

WORKING PAPER

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Research on Second Language Acquisition: A Democratic Educational Concept

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Research on Second Language Acquisition: A Democratic Educational Concept

There are four issues and levels of significance regarding research on second language acquisition in the areas of economy, best educational practices, lack of research, and research that is methodologically flawed. Each of these areas is related to democracy as we define it herein— the provision of and the access to equitable opportunities within the educational system. Each is discussed initially and then our own research is reported as one part of a larger picture that should be painted by many to address democracy in the research on second language acquisition and its impact specifically on Hispanic/Latino students.

Issue #1: Economics and Literacy

First, today's immigrants and English language learners (ELLs) in the U.S. face a vastly different situation than those who immigrated just a generation ago. Greater literacy demands have been placed upon students and workers, and much higher levels of English fluency are needed to compete in the U.S. economy; thus high levels of literacy are seen as necessary to improve one's social and economic condition. Today's economy is knowledge based, and to participate in it requires increasingly complex skills (Point & Werquin, 2000). Accordingly, the U.S. Census (2000) determined that a person with less than a high school degree would earn almost 60% less than a person with a bachelors degree or higher. Therefore, becoming a literate member of society is paramount to the U.S. economy and the general welfare of its citizenry.

The literacy situation has become critical as nearly 5.1 million children come to school from families where the home language is other than English ("National Progress Being Made in Serving Students with Limited English Proficiency," 2005). In Texas, alone, over 600,000 children were served in programs for limited English proficient students in 2003-2004,

accounting for 14.1% of the school population (TEA, 2003-2004). Of these children, 94% were Spanish speakers, and 87% were considered economically disadvantaged (TEA, 2003).

Nationally, in 2001-2002, ELLs comprised 9.64% of the enrollment in public elementary and secondary schools, and 79% of these students were Spanish speakers (National Center for Education Statistics, 2002). From 1979 to 2003, the population of school-age children increased by 19%. In contrast, during this period, the number of such children who spoke a language other than English at home increased by 161%, and the number who spoke a language other than English at home and who spoke English with difficulty increased by 124%. In 2003, of those school-age children who spoke a language other than English at home, 29% spoke English with difficulty. Spanish was the language most frequently spoken at home by those in homes where English was not the primary language (NCES, 2005).

Issue #2: Best Educational Practices for ELLs

Second, a problem exists in that there is still no clear understanding of how to best assist ELLs to acquire English as a second language in the most efficient and effective manner. There is considerable debate as to the means by which the ELLs learn best to most effectively develop English oracy and literacy proficiency. Some scholars and practitioners hold the belief that ELLs spend too much time in native language instruction, while others believe that ELLs should receive instruction in their native language over a longer period of time to have a better transition to the English language. Other scholars believe that the longer the child spends in native language instruction, the less likely the child is to make significant progress in acquiring English (August, 2002). However, without a grounded and more extensive research base that truly answers the question of the debate, the debate, itself, is illogical. Thomas and Collier (2002) conducted a landmark longitudinal study responding to the need to determine which language

support programs successfully promote the long-term academic achievement of ELLs, thus, attempting to answer the question of the debate—“which program type is best?” Following in Figure 1 is depicted a synthesis of their study and indicates, based on the data gathered, the longer a student stays in bilingual education or in a dual language program, the higher the academic English achievement level. Although their study lays the foundation for our study and

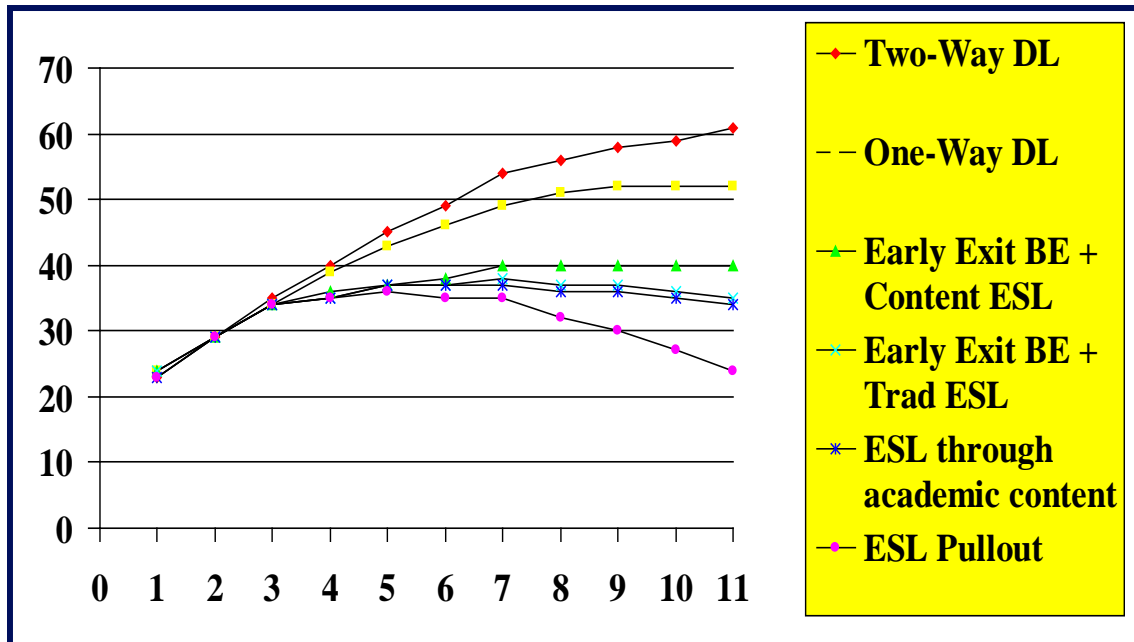


Figure 1. Thomas and Collier Study Results (2002)

future studies, it included in the sample, programs that met theoretical design features put forth by experts in the field; however, these programs were “typical programs” that occur with great variety from district to district and state to state, and sometimes even campus to campus. It is difficult to control for such variability within large-scale studies.

