A MULTI-AGE BILINGUAL TWO-WAY MODEL AND CURRICULUM

By

Mario Tijerina

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By

Mario Tijerina

has been approved

August, 1998

APPROVED:

John S. Mansour

Thomas C. Rock

ACCEPTED

Associate Dean for Graduate Studies
ABSTRACT

Over the course of the next fifty years the United States will undergo a major shift in demographics. This shift reflects a dramatic increase in students entering schools as second language learners. More clearly, an increasing number of students entering schools will speak a language other than English. The fastest growing community of second language learners are students who speak Spanish. In 1985 the overall number of Hispanics in the U.S. consisted of 14.7 million. However, it is projected to increase to 47 million by the year 2020. Spanish is the second most spoken language in the U.S..

Schools in a traditional since are not effectively prepared to deal with the current and future increase of the second language learning population. Studies indicate that students whose primary language is maintained while learning English score higher on standardized test. However, traditional schools settings detach second language learners from their native language to quickly through emersion/submersion programs. The effect of emersion/submersion programs do not allow the student sufficient time to establish a foundation in either language. The long-term effect maybe reflected in the high number of Hispanics who dropout of high school before graduating.

The researcher developed a model of instruction intended for native Spanish speakers that combines the multi-age setting with two-way language instruction. The model was developed to increase the academic success on standardized tests of students whose primary language is Spanish. While the focus of this model is on Spanish speaking students, students who’s primary language is English will benefit equally.
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CHAPTER 1
THE PROBLEM

Introduction

This study explored the benefits of incorporating a multi-age classroom setting with a two-way bilingual design to form a model for students who speak Spanish and are in the process of learning English as a second language. Research by Collier (1995) indicates the advantages of a two-way bilingual program in terms of increased academic achievement and second language acquisition by students. Some advantages included higher literacy development in two languages and higher normal curve equivalent (NCE) scores. In addition, the multi-age classroom environment allows students to develop along a continuum with a longer period of time to achieve academic success. One of the components of a two-way bilingual program emphasizes continued instruction in a student’s primary language.

Development of the Problem

Continued education in a student’s primary language is important to the extent that literacy in one language can be transferred into a second language (Cummins, 1981). In a two-way bilingual multi-age setting, academic information provided in a student’s primary language can be accessed and transferred into that student’s second language. The importance of literacy transfer and the integration of a multi-age/two-way bilingual
program is the opportunity to adjust the method of instruction for students who speak a language other than English.

Demographic studies by Hodgkinson (1985) indicated a growing trend in the Hispanic population in the United States within the next thirty years. In 1985 the Hispanic population of the United States was 14.6 million. By the year 2020 the Hispanic population was projected to 47 million (Hodgkinson, 1985). As the population shifts, one could conclude that it will be necessary for public education to adjust to meet the growing number of students who speak a language other than English.

The formation of multi-age bilingual two-way classrooms may be effective with monolingual students. Schools need to improve the delivery/approach of instruction to students whose primary language is Spanish or L1. “Minority students who are limited in English are, ... 1.5 times more likely than their English language counterparts to have discontinued school before completing twelve years” (Crawford, 1991, p.14). According to demographic data collected by the Casa Grande Union High School in 1996, there were 405 Hispanic students who dropped out. If the Casa Grande Elementary Schools adopted a bilingual two-way multi-age program, this figure may dramatically decrease and other objectives may be met.

An objective of such a program would be to increase test scores of elementary school students on national testing instruments. In addition, it is anticipated that monolingual English speaking students, along with their Spanish speaking counterparts, would develop fluency in two languages.
Need for the Study

