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A Comparison of Two Second Language Acquisition Models for Culturally and Linguistically Different Students

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THESIS APPROVAL

The abstract and thesis of Karen Dorothy Kuhn for the Master of Arts in TESOL were presented November 24, 1997, and accepted by the thesis committee and the department.

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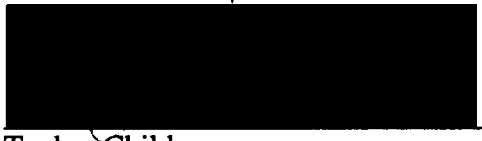

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ABSTRACT

Abstract of the thesis of Karen Dorothy Kuhn for the Master of Arts in TESOL presented November 24, 1997.

Title: A Comparison of Two Second Language Acquisition Models for Culturally and Linguistically Different Students.

The purpose of this thesis research was to determine if there were significant educational advantages in terms of sociocultural development for culturally and linguistically different students enrolled in a two-way bilingual education program as compared to those directly mainstreamed. Eighteen third-grade students were selected from two schools in the same school district. Half of the subjects spent their third grade year in a two-way bilingual educational program while the other half were mainstreamed into a submersion education program. Each subject was culturally (Hispanic) and linguistically (Spanish was the dominant language) different from mainstream students. A qualitative summary and statistical analyses were used to determine any group differences in terms of sociocultural development. The quantitative analyses showed minimal statistically significant differences suggesting that participating in the two-way bilingual program may not be any better or worse than the direct mainstreaming of culturally and linguistically different children. Conversely, the qualitative data, centered on researcher observations and teacher interviews, arguably pointed in the two-way bilingual program's favor. These results imply that independent of program model, the positive attitude of teachers (and students) stimulates culturally and linguistically different student's educational success. Additionally, in-class use of the sociocultural checklist can serve to enlighten teachers to common factors inhibiting the successful

education of the Hispanic student population, thus leading to more effective assessments and fewer mistaken diagnoses. An extension of this work should assess student, teacher, and parental attitudes in more depth. General suggestions for future research include a better understanding of student's background factors, academic achievement, school characteristics, school performance, and school experiences.

A COMPARISON OF TWO SECOND LANGUAGE ACQUISITION MODELS FOR CULTURALLY AND LINGUISTICALLY DIFFERENT STUDENTS

by

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As I reflect on my journey through the MA:TESOL program over the last several years, I look fondly on this experience. Not only was the education phenomenal, but many lifelong friends and memories were made. The finality of this goal is sweet, but I must admit that leaving this program is difficult. I will miss the excitement of the challenges that pervade academia. However, as I move into a new stage of life, I bring with me the confidence and pride that I developed out of this accomplishment.

My particular journey was not a quick one. Between working every job that was offered to me and my fear of writing, I managed to stretch my graduate school years longer than most. It wasn't until two things happened in my life that I had the courage to see this project from beginning to end. First, I met Philipp, who urged me to get going and never lost faith in the fact that I would be able to finish this thesis. I could not have done this without the support and editing contributions you consistently provided me. Second, and not wonderful like the first, my father was diagnosed with terminal cancer. This circumstance is what drove me to finish. After receiving the news from my parents in April of this same year, I immediately made the completion of this thesis a priority in my life. I deeply desired to share this accomplishment with my dad, and that I will be able to do. Dad, to you I dedicate this thesis. Your courage, dignity, and love have remained constant throughout your battle and remind me why I idolize you.

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have done this without the confidence you instilled in me. You believed in me when I needed it the most.

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As I leave Portland and resume my life elsewhere, I know that I will forever hold fond memories of my graduate school experience.

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A COMPARISON OF TWO SECOND LANGUAGE ACQUISITION MODELS FOR CULTURALLY AND LINGUISTICALLY DIFFERENT THIRD GRADE STUDENTS

INTRODUCTION

The recent influx of non-native English speaking children into the mainstream American classroom has forced researchers and educators to reevaluate their approach to teaching. In general, schools have been unprepared to meet the needs of the large number of culturally and linguistically different (CLD)[1] children. Paradoxically, the goal of society to integrate immigrants into the American society as fast as possible is undermined by the existing school system which is not adequately meeting this goal. The evidence is in the rising number of students not completing high school. In response, school districts around the country have been experiencing changes in attitudes and policies that are more reflective of the times. Currently, public schools rely on at least four educational models for teaching a second language to students who are culturally and linguistically different (CLD). These CLD students come to the educational environment with few to no English skills and little knowledge of the American school culture. The programs are faced with the challenges to handle the needs of these children which include: learning English, understanding the mainstream

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[1] The term 'culturally and linguistically different' (CLD) was employed to describe children whose native language is different from English and whose culture is different from mainstream American. The more widely used terms in the literature are 'Limited English proficient' (LEP) or 'Language Minority' (LM). Immigrant children, however, are more than "language minority" children, therefore, "LEP is a term that does not describe the whole child" (Igoa 1995:116). The choice to use CLD to describe the subjects in this research was made to emphasize the linguistic *and* cultural distinction that exists between these students and mainstream American students.

culture, and comprehending the curriculum they are exposed to. However, each model approaches the task of educating these students with a different philosophy about the role of the native language (L1) in this process. The programs currently existing to educate immigrant children range from submersion, which directly mainstreams the CLD student, providing support for English only in an English as a Second Language (ESL) classroom, to the developmental bilingual education program, which supports and develops the student's L1 throughout their schooling experience. These programs and others along the spectrum of solutions will be described in more detail in Chapter II to provide background on current philosophical theories underlying the education of CLD children today. With this in place, the goal of this thesis is to compare the two extreme programmatic models along the spectrum to determine if there are significant advantages in terms of sociocultural development to CLD students who are enrolled in a two-way bilingual education program as compared to those who are directly mainstreamed.

Research Motivation

Recently, America has seen a large increase in the immigrant population. CLD children represent a rapidly increasing percentage of students enrolled in schools throughout the United States. This student population has risen over the past decade to number more than two million (U.S. Department of Health, Education, and Welfare 1994). From 1985 to 1994, the CLD student population increased at an average of 9.6 percent per year. By contrast, the overall student population increased by approximately one percent annually (Anstrom 1996). Demographic researchers predict that the extent of diversity in America will continue to increase rapidly in the years to come.

Part of this immigration explosion is due to the sudden and large increase of Hispanics. Yet in spite of the fact that there are currently over 17,000,000 Hispanics living in the United States, the Spanish language continues to be called a marked language[2]. This unconscious policy of insubordinating those who speak the Spanish language is often translated into educational policy and practice. This, in turn, is the result of political, social, and economic prejudices against Mexican-Americans in particular (McKay & Wong 1988; Trueba 1987; Wong Fillmore 1986). Experts in the field (Cummins 1986; Wong Fillmore 1991) agree that school failure tends to occur among minority groups that have experienced persistent racism and have been denied opportunities to celebrate (or at least validate) their culture (Garcia 1983). This may be one reason why Hispanics[3] are generally considered to be among the highest at-risk groups for school failure in this country (Curiel, Rosenthal, & Richek 1986). Kagan & Garcia (1991) found that little attention has been paid to the care and education of Hispanic CLD students in early education. This seems clear from the dismal statistics regarding school failure and/or drop-outs among the Hispanic population[4]. In particular, it is widely documented that Mexican-American students generally achieve at a lower academic level than their fellow African-American or Anglo students (Steinberg, Blinde, & Chan 1984). The National Center for Educational Statistics (1989) estimates that national dropout rates stand at 36% for Hispanics, 15% for African-Americans, and

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[2] A term used to identify languages having low status in society.

[3] The more general use of the term Hispanic describes "those persons who reside in the United States and who were either born in, or trace their family roots to one of the Spanish-speaking Latin American countries, or to Spain" (Marin & VanOss Marin 1991:18). In this research, unless a direct quote, the term is more narrowly used to refer to persons who are from Mexico and whose native language is Spanish.

[4] Hispanic students drop out for a plethora of reasons other than academic failure. For example, they are often expected by their family to work as soon as legally possible. This often means dropping out at age sixteen, and therefore, before completing high school.

13% for Whites. Finally, Alva & Padilla (1995) highlight a report prepared by the Congressional Research Service which finds that Mexican-Americans have the lowest median number of school years completed (9.9) and the lowest proportion of high school graduates (40.8%) in the United States.

As the Hispanic student population continually grows in our communities the number of children not completing high school will predictably rise, resulting in a largely uneducated and isolated underclass. It is argued in this thesis that understanding and validating CLD children's' cultural resources is equally important as helping them learn a second language. Well-developed programs that expand to serve the language and culture needs of the Hispanic CLD population may help to lessen the culture shock that these children experience in the early years. "To ease culture shock in no way means that one has to assimilate quickly and become what one is not; rather, one should stay connected to one's own culture and also learn the cues of the new culture- a both/and experience" (Igoa 1995:39). Validating the child's culture means giving them a connection between the home culture and the school culture. Conversely, the child who is forced into silence and denial about their heritage while being forced to adjust to rules and values of a society that often never fully accepts them is a child who will most likely give up and/or drop-out.