A more recent meta-analytic study by Slavin and Cheung (2004) indicated significant positive effects of bilingual education on reading performance, while “other studies found no differences—but in no case did positive results from an English-only strategy exceed those from a bilingual strategy... Even more surprising ... was the strength of the evidence in favor of

teaching students to read in both their native language and in English at different times of the day. This paired bilingual strategy was common in the 1970s, when many of the studies of bilingual education were conducted, but it survives today primarily in two-way bilingual programs, in which teachers instruct (typically) Spanish- and English-dominant students to read both Spanish and English, from kindergarten or 1st grade onward” (p. 53).

Issue #3: Lack of Research in Bilingual Classrooms

Third, there is a problem in the lack of research on the impact the classroom has in relation to acquiring English. This issue is significant in that most studies have not actually observed bilingual and English immersion classrooms in a large scale study to take into account instructional factors in the learning of English as a second language (Bruenig, 1998). In fact, few researchers have even directly observed instructional events in bilingual classrooms (Brisk, 1991, Breunig, 1998; Bruce 1995; Bruce 1997; Escamilla, 1992; Greene, 1998; Heras, 1994; Krashen & Biber, 1988; Strong 1986). Furthermore, no studies to date have intervened to enhance classroom instruction in Transitional Bilingual Education (TBE) or Structured English Immersion (SEI), and then studied the difference in a controlled environment. The impact of the classroom is unclear, particularly related to the language of instruction which creates an opportunity to learn in a specific language; therefore, it is critical to assess this because, based on the observational research that is available, research has determined that English has been used in bilingual classes as much as in all English classrooms (Strong, 1986) and that teachers in certain bilingual programs lacking in their use of Spanish (Escamilla, 1992). Lara-Alecio, Irby, Rodriguez (2001) found through their time sampling observations in 102 bilingual classrooms, PK-4, that more Spanish (67%) than English (20%) [13% were clarifications] was used. Meyer (2000) found in her research from among 2, 929 observations in bilingual content area

classrooms that third grade bilingual teachers were using 38% of their teaching time in Spanish and 45% of the time in English (other percentage of time was spend in clarifications of silence of the teacher). These amounts of usage were below the expected 50-50 use in third grade.

Issue #4: Methodological Flaws with Research

Fourth, some studies have been called into question because of methodological flaws and for failing to answer critical questions. Gersten and Baker (2002) suggested that research findings have failed to provide answers as to when it is best to introduce academic instruction in English to young learners and if native language instruction benefits the cognitive and academic growth of English language learners, while August and Hakuta (1997) suggested that the research community had not yet determined the best instructional methods for English language development. For example, the Ramírez study (1992) and the earlier Danoff (1978) were plagued with poor research designs with differing program models in different cities and with students tested at various grade levels. Greene (1997) found the Rossell and Baker (1996) research to have serious methodological flaws: (a) they applied inconsistent criteria in selecting studies to include in the meta-analysis, (b) they confused program types, (c) they understated the importance of major studies in the field, and (d) they did not apply appropriate meta-analytic methods. In a more recent intervention study conducted by McLaughlin, Snow, August, et.al. (2002), it was determined that the intervention was not clearly defined and varied by year and by teacher; again, the difficulty in control within school settings is demonstrated here. Gersten and Baker (2002) suggested that there might be a greater degree of control with smaller evaluation studies as opposed to larger ones. The comparison of differing districts and schools in large scale studies, as well as programmatic/curricular/instructional nuances within program types confound data.

Issues Connected to Our Research

Our research reported herein through the interventions addresses the problems related to the need for higher levels of English fluency and literacy as our research begins at K-3 to lay the groundwork for success for a better future for ELLs by testing a structured English curriculum for ELL students in both English immersion and in transitional bilingual education. Additionally, our research critically assesses the difference between typical practice programs and enhanced programs for ELLs in a controlled environment. Specifically, we are controlling for program type and school effects and are enhancing and transforming the typical programs with feasible interventions that schools can easily and effectively implement. Our study addresses the need for direct observational data related to language of instruction within bilingual classrooms and also addresses other poignant instructional practices specific to bilingual classrooms. We also apply rigorous quasi-experimental methods controlling for the problematic confounding variables that plagued previous studies.

Theoretical Framework

Several theories of second language learning exist. Some expand upon a theory of linguistic development (Broselow, 1988; Trueba, 1989), while others, such as Krashen's (1985) "input" theory, focus on learning through communication in natural settings. These theories do not adequately account for what occurs in a classroom, nor do they help in planning curriculum and instruction for programs for ELLs. Trueba (1989) stated that "teams of researchers and practitioners ultimately need to find more useful theories and possible explanations that permit them to improve instructional design" (p.21). Lara-Alecio and Parker (1994) developed a pedagogical model/theory to address these overlooked issues for ELLs. (Lara-Alecio is one of the PI of the proposed research.) As reported in more detail by Lara-Alecio & Parker (1994), the

Transitional Bilingual Pedagogical (TBP) Theory originally was developed to identify the interactions of four major instructional dimensions within bilingual classrooms; however, since that time, the Bilingual Observation Protocol that was developed and validated from the Theory (Bruce, 1997; Bruenig, 1998), has been applied successfully to evaluation research in, of course, transitional classrooms, but also, dual language and SEI classrooms. The TBP Theory consists of four dimensions: (a) Language Content, (b) Language of Instruction, (c) Communication Mode, and (d) Activity Structures. This Theory, in Figure 2., will allow us in our proposed research to assess the occurrences of language of instruction, language of response in relation to communication mode, cognitive response levels, and instructional activity structures within the classroom within subject matter.