Establishing a framework for academic success in a kindergarten to sixth grade program for limited language proficient students is important. A study by McPartland & Slaven (1990), shows that students who come from a poor background, attend schools composed of largely poor students, read at a year behind grade level and have been retained a grade, have a near zero chance of ever graduating from high school. The studies conducted by McPartland & Slaven (1990) can predict with better than eighty percent accuracy who will drop out of school. In fact, Indiana plans future prison cell numbers based on projections that are developed by studying second graders (Mark of Cain, 1990). A demographic chart produced by the California Post Secondary Education Commission and the California State Department of Education in 1990, indicates that out of 100% of kindergarten Hispanic enrollees, 62% will not graduate from high school and only 12% will go on to college. In a study conducted by the Arizona Department of Education (1994), the total graduation rate by percentage is plotted for each county in Arizona as shown in Figure 1. Pinal ranked among the counties with the lowest graduation rate. Texas, Florida and Arizona have the second, fourth and eighth largest Hispanic populations in the country (Delgado, 1996). "In these states, Hispanic children under age 19 are more likely to live below the poverty level, drop out of high school, and receive poorer prenatal care than their white counterparts," according to Jane Delgado president of the National Coalition of Hispanic Health and Human Services Organization (1996). A large number of limited English proficient (LEP) students fall into the categories established by McPartland & Slaven in determining the drop out rate of high
school students. Nearly one-third of all Hispanic students are not completing their schooling through 12th grade in the United States (U.S. GAO, 1994). When students are immigrants, one of the principle reasons for not finishing school is limited English (U.S. GAO, 1994).

One of the primary reasons for failure of LEP students in the public school system centers on a pattern of ESL programs prematurely separating students from their primary language. Many students remain limited in English because they have never fully developed their literacy skills in Spanish (Cummins, 1981). According to Cummins (1981), because some LEP students have no foundation in either language, they are limited in both languages, making learning and consequently graduating from high school extremely difficult.

When students fail to graduate from high school and go on to technical/academic colleges, it impacts the U.S. from a social and economic view point (Hodgkinson, 1985). Failing to properly educate LEP students relegates American society to an increasing population consisting of low educated, unemployable people (Hodgkinson, 1985). In their conceptual model, Thomas and Collier (1997) stress the role of the students' native language in the acquisition of English, believing that it must be developed to a high cognitive level at least through the elementary-school years for long-term academic success of language minority students. This model would lead one to affirm the importance of a K-6 bilingual program that effectively addresses the needs of LEP students. These factors support the idea of a need to improve the current method of educating the minority Hispanic population in the Casa Grande Elementary School
District (CGESD). The current ethnic mix of the student population of the CGESD shows a 46.48% Hispanic enrollment (CGESD demographic report, 1997). In addition, 405 Hispanic students dropped out of high school in 1996 (Casa Grande Union High School District demographics, 1996).

Purpose of the Study

The purpose of this study was to incorporate a multi-age classroom setting with a two-way bilingual design to form a model for students in grades K-6, who speak Spanish only and are in the process of learning English as a second language.

Research Question

How does one design and implement a two-way multi-age program for monolingual Spanish speaking students?

Definition of Terms

Bilingual education: A language acquisition program in which a student's native language is maintained while learning English (Crawford, 1991).

English as a second language instruction: A language acquisition program in which English proficiency is the objective (Crawford, 1991).

Cooperative learning: A method of learning in groups where in every member has a task and all work together to achieve a particular goal (Lazear, 1991).
**English immersion:** An educational philosophy of placing non-native speakers of English in an English-only environment (Crawford, 1991).

**Second language acquisition:** A process of learning a second language (Crawford, 1991).

**Two-way immersion:** A program in which speakers of both languages are placed together in a bilingual classroom in order to learn each other’s language (Crawford, 1991).

**Submersion:** An educational philosophy of providing no native-language support or structured ESL instruction (Cohen, 1976).

**ESL pullout:** A program in which a student receives one hour to a half day of instruction in segregated centers or classrooms (Ovando and Collier, 1985).

**Normal Curve Equivalent:** A method of normalizing standard scores with a mean of 50 and standard deviation of 21.06. The standard deviation of 21.06 was chosen so that NCE’s of 1 and 99 are equivalent to percentiles of 1 and 99 (Stanford Achievement Test Series, Ninth Edition glossary of terms, 1995).

**Literacy transfer:** A program of instruction in which students receive from one hour to a half day of instruction in a segregated center of the classroom (Ovando and Collier, 1995).

**Cognitively:** An ongoing complex developmental process that occurs at the subconscious level. These ongoing processes can be stimulated through natural experiences or a series of planned conscious activities creating academic and intellectual
growth. This growth continues from birth to the end of schooling and beyond (Thomas and Collier, 1997).

