickman, 1987). Carbo (1978) developed a method in which students listen to a tape-recorded story by a fluent reader. Research has demonstrated that an expert model reading along with, or slightly ahead of, students produces growth in vocabulary, word knowledge and visual decoding (Baily, 1970; Chomsky, 1972; Eldredge & Quinn, 1988; Skinner, Logan, Robinson, & Robinson, 1997).

Self-monitoring is another research-supported instructional technique. Several studies support a relationship between self monitoring and achievement (Bandura & Cervone, 1983; Skager, 1984; Wang and Peverly, 1986). Fuch and Fuchs (1986) conducted a study with students whose progress was

monitored. These students systematically gained an average of .7 standard deviation units more in achievement than students who were not monitored systematically. Low-achievers may be as capable of self-monitoring as high-achievers, although they may require support from external progress monitoring systems (Smith, 1991).

Purpose and Research Question

There is published evidence that these three instructional techniques: repeated reading, teacher modeling, and progress monitoring were effective with English speaking students. There was no published evidence located, however, that these same techniques in Spanish were effective with Spanish bilingual ELL students. Therefore a study was designed to implement a reading intervention using the Read Naturally (RN) program translated and adapted to Spanish that included these three techniques. An answer to the following question was sought. To what extent will the Spanish language RN program when administered 45 minutes per day, 3 times per week during 12 weeks to bilingual Hispanic students in grades 1-2, improve reading fluency and comprehension for: a) students engaged intensively in the RN intervention and, b) students not intensively engaged in the RN intervention?

Method

Context

This study was conducted in four Spanish/English bilingual classrooms in a small city in southeast Texas. The district is composed of 13,500 students and 12 schools, with a multi-ethnic makeup (African American, 24%; Hispanic, 31%; White, 44%). Sixty-three percent of the students are economically disadvantaged. The district's bilingual/ESL program enrolls

nearly 1,000 students.

This study's intervention took place in transitional bilingual classrooms during the reading/language arts period, in which students were involved in concentrated phonics practice and ESL-based activity centers. Transitional bilingual education in Texas is offered in pre K-5 grades (Texas Education Agency, 2000). Bilingual students are categorized in four levels of English proficiency: beginners, intermediate, advanced, and advanced high. At the first level, the students receive instruction in their native language, Spanish, and also receive 45 minutes of ESL instruction. At the next three levels, the minutes of ESL taught throughout the day increase at the same rate as the students' Cognitive Academic Language Proficiency (CALP) increases. Increasing English language instruction continues until the students are fully transitioned into the English language instruction. The students should complete the transition into the regular classroom by the fifth grade, providing that they entered the program at the lower grades (i.e., kindergarten or pre-kindergarten).

Participants

Student participants were 74 Spanish-English bilingual students attending first and second grades, with approximately 18 students per classroom, in four classrooms. Their ESL category was beginner or non-English speaker (NES). Most participants were second-generation Mexican American immigrants; their parents were among the first generation to immigrate to the United States.

All students were selected for the study based upon performance on an initial skills screener. Students were selected only if they could orally read 30-60 words correctly per minute on a

first reading of a Spanish story at either first or second grade level readability, or knew their beginning sounds and could read 50 to 100 sight words. The low performance levels of these students, along with their NES language classification, placed them at risk for successful reading in English, without a targeted and effective intervention (August & Hakuta, 1997; Gersten & Jimenez, 1994; Snow et al., 1998).

Description of the Intervention

For the purpose of this study, materials from first and second grade levels of the RN program were translated to Spanish by a team that included three native Spanish speakers, one of whom is a certified bilingual translator. Direct translation was followed by rewriting to ensure natural language in all stories. With the permission of the RN author, stories were translated into Spanish text passages, and audiotapes of each story were professionally recorded in Spanish. These materials were produced for experimental use only.

The intervention was implemented with three groups of students for 45 minutes per day, three times a week for 12 weeks for Group 1, 10 weeks for Group 2, and eight weeks for Group 3. The intervention was conducted during the students' Spanish language arts block. Students not receiving the intervention participated in language arts activities in centers (a mixture of word analysis, vocabulary, and other language arts activities).