Most educators agree that an educational program especially designed for CLD students needs to promote adequate language development, academic achievement, and psychosocial adjustment for students from non-English language backgrounds (California State Department of Education 1990). A programmatic model which supports a "bi"-lingual and "bi"-cultural approach is relevant in the successful education of CLD students. In short, rather than providing cultural discontinuity by denying the

CLD student's heritage, educators instead can provide these students with tools that enable them to compare and contrast the rules and values of their home country with the second language and culture of the new society. By integrating two languages and two cultures within the classroom, all students are allowed access to valuable resources. This research pursues the most productive way to encourage the development of the "whole child" (Igoa 1995). The focus is on a two-way bilingual education program and a program that directly mainstreams students. The opportunity for this comparison is unique since these philosophically diverse programs reside in the same school district. A homogenous population of eighteen Hispanic children was chosen from two different educational environments for a holistic comparison to determine which environment is more successful in developing CLD children's sociocultural development.

STATEMENT OF PURPOSE

The focus of this research is to determine the sociocultural effects of a two-way bilingual education model on the Hispanic CLD children who participate in it. Sociocultural development is defined as "the comprehensiveness of adjustment to a new milieu or environment with different linguistic, cultural, and experiential elements" (C. Collier 1988:9). The two-way bilingual education program is meant to help students who are involved in the second language acquisition (SLA) process by developing the second language (L2), while simultaneously supporting and developing the first language (L1). This type of program also focuses on teaching the CLD students a second system of communication, new cultural beliefs, and developing a new cultural identity, while maintaining these aspects in the native culture.

This study took place in a school district in Oregon. Half of the subjects spent their third grade year in a two-way bilingual education program while the other half were mainstreamed into a submersion education program. This study was conducted at the end of the participating subjects' third grade year[5]. Tools developed outside of this research were used together to attempt to measure the construct of sociocultural development. These included: the Acculturation Quick Screen (AQS), the Sociocultural Checklist (SC), and Oregon Statewide Assessment (OSA) scores in writing and mathematics. In addition, data from student record reviews, thirty-six hours of recorded researcher observation, and over four hours of transcribed teacher interviews were collected. The complex nature of this protocol was chosen to capture the complexity of the CLD child going through the second language acquisition process. The literature reviewed in Chapter II suggests that an analysis which simply explores one part of this process is incomplete.

The goal of this study is to determine if there are qualitative and/or quantitative differences between two philosophically and pedagogically diverse education programs available to Hispanic CLD students. The questions asked are:

- What are the characteristics of educational programs that are supportive of CLD students,

- What are the characteristics of early childhood educational models that attempt to socialize CLD children to a new set of standards without supporting the resources they bring with them, and

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[5] It must be noted that educational programs of any kind are most effective for children who have the luxury of entering school in Kindergarten and consistently attending throughout the elementary years, J. Strouse, (personal communication, April, 17, 1996). Not all children, especially children from low income and/or migrant families, have this opportunity.

- Is there a difference in the sociocultural development of CLD students who participate in a two-way bilingual education program and those CLD students who are mainstreamed into a submersion with pull-out ESL program at the end of the third grade year?

The first two questions were addressed using a qualitative methodology, including data collected from student records, teacher interviews, and researcher observations. The third question was measured through a quantitative methodology, including data from the AQS, SC, and the OSA scores in writing and mathematics. These measures were quantified and statistically analyzed for any significant differences between the two groups with respect to sociocultural development. The Two Sample t-test served as the parametric measure and the 2x2 Chi-Square and Mann Whitney U tests as the non-parametric methods.

Summary

A review of the literature on acquiring a second language for school is presented in Chapter II beginning with a brief discussion on the value of multi-dimensional research methods in SLA research. This is followed by a conceptual model explaining the SLA process, a summary of SLA research supporting the foundations for this model, a description of current models and approaches used in the education of immigrant children, and finally, an overview of research specifically focused on submersion and two-way bilingual education. Chapter III presents a detailed discussion of the methods and protocol followed in this research. This includes a discussion about the quantitative and qualitative methodologies that were utilized. Chapter IV provides the results obtained in this thesis research, including a descriptive observation of the participating educational programs as well as analyses and statistical results. Finally, a

discussion of the results, their implications for teaching, and suggestions for further research are addressed in Chapter V.

DEFINITION OF TERMS

The following list of definitions is provided as a reference and concise directory for the reader to consult throughout this paper.

ACADEMIC SKILLS: Task-based skills learned through structured academic school instruction.

ACADEMICALLY AT-RISK: Lacking the linguistic skills necessary in the school-language, and/or lacking the social skills necessary for the school environment.

ACADEMIC COMPETENCY: "Includes a high level of proficiency in English, critical thinking skills, and the ability to control the relationship between language and logic, but also social and cultural skills" (Trueba & Delgado-Gaitan 1988:2).

ACCULTURATION: The process of adapting to a new cultural environment: When native culture patterns into the cognitive and behavioral framework of the first culture (C. Collier 1988:13).

ASSIMILATION: The process of adapting to a new cultural environment: When native culture is essentially eliminated from the persons cognitive behavior as the second culture takes its place (C. Collier 1988:13).

BASIC INTERPERSONAL COMMUNICATIVE SKILLS (BICS): Social skills learned through personal experience (Cummins 1986).

BILINGUAL EDUCATION: Uses student's home language, in addition to English, for instruction. Students in bilingual programs are guided in the school environment according to their first language, and teachers must be proficient in both

English and the student's home language. The goal is to enable students to learn English and meet high academic standards, including proficiency in more than one language.

BILINGUAL: Proficiency in two languages.

COGNITIVE ACADEMIC LANGUAGE PROFICIENCY (CALP): The underlying conceptual foundation for academic skills development (Cummins 1986).

COGNITIVE LEARNING STYLE: The way a student responds to learning tasks and instructional environment.

CULTURALLY AND LINGUISTICALLY DIFFERENT (CLD): A student whose native culture is not mainstream America and whose language is not English. The student may or may not be acculturated and may or may not be proficient in English or his or her native language.

CULTURAL RESOURCES: Native values, beliefs, histories, and experiences.

CULTURE: "A society's culture consists of whatever it is one has to know or believe in order to operate in a manner acceptable to its members. Culture is the organization of things, behaviors, and emotions. It is the form of things that people have in their mind, their models for perceiving, relating, and otherwise interpreting them" (Goodenough 1957:167).

DEVELOPMENTAL BILINGUAL EDUCATION: or "maintenance" programs, place an equal emphasis on the two languages and attempt to ensure that the native language is supported and developed simultaneously with the acquisition of the second language. Additionally, the child's culture is validated and developed through a curriculum that focuses on the resources of both the CLD and mainstream student.

ENGLISH AS A SECOND LANGUAGE (ESL): Explicit English language instruction that is usually taught by a different teacher than the content instruction teacher in the mainstream classroom. One form of ESL at the elementary level is "pull-out", in which the child is taken out of the regular classroom for part of each day to receive ESL instruction with other CLD students. Another form is called "team teaching" where an ESL teacher and/or a bilingual aide help CLD students within the mainstream classroom during regular content material instruction.

EXPERIENTIAL BACKGROUND: Experiences and pre-skills important for learning in school including socioeconomic, political, and educational (C. Collier 1988:10-11).

HISPANIC: Those individuals who reside in the U.S. and who were either born in or trace their family roots to one of the Spanish-speaking Latin American nations or to Spain (Shorris 1992).

LANGUAGE MAJORITY STUDENTS: Native English-speaking students.

LANGUAGE MINORITY STUDENTS: Students who experience a home-school language shift and belong to an identifiable minority group. Their native language is other than English and the individual comes from an environment where a language other than English is dominant.

LANGUAGE PROFICIENCY: The ability to communicate effectively and efficiently in a particular language with a certain level of automaticity.

LEARNING/BEHAVIOR PROBLEMS: Lack of or seriously deficient academic achievement, social and classroom behavior which is disruptive to instruction, or other problems difficult for the teacher to handle in the general classroom setting (C. Collier 1988:3).

LIMITED-ENGLISH-PROFICIENT (LEP): CLD student who communicates with greater proficiency in the L1 than in English, having sufficient difficulty speaking, reading, writing, or understanding the English language.

LINGUISTIC RESOURCES: Native language skills.

MAINSTREAM CLASSROOM: Regular American classrooms that the student is assigned to, which is populated by children born in the U.S. whose native language is English, and who come from an English-dominant environment. A student who is "mainstreamed" is placed in the mainstream classroom and usually provided with English as a Second Language support.