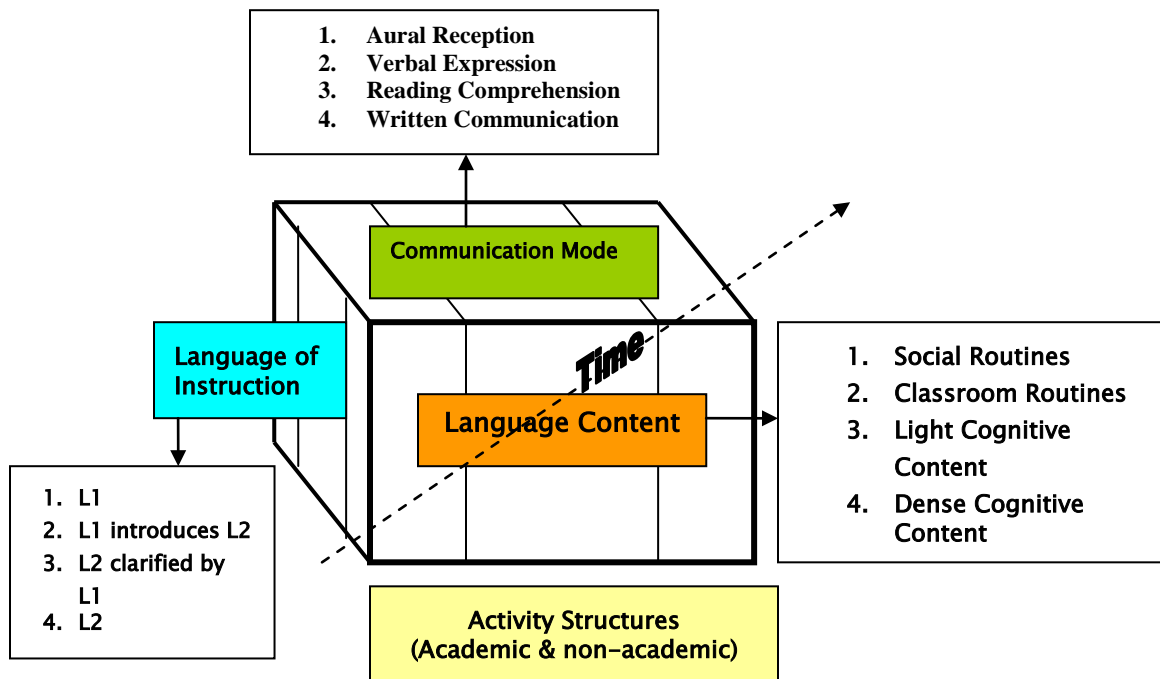


Figure 2. The Four Dimensional Transitional Bilingual Pedagogical Theory

Language Content

The model's "Language Content" dimension derives from Cummin's (1986) influential language acquisition theory distinguishing Basic Interpersonal Communications Skills (BICS) and Cognitive-Academic Language Proficiency (CALP) language competencies. While the BICS and CALP distinction was initially useful, the main limitations (Trueba, 1989) of this simple dichotomy are that it has obscured all classroom communication on a continuum between BICS and CALP, and has discouraged examination of student progress in this vast "middle area." The Lara-Alecio and Parker Theory reformulates BICS and CALP as malleable levels of discourse, rather than as fixed or long-term abilities. The Theory includes four levels of language content: (1) Social Routines (e.g., social exchanges and conversation), (2) Classroom Routines (e.g., repetitive school-related tasks), (3) Light Cognitive Content (e.g. discussing community news), and (4) Dense Cognitive Content (e.g., entailing conceptually demanding, specialized vocabulary; critical thinking).

Language of Instruction

The Model's second dimension, the "Language of Instruction," presents four progressive uses of native [(L1)(Spanish)] and second [(L2)(English)] language in the classroom: (a) content presented in L1 (Spanish), (b) L1 (Spanish) introduces L2(English), (c) L2 (English) supported and clarified by L1 (Spanish), and (d) content presented in L2 (English). This dimension acknowledges the concept of "transition" (as in "transitional bilingual"), and affirms the importance of the content areas as rich sources of language input for ELL students (Cummins, 1986) and as vehicles for language learning (Krashen, 1985). Language of Instruction usually refers to the teacher's use of language. However, it also may refer to the reading text used, or the language used by students in cooperative learning groups. Although the model depicts transition of language, the model can also be used, singling out either L1 or L2, as would be in an all-

Spanish or all-English classroom (or as applies to other languages); thus, there is applicability to other types of programs other than transitional bilingual, with evaluation studies supporting that application (Rumbo al Exito, 2001; BESI, 2002).

Communication Mode

The Model distinguishes two receptive models (Aural, Reading) and two expressive language modes (Verbal, Writing). Cummins' (1986) "reciprocal interaction model" and the "context-specific" model of Diaz et al (1970) both support the practice of multiple modalities for second language acquisition. These modalities (especially Reading, Writing, and Verbal Expression) also are important curriculum skill areas. Their differentiation within the TBP Theory indicates that English facility may not be unitary, but may vary by communication mode.