RN involves students self-graphing scores of words correct per minute (wcpm) before and after individualized repeated practice. After an initial timing by the teacher on an unpracticed story, students graph this "cold reading" score on bar graphs in their individual folders. They then read along with an audiotape or

CD of the story at a listening center. This step involves simultaneous, subvocalized reading of the entire story up to three times. After reading with the audiotape or CD, students practice reading the story independently without the tape. They self-time each individual practice for one minute to determine if they have reached a predetermined performance goal. When the goal is reached, students signal that they are ready for a timing conducted by the teacher. Students then plot this "practiced score" on bar graphs that provide instantaneous and concrete evidence of progress and improvement. Students may pass to the next story only if they reach their targeted fluency goal, make fewer than three oral reading errors, read with appropriate expression, and accurately answer three of four comprehension questions. Students then repeat the process with another story at the same level of difficulty. After the student completes 12 stories at a level, the teacher and the student decide whether the student should continue at the same level with the same goal, adjust the reading rate goal, or move up a level to more difficult reading material (Hasbrouck, Lhot, & Rogers, 1999).

RN provides 24 stories to practice at each level, in half-year increments from mid first-grade level through Grade 6. Passages range in length from approximately 60 words in the mid first-grade level to 350 or more words at the sixth-grade level. Students individually pace themselves, completing as many self-timings as possible within the instructional period.

Screening

Prior to the study, students were screened to establish their suitability for participation in the study and to

place students into balanced groups. Spanish reading passages at levels 1.0, 1.5, and 2.0, obtained from Spanish basal readers adopted in Texas, were administered to students. Based on screening results, students were classified as reading at grade levels 1.0, 1.5, or 2.0. Students were placed at the level at which they could read 30-60 wcpm. Students who did not know beginning sounds and could not read 50 to 100 sight words were not included in this study. The treatment groups in the study were each composed of a balance of students at each of the three levels. A total of 74 students began the intervention. Due to absences and subsequent missing data, complete data were finally available for only 53 students.

Assessment Instruments

Reading probes. Seven semi-weekly probes were created by the first author, a certified Spanish interpreter. Passage titles were: (a) "El Cumpleaños," (b) "La Navidad," (c) "El Cinco de Mayo," (d) "Los Santos Reyes," (e) "El Baile del Cinco de Mayo," (f) "La Comida del Cinco de Mayo," and (g) "Las Posadas." The shared theme was important holidays celebrated in Mexico and other Hispanic countries.

The seven probes were designed to be similar to the passages used in the reading intervention in average word length, average number syllables per word, average sentence length, and topic. The range for the total words for the seven probes was 72-80, and number of sentences ranged from 9 to 12. The range for word length was 3.57 to 4.31 (average letters per word), and sentence length ranged from 6.3 to 8.0 (average words per sentence). These countable indicators of readability are in line with typical Level 1 stories from the Spanish basal reading series used in this district.

Furthermore, the topics in these passages were related to the students' culture and background knowledge. To control for invalid results due to passage differences, the administration of these probes was counterbalanced by students within groups and classrooms.

Assessing reading fluency. Students individually read the short passages aloud and were scored for oral reading fluency (ORF). The number of words that they read during one minute, minus errors, was recorded as the words read correctly per minute (wcpm) (Shinn, 1989). Inter-scorer reliability for ORF was established prior to the study at $Kappa = .94$.

Assessing comprehension. Four short-answer questions were created for each probe, all supply-type. Students were asked questions of sequence, such as "who?" "did what?" "when?" and "why?" The probes also posed questions of prediction; passage length precluded the use of "main idea" questions. Responses were scored 0 or 1, with .5 points given for partially correct responses. An answer key described correct and partially correct responses to help maintain high interrater reliability on comprehension scoring. In addition, reliability for comprehension scoring was established at $Kappa = .89$.

Probe Equivalence

The seven probes were counterbalanced within groups and classrooms to help negate any differences in readability. In addition, passage difficulty levels were calculated after the study based on the wcpm scores of the students. The mean scores across all students for the seven probes ranged from 53.7 wcpm to 76.3 wcpm, with $F(6,363) = 3.0$ ($p = .007$). Only two probes were outliers, Passage D being significantly easier ($t = 2.93$, $p = .003$), and Passage F being significantly more difficult than the

rest ($t = 2.98, p = .003$). Since passages were counterbalanced within groups, this degree of non-equivalence was considered tolerable.