MAINTENANCE BILINGUAL EDUCATION: This program uses instruction in the first language to achieve the goal of developing literacy in two languages. This model views the development of bilingual proficiencies as a long term investment. Therefore, students usually remain in this type of program through their educational experience.

MEXICAN-AMERICAN: Hispanics from Mexico.

NATIVE LANGUAGE/HERITAGE LANGUAGE/FIRST LANGUAGE (L1): The language spoken in the home.

NON-ENGLISH-PROFICIENT (NEP): An NEP student does not communicate in the L1, and has little ability to speak, read, write, or understand the English language.

SOCIOCULTURAL DEVELOPMENT: Comprehensiveness of adjustment to a new milieu or environment with different linguistic, cultural, and experiential elements. This includes: first and second language development, cross-cultural communication strategy development, stress level due to acculturation, and adaptation in meeting the cultural and sociolinguistic differences of the new environment (C. Collier 1988:9).

SOCIOLINGUISTIC DEVELOPMENT: Comprehensiveness of language development and usage.

SUBMERSION EDUCATION: CLD students are placed in an English-only classroom for content material instruction in all subjects. For part of the school day CLD students are taken out of the mainstream classroom and receive English as a Second Language. This form of submersion education is called **submersion with pull-out ESL.**

TARGET CULTURE/SECOND CULTURE (C2): The culture other than the home culture that is being taught.

TARGET LANGUAGE/SECOND LANGUAGE (L2): The language of the school that is used for content instruction and that is different from the home language.

TRANSITIONAL BILINGUAL EDUCATION: Structured English language instruction, and to the extent necessary to allow the child to achieve competence in the English language, instruction in the child's native language. The goal is to transition CLD students into all-English medium classrooms.

TWO-WAY BILINGUAL EDUCATION: This program groups language minority students from a single language background in the same classroom with language majority students. There is a 50/50 balance between these two linguistically and culturally diverse groups. Instruction is provided in both English and the minority language. The language as medium of instruction alternates morning to afternoon. The class is usually taught by a single teacher who is proficient in both languages.

CHAPTER II

REVIEW OF RELATED LITERATURE

RESEARCH DIMENSIONS

The most general goal of U.S. educators for schooling all children in the early years is to provide the tools and skills necessary for them to become competent members of society. In order that children entering the school system have an equal chance at successfully attaining this goal they must be able to participate meaningfully in school activities. This includes developing language, critical thinking skills, cultural values, and socialization skills. The acquisition of these "academic competencies" has traditionally been measured by researchers and educators through standardized testing or by assessing the development of L2 (English) skills. The assumption is that if children are provided L2 language development they are provided an adequate education. Over the past few years, a growing body of research has revealed more about linguistic factors that have been influential in determining the relative success of different educational models. At the same time, the CLD student population growth has necessitated the urge to expand on existing educational models in the U.S. In response to these influences, classroom models in public schools are slowly evolving and adapting to meet these needs where necessary. One influential result is the realization of the importance of the student's native language (L1) in the acquisition of the second language (L2). The theoretical debate ranges from strong English-only positions, through transitionalists, all the way to two-way bilingual ones.

However, while the debate on the linguistic environment of the SLA process is of considerable theoretical and practical interest, recent research has begun to focus on

the whole process of SLA and the complex interaction of all factors involved. Many researchers have chosen in the past to look at restricted issues in SLA research such as bilingual education as only a linguistic or social issue. "We all know this can't be done, but we struggle to do it because the task is so overwhelming otherwise" (Hatch & Lazaraton 1991:556). The shift in thinking from one-dimensional paradigms to multi-dimensional research is based on the need to better understand the whole child involved in the second language acquisition process. In The Inner World of the Immigrant Child, Igoa (1995) describes some of the hidden complexities involved in this process:

> Even though immigrant children have left behind their systems of communication, their cultural beliefs, and the cultural identity that once gave meaning to their lives, the psychological traumas of uprooting are less visible and are less easily measured than their language proficiency. (p.39)

Researchers in linguistics, education, and the social sciences have worked on identifying these "less visible and less easily measured" components that have a major impact on the acquisition of a second language in a school context (V. Collier 1995; Trueba 1988, 1993; & Wong Fillmore 1986). In particular, it has been suggested that educational success involves the interrelationship of; language acquisition and socialization processes (Ochs & Schieffelin 1982); cognitive and social skills (Trueba 1987); and cultural, academic, and psychological factors (Igoa 1995). The different angles taken by these researchers demonstrates the complex process of schooling in a second language. Part of the complexity deals with human subjects and factors that are not easily measurable. While limiting the scope of research may succeed in reducing the complexities involved, since the results exist out of context, an understanding of the process is inexact. The conclusion is that the components involved in the second language acquisition process cannot be easily separated out from the process and measured with validity. These factors can not be analyzed independently since they each

may be based at least in part, upon each other. Therefore, because these variables are not independent, any measure of one based on the sum of the variables is necessarily confounded (Husband & Khan 1982). "The lack of any social theory to generate a list of distinct variables leads to endless debates aimed at achieving a consensus about the best list, but not a theoretically based one" (p. 73). Influenced by this sentiment as well as the literature reviewed, this thesis research is contextually driven and focused on the multi-dimensional complexity of the SLA process. This departs from the one-dimensional approach often taken by researchers in the past. It is argued that a student going through SLA is involved a complex interaction of factors. An understanding of these factors together helps to better identify and plan for the issues facing public classrooms today.

Prior to a summary of the literature on the processes involved in SLA, a conceptual model developed by V. Collier (1995) will visually introduce the reader to the complexity of the process. It is meant to help clarify some of the misunderstandings about second language acquisition including the main oversimplification that language learning can be isolated from other issues and that learning English is the first things students must do.

ACQUIRING A SECOND LANGUAGE FOR SCHOOL

The work of V. Collier (1995) with help from Thomas (1995, in press) developed a conceptual model of the SLA process based on research from linguistics, educators, and social scientists. This model visually represents the complexity of the interaction that the CLD school student experiences during the SLA process (Figure 1).

The following summarizes the key points in "Acquiring a Second Language for School" (V. Collier 1995).

In the middle of the prism is the student surrounded by social and cultural processes that mold them as a particular member of their family and community. These processes affect the academic, cognitive, and language domains, and vice-versa.

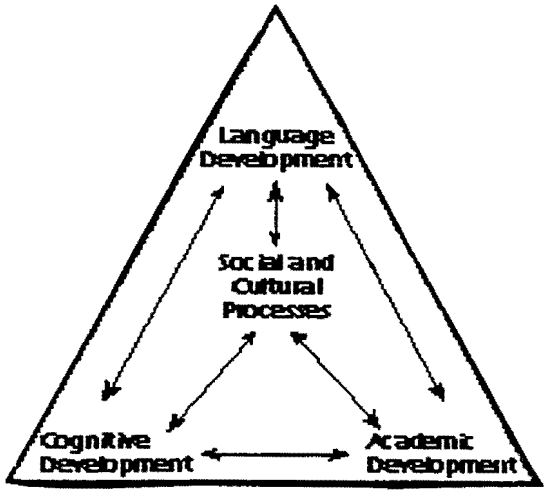

Figure 1. Language Acquisition for School.

Sociocultural Processes

The CLD student going through the SLA process is at the core of the figure. Central to the students acquisition of language are both social and cultural processes. These processes are made up of individual ways of thinking, doing things, as well as family and community norms and serve as the basis for the other three processes in the prism. A few examples of how these sociocultural processes affect the SLA process might be student variables such as self-esteem or anxiety. Also, the instructional environment in a classroom or the overall program structure might create a social or

psychological distance between groups. Finally, social patterns that subordinate the status of a minority group can also influence a student's achievement in school. All of these factors can have an influence on the student's response to the new language and culture, affecting the process positively only when they are in a socially and culturally supportive environment (V. Collier 1995). The number and type of environmental resources in place to provide support and alleviate stress for CLD students affects how CLD students adapt to their environment during this time of cultural change (Alva & Padilla 1995).

Language Development

The second element of this model, linguistic processes, includes the acquisition of the student's native language (L1) and second language (L2). "To assure cognitive and academic success in L2 a student's L1 oral and written system must be developed to a high cognitive level at least through the elementary school years" (V. Collier 1995:3). Highly interactive classes provide a type of social setting for natural language acquisition to occur at the same time with academic and cognitive development (Swain 1985; Wong Fillmore 1991).

Academic Development

Academic development, a third component, includes all school work in language arts, mathematics, the sciences, and social studies. Academic knowledge and conceptual development transfer from L1 to L2, thus it is most efficient to develop academic work through a student's L1 while teaching L2 during other periods of the school day through cognitively challenging and meaningful academic content.

Cognitive Processes

The final component, cognitive development, includes the crucial role of L1 cognitive development in the successful development of academic proficiency in L2. In language teaching this means using complex, unstructured, and variable language content curricula for educating CLD students. A good program considers ongoing support for staff development, emphasizing the cognitive complexity of the curriculum for all proficiency levels.