**Multi-age classroom:** A classroom environment where children are grouped so that the age span of the class is greater than one year (Katz, 1990).
CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter discusses the research and findings of bilingual/two-way instruction, the transfer of literacy, multi-age classrooms and the shift in demographics in the United States. In the case of the non-English proficient (NEP) and limited English proficient student (LEP), hope for academic success is possible if appropriate steps are taken. Studies dating back as far as 1973 indicate instruction in a student’s primary language enhances his or her chances of acquiring a second language (Goodmen, 1973).

Bilingual/Two-Way Instruction

In the past, it was thought that submersion (Cohen, 1976) was the best way to effectively promote the development of the English language among LEP students. As an example, the Casa Grande Elementary School District’s current ESL model is intended to give instruction in English only in a pullout setting. However, current research by Collier (1995) shows these types of ESL models actually do not promote the development of a second language by students. Conversely, providing two-way language instruction increases students’ standardized tests scores beyond the 50th percentile (Collier, 1995). Cummins (1992) stated,
The findings of this report (Ramirez report, 1991) indicate that Latino students who receive sustained first language (L1) instruction throughout elementary school have better academic prospects than those who received most or all of their instruction through English. This pattern of findings refutes the theoretical assumptions underlying opposition to bilingual education while supporting the theory underlying development of two-way bilingual programs (p. 91).

Relating to the same subject, Thomas and Collier’s study (1997) makes a comparison of different bilingual models. The study plotted program models to student achievement on standardized tests (Figure 2). Thomas and Collier’s research (1997) compared six school districts over the course of a three to six-year longitudinal period. From Thomas and Collier’s comparisons of the six different programs, a graph was developed plotting standardized test scores of students in the programs studied. The six programs listed in order of effectiveness were as follows:

Program 1: Two-way developmental bilingual education (BE)

Program 2: One-way developmental BE + Content ESL

Program 3: Transitional BE + Content ESL

Program 4: Transitional BE + ESL both taught traditionally

Program 5: ESL taught through academic content

Program 6: ESL Pullout taught traditionally

The study clearly shows late exit two-way programs produce the highest achievement results. The study describes the academic success of students entering kindergarten in the U.S. with no proficiency in English and compares the normal curve equivalent against several bilingual/ESL models. As a benchmark, the fiftieth percentile
Figure 2

PATTERNS OF K-12 ENGLISH LEARNERS’ LONG-TERM ACHIEVEMENT IN NCEs ON STANDARDIZED TESTS IN ENGLISH READING COMPARED ACROSS SIX PROGRAM MODELS

(Results aggregated from a series of 4-8 year longitudinal studies from well-implemented, mature programs in five school districts)

Program 1: Two-way developmental bilingual education (BE)
Program 2: One-way developmental BE, including ESL taught through academic content
Program 3: Transitional BE, including ESL taught through academic content
Program 4: Transitional BE, including ESL, both taught traditionally
Program 5: ESL taught through academic content using current approaches
Program 6: ESL pullout—taught traditionally

Source: Thomas and Collier, 1997, p.53
is the average score of students taking a national standardized test. The ESL pullout model taught in a traditional setting was the least effective of the six comparisons. On the opposite end of the comparison lies the two-way bilingual program. Students entering this program at kindergarten scored in the sixty-fifth percentile on the normal curve equivalent by the eleventh grade.

Figure 2 demonstrates the average NCE percentile as 50%. It was calculated taking standardized test scores of a group of similar students and calculating an average. Individual test scores are compared to the normed average depending on what standardized test was administered. For instance, a score of sixty-two percent would be twelve percent over the normed average of fifty percent. The NCE is a scale used to correlate a student’s performance compared to other similar students as specified by federal education regulations (Thomas and Collier, 1997).

The Transfer of Literacy

A review of several studies by Krashen (1996) indicated that reading skills developed in one language are transferable to a second language. Krashen (1996) quotes Goodmen (1973) who stated the process of reading as a part of literacy transference is fundamentally the same in all languages except for minor degrees of difference.