Design

A multiple baseline design, single-case research methodology, Kazdin, (1982) was used for this study. The treatment groups were initially formed from 74 bilingual students. However, only group 1 started receiving the treatment at the beginning of this intervention. Group 2 started treatment after the 2nd week, and group 3 began after the 4th week. The total duration for this study was 12 weeks. The total population of these 4 classrooms received the assessment at two week intervals. The students were categorized into one of several reading levels 1-4. Once the student's levels were determined, they were placed in groups heterogeneous by category, using random assignment.

This was accomplished by first randomly assigning three groups of students per classroom. Each group consisted of six students. After all the groups were formed, the students were tested to find their reading level, corresponding to the levels mentioned above. After the testing, some individuals from each group were reassigned to make the groups more equivalent in student skills. The reading level range on the first testing included three levels, 1.0, 1.5, and 2.0, and each final group was configured to include at least one student per reading level. Gender was not considered as a research variable for this study.

The purpose of this design was to establish if significant differences existed among the baseline and the treatment phases: to determine if the students receiving the treatment were improving their reading fluency

and comprehension more than the untreated students. For this purpose, differences were established among the treatment phases and the groups.

Inter rater reliability was established prior to data collection. Two independent judges rated and scored 20 recorded samples of responses for each of the skills being measured. Kappa categorical agreement statistic, a conservative measure that accounts for chance agreement, was also used.

To control for invalidity due to instrumentation, a counterbalance technique was used. Seven different passages were administered to all students. Each student within the group received a different sequence of passages. All the students were tested every two weeks for a period of 12 weeks. Two measures were used to evaluate improvement: reading fluency and reading comprehension scores.

In this design, the dependent measures included: (a) oral reading fluency (ORF) reading scores of wcpm on the semi-weekly equivalent probes, and (b) reading comprehension scores (from post-reading questions) for the same Spanish reading probes. Visual and statistical comparisons between baseline and treatment phases and between groups permitted judgments about the efficacy of the intervention.

Student Level of Engagement

Because student engagement level in the RN program was a concern and could easily be measured from student daily records, after the study each group was sub-divided into "low-engaged" (12 Grade 1; 13 Grade 2) and "high-engaged" (12 Grade 1; 16 Grade 2) students. Level of engagement was based upon the average number of reading attempts

per week documented (by a mark on the reading graph) over the 12 weeks in students' cumulative folders. In this study, low- and high-engaged results were analyzed separately.

Treatment Fidelity

In addition to measuring levels of engagement by the student participants, treatment fidelity was monitored through direct observation during weekly visits to individual classrooms by a member of the research team. In addition, the researcher completed a "fidelity of implementation checklist" at mid-program for each classroom. Prior to and after completion of the fidelity checklist by the visiting researcher, teachers monitored themselves on the same checklist. Remedial support was offered by the research team when fidelity concerns were detected by either classroom teachers or by the researcher-observer.

Results

Student Level of Engagement

The amounts of improvement shown by students in the high-engagement (HE) group were large enough to make a difference in daily classroom performance (Suen & Ary, 1989). The size of improvement can be gauged in part by comparing the growth of these students with national norms and performance standards for ORF scores (Fuchs, 1993; Hasbrouck & Tindal, 1992). According to these guidelines, most HE students made progress exceeding ambitious goals of three words per week. The students in Grade 1 started the intervention reading at an average of 37.2 wcpm but were at 59.3 wcpm at the end of the intervention, reading at the expected fluency level for first graders, 60 wcpm (Hasbrouck & Tindal, 1992). The second graders

started at an average of 60.7 wcpm and ended at 87.2 wcpm, a significant improvement but still below average for second graders at the end of the school year, 94 wcpm (Hasbrouck & Tindal, 1992). The improvement in wcpm was statistically significant for both grades.

ORF Progress

Over the 12 weeks of this study, the 24 students in Grade 1 improved their rates of oral reading fluency (ORF), an average of over 22 words correct per minute (WCPM), from 37.2 in week 1 to 59.3 in week twelve. Grade 2 students improved even more--26.3 WCPM (from 60.7 to 87.2). This amount of improvement compares very favorably with the generally expected rate of improvement of realistic goals of 2 words per week or ambitious goals of 3 words per week. This is according to the guidelines for projected growth for student performance in standardized curriculum based measurement (CBM) measures of reading provided by Fuchs (1993) and Hasbrouck & Tindal (1992). This improvement was statistically significant for both grades ($t_{23}=8.5$, $p=.0001$; $t_{28}=12.4$, $p<.0001$).