Interdependence of the Four Components

Individual students with their social and cultural processes, together with the academic, cognitive, and linguistic components are all interdependent in the SLA process. These latter three components are the developmental dimensions of the process. During the SLA process these components depend on the simultaneous development of each other through both L1 and L2. The sociocultural processes at the heart of the SLA process influence, either positively or negatively, student's access to cognitive, academic, and linguistic development. For this reason "it is crucial that educators provide a socioculturally supportive school environment that allows natural language, academic, and cognitive development to flourish" (V. Collier 1995:3). Supportive also means teachers having high expectations for student performance, a characteristic that was found to promise long term academic success of CLD students.

The conceptual model clearly explains the dependence of the components and why it is important to study them together. The research on individual attributes that influence the second language acquisition process, that has led to the assumptions made in this research, is provided in the next few pages. The chapter closes with an

exploration of the submersion and two-way bilingual models to determine whether they do or do not incorporate the factors necessary for successful education.

SECOND LANGUAGE ACQUISITION RESEARCH

Linguistic, Academic, and Cognitive Skills

Second language acquisition is different from first language acquisition in that the former is more subject to influences from other factors in the language learning process. However, there does exist a relationship between the learner's L1 and L2. One theory is based on the notion that class time spent on developing L1 essentially subtracts from the development of L2. This "time-on-task" hypothesis (Porter 1991) has it that the time spent in the classroom using L1 is wasted or lost. Therefore, the focus should be to develop L2 skills only. Existing research from bilingual education however, does not support this assumption. Over the length of the program, children in bilingual classes where there is exposure to L1 and L2 have been found to acquire L2 skills equivalent to those acquired by children who have been in L2-only programs (Cummins 1981; Ramirez 1991). This would not be expected if "time-on-task" were the most important factor in SLA. Additionally, by looking at the effects of incorporating L1 of CLD students into the regular school curriculum, Cummins (1983) consistently found evidence that "there are no educational impediments with the implementation of bilingual programs, and that in actuality, they appear to have potential for facilitating the educational development of CLD students who are academically at-risk" (p.46). The

relationship between L1 and L2 skills is modeled in the "interdependence hypothesis" (Cummins 1980):

> To the extent that instruction in Lx (L1) is effective in promoting proficiency in Lx (L1), transfer of this proficiency to Ly (L2) will occur provided there is adequate exposure to Ly (L2) (either in school or environment) and adequate motivation to learn Ly (L2). (p. 47)

The principle is that the transfer of underlying academic skills across languages will occur provided there is sufficient environmental exposure to L2. Several researchers conclude that a strong L1 foundation acts as a support for the learning of L2 and the learning that goes on in L1 transfers to L2 (Cummins 1981; Lambert & Tucker 1972; Hakuta & Gould 1987; Genessee, Polich, & Stanley 1977; Swain 1978; Wong Fillmore 1985). For example, the hypothesis suggests that instructors begin by teaching the CLD student reading skills in L1. Initial literacy skills are developed in L1 and once the children become orally proficient in L2, literacy skills continue to develop in both L1 and L2. The student will learn to read only once and thereafter transfers this knowledge and skill to L2. In sum, L1 and L2 are complementary rather than mutually exclusive. Instruction in L1 will develop not only academic skills in L1 but also the underlying concept found for L2 academic skills development. A study comparing several educational models available to CLD students found that students in bilingual programs with L1 components did considerably better on tests in reading, language arts, and math than students without (Crawford 1987). This same maintenance group which had the least exposure to L2 made the greatest progress in both L1 and L2. These results suggest that programs with substantial L1 components may be very effective for linguistic, cognitive, and academic development in L2 (Hakuta & Gould 1987). See Figure 2 for Cummins' proposed model of L2 development among CLD children enrolled in programs with different L1 components (1981).

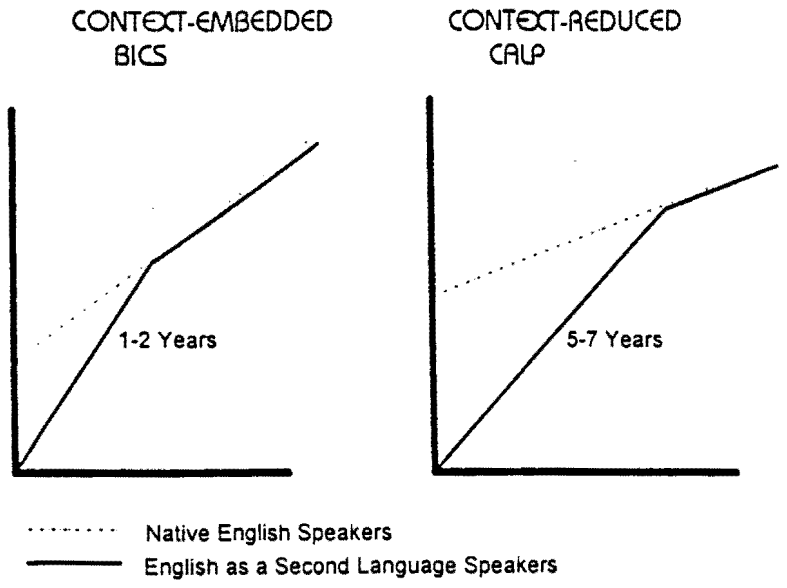

Figure 2. Cummins' Model of L2 Development Discrepancy.

This model represents the length of time required to achieve age appropriate levels of BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency). Refer to Cummins 1980 for a more detailed discussion of BICS and CALPs. In mainstream instruction, CLD students with no previous instruction take 7-10 years to reach an equal level as grade level peers while immigrant students with 2-3 years of L1 schooling take 5-7 years. Lastly, it takes 4-7 years for students in a quality bilingual education program to surpass L1 speakers. From this point on they tend to outperform in both the L1 and L2 in the upper grades. Available research supports the development of L1 during the SLA process. However, the unresolved question among bilingual educators is whether developing L1 beyond the successful transition to L2 is necessary for long term success in L2. In response to this question, the federal

government of the United States commissioned a study in the late 1980's to determine the relative effectiveness of educational models with different L1 components in the American public school system. Findings from the Ramirez report (Ramirez 1991, Volumes I & II) showed that bilingual programs in which L1 is strongly supported and longitudinally developed in combination with balanced L2 development are more successful in supporting CLD student's academic achievement in L2 than are programs that give little to no academic support to L1. In essence, providing substantial amounts of instruction in L1 enhances the ability of CLD students to improve L2 skills and their cognitive skills in content areas. V. Collier (1992) also found that after three years, the greater the amount of L1 instructional support combined with balanced L2 support, the higher L2 academic achievement in each succeeding academic year when compared to matched groups schooled monolingually in L2. The basic assumption is that CLD students need to reach a certain level of L1 proficiency in order to facilitate L2 development (California State Department of Education 1990). As a matter of fact, studies indicate that if students do not reach a certain threshold in L1, including literacy, they may experience cognitive difficulties in L2 (V. Collier & Thomas 1989; Cummins 1981, 1991; V. Collier 1995).

The connection and interdependence of the linguistic component to others in the SLA process is well-defined in the literature. Trueba found that "children's ability to participate meaningfully in school learning activities is intricately linked to cognitive and social skills that presuppose specific and substantial cultural and linguistic knowledge" (1987:1). When learners apply cognitive strategies and skills, they have to make use of linguistic skills as well as social and cultural knowledge. A student's level of academic

socialization therefore affects the development of their cognitive skills. Cummins (1986) summarize the complex process of SLA best:

> The use of the L1 to the extent that it is possible in the school setting facilitates children's ability to develop critical thinking skills. The reason is that cognitive structuring is conditioned by linguistic and cultural knowledge and experiences that children usually obtain at home and bring with them to school. (p. 354)

It is obvious why researchers have attempted to simplify this process by singling out one component to study in this complex process. However, it is still maintained that the whole process must be explored in order to fully understand the development of the whole child.