Research completed by Cummins (1991) indicated there is an interdependence of literacy-related skills across languages. This is true to the extent that the better developed a child’s L1 conceptual foundation, the more likely he/she is to develop similarly high levels of conceptual foundations in his/her second language.
Cummins (1992) found the following three psycho educational principles were supported by empirical research:

1. Continued development of both languages enhances children's educational and cognitive development.

2. Literacy-related abilities are interdependent across languages such that knowledge and skill acquired in one language are potentially available in the other.

3. While conversation language abilities may be acquired fairly rapidly in a second language, upwards of five years are usually required for second language to attain grade level norms in academically related aspects of the second language (Cummins, 1992, pp. 91-1040).

In Collier's (1997) research, conversational language development takes approximately two years. Academic language takes from five to seven years to fully develop. Additionally, Fillmore (reported at a TESOL conference in 1994) that the five to seven-year development of academic language was only accurate if all the conditions were optimum; that is to say, that English was used and supported at home and teachers provided instruction in L1 and L2. If conditions are not optimum, the academic language development could take as long as ten to twelve years.

**Multi-age Classrooms**

A modern multi-age classroom allows students to academically progress along a continuum over a longer period than the traditional one-year process. Multi-age academic progression extends from entry level skills to exit mastery goals without artificial divisions or increased opportunity for failure (Katz, 1990). This progression is particularly important to students who are in the process of developing a second
language, because using a two-way bilingual program in a multi-age setting makes for a highly compatible environment in developing a second language. In a multi-age classroom children are learning and progressing cognitively and socially along a continuum (Katz, 1990). The combination affords students the opportunity to progress at their own pace and at the appropriate level. With regard to language development, a teacher can pair monolingual English speaking students with monolingual Spanish speaking students for second language activities. This type of peer tutoring allows both the tutors and the tutored to benefit academically (Katz, 1990). Additionally, in a bilingual class setting a younger or opposite language student could be stimulated to emulate another student’s language skills and benefit from that experience (Paven, 1992).

A multi-age classroom may offer the student an opportunity to progress academically and socially on a continuum. When a two-way bilingual program is merged with a multi-age classroom setting, it allows a student more time to develop academically in a second language. The benefits included the use of peer tutoring in opposite language settings. More specifically, a multi-age, bilingual classroom allows the monolingual student an opportunity to progress academically at an appropriate level in L1 while developing basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP) in L2. Multi-level two-way programs are increasingly important because of the demographic shift in recent years and in projections of future population growth in the United States.
The Shift in Demographics

As of 1993, there were over two million limited English students who required English as a second language (ESL) or bilingual services (BLE) in the United States school systems (Gray, 1993). Public schools are faced with educating an increasing number of immigrant children and children whose first language is other than English. Currently, Spanish is the second most spoken language in the United States. Today, there are 32 million Spanish-speaking Hispanics or approximately 12% of the total population living in the United States. Of that 12%, at least 25% are LEP students and according to the United States Department of Education, get no special help at all (Headden, 1995).

Hodgkinson’s demographic report (1985) shows an increased shift in the Hispanic minority population of the United States. The Hispanic population in 1985 was 14.6 million, but is projected to increase to 47 million by the year 2020. A current review of demographic data indicates a societal change within the next thirty years. One can surmise from Hodgkinson’s (1985) data that the economic future of this country is in part contingent on an ability to properly educate the future workforce. One-third of the new entrants into the workforce will be African-Americans and Hispanics (Wilson, 1993). This factor makes educating the minority population paramount. An example of the necessity to educate the minority population relates to the social security retirement system used in the United States. It is clear that if more people are taking money out of the social security system than are putting in; a dim economic picture is created for those relying of this system as a retirement income in the future. Data from Hodgkinson
(1985) states that in 1950 seventeen workers paid the benefits of each retiree, but by 1992, only three workers will provide the funds for each retiree and one of the workers will be minority. It is estimated that by the year 2000, 42% of the students enrolled in public schools will be Black or Hispanic (Kuydendall, 1992).