Activity Structures

Activity structures are teacher-structured, stable, recurring learning situations, each with its own expectations for teacher and student communication (Brophy & Evertson, 1978; Doyle, 1981). Communication that is expected and fostered in one activity structure may be inappropriate and discouraged in a second. Our traditional pedagogical emphasis on "the lesson" with objectives, curriculum content, and assignments, unfortunately ignores "activity structures." Influenced by Vygotsky's notion of Zone of Proximal Development (Cole & Griffin, 1983), classroom ethnographers similarly describe the "structure of events," each type of structure with its own opportunities, implied values and expectations for student participation (Erickson, 1982). Activity structures are operationally defined in the Lara-Alecio and Parker Theory as combinations of (a) type of teacher behavior (e.g. directing, leading, evaluating, observing), and (b) the expectation for student responding (e.g. listening, performing, discussing, asking questions, answering questions, cooperative learning). A few classroom activity structures (e.g.

time spent disciplining, transitions between classes) are considered non-academic. Most classroom activity structures are defined by combinations of two activities, signifying the main teacher behavior plus the primary student expected behavior (Parker, Hasbrouck & Tindal, 1994). Thus when a teacher mainly lectures or presents information, and students are mainly expected to listen, the activity structure is identified as lecture/listen (Lec/Lis). Activity Structures of the TBP Theory are described in greater detail in Appendix A.

The TBP Theory guides the study as it allows for an integrated view of each classroom within either the TBE classroom or the SEI classroom and between the enhanced and typical classrooms within those program types.

Methodology

The purpose of our research is to implement a rigorous, longitudinal evaluation of alternative instructional models for early elementary students whose first language is Spanish with the intended result being improved English proficiency and reading achievement. English language proficiency is defined in our grant as: the ability to master the basic linguistic elements (listening, speaking, reading, writing) necessary to succeed academically in the school environment. Specifically we seek to answer the following four questions:

1. How effective are the structured English immersion and transitional bilingual education programs in developing English proficiency and reading achievement for ELLs whose first language is Spanish?
2. Is there a difference in the effectiveness of each model type when instruction provided is enhanced to reflect best practice in language and literacy instruction as compared to instruction typically provided within each program type?

3. Are there student, teacher or school characteristics that predict success in English proficiency and reading achievement for ELLs whose first language is Spanish?
4. Do student characteristics interact with program type (enhanced or typical), and/or teacher or school characteristics to predict success in English proficiency and reading achievement for ELLs whose first language is Spanish?

In order to answer these questions, we are conducting a four-year longitudinal study comparing enhanced and typical practice versions of SEI and TBE programs. During year one of the grant period, we prepared and piloted materials and routines for each enhanced program type. The longitudinal study was actually begun in 2004-2005 during the kindergarten year with identified classrooms of children and is in progress in the second year of implementation..

Year 1(Phase 1): Development and Pilot Work

In the first year we prepared, piloted, and refined our enhanced versions for each program type (i.e. SEI or TB) at kindergarten grade level. Further we developed staff development materials including videos and case studies to be used in subsequent years. We piloted all of the materials within one school in Houston, Texas. In this year we piloted and refined our observational tools and qualitative protocols for fidelity. We placed the observational tool on a handheld PDA. Finally, we refined our assessment battery, as recommended by the funding agency, based on measurement information coming from the National Institute for Child Health and Human Development (NICHD) funded bilingual research project, "Development of English Literacy in Spanish Speaking Children." An Advisory Board and the research team met at the beginning and ending of the pilot year; additionally, meetings with the administrative staff occurred.

Phase 2: The Longitudinal Study: Baseline and Impact Data (Kindergarten)

Pre-testing of students with established measures on oracy, vocabulary, literacy, and comprehension, cognition, and nonverbal IQ, in both the control and experimental classrooms occurred at the beginning of the year of the longitudinal cycle. Intervention activities occurred in the enhanced program types 2004-2005 year with training and implementation monitored carefully. Post-testing occur during the end of the the school year cycle. All *baseline* data were analyzed at the end of the first implementation year of the project. Students matriculated to first grade in Fall, 2005, and continue in the same intervention they were assigned in kindergarten. The training, testing, and implementation cycle has begun with first grade level students and teachers.

Research Design and Sample

The initial 2x2 factor design, established in 2004, included random assignment of schools to either enhanced or typical practice for both Structured English Immersion (SEI) and Transitional Bilingual Education (TBE) program types. Three additional schools were added to the design to augment the sample size in the SEI typical practice group (to be discussed below). After parental consent was received, 889 native Spanish speaking students were pretested. During the academic year, 67 students moved resulting in a final sample size of 822 students distributed across the four cells as depicted Table 1.

Table 1. Research Design

	SEI	TBE	Total <i>n</i>
Enhanced (11 schools total)	Schools: 10 Classrooms: 13 Students: 174	Schools: 10 Classrooms: 17 Students: 290	Classrooms: 30 Students: 464
Typical Practice (12 schools total)	Schools: 12 Classrooms: 19 Students: 176	Schools: 9 Classrooms: 11 Students: 182	Classrooms: 30 Students: 358
Total	Schools: 22 Classrooms: 32 Students: 350	Schools: 19 Classrooms: 28 Students: 472	Classrooms: 60 Students: 822

Of the eleven schools receiving an enhanced treatment, nine schools received both enhanced SEI and TBE, while the remaining two schools received either enhanced SEI or TBE. Of the 12 schools receiving the typical practice treatment, nine schools received both typical practice SEI and TBE, while the remaining three schools received only SEI. Those three schools were added in November, 2004, due to an unexpectedly low return rate on parental consent forms. Multiple attempts were made within the nine schools to obtain parental consent from a greater number of students. After our fifth trial of sending home consent forms, our sample size within the typical practice SEI cell was only 96 students. Thus, we decided we were not going to be successful in obtaining additional parental consent forms, and, therefore, we recruited three additional schools with similar demographic profiles. Parental consent was obtained, and 90 additional students were pretested. After attrition, 176 students were posttested in the typical practice SEI cell. Student demographic data are presented in Table 2.