Social and Cultural Processes

Less frequently discussed in the literature are the sociocultural abilities and the knowledge required for school success. Acculturation is one theoretical component in the SLA process that has been receiving recent attention from researchers. The process of acculturation is defined as "the process of adapting to a new cultural environment: when native culture patterns into the cognitive and behavioral framework of the first culture (C. Collier 1988:13). McGroarty (1993) asserts that successful acculturation includes the development of a culturally appropriate learning environment in order to maximize the cognitive development of children. In her review of varied SLA programs she found that:

> only cross-cultural efforts that require ongoing mutual discovery and adaptation by both learners and teachers can provide the concrete guidance needed to insure that literacy instruction is culturally as well as linguistically compatible for all those involved. (p. 1)

Similarly, Trueba (1988;1993) maintains that culture must be recognized by researchers as a key factor in the study of achievement. "It is culture that provides the motivation to

achieve either success or failure" (p. 4). If not, the conflict resulting from what he calls a "cultural discontinuity" occurring in our schools, may lead CLD children during the SLA process to feel alienated and not willing to participate actively in learning activities. In his review of research on the relationship of cultural background to academic achievement, Trueba concludes that those programs that have had the student's cultural background in the curriculum are the most successful approaches to minority education (1988). This argument is parallel to Cummins' (linguistically focused) interdependence hypothesis; that people are better able to learn about another language and culture if they first have a firm basis in their own. L1 is one of the many resources tied to the CLD student's cultural background that they bring with them to the SLA environment. Through support and development of the L1, educators validate the student's native culture (C1). The affirmation and validation of the CLD student's resources, such as incorporating L1 into the regular school curriculum remains a viable means of creating a positive learning environment for CLD students (Gonzalez & Maez 1995). Consequently, when the value of L1 is reaffirmed it contributes to student's self-esteem. Paulston (1980), in a survey of American studies on bilingual education found that "all of the researchers reported that bilingually taught children showed self-concept as positive as - and more often, more positive than - monolingually instructed pupils" (Rotberg 1984:141). A positive self-concept can in turn affect motivation. Some researchers in the field argue that this is one of the necessary and vital pieces in the SLA process that contribute to a successful educational experience (Alva & Padilla 1995; Cummins 1980; V. Collier 1995)

Hirschler (1994) found that social interaction plays an important role in the acquisition of language and the acculturation process in general. The interaction

enhances acquisition of the new language as the second language learners use the presence of the native speakers in the classroom as an opportunity for interaction. Each peer group helps the other with language skills needed for school success. This type of integrative approach is also expected to improve intergroup attitudes and attitudes toward the target language and culture of the language majority children (Baecher & Coletti 1988; Lindholm 1987). The result is that students experience less culture conflict (McKay & Wong 1988:352). Each language group alternates as peer language models for half of the day, necessitating negotiation of the new language through peer interaction. Research found that students within programs that focus on this aspect tend to experience less stress and fewer acculturation problems as compared to children in traditional programs where L2 is the primary focus (C. Collier 1988). For example, in a bilingual education program on the Warm Springs Indian reservation in Oregon, it was found that one reason for the Indian children's lack of participation in the English-only classroom was that their native ways of speaking and their learning strategies were very different from those of the Anglo school (Philips 1970). A different study involving Mexican-American elementary school students within American elementary schools in programs where the L2 was the primary focus, described the students as "showing manifestations of maladjustment that included frustration and sadness, fatigue, lack of concentration, aggression, loneliness, acting out, persistent and predictable stomach problems, and general anxiety" (Trueba 1983:1). Along the same lines, Yamamoto & Brynes (1984) found that Hispanic elementary school students in the same type of program showed a higher incidence of school-related stresses compared to the majority-language students. Specifically, they reported that the Hispanic students showed significantly higher occurrences of stress than other CLD students in the study for

events such as academic retainment (28% versus 14%), poor report card (62% versus 39%), and being sent to the principal (63% versus 48%).

The findings above support the contention that linguistic, social, and cultural change can be difficult, particularly for Hispanic elementary school children. Alva & Padilla (1995) found that the struggle of the Hispanic student to form an identity that successfully integrates the old and the new features of a cultural reference group can cause stressful cultural change (p. 3). This conflict may be reduced in classrooms where both the majority and minority languages are supported and developed and students are exposed to both sets of cultural rules and values. Programs that integrate CLD student's L1 and C1 into the curricula have positive effects on their acculturation process by lessening the shock attributed with integrating into a new L2 and C2. McLaughlin (1985) supports that a well-developed bilingual program must also be a "bi-cultural" program:

> An effective bicultural program is one in which the child's cultural heritage has a central place in instruction and where there is awareness of patterns of language use and interactional style that are customary in the child's culture. At the same time, mainstream values, patterns of language use, and interactional style need to be gradually introduced so that the child at least has the opportunity to move out and function in the larger society. (p.192)

The point is not that one set of values or behaviors replaces the other but that the children have access to both sets so that they can form a new personality from both their unique bicultural identities. Lastly, ethnographic research has shown that classroom strategies are most successful when matched with the children's cultural style of interaction (McLaughlin 1985). Empowering and validating each language group equally can aid in the successful integration of the two cultural groups. For example, using marked languages and cultures within the program curriculum, as well as hiring teachers from similar backgrounds contribute to upgrading the minority group status and

can give an institutional boost to CLD student's self-esteem (Inn 1983). Gonzalez & Maez (1995) report that "two-way bilingual education programs show strong potential for high academic achievement by lessening social distance and unequal social status relations between majority and minority language students" (p. 5). The research found that the students who participated for at least 4-5 years in this type of program tended to score high on standardized tests in English (V. Collier 1992). See Figure 3 for a visual summary of these results.

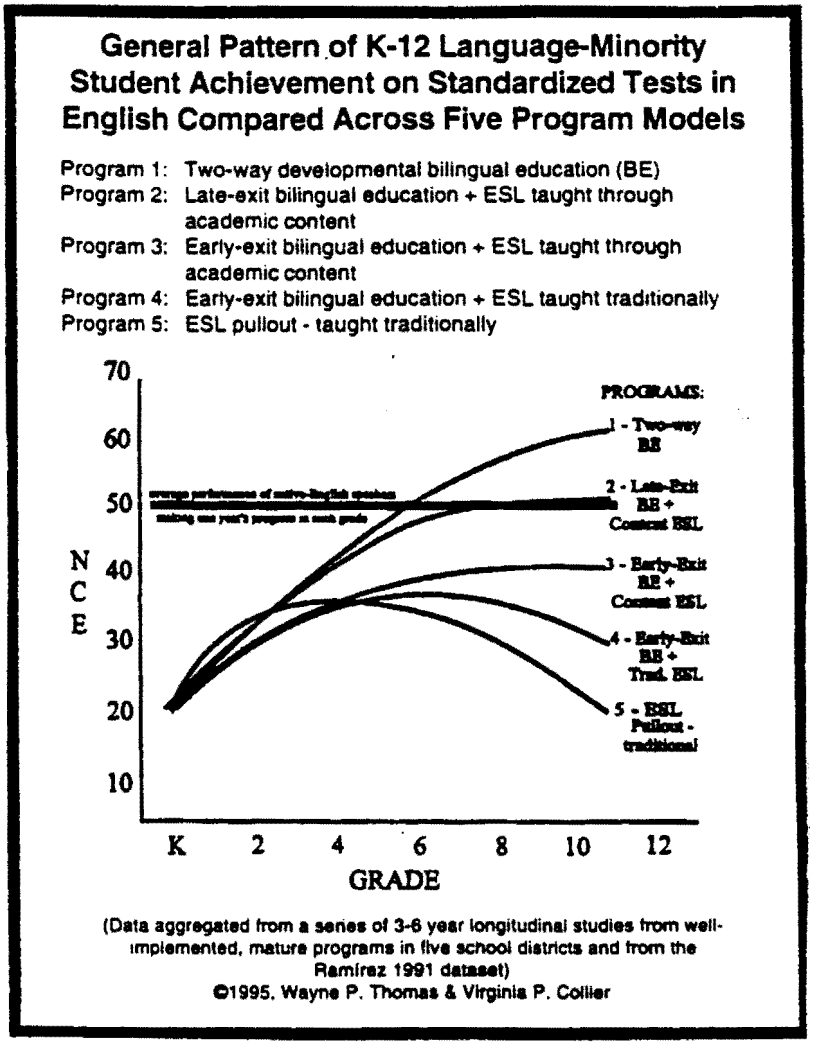

Figure 3. General Pattern of K-12 CLD Student Achievement on Standardized Tests in English Compared Across Five Program Models.

CLD children not only have to develop a second cultural identity during SLA but also experience different socialization processes compared to their mainstream counterparts in the schooling experience. In their research exploring the academic socialization of some Hispanic and Anglo students in an urban Colorado community, Delgado-Gaitan & Trueba (1992) found that educators have unrealistic expectations for CLD children to adjust quickly to their new culture, learn the new language, and commit themselves to the new set of cultural values. The assumptions underlying these expectations deny the inherent complexity of the SLA process. In response to the limited research focus of the past, theories of socialization factors have begun to gain more attention from researchers, teachers, and teacher trainers (Giroux & Mclaren 1986; Shulman 1987; Socket 1989). The basis of the theory is that schools are, and always have been, primarily responsible for socializing all children to American society. Successful socialization, in turn, determines school success but socialization depends on successful communication with educators in the target language (Trueba 1988). Socialization is a vital component in the SLA process. From a comparison of the social development of children in three societies, Ochs & Schieffelin (1982) found that:

> the process of acquiring language is deeply affected by the process of becoming a competent member of society, and the process of becoming a competent member of society is realized to a large extent through language and through acquiring knowledge of its functions, social distribution, and interpretations in and across socially defined situations. (p. 4)

There is a tight connection and influence between the social and cultural processes of SLA. Acculturating to a new environment requires learning a new set of values and beliefs. In turn, socializing oneself to a new set of values and beliefs necessitates a knowledge of the culture and the components within. If these assumptions are correct, students will most efficiently learn English and the values of the new society if they first

have a grasp on their native language, native culture, and home values. Only at this point will native language skills and cultural understanding readily transfer to learning the second language and culture.