Summary

Figure 2 tells us that ESL pullout programs are least effective in second language development. The longer a student can receive instruction in his/her primary language, the higher the probability of scoring better on standardized tests. The two-way program is the most effective of the six studied by Thomas and Collier (1997) in terms of student academic success. A key to the success of the two-way program is the ability of students to transfer information from their primary language to a second language at a future point in time.

Literacy developed in one language transfers to a second language, based on Cummins (1991) research. In addition, one can infer the length of time spent in primary language instruction, while developing a second language, will provide students with more transferable information into other languages. The continued development of the primary language enhances the students’ academic/cognitive success in later years. As a result, multi-age classrooms offer attractive conditions for second language learners.

When students are placed in a multi-age setting, it affords them more time along a set continuum to develop a second language. In addition, the use of cooperative learning and peer tutoring provides academic benefits for students. The benefits of a
multi-age setting and dual language instruction could offer the most productive environment for an increasing number of second language learners entering schools today.

The shift in demographics indicates a growing number of minority children entering American schools. The Hispanic population is predicted to increase to 47 million by the year 2020. More than one-fifth of American school-age children come from families in which languages other than English are spoken (McDonnell and Hill, 1993).
CHAPTER 3

METHODOLOGY

Purpose

The purpose of this study was to incorporate a multi-age classroom setting with a two-way bilingual design to form a model for students in grades K-6 who speak Spanish only and are in the process of learning English as a second language. The question to be addressed is: How does one establish a multi-age two-way bilingual program?

Research Design

This research was a descriptive study. The central focus of a descriptive study is to examine facts about people (Kerlinger, 1986). In a descriptive study, the researcher does not manipulate conditions or control the environment in which the study takes place. Its purpose is to systematically describe the facts and characteristics of a given event, population, or area of interest.

Data was collected pertinent to establishing an instructional delivery design for students in the process of learning a second language. In this study, that language was Spanish to English. The collection of data included attending and analyzing information from workshops, conferences, school observations and interviews with individuals. In addition to these sources, information from researched studies, texts and journals was used in collecting data.
Secondly, the researcher identified a need for a multi-level two-way bilingual design through observations and instruction of ESL pullout sessions and language labs found in the ESL program at the CGESD. The demand for a two-way design was examined as a result of an increased number of monolingual students entering CGESD. According to past and current studies, the ESL model used to service LEP/monolingual students was inadequately servicing this population of students in the CGESD (Ramirez, 1991).

Source of Data

Initial data for this study came from journal articles, texts on bilingual education and collaboration with ESL and regular classroom teachers. Specifically, the researcher attended a teachers of English to speakers of a second language (TESOL) conference in 1994 in Tucson, Arizona, and in 1997, a National Association of Bilingual Educators (NABE) conference in Albuquerque, New Mexico. At each of these conferences, the researcher attended workshops and analyzed information presented. In addition, the researcher attended lectures by experts in the field of bilingual education. In June of 1995, the researcher traveled to San Felipe, Mexico, as part of a course requirement for Ottawa University. Additionally, the researcher collected data while taking bilingual education course work through Ottawa University.

Mesquite Elementary School was selected as a data gathering site to implement a multi-age two-way program because of a growing number of students who would benefit
from dual language instruction. The researcher worked directly with a 4-5-6 multi-age classroom of students consisting of an approximate ethnic mix of 50% Hispanic and 50% Anglo. Mesquite Elementary is currently the site where monolingual Spanish speaking students from throughout CGESD are sent. The population of students entering Mesquite Elementary consist of about 16.3% immigrant children from Mexico and 39.1% overall who qualify for ESL/bilingual services. The ethnic breakdown of the school district consists of a 46.48% Hispanic population with a total overall population of five thousand eleven students district wide.

**Procedure**

The purpose of the San Felipe trip in June of 1995 was to observe and learn about the school system in order to develop a curriculum for Mesquite Elementary School. During the trip, Ottawa students chose a peer teacher from the San Felipe school system with whom to work. Information about both school systems, that of the United States and Mexico, was shared. The purpose of this exchange was to better assist immigrant students who come to the United States from Mexico and to help develop a curriculum for schools located in the United States. In addition, classroom observations of the dual language programs at Borton Elementary School, Tucson, Arizona, in 1994 and Mains Elementary School, Calexico, California, in 1997 were conducted as part of the research for this study. While in Calexico, California, an interview with Gloria Celeya, principal of Mains Elementary School, was conducted. Information from this interview and data
collected about the bilingual program in Calexico was used to establish a curriculum/program at Mesquite Elementary School.