Table 2. Demographic information of students participating in Project ELLA

	SEI (n = 174) Experimental		SEI (n = 176) Typical		TBE (n = 290) Experimental		TBE (n = 182) Typical		F (3, 818)	χ^2
	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)	n (%)	M (SD)		
Age		67.35 (4.83)		67.02 (4.47)		67.26 (5.08)		66.81 (4.35)	0.496	
Gender										
Male / Female	99 (56.8)		105 (59.6)		144 (49.8)		97 (53.3)			0.17
Race										
Hispanic	177 (100)		176 (100)		289 (99.7)		182 (100)			
LEP	172 (98.9)		174 (98.9)		290 (100)		180 (98.9)			
Nonverbal ability index ^a		94.6 (19.22)		100.83(19.13)		96.75(19.02)		96.01(19.73)	3.22*	

* $p < 0.05$ ^a SEI-T > SEI-E = TBE-T = TBE-E

All students participating in this study are identified by State criteria as being limited English proficient and have a Home Language Survey indicating that Spanish is the primary language spoken in their home. To determine the number of classrooms and students we conducted a power analysis to ensure that our sample size would allow for the detection of educationally relevant, but relatively small effect size differences between our groups. Thus, we attempted to begin our study with a larger sample that would allow for significant amount of attrition across the four years. Thus, we had anticipated beginning this research with a sample of 288 in each of four conditions (i.e. Enhanced SEI or TBE , Typical SEI or TBE) for a total of 1152 students. Allowing for approximately 35% attrition, we should maintain approximately 175 students in each condition, for a total sample of 700 students at the end of third grade. However, as indicated and by natural conditions occurring in school settings, we were only able to begin the study with 822 students.

Students were placed in either SEI or TBE by their respective schools according to the Language Proficiency Assessment Committee. Schools are mandated by state law to place

Spanish Speaking students with low English in TBE classrooms. However, parents have the right to waive bilingual education. These students are placed in SEI classrooms. Because we are unable to change the state law (Acts 1995, 74th Leg., ch. 260, § 1, eff. May 30, 1995), random assignment to program type was not possible. However students in each program type attended the same school and lived in the same neighborhood. Thus, possible effects of school, socio-economic status, and culture of specific neighborhoods were diminished. To further mitigate the inability to assign students randomly to program type, we attempted a robust matching scheme to assure initial language and literacy equivalency of our groups; however, due to the nature of the program types, equivalency of groups was difficult to establish across intervention types of SEI and TBE. Within types between control and experimental groups, basic equivalency was established.

Description of Conditions

Typical Structured English Immersion for grades K-3 is a program that is currently taught in Aldine ISD with all subjects taught in English using typical English as a Second Language (ESL) strategies. In a typical program, the students receive 45 minutes of ESL with no support from our research team.

Typical Transitional Bilingual Education for grades K-3 is a program that begins with a 80%(Spanish) /20% (English) model in K and moves to a 50/50 model in grade 3. In a typical program, the students receive 45 minutes of ESL with no support from our research team.

Enhanced Structured English Immersion included 75 minutes of a structured ESL curriculum designed by our research team. Intensive structured English instruction was built from three major components: (a) 50 minutes--*Santillana Intensive English* (Ventriglia & Gonzalez, 2000), (b) 10 minutes--Daily Oral Language using *Question of the Day* (Lakeshore, 1997) and (c) 15

minutes-- *Story Telling for English Language and Literacy Acquisition [STELLA]* (Irby, Lara-Alecio, Mathes, Rodriguez, Quiros, & Durodola, 2004). (Additional time – 15 minutes-- was spent with the lowest performing students on communication games.) A detailed scope and sequence was provided to guide teachers in the implementation of the different instructional model interventions. In addition, itemized lesson plans for the intervention components were provided to all experimental teachers. These lesson plans reflected the curriculum alignment between the state, district, and instructional program academic standards and objectives.

Enhanced Transitional Bilingual Education for grades K-3 is a program that begins with a 70%(Spanish) /30% (English) model in K and moves to a 40/60 model in grade 3. The same interventions occurred in the Enhanced TBE program classrooms as did in the SEI classrooms as outlined above.

Intervention: Enhanced Curriculum in Experimental Classrooms

Tier I intervention was comprised of professional development with the enhanced treatment teachers who received bi-weekly staff development sessions on the following strategies: (a) enhanced instruction via planning, (b) support for student involvement, (c) vocabulary building and fluency, (d) oral language development, (e) literacy development, (f) reading comprehension, and (g) parental support and involvement. Biweekly, the teachers reviewed the Story Retelling and Higher Order Thinking for English Language and Literacy Acquisition (STELLA) and upcoming lessons of Santillana (the ESL language program used). They also reviewed the communications games developed by the research team for the paraprofessionals to use. Paraprofessionals were trained monthly and were provide the program, Communication Games (Lara-Alecio, Irby, & Quiros, 2004), each day for the students. Four on-site coordinators (full-time employees) monitored and participated in all grant activities.

Additionally, a parent involvement program was implemented during the second semester. Teachers were trained in working with parents on literacy development. Two 45-minute training sessions were provided to the parents by the teachers in the enhanced condition. Eighty percent of the parents attended.