This section summarized the components said to be most influential on the learner. These include academic, linguistic, cognitive, social, and cultural processes. The following section involves a summary of four educational program models available to CLD students. The four most common SLA programs available to CLD students are based on differing assumptions of how to best educate CLD students in public schools. While most of these programs have existed for many years, a great deal has been learned in recent years about the acquisition of a second language. Based on a summary of SLA research, a list of key variables that were found to predict academic success for second language learners in a school context was developed. A summary of the research finds three key predictors of academic success which appear to be more important than any other variable in the successful education of CLD students (V. Collier 1995:33):

- Cognitively complex academic instruction through student's L1 for as long as possible (at least through the elementary years) and through L2 for part of the school day.

- Use of current approaches to teaching the academic curriculum through both L1 and L2, through active, cognitively complex learning; and

- Changes in the sociocultural context of schooling, e.g. integration with English speakers, in a supporting, affirming context for all; an additive bilingual context, in which bilingual education is perceived as the gifted and talented program for all students; and the transformation of majority and minority relations in school to a positive school climate for all students, in a safe school environment.

After the following overview of the controversy underlying the spectrum of diverse models in immigrant education, the four most common SLA program are

presented. An explanation of their main goals leads to a description of the philosophy and assumption upon which each is based. Finally, each model is analyzed for the presence or absence of the above key variables to assess which model predictively succeeds in providing the most successful language acquisition environment for CLD children. The models presented next include: submersion with pull-out ESL, transitional bilingual education, maintenance bilingual education, and two-way bilingual education.

IMMIGRANT EDUCATION

The four program variations mentioned above are based on several different educational philosophies, resulting from a great deal of study and controversy. Most of the controversy has centered around mainstreaming and bilingual education. The periodic acceptance or rejection of each extreme over the last century has been primarily driven by politics. For example, after World War I, bilingual education in public schools virtually disappeared, which was characteristic of an era of nationalism and isolationism. In the late 1960's however, it reappeared through the efforts of both old and new immigrants who saw it as a necessary alternative to traditional English-only schools. In recent years, the debate on the effectiveness of bilingual education has been inspired by researchers in academic fields such as education, linguistics, sociology, and psychology, just to name a few. On one side of the debate, it is argued that educating CLD students in submersion programs that force them to "sink or swim". Rather, it is argued that bilingual education programs that allow students to use their L1 to learn the (L2) are more effective in the long run. "Effective bilingual education programs which meet the needs of CLD students at all levels, and especially for the elementary level, are

greatly needed to ensure that CLD students can succeed academically, stay in school, and graduate" (Department of Education Comprehensive School Grant 1996:14). The first step towards this goal is a better understanding of the influence of the L1 in the educational process. Focusing mainly on linguistic processes, it has been found that omitting L1 support as part of the instruction of CLD students deprives them of the opportunity to develop their L1 skills and consequently, their L2 skills as well (Cummins 1983). Therefore, Cummins and other opponents to mainstreaming argue that the view that bilingualism may be harmful or detrimental to students learning English should be replaced with the belief by many that the support and development of the L1 is a necessity to the attainment of the L2 (Krashen 1991; Hakuta 1986).

On the other hand, opponents of bilingual education claim that it simply does not work (Baker & DeKanter 1983; Rossell & Ross 1986). Also approaching the topic from a linguistic focus, these researchers argue that the learner becomes confused by dual language input. The cognitive load of learning two languages at the same time overwhelms the learner resulting in a lack of development in either language. Concentrating on learning the native language first could result in a slowing of subject material acquisition and the possibility that the student may be retained. While the SLA process has been shown to include more than linguistic processes, the linguistic debate provides some background on the diversity of assumptions underlying different programmatic models.

In the following section, the spectrum of diverse solutions for teaching a second language in public schools will be presented and explored for key variables predicting their success in the education of CLD students.

Submersion Education

One of the most common types of programs available for teaching CLD students in public schools today is submersion with pull-out English as a second language (submersion). This method of teaching suggests that instructors begin immediately upon their arrival, teaching these students using only the L2 as the language of instruction. The CLD students are "submersed" in L2 immediately with the goal to move them into L2 and out of the L1 as quickly as possible by using L2 as the language of instruction in all subjects. Cognitively complex academic instruction in L2 within the mainstream classroom is usually watered-down to meet the CLD student's L2 proficiency level. In a review and summary of submersion programs, Long (1983) found that the common driving force behind this philosophy is the belief that learning English is "the gateway to education and to economic and social survival" (p. 380). Without L2 language capabilities, one cannot fully function in American society. However, because L2 acquisition is the entire goal, no concessions are made to accommodate the linguistic or cultural resources of the CLD student.

One of the major appeals of submersion lies in the ease of implementation. Submersion is cost-efficient, few administrative changes are necessary in the school, it involves little to no teacher training or re-training, and ESL classrooms require very little space. Also, submersion has had some success in helping individual students acquire L2 in the short run. However, in her research on submersion programs as compared to bilingual approaches for teaching the CLD population, Thomas & V. Collier (in press) found that submersion into L2 without having yet reached a critical level of proficiency

in L1, effectively interrupts cognitive, academic, and linguistic development, and may limit long term academic success. Therefore, extensive cognitive and linguistic development in L1 is "crucial" to L2 success.

For part of the school day in submersion programs, CLD students are separated from L2 proficient students in order to receive ESL instruction. The ESL model is based on the premise that students need explicit instruction to better understand the structure of the language which is essential to achieve full proficiency in L2 (McKay & Wong 1988). The students benefit in the early years from formal instruction they receive in L2 and may even gain self-confidence by being with others who share a level of L2 proficiency comparable to their own. However, within ESL instruction, support to assist students in comprehending academic subject matter is often lacking since bilingual education is usually not available.

In submersion programs, the negative social perceptions of ESL classes that both English-speaking and CLD students have often developed in U.S. schools has led to CLD students' social isolation, denying them the critical conditions that Wong Fillmore (1991) says must be present for SLA to take place. Ogbu (1993) and Oakes (1985) also discovered from their work that segregated transitional bilingual classes and ESL classes can sometimes heighten the social inequities and subconsciously maintain the status quo in majority-minority relations. This often leads to a condition of "subtractive bilingualism" (Lambert 1984:19). From their work in the field, along with other researchers, Thomas & V. Collier (in press) concluded that ESL pull-out in the early grades was the least successful program model for student's long term academic success (V. Collier 1992, 1995; V. Collier & Thomas 1989; Cummins 1981).

Submersion education is based on an "assimilation" philosophy, reflecting societal views that encourage linguistic and cultural absorption into the mainstream (McKay & Wong 1988). The curriculum centers around the teaching of linguistic and social rules most familiar to mainstream English-speaking students so there is little consideration given to the socialization and culture needs of the CLD student. The belief is that the faster children are submersed into L2 and C2 the faster they will adapt and be able to succeed in the mainstream classroom. Alva & Padilla (1995) in their research on CLD children found that:

> the impact of schools in relation to their socialization is quite powerful in that the interactive exchange between CLD students, and the values and practices of schools and classroom, form the structure in which CLD children develop behaviors, beliefs, and aspirations in relation to their education. (p. 4)

Because submersion classrooms are unable to address or meet the CLD student's culture learning needs, students are forced to ignore their native social rules, at least for academic purposes. In her research with CLD students, Nieto (1988) found that students whose linguistic and social rules are different from the mainstream, and whose own linguistic and social rules are ignored and invalidated, experience high rates of academic and social failure within the school system. The invalidation of CLD student's previous experiences can cause isolation, in turn, causing them to withdraw from the learning experience completely. Others, too, have found that this type of monocultural response to the acculturation process can result in an increase in self-abusive behavior and if ignored, usually leads to school failure (Szapocznik & Kurtines 1980). McKay & Wong (1988) document the experience of one CLD student who wrote in a journal on

attending an English-only classroom:

> School was a nightmare. I dreaded going to school and facing my classmates and teacher. Every activity the class engaged in meant another exhibition of my incompetence. Each activity was another incidence for my peers to laugh and ridicule me with and for my teacher to stare hopelessly disappointed at me with [sic]. My self-image was a serious inferiority complex [sic]. I became frustrated at not being able to do anything right. I felt like giving up the entire mess. (p. 341)

Trying to succeed in a new environment without adequate language or classroom socialization skills, especially for a young child or newly arrived immigrant, is a frightening experience that may lead to absenteeism and eventual school dropout. The high dropout rate among Hispanic students alone is one indication of the educational failure born by this model (Nieto 1988). Cardenas (1977) also reports that in programs with no support for L1, anywhere from 50 to 100 percent of CLD students drop out of school before even completing high school. This summary of available research documents that in the long run, many CLD students subjected to this approach fail.