Chapter 4 outlines a curriculum, a mission statement, purpose and a sample of introductory academic standards for initiating a multi-age bilingual two-way model.

**Method of Analysis**

Assessment of academic growth will be accomplished by using the Stanford 9 in English and the Aprenda in Spanish. These tests will be administered on a yearly basis and the results will be compared from year to year. Based on the results, instruction can be modified to improve student achievement. Additionally, teacher evaluations of student performance on a weekly/monthly basis, using curriculum guidelines and academic standards, may be used to modify instruction. Part of the teacher evaluation process should include writing samples from students on a monthly basis. Ideally, a student should grasp enough information concerning language acquisition concepts from month to month to measure improvement. Finally, a post-assessment instructors’ seminar will be conducted with the purpose of evaluating students’ tests scores and determining necessary adjustments needed to improve the program.
CHAPTER 4
MODEL PROGRAM

A Language Acquisition Model for Spanish Speaking Students

Kindergarten thru Sixth Grade

Introduction

A language acquisition model (see Appendix A) for Spanish speaking students was developed to help establish an academic foundation in English for students who speak Spanish. The model was designed by the researcher to combine the benefits of a multi-age setting with dual language instruction to improve student academic success.

Research has shown that in a multi-age setting, students are allowed to progress at their own academic and language acquisition pace for a series of consecutive years (a minimum of three years). In a ideal situation students progress in a multi-age environment, kindergarten through sixth grade or until they reach proficiency in two languages. Proficiency is not limited to language, but includes all academic subjects so that as students become more fluent in Spanish, their literacy skills transfer to English. The consequential outcome of combining the multi-age environment and the process of dual language instruction for an extended period of time would be a bilingual/biliterate student.

Model Criteria

The criteria for selecting students for this model will be to give priority to monolingual Spanish speakers. English speakers will be selected for academic and
language development. Grades and teacher referrals will be used to select native English speakers. The grade levels will consist of two all-day kindergarten (K), one K-2 multi-age, one third for students who are not ready to transition into a regular classroom and one 4-6 multi-age classroom. Based on the ethnic breakdown of the school in question, the class should consist of a 50/50 mix of native Spanish and English speakers. The method of separating languages used for instruction will be by block of time and subject. For example, the language of initial reading instruction would be Spanish for Spanish speakers and English for English speakers. It is highly advised that teachers and aides be proficient in both languages.

The following is an example of possible scheduling:

- **K-Spanish:**  
  Pre-literacy, Literacy, Math

- **K-English:**  
  Pre-literacy

- **1-Spanish:**  
  Literacy, Math

- **1-English:**  
  Music, P.E.

- **2-Spanish:**  
  Literacy, Math, Science, Social Studies

- **2-English:**  
  Music, P.E.

- **3-6-Spanish:**  
  All subjects except P.E., Art, Music, Computers

- **3-6 English:**  
  P.E., Art, Music, Computers
Evaluation components would consist of the following assessment instruments:

Pre-test and Post-test

Stanford 9 in English (yearly)
Aprenda in Spanish (yearly)

Teacher evaluation based on curriculum and academic standards
(weekly/monthly)

Writing samples (monthly)

In an attempt to better serve the student population of the CGESD, a bilingual program curriculum was developed. This curriculum involved collaboration of all the bilingual classroom educators associated with the program.

Supplementary informational sources are referred to in chapter 3. The information from these sources provided a guide for the development of a fundamental curriculum. The intent of this curriculum is to add/modify academic standards each year to meet the needs of the students and the district.