Tier II of instructional intervention was provided for the students and the very lowest performing students in experimental classrooms. This instruction for the lowest students was composed of communication games (20 minutes) delivered by highly trained paraprofessionals. Student Intervention included small group oracy and literacy instruction with all students in the classroom. Moreover, students received intensive English tutorials by trained paraprofessionals delivered in small groups to the lowest achieving students. In addition, ESL instruction was structured using the Santillana Intensive English Program, daily oral language by Lakeshore and a systematic storytelling and retell component referred to as STELLA: Story-retelling and higher-order Thinking for English Literacy and Language Acquisition.

During the preparation stage of the study, publishing company representatives were asked to demonstrate research-based teaching materials and instructional programs for second language learners. Each company was allotted thirty minutes to present their product information. The majority of the companies brought sample books and instructional materials to be viewed by the research team and program coordinators. In addition to their available instructional materials and supplements, most companies described the type of professional development training programs their company offered. The research team, program coordinators, campus principals, and the district bilingual director asked the representatives questions about their products and how these could be linked to the purpose and goals of Project ELLA.

After reviewing the sample materials and meeting notes, it was decided that Santillana Intensive English program offered by Santillana best suited the needs of Project ELLA. Therefore, the Santillana Intensive English program was selected as the core curriculum for kindergarten. Santillana presented research studies conducted in Florida that showed its effectiveness in teaching native Spanish speakers English. In addition to the program being research-based, it is student-centered. The program encourages the students to be actively involved in their own learning. This program was created by ESL teachers and tested in bilingual and SEI classrooms in Florida and California. Santillana's curriculum is based on academic content such as math, science and social studies. In addition, one major objective is to increase the students' English vocabulary bank. The format of the program is easy to follow. Everything the teacher needs to implement the program is found in one kit. The program consists of lesson cards that have the lesson plan for the teacher with scripted discussions on one side and a picture for the students on the other side (Santillana, 2004). The program is teacher and student-friendly, yet addresses the language needs of second language learners. Santillana unit themes were used to align the other curriculum intervention components such as the daily oral language and story-retell. The Santillana was aligned to the Texas standards for English as a second language program.

Lakeshore's *Question of the Day* chart was selected for the daily oral language component. This chart has pre-printed questions that help spark student discussion on a variety of topics. The teacher places the pre-selected question of the day in a pocket chart along with three to four answer choices. The students would address the question by answering in complete sentences. The students then placed cards with their names under the selected column that matched their answer choice. This created an instant graph that the teacher used to make

comparisons, generalizations, and ask the students further questions. The pre-selected questions and answer choices were chosen based on the Santillana themes. Therefore, the questions and answer choices were aligned to Santillana.

Story Retell for English Language and Literacy Acquisition (STELLA). Robert Slavin's Story Telling and Retelling (STaR) along with Patricia Mathes' Literature Read Aloud and Story Retelling approach were used as models to format Project ELLA's STELLA. STELLA was designed to be delivered in a fifteen minute lesson during the ESL 75-minute block. Teachers received scripts prior to the week of story introduction allowing them time to practice. Teachers introduced one book a week accompanied by a script which included three vocabulary words per book, a pre-selected ESL strategy aligned to the story, and a set of different leveled questions identified as easy, moderate, and difficult. Most of the activities included a mixture of dramatization and music to allow students to use their motor skills. Students were encouraged to work in pairs and/or small groups.

Once Santillana Intensive English program was selected as the core curriculum, the alignment process began. The first step in aligning the curriculum was to review Santillana's scope and sequence that consisted of the lesson number, lesson goal, language arts skills and strategy, extended cross-curricular activity, and the Teacher of English to Speakers of Other Languages (TESOL) National ESL Standards. Although this scope and sequence contained essential information, it did not include elements critical to Project ELLA. Therefore, the necessary adjustments to tailor the scope and sequence to the needs of the study and to fit Aldine ISD's expectations were made.

Since the study was being conducted in a Texas school district, it must comply with state standards. The academic standards in Texas are referred to as the Texas Essential Knowledge

and Skills (TEKS). Educators across the state of Texas use the TEKS as a guide when planning their lessons and assessments. In fact, the Texas Assessment of Knowledge and Skills (TAKS) test is based on the TEKS for that particular grade level. Therefore, the program coordinators needed to incorporate the ESL TEKS objectives and Aldine ISD's benchmark targets to the scope and sequence. In addition, the vocabulary target words, a list of core materials, the daily oral language, and the title of the STELLA books were added. Since the language arts skills and strategies and the extended cross-curricular activities were not as pertinent to the study as the other elements previously mentioned, they were removed from the scope and sequence. However, the teacher can find that information on the individual lesson cards.

Once the scope and sequence was completed with the additional information, its contents were the guide for the other interventions. When planning STELLA, the story retell component, the scope and sequence was used to align the themes of the lessons and the general topic of the storybook. For example, the first week of the Santillana Intensive English lessons was centered on learning the program's character's names. The story *David Goes to School* by David Shannon was used because it focused on the importance of following rules and introduced the character's personality traits. All the other storybooks were selected using the same process. The theme from the Santillana weekly lessons was used to choose the STELLA storybook for that week.

The scope and sequence was also used to align the ESL strategies the teachers were trained on designated in Tier I: Teacher Enhancement to the Santillana Intensive English program. For example, the first week of lessons in the Santillana Intensive English program the students learn to introduce the program's characters and themselves using Total Physical Response (TPR). Therefore, the training session for that week focused on the methodology and the research that supports TPR. The ESL Strategies selected for teacher training have been

identified as the most effective ESL strategies (Herrell & Jordan, 2004). The following ESL strategies were selected for kindergarten: Academic Language Scaffolding-Visual & Modeled Talk, Bridging, Communication Games, Dramatization & Scripting, Interactive Read Aloud, Leveled Questioning, Manipulative & Realia Strategy, Preview/Review, Partner Work & Tutoring, Sorting Activity, Think Aloud, and Total Physical Response with Music & Movement. The parents were involved by receiving a take home book with lessons for the week for part of second semester (we were still trying to determine the best parent involvement strategy and how to measure that as opposed to Saturday optional classes for the parents—we did not have a significant number of participants so we tried another model which we will continue this fall.) Alignment of the assessments with the Texas standards and the objectives of testing oracy and literacy (specifics) and the curriculum are in process of being aligned for first grade assessments.