In theory, submersion education does not incorporate the key variables V. Collier (1995) claims are essential to successful academic proficiency for CLD students. In the submersion program: (1) integrated schooling is not explicitly incorporated, so English speakers and language minority students do not learn academically through each other's languages; (2) perceptions among staff, students, and parents are that student performance expectations are low; (3) there is not an equal status of the two languages, thus creating isolation among language minority students; and (4) the focus is to water down discrete units of language and curriculum to meet the proficiency level of the students.

In the next section, the literature on "bilingual education" is briefly summarized followed by a discussion of the three most common bilingual education programs available to CLD student's in public elementary schools. These models will be individually explored for the presence or absence of key variables that were found to be essential in successful SLA environments, including: schooling in both L1 and L2, challenging academic, linguistic, and cognitive content instruction, and the integration and socialization of the majority and minority culture.

Bilingual Education

Bilingual education models vary drastically throughout public elementary schools. However, the common objective across program type is to develop skills in L2 while at the same time learning content through native language (L1) (Nieto 1988). In general, bilingual programs agree on the goal to develop the L2 to a point where students can achieve at the same level of readiness for school that compares favorably with that of English-speaking children. It is the role of the L1 has become less defined. One of the main controversies within bilingual education has been whether it should exist solely to support the L1 as a short term transition to student's L2-only classroom (forward reference to "transitional" bilingual model) or whether it should develop and maintain the L1 for the long term (forward reference to "maintenance" and "two-way" models). At the core of this debate is whether maintaining student's L1 in the long run will help the child to succeed academically. The following section will present a theoretical description of three bilingual education models depicting how each incorporates these objectives.

Transitional Bilingual Education

While a majority of English-only programmatic models in public schools today are submersion ones, most bilingual models are transitional in nature (Nieto 1988). The transitional bilingual education program is very common throughout relatively heavily populated CLD population districts. It is a style of education that is typically funded under Title VII, the U.S. federal grant mandated to educate CLD students. From a linguistic, cognitive, and academic perspective, the use of L1 during the transition to L2 provides a basic foundation upon which CLD students will develop L2. From a social and cultural perspective, using L1 to some extent helps to validate their background experiences, thereby lessening the effects of culture shock on the acculturation process. The transitional bilingual model is relatively easy to implement with little teacher training or re-training and relatively few additional funds necessary.

Often referred to as "early-exit", the transitional bilingual model (transitional)[6] differs from submersion education mainly in that it supports and uses student's L1 in addition to L2 for instruction during the transition to L2. Students are provided with initial instruction in L1 primarily for the introduction of reading but also for clarification purposes. However, L1 instruction is phased out rapidly with most students mainstreamed into the L2 by the end of their second or third year. While the transitional model uses both L1 and L2 to some extent during the day, it generally places the major emphasis on L2. Students use the L1 as a bridge to the L2 at which time they are forced in school to burn that bridge (Nieto 1988). A closer look at this bilingual program reveals that the transitional bilingual program shares the same primary goal as

[6] "Transitional" will be the term used in this thesis. It is the most common reference in the literature.

submersion: to quickly move the CLD student towards acquisition of skills necessary to succeed in the L2-only classroom.

Although positive differences have been found in student performance within transitional bilingual programs when compared to submersion programs, similar problems persist across programs that switch out of the L1 during a critical stage. Again, when students are pushed quickly out of L1 into L2 they are forced to function in the L2 at cognitively below their age and ability level. This may cause them to fall behind in cognitive and academic growth, in turn, affecting long term academic proficiency. Students in transitional programs may not reach a certain threshold in L1 including literacy, and consequently, may experience these cognitive difficulties in L2 (V. Collier 1995, 1987; V. Collier & Thomas 1989; Cummins 1981, 1991). Interrupted cognitive and linguistic development in L1 may negatively affect L2 academic success. Evidence from Rossell (1988), who analyzed comparisons of transitional bilingual education programs and submersion programs, found that 71% (20 of 28 cases) of the studies reviewed showed transitional bilingual education to be no better than submersion in the long run. In sum, short term L1 support may not be a great advantage over no L1 support at all.

The transitional model is grounded firmly in a "compensatory education" framework (Nieto 1988). Languages and cultures other than English are deficits and should eventually "go away". Children who arrive speaking a language other than standard English and whose experiences are different from those of middle-class youth are "culturally deprived". The objective of transitional education becomes one of "bringing students up" to some perceived linguistic or cultural standard (Nieto 1988:6). This creates a psychological distance between L1 and L2 speakers causing "perceptions

of each group in inter-ethnic comparisons", "cultural stereotyping", and "subordinate status of a minority group" (V. Collier 1995:5). Much like the effects of segregated ESL classes on CLD students, segregated transitional bilingual classrooms deny access to the core curriculum, heighten social inequities, and subconsciously maintain the status quo in mainstream-CLD student relations (Hernandez-Chavez 1984; Spencer 1988). The negative perception that both English-speaking and CLD students have often developed in regard to this "difference" has led to CLD student's social isolation, in effect denying them the conditions that Wong Fillmore (1991) says must be present for SLA to take place. Transitional bilingual education incorporates at least one of the key variables essential to successful academic proficiency for CLD students that were outlined at the beginning of this chapter; that is, the transitional program is characterized by the equal status initially given to the two languages during the simultaneous support for the L1 and L2, thus increasing self-confidence among CLD students. However, L1 support is only used as a bridge to the L2. The transitional program usually does not exhibit challenging academic, linguistic, or cognitive content instruction. Students are often functioning cognitively below their age and ability level since they are taught through a watered-down curriculum in the L2. Also, while CLD student's L1 is supported in this program, it is usually undertaken outside of the mainstream classroom, thus minimizing the integration and socialization of the majority and minority culture.

Maintenance Bilingual Education

The philosophy of maintenance bilingual education is that becoming fluent in L2 does not necessarily mean having to lose or replace L1 (Hakuta & Gould 1987). Maintenance education[7], or "late-exit" differs from the transitional program primarily in

[7] "Maintenance" will be the term used in this thesis. It is the most common reference in the literature.

the amount and duration that L2 is used for instruction as well as the length of time students are to participate in each program (Ramirez 1991). In the maintenance model the goal is to promote bilingualism by putting an equal emphasis on L1 and L2 rather than the primary emphasis on L2. Students remain in late-exit programs throughout elementary school and continue to receive 40% or more of their instruction in L1 even when they have been reclassified as fluent-English-proficient. The newest maintenance variation is a "two-way" developmental bilingual program.

Two-Way Bilingual Education

The two-way model is one variation of the maintenance approach. The main difference is that maintenance style SLA programs are usually available only to CLD students while two-way programs school English-speaking and CLD students together in the same bilingual classroom. The two-way bilingual education model[8], also called two-way immersion, dual language, or developmental bilingual education brings together CLD students from a single language background in the same classroom with language-majority (English-speaking) students. Ideally, there is a 50/50 balance between English-speaking students and CLD students. Instruction is provided in both L1 and L2 which are alternately taught in the mornings and afternoons each day. The class is usually taught by a single teacher who is proficient in both languages, but can also be team-taught by one bilingual and one English-only teacher. Native English speakers and speakers of the minority language are given the opportunity to acquire proficiency in L2 while continuing to develop L1 skills. The two-way program is designed to continue at least through the student's primary educational program. The purpose is not to transition the student to L2 only, but to continue using both languages

[8] "Two-way" will be the term used in this thesis. It is the most common reference in the literature.

simultaneously throughout the program. The philosophy of two-way education is that a well-developed and comprehensive bilingual program not only develops but promotes the linguistic and cultural resources of CLD students. For this reason, the history and culture of students in the program are made explicit components of the curriculum (Nieto 1988). Two-way education encourages "cultural pluralism", stressing that "language and culture deserve not only to be used as a bridge but also be preserved, nurtured, and valued" (Nieto 1988:6). From this perspective bilingual education is viewed as enrichment since CLD students are bringing a "gift" rather than a "deficit" to the classroom.