The mission statement, purpose and curriculum for the bilingual program at Mesquite Elementary School were compiled from data obtained from Mains Elementary School, Calexico, California, and Arizona Department of Education Academic Standards.
Summary

The criteria and curriculum set forth in chapter 4 is designed to establish a foundation for academic achievement for students developing a second language. In addition, establishing a multi-age dual language setting to develop bilingual biliterate students as an outcome of the program. A multi-year, multi-age experience, combined with what is known about collaborative learning, learning styles, and multiple intelligences, grouping practices, and the success of inclusion in such a setting, promises to give all children a genuine opportunity for success in the classroom.
CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to incorporate a multi-age classroom setting with a two-way bilingual design to form a model for students in grades K-6 who speak Spanish only and are in the process of learning English as a second language. The model was developed from the active participation of the researcher in restructuring a program that relied primarily on an ESL model of instruction. The curriculum was developed with the cooperation of a group of teachers who worked closely with students who are second language learners. In addition, the curriculum was based on observations of other schools that contained a high number of monolingual Spanish speaking students, research and application in a multi-age 4-5-6 grade classroom.

Hispanic students are the fastest growing ethnic group in American public schools. Currently, there are 32 million Spanish speaking Hispanics or approximately 12% of the total population living in the United States. By the year 2020 that number will increase to 47 million. The number of immigrants who enter the United States whose language is other than English is projected to continue to increase the number of students in public schools who will need instruction in two languages. The Spanish language is ranked as the second most spoken language in the United States. Schools throughout the country will continue to face the challenge of educating students whose native language is Spanish.
Conclusion

The six bilingual instructional models referred to in this study indicate
the two-way developmental bilingual model as producing the most successful academic
results. Literacy in one language transfers to a second language, and it takes upwards of
five years for a student to reach grade level norms academically in a second language.
Therefore, one can infer the greater the length of time spent in an environment that
promotes dual language instruction, the higher the academic results.

A multi-age setting for academic instruction allows students to stay in a program
for more than one year. Additionally, it allows students to progress at their own learning
level without feeling they are falling behind. The advantages of cooperative learning in a
multi-age classroom consisting of a 50/50 mix of English to Spanish students, encourages
students to emulate each others language skills, which fosters second language
development. A multi-age bilingual classroom allows the monolingual student to
progress academically at an appropriate level in L1 while developing basic interpersonal
communication skills (BICS) and cognitive academic language proficiency (CALP).

Recommendations

Districts may want to consider team teaching in a two-way multi-age classroom
as it allows a school district to have a bilingual setting where only one of the teachers has
to be bilingually endorsed. Additionally, students can be grouped during various times of
the day and taught by an opposite language teacher; creating a time for in class language
emersion.
As a result of shifting demographics and increasing numbers of Spanish speaking students entering schools in the United States, steps need to be taken to accommodate this population of students. Longitudinal research indicates that for second language learners a two-way bilingual model produces the highest academic results. In addition, schools need to be encouraged to pursue multi-age settings in order that students are given multiple years to develop proficiency linguistically and academically. A portion of this study discusses the benefits of a two-way model and its academic impact on Spanish speaking students, which includes literacy development in two languages. One can acknowledge that a two-way model not only benefits Spanish-speaking students, but it equally benefits English-speaking students. In both cases, the students are given instruction toward development of proficiency in a second language.
Appendix A

A Language Acquisition Model for Students who Speak Spanish only and are in the Process of Learning English
Mission Statement

Prepare a culturally and ethnically diverse student population to be biliterate and culturally aware in an environment where diversity is valued.

Purpose

Our purpose is to provide a bilingual program that allows the district to more completely fulfill its mission statement of providing superior educational opportunities for all students by:

- Allowing students access to the core curriculum while acquiring a second language.
- Meeting the affective (self-esteem) and academic needs of all students.
- Promoting literacy and literacy-related learning.
- Building a cognitively demanding conceptual base of knowledge in the primary language that forms the basis for learning in a second language.
- Exposing students to progressively more complex language usage.
Academic Standards and General Course

Requirements for

Casa Grande Elementary District Two-Way Bilingual Program

(Kindergarten)

Reading

Match sounds with letters (phonics).

Read some sight words.

Participate in shared reading activities.

Retell a story.

All standards will be met in the student’s primary language.

Writing

Relate a narrative or creative story by drawing, telling and writing.

Write the letters of the alphabet.

Spell simple words.

All standards to be met in the student’s primary language.