Comprehension Progress

There was also improvement in reading comprehension. The 24 students in Grade 1 improved their comprehension scores significantly by 35 percentage points, from 64% to 89% correct. At Grade 2, students also improved significantly, from 70% to 91% correct. Another measure of improvement, effect sizes, were computed on student improvement from one phase to the next and from the first to last assessment. In both tests, effect sizes were substantial enough to be noticed in classroom performance.

Discussion

The purpose of this intervention was to find if the students who spent a longer span of time receiving the intervention would improve in oral reading fluency and reading comprehension. The results suggested that the length of the intervention was not a crucial factor, as long as the students practiced accordingly. Thus, students who practiced the most (HE Groups), regardless of the time span of the intervention, were the ones who improved the most with very few exceptions. This was based on analysis of the students' personal timing booklets and graphs.

Possible Reasons for Differences in Levels of Engagement

Teachers. The observations conducted during this study suggested that the amount of student practice was closely tied to teacher involvement. The teacher was apparently needed to keep the students on task, provide quiet time, and motivate them. The teacher also visited students individually and provided timing opportunities for students to meet their ORF goal and move to the next level. The teacher was in charge of several defined tasks: a) The teacher had a learning center with materials and equipment necessary to practice. The center included a tape recorder, earphones, stopwatch, tapes and booklets in addition to the student's personal folder. b) The teacher was also in charge of monitoring the student, in regards to timing, and checking that each step was followed before advancing to the next level. c) The teacher provided students with structured time in the daily schedule to practice.

Thus, teachers have to have classroom structure and management in place in order to

implement the intervention. Structure and classroom management are apparent factors in the success of this intervention. Therefore, it is suggested that researchers select teachers participants very carefully in future studies.

Fidelity of implementation was an important factor in this intervention as described earlier. Several measures were taken to assure fidelity. Each classroom was visited on average of one time per week to monitor implementation. A fidelity of implementation checklist was completed in mid-program for each classroom as part of a class visit. Teachers were previously trained in accordance with the checklist, and were asked to self-monitor to ensure that critical components were always in place. Nevertheless, in one of the first grade classrooms the teacher was absent for several days during which time, (over a week on and off) the students did not receive the intervention. Interestingly enough, the checklist for the other first grade teacher on a different campus showed at various times that items such as: completed, accurately, stay focused, and not interrupted were marked as "mostly" and "partly" only.

Observations during this intervention suggested that differences in fidelity of implementation existed between first and second grade classrooms. It was observed during the monitor visits that in both first grade classrooms the intervention materials were not always in the designated place and at times were not available, especially when the teachers were absent. On the other hand, the checklists for both second grades were marked in the same items as previously mentioned above with "positive" at all times. This meant that the students had completed their read along, independent practice

reading, checkout reading with teacher, graphing, and answering of questions for comprehension. These items were also marked as done "accurately," "stay focused," and "not interrupted." Thus the differences in fidelity of implementation between first and second grade classroom were evident.

Students. In regard to the students, motivation may have played an important role in this intervention. Some students were not motivated to practice as much as others. Age and motivation are also related; older children are more cognizant of their internal locus of control. The older the child the more he can understand that his success in reading is based more in his effort than in external reasons such as fate, luck, and sheer intelligence (Witrock, 1986).

We could observe that consistently in second grade even Low Engaged students improved to some extent. We also found that the older students obtained better results than the younger students. Thus, it was observed that the older students appeared more ready to learn than the younger students.

Teacher/Student Interaction. This interaction may have also played a part regarding the differences in levels of involvement of the students. In every classroom we can find students with different learning styles. For instance, there are students who can learn better in a structured environment and others who do best without so much structure. In this study, two very distinct approaches to teaching were evident. One approach was very structured and the other was very relaxed. Because students have different learning styles and are not necessarily grouped with a compatible teacher, student/teacher interaction is thus affected. It was observed that low achievers

benefited from this intervention in part because they were trained to set up reading goals and at the same time they were constantly monitored by the teacher. The students were reminded by the teacher that they had to practice three times a week. Low achievers had to be reminded more often at first but it was observed that by the third week low achievers were practicing on their own. The fact that the teacher had to time the students after they had practiced independently, also helped the low achievers. These students looked forward to be reaffirmed every time they made progress, which was every time they practiced at least three times independently. These students were competing with themselves and not with others, so they were winners every time they made progress. Teachers also realized that as a result of this intervention they knew very accurately the reading level and difficulties of their students. On one hand, they were assisting those who needed the extra help and on the other, they were challenging advanced students to pursue higher reading levels. In terms of transitioning from Spanish to English reading, at the end of the intervention there was one student who had finished all the second grade second semester RN stories and was reading already at the third grade level, second semester, in Spanish. This girl was a high achiever and wanted to continue with this reading program, so she asked the teacher if she could start with the next level stories, at the third grade level. Since at that time only RN first and second grade stories were translated specifically for this intervention, the teacher decided to transfer her to English reading. She started this student with the RN English stories at a lower reading level than what she was reading in Spanish. The teacher placed her at her English reading level