Quantitative Data

Because we have just completed our first of four years with our cohort of native Spanish speaking students, it is not yet possible to address these questions directly. Answers to these four research questions will be obtained after the longitudinal aspect of this research is complete and all children are required to be instructed in English (i.e. after 3rd grade). However, we are able to answer a number of related questions that ultimately will lead to answering the four overarching questions. After all kindergarten data are finally analyzed, we will be able to determine if our enhanced models, which reflect recognized best practices for teaching English Language learners, are more effective than typical practices. We will also be able to determine if student, school, or teacher characteristics interact with the efficacy of kindergarten language and literacy instruction. At the present time, all pretest data have been analyzed. Posttest data have been scanned, verified, the final data set is being cleaned. All final data for year one will be completed by the Southern Methodist University Data Center by December, 2005.

Pretest Equivalency

For measures of English language, the mean raw scores of the SEI conditions were statistically significantly greater than those of the TBE conditions for the most of the subtests. The converse was true for Spanish Measures, with the mean scores of the TBE conditions being greater than those of the SEI conditions for most of the subtests. No statistical differences between conditions were detected between enhanced and typical TBE conditions. However, differences at pretest on several measures were detected at pretest between enhanced and typical SEI conditions. English pretest raw scores, as well as F-values are presented in Table 4. Spanish –pretest scores and statistics are presented in Table 5.

SEI Conditions. For measures of Spanish, the SEI-typical condition was statistically significantly different from those for the SEI-enhanced condition for the IPT, all WLPB subtests, Letter Names, Rapid Letter Naming and Word Reading. For the Blending phonemes into words subtest, the SEI-enhanced condition was equivalent to the two TBE conditions. On Letter Sounds, Rapid Object Naming and Blending Phonemes, the SEI-typical was statistically significantly greater than that for the SEI- enhanced condition.

Among the subtests administered in English, the SEI-typical condition was statistically significantly greater than the SEI-enhanced condition on the IPT, all WLPB subtests, IRT Word Reading, Blending Phonemes into words, Letter Names and Letter Sounds. No statistical differences were detected between SEI conditions for Rapid Object Naming and Rapid Letter Naming subtests for SEI- enhanced condition. While interpreting the raw scores of both Rapid Object Naming and Rapid letter naming measures, it should noted that a higher score corresponds to lower performance.

Table 4. Initial Equivalence of Raw Scores on Spanish Assessments by Condition

Measure	SEI (n = 174) Enhanced		SEI (n = 176) Typical		TBE (n = 290) Enhanced		TBE (n = 182) Typical		F (3, 818)
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	
STOPP									
^e Rapid Object Naming ^c	222.85	86.34	247.50	79.46	142.24	72.16	159.07	81.51	84.93*
^e Rapid Letter Naming ^b	288.04	47.75	290.62	41.28	206.39	107.93	222.18	102.71	53.40*
Blending Phonemes into Words ^a	4.46	3.52	6.67	4.37	5.21	3.84	5.37	4.90	7.67*
WLPB									
Picture Vocabulary ^b	12.58	4.52	12.04	4.35	16.78	4.17	16.22	4.63	64.04*
Listening Comprehension ^b	4.05	3.69	3.57	3.79	7.39	4.25	6.96	4.51	46.50*
Verbal Analogies ^b	2.64	2.47	2.74	2.47	3.41	2.40	3.38	2.46	5.54*
TIMES									
Letter Names ^b	5.06	7.42	4.58	6.41	17.84	8.81	18.49	9.47	160.29*
Letter Sounds ^d	7.21	9.19	10.86	7.85	16.84	9.73	18.60	9.73	56.13*
Word Reading ^b	0.56	2.39	0.76	2.90	3.12	7.21	2.87	7.58	10.46*
IPT ^b	11.35	5.85	10.02	5.66	15.29	6.16	14.89	8.30	32.88*

*p < 0.01

^a SEI-T > SEI-E = TBE-T = TBE-E ^b SEI-T = SEI-E < TBE-T = TBE-E

^c SEI-T < SEI-E < TBE-T = TBE-E ^d SEI-E < SEI-T < TBE-T = TBE-E

^e a higher score corresponds to a lower performance

Table 5. Initial Equivalence of Raw Scores on English Assessments by Condition

Measure	SEI (n = 174) Enhanced		SEI (n = 176) Typical		TBE (n = 290) Enhanced		TBE (n = 182) Typical		F (3, 818)
	M	(SD)	M	(SD)	M	(SD)	M	(SD)	
CLOPP									
^d Rapid Object Naming ^b	140.84	71.22	152.63	78.77	253.08	79.89	241.77	85.57	112.37*
^d Rapid Letter Naming ^b	183.84	100.72	165.80	105.15	281.48	58.64	276.96	65.79	111.24*
Blending Phonemes into Words ^a	5.22	3.62	7.61	4.22	4.60	3.25	4.67	3.59	26.01*
WLPB									
Picture Vocabulary ^c	15.99	4.43	18.15	5.16	12.28	4.78	11.70	5.26	76.39*
Listening Comprehension ^c	5.13	4.29	6.49	4.79	1.98	2.81	1.78	2.48	82.43*
Verbal Analogies ^c	1.86	1.72	2.49	2.24	1.24	1.69	1.02	1.65	24.73*
TIMES									
Letter Names ^c	17.36	8.84	20.41	6.66	5.74	6.74	6.56	6.99	206.85*
Letter Sounds ^c	14.24	8.20	17.78	7.93	6.55	6.88	6.89	6.69	111.33*
IRT Word Reading ^a	1.26	2.85	4.39	5.23	0.94	2.61	1.10	2.91	42.41*
IPT ^c	14.05	8.81	17.87	10.89	7.47	5.38	6.99	4.52	96.66*