Math

Develop an understanding of number meaning and relationships.

Use manipulatives to count, order and group.

Recognize relationships between concrete representations, number names and symbolic representations of numbers.

Compare and sort objects by their physical attributes.
Collect, organize and describe simple data in concrete displays, elementary tables, graphs and charts.

Create, describe and extend a variety of patterns, using concrete objects.

Recognize that the same patterns can emerge from a variety of manipulative and real-world situations.

Recognize that a single object has different attributes that can be measured in different ways.

Compare, order and sort objects according to observable attributes that can be measured in different ways.

Use a variety of puzzles and games involving counting problems.

All standards to be met in the student’s primary language.
Academic Standards and General Course

Requirements for

Casa Grande Elementary District Two-Way Bilingual Program

(Grades 1–3)

Reading

Read and analyze literature selections.

Read and follow directions.

Use phonetic skills to decode words.

Use listening and retelling skills properly.

Identify the main idea of literature selections.

All standards to be met in the student’s primary language.

Read and comprehend warning labels, safety signs and environmental print in their second language.

Writing

Write well organized communications.

Use of the writing process.

Write personal experience narrative.

Write a report.

All standards to be met in the students primary language.

Will be able to use their second language for personal social communication.
Math

Understand the meaning for and application of the operations of addition, subtraction, and multiplication for whole numbers.

Have knowledge of place-value concepts.

Predict and measure the likelihood of events.

Formulate generalization about patterns.

Have knowledge of measuring instruments.

All standards to be met in the student’s primary language.

Students will understand and be able to use vocabulary in their second language for numbers and basic math skills.
Academic Standards and General Course

Requirements for

Casa Grande Elementary District Two-Way Bilingual Program

(Grades 4-6)

Reading

Identify the author's purpose in a persuasive selection.

Write a review of a literary selection including elements of plot, character, setting and theme supported by references to the text, other works or experiences.

Compare and contrast historic and cultural perspectives of a literary selection.

Write a clear accurate summary containing the most significant details.

All standards to be met in both primary and secondary languages.

Writing

Use correct spelling, punctuation, capitalization and grammar and usage to complete effectively, a variety of writing tasks.

Write a personal experience narrative or creative story that includes a plot, well developed characters, setting and themes and uses descriptive words and phrases.

Write formal communication in an appropriate format and for a specific audience and purpose.

Demonstrate research skill; using reference materials such as dictionaries, thesaurus, encyclopedia to effectively complete a variety of writing tasks.

All standards to be met in both primary and secondary languages.
Math

Understands the relationship between addition, subtraction, multiplication and division.

Proficient use of multiplication and division of whole numbers.

Can find multiples, fractions and prime factors of whole numbers, and can identify a prime number.

Represents numbers in equivalent forms (integers, fractions, percents and decimals).

Construct, read, analyze and interpret tables, charts and graphs.

Display and use measures of Mean, Median, Mode, and Range.

Describe the concept of variables, expressions, equations and inequalities.

Solve simple linear equations.

Represent and solve problems relating to size, shape area and volume using geometric models.

Visualize and draw two and three dimensional geometric figures.

Estimate, make and use measurements (U.S. and Metric) to describe and make comparisons.

Develop and use formulas to solve problems involving measurement.

Construct and use algorithmic procedures for computing with whole numbers, fractions and decimals.

All standards to be met in both primary and secondary languages.
REFERENCE LIST


Biography

Mario Tijerina has been teaching for the last four years in the Casa Grande Elementary School District. During this time he has worked with ESL pullout programs, monolingual labs and in a multi-age two-way program. While working on his masters thesis in bilingual education, he was able to apply many of the concepts detailed in his thesis. In addition to the past four years of study in the field of bilingual education, Mr. Tijerina was active in restructuring the ESL/Bilingual program for the Casa Grande Elementary Schools, serving on a bilingual textbook adoption committee, writing a curriculum, making board presentations, serving as a guest speaker for several college courses on bilingual education, collecting data on various bilingual programs and sitting on bond election committees. The work on his thesis has taken him to three states and two countries where he compiled pertinent information on bilingual education and instructional models.
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