using RN placing tools. Absenteeism of both students and teachers may also have played an important factor in why some students did not practice as much as others. These findings are consistent with the literature that states that low-achievers may be as capable of self-monitoring as high-achievers, although they may require support from external progress monitoring systems (Smith, 1991).

Final Remarks

It is important to mention some interesting points that were observed in this study.

Informal observations indicated that this intervention greatly increased students' motivation and self-esteem. The students in this study appeared motivated by the fact that their scores improved as they practiced. Every time the students were timed and passed to the next level, the teachers reinforced their success. At this point, the students could compare their progress against their last timed reading. The students were also reminded that they had a goal and that they needed to practice reading every day in order to reach it. This improved their self-esteem, in part, because again, they were not competing with other students but with themselves. Most importantly, all of the students were winners because they made progress, varying as it was. This informal observation agrees with the literature indicating that students can monitor their own progress, and their self-confidence increases as they read a passage repeatedly (Kann, 1983).

All the HE students participating in the intervention made significant gains in ORF with minor exceptions. These findings are supported by the literature, affirming that active practice time is a good index for opportunity to learn and

commonly relates to degree of skill improvement (Berliner, 1979; Stallings, 1980; Wyne & Stuck, 1982). They also made gains in reading comprehension. The gains, however, were not as significant in the latter. This was expected, because the RN intervention dedicates much more time to fluency practice than to vocabulary and comprehension. It is also true that for second language learners, comprehension is more difficult to improve, because comprehension is frequently compounded with a limited vocabulary and a narrow range of background experiences (Anderson & Roit, 1998; Wink & Putney, 2000). In addition, we can readily expect ORF to improve more quickly and easily in part because the metric used to assess (wcpm) is highly sensitive to growth over time. Its psychometric properties to assess fluency gains are much stronger than those of post-reading questions to assess comprehension. Finally, it has been noted that students must first obtain a level of fluent, or automatic, reading before they can attend sufficiently to text to improve their comprehension (Samuels, 1997).

It is important to know that overall second graders showed more improvement than first graders. Even the LE students in second grade made some improvement. As discussed earlier, this may have been due to age, maturity, skill development, and even increased motivation as a result of age and the relationship that exists between this and internal locus of control cognition (Wintrock, 1986).

Results for ORF comparisons between week 0 and week 12 also showed more evidence because consistent gains for all groups were found. Effect sizes (in standard deviation units) were very large (in terms of effect sizes) and were made consistently by HE students with minor

exceptions.

The comprehension results also showed that HE students produced effect sizes of two-to-four times the effect sizes of LE students. Effect sizes were large enough to be noted in daily classroom performance.

Results for comprehension pre-post growth showed evidence that all the students in both grades showed significant gains. The effect sizes were large enough for classroom importance. Nevertheless, no effect sizes approached the size of those obtained for ORF.

This study contributes to the existing foundation of empirically supported reading interventions in Spanish for use in the United States. For monolingual Spanish students to successfully exit from bilingual programs, they need accelerated progress in reading -

both in Spanish and in the transition to English (Bernal, 1994). Funding realities and different philosophical and political points of view are creating increased pressure to show improvements in reading for bilingual students in the early grades. This study indicates that if carried out with

fidelity, and with high levels of student engagement, short-term intensive interventions can have a noticeable impact in bilingual classrooms.

Subsequent Progress

A subsequent study was conducted by the principal investigator. This following study showed that out of the 53 students who successfully completed the former study, five students moved out of the school district and 39 students successfully exited the bilingual program. These students were successfully transitioned to the regular monolingual (English) classroom. It is also important to note that during the years that this intervention was implemented district wide in this school district the transitional bilingual program continued to make progress. The state assessment passing rates for Hispanic students improved from 69% to 76% 4 years after the intervention took place. These scores surpassed the improvement of district's White students by 10 percentage points over this same period of time.

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