*p < 0.01

^a SEI-T > SEI-E = TBE-T = TBE-E ^c SEI-T > SEI-E > TBE-T = TBE-E

^b SEI-T = SEI-E > TBE-T = TBE-E

^d a higher score corresponds to a lower performance

Strategy for Analyses. Due to the need to add students to the SEI-typical condition, some students in the SEI-typical condition were assessed approximately 6 to 8 weeks after pretesting occurred for all other participating students. Given the overall higher performance levels on pretest of this added group, it appears that a learning effect occurred, resulting in higher

performance at pretest. We make this assumption because no difference in pretest performance was detected between SEI children in the typical and enhanced groups when only children in both conditions tested at the same time were included in the analysis (on all measures $p = ns$). In order to account for this learning effect, we will “calibrate” pretest scores for the added group by extrapolating pretest test scores through regression models as we further analyze the data.

In order to deal with the expected initial inequivalency across program types, with SEI students scoring, on average, better on English measures, and TBE students scoring better, on average, on Spanish measures, outcomes will be analyzed and conducted separately for Spanish and English, stratifying by learner type (high, middle, low language). Thus, lower achieving students in the four conditions will be compared for all the subtests, while similarly, the average and above average achieving will be compared across the four conditions. An analysis based on this stratified procedure will facilitate better understanding of the effects of intervention and model of instruction. (It is understood that in general, students who are in the SEI program would like begin with higher levels of English while students who are in the TBE program would begin with higher levels of Spanish. This is a generally understood phenomena within program type and is an initial limitation at the outset of any study of this type.) Final analysis is being conducted on post-test data.

Characteristics of Instruction

A first step in answering question 2, 3, and 4, is to first describe the characteristics of instruction provided in each condition. In this research, teachers were observed providing English language instruction five to six times across the academic year using the Transitional Bilingual Observation Protocol. The TBOP was developed for a PDA following the PIs recommendations, for the first time for this project making ease of use. All observers were

trained and interrater reliability was established at .98. The observation process is based on the pedagogical theory for bilingual classrooms (Lara-Alecio & Parker, 1994) with the ESL strategies added (Lara-Alecio & Irby, 2004) to the observation for the purpose of ELLA. An explanation of the theory base was presented in the Theoretical Framework. The ESL strategies are also recorded. These data are being cleaned for analysis.

Qualitative Measures

Interviews, questionnaires, and field notes. Factors that facilitate or impede the implementation, effectiveness, and sustainability of the interventions will be investigated through interviews and questionnaires of school personnel and parents, as well as field notes taken weekly from the On-Site Coordinators, graduate research assistants, and bi-monthly from the research team. Data from the interviews, questionnaires, and field notes will be evaluated for common themes, coded according to these themes, and analyzed qualitatively using QUALRUS.

School context surveys. In the fall of the second year of implementation, we will ask participating teachers and administrators, to complete three 15-minute survey regarding key dimensions of school operations associated with effective schools for limited English proficient students (Carasquillo, 1996) – existence of explicit academic goals assessment that gauge progress, adequate assistance to teachers in the form of professional development, and effective school leadership. We will also use an instrument that gauges teacher perceptions that are key to a school's academic ethos, or culture—teacher efficacy, attribution for student success, and expectations for student learning (Goldenberg & Sullivan 1994). In addition, we will use a modified version of Grayson's (1999) and Brown and Irby's (2002) checklist for equity (Likert-type responses).

Intervention teacher interviews. Beyond a questionnaire, we have conducted structured interviews with participating teachers at the end of 2004-2005 academic year to explore (a) satisfaction with their respective interventions, (b) satisfaction with the level of support they received to teach their intervention well, (c) satisfaction with the academic progress of their students, (d) barriers to implementing their respective intervention, and (e) facilitating factors that assisted with the implementation of their respective intervention.

Principal interviews. Similarly, we conducted structured interviews of principals, focusing on their level of satisfaction with the intervention program in their schools and their perceptions of the degree to which the program facilitated student improvement, along with questions regarding facilitating factors and barriers to sustained implementation.

Summary

The research we are conducting is based on the issues identified in this paper. Particularly, research on and for ELLs must be situated in the students' culture. This implies the type of data gathered, from whom, and where, and it also implies considerable attention be given to the analysis and reporting of the data in a fair and unbiased manner. The research team, itself, has included those who can provide perspective to the research—second language learners themselves. As nonindigenous researchers we consider the culture carefully and situate ourselves in it and try to understand and internalize it. As a research team, we considered the culture of the school and understood that research in classrooms and in schools may need to take a different turn at points of the research journey. In order to be welcomed in the society of the school, researchers must be trusted as a part of that community. Trust is built over time. Democracy can be observed in research for second language learners only when conditions are equitable, monitored carefully, and just for the population being studied. The problems

identified in the initiation of this paper can be addressed through research that is carefully and thoughtfully considered and that is carefully and thoughtfully considerate.

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