The support and development of CLD student's cultural resources is considered a vital component in the two-way curriculum. Recent research suggests that elementary education programs which focus on the development of student's native language (L1) and culture (C1) may be the most effective means by which to educate the growing population of CLD speakers (Anstrom 1996; Garcia 1983; Griego-Jones 1994; McKay & Wong 1988, Ramirez 1991; V. Collier 1995). Because language and culture are closely intertwined, learning a new language necessitates a personal entry into another cultural group (Delgado-Gaitan & Trueba 1992; Ramirez 1985; Greigo-Jones 1994). This forces students to adopt new cultural norms of social interaction as well as a new linguistic code. Integration of majority English-speaking students and minority-CLD students in two-way classrooms creates a unique sociocultural context for schooling. It provides a mechanism for second language learners to interact with peers who are speakers of the target language. The two-way model promotes the integration of L1 and C1 of the student's experience, encouraging language development as well as cultural sensitivity on the part of all students and therefore minimizing the isolation often

experienced by children in programs with little or no linguistic or cultural support (Nieto 1988). Valuing what children bring with them to school, including the non-English language, determines whether they develop a positive self-concept and develop a healthy attitude toward schooling (Gonzalez & Maez 1995). This philosophy is fundamentally different from the "assimilationist" and "compensatory" philosophy at the heart of most English-only and transitional programs where little or no consideration is given to the maintenance of CLD student's L1 and C1.

Two-way bilingual education incorporates all of the key variables essential to successful academic proficiency for CLD students. The two-way program is characterized by: (1) integrated schooling, with English speakers and language minority students learning academically through each other's languages; (2) perceptions among staff, students, and parents that it is a "gifted and talented" program, leading to high expectations for student performance; (3) equal status of the two languages achieved, to a large extent, creating self-confidence among language minority students; and (4) emphasis on natural language acquisition through all content areas, cooperative learning, interactive and discovery learning, and cognitive complexity of the curriculum for all proficiency levels. In this more holistic model, long term needs are being met by incorporating these considerations. For a visual summary of the four educational models previously described and the philosophy of SLA upon which they are based, please refer to Table I.

TABLE I

Four Second Language Acquisition Models Serving Culturally and Linguistically Different Students in Oregon

Program type	**Assumptions of Language Learning**	**Philosophical Assumptions**	**Underlying Philosophy**
Submersion with ESL (English-only)	Formal instruction is beneficial to learning a language. Initial learning need not take place in the L1	Adheres to an assimilationist model	Goal to transition to L2/C2 as quickly as possible
Transitional bilingual education	Students can acquire the language by using it as the medium of instruction, but formal instruction is also beneficial	Adheres to an assimilationist model	Limited support for L1, only long enough to move to L2-only classroom
Maintenance bilingual education	Initial learning should take place in L1. Skills in one language transfer to another	Adheres to a pluralistic model	L1/C1 support simultaneous with L2/C2 development and support- with the goal to reach full proficiency in both. Students remain in the program throughout educational experience
Two-way bilingual education	Formal instruction is beneficial to learning a language. Initial learning should take place in L1. Skills in one language transfer to another	Adheres to a pluralistic model	L1/C1 support simultaneous with L2/C2 development and support- with the goal to reach full proficiency in both. Students remain in the program throughout educational experience. Native L1-speakers and native L2-speakers receive content area instruction together, using both languages

(McKay & Wong 1988)

A summary of the four SLA models available to CLD students clearly indicates that submersion and two-way education are based on the most distinct philosophies and assumptions about language learning and language learning environments, providing for an interesting level of comparison in this study. The two extreme models on this spectrum of diverse solutions will be explored for the presence or absence of components found to successfully influence the SLA process. The submersion model did not incorporate any of the key variables. Conversely, all four variables were found to exist in the two-way bilingual education environment. If the theories of SLA that were explained in detail are sound, then the prediction is that the two-way model will provide a more successful environment for educating CLD children. However, the goal is to find in practice, whether this program outperforms the submersion model in terms of the sociocultural development of children.

Conclusion

This chapter first addressed the difficulties inherent in conducting valid and reliable research that also captures the complexity of the SLA process. This was followed by a visual representation of the complex process of acquiring a second language for school and the review of the literature identifying key components that may have a major impact on the acquisition of a second language.

The goal in the remainder of this thesis is to focus on a comparison of a submersion program to a two-way bilingual education model to test our prediction that a two-way will be more effective for developing the sociocultural development of CLD children. The following chapters will attempt to draw from the summary of the literature presented here in order to demonstrate how and why the questions in this thesis are

asked, as well as the results or lack thereof, that were found. The research protocol is presented and explained next.

CHAPTER III

METHODOLOGY

This study employed a quantitative and qualitative methodology to measure the construct of sociocultural development, defined as; "the comprehensiveness of adjustment to a new milieu of environment with different linguistic, cultural , and experiential elements, including first and second language development, cross-cultural communication strategy development, stress level due to acculturation, and adaptation in meeting the cultural and sociolinguistic differences of the new environment (C. Collier 1988:9). At the heart of the model of second language acquisition for school (V. Collier 1995) are the sociocultural processes that have formed the student into who they are and therefore must serve as the basis for their cognitive, academic, and language development. It visually represents the complex interaction within the SLA process. In this chapter, a qualitative and quantitative methodology is presented for capturing this process. To begin, there is a description of the participating subjects and how they were selected. This is succeeded by an explanation of the design of this study and an account of the procedures followed during the course of this research. This is followed by an in-depth discussion regarding the reliability and validity of the methodology. Finally, a brief introduction to the means for profiling the comparison groups closes the chapter.

SUBJECT SELECTION

Information for this study was collected from eighteen third grade Hispanic students studying in two diverse second language acquisition (SLA) environments. Students in a two-way bilingual education program and a submersion with ESL pull-out program participated in the study. For purposes of this research the schools from which

the subjects came will be referred to under the pseudonyms "Dual" (to emphasize two languages) and "Solo" (implying the use of one language), respectively. In the third week of May, 1996 this research purpose and plan were presented to the four participating classes. A brief question and answer period was followed by the distribution of either Spanish or English parental consent forms depending on the home language of the student. See Appendix A for both versions of the consent form. The consent form instructed parents/guardians to read, sign, and return the form only if they approved of their child's participation in the study. Parents/guardians were assured that their child's participation would not interfere with the educational experience and that there would be no direct interaction between the researcher and student for research purposes. Most importantly the consent form pledged that student, teacher, and school confidentiality would be honored by the researcher throughout the span of the research project.

In the last week of May, 1996 the consent forms were collected from Solo and filtered by language. The researcher analyzed the consent forms from Solo first because a smaller return rate was expected from this school due to a lower population of culturally and linguistically different (CLD) students. Students from Dual were then selected based on their similarity in background demographics to the existing pool of Solo subjects. The four criteria forming the basis for subject selection at both schools were:

- enrolled in program Solo or Dual at the third grade level,
- linguistically different than mainstream students - Spanish is the home language,
- culturally different than mainstream students - familial/cultural ties to Mexico and
- classified as Non-English Proficient (NEP) upon admission to the program.

The information necessary to determine if subjects met predetermined subject selection criteria was mostly found in existing student records. This information was necessary in the selection of a homogeneous subject population for the creation of similar data sets. Existing student files were kept in locked closets at both schools and accessible to the researcher only after school hours. Permission to review these records was granted by school administrators, teachers, and parents.

A total of nine Spanish consent forms were returned from the Solo program and all nine were selected. No additional subjects were sought for participation since the goal of this research was to collect qualitative and quantitative data on eighteen subjects. While this number is arguably small for most statistical models, the data set was intentionally limited due to the enormous amount of information that was to be collected for each of the eighteen subjects.

More than twenty Spanish consent forms were returned at Dual. From this set, a pool of qualified students was established whose records matched the above four criteria. Eventually, nine students who most closely matched the background of the nine previously profiled students at Solo were selected.

PROCEDURE

This study involved a 2-week data collection effort from late-May, 1996 to early-June, 1996. The methodology followed in this research drew from qualitative and quantitative sources to compare subjects enrolled in a two-way bilingual program and subjects who had been mainstreamed into a traditional submersion with pull-out ESL program. Student record reviews, researcher observations, and teacher interviews

helped to gather information that was then summarized in the Acculturation Quick Screen (AQS) and Sociocultural Checklist (SC). Oregon Statewide Assessment (OSA) scores[9] were collected at a later time from school officials and contributed to the quantitative methodology. The qualitative and quantitative protocol provided data for assessing the sociocultural development of Hispanic CLD students enrolled in philosophically diverse educational programs at the third grade level. Using a triangular combination of qualitative and quantitative methodologies, the researcher attempted to provide a rich descriptive and comparative profile of the two groups, and to generate a valid and reliable model of student's sociocultural development that was accessible to the outside observer. The main construct of sociocultural development was operationalized by the AQS, SC, and OSA scores. Results from this analysis along with the qualitative comparison tested the hypothesis that a student who is at a more advanced stage of sociocultural development will exhibit a lower score on the SC, a higher score on the AQS, and higher OSA scores. On the other hand, a student who is at a less advanced stage of sociocultural development will exhibit higher SC scores, lower AQS scores, and lower OSA scores. The next two sections will focus on the description and explanation of the qualitative and quantitative methodologies that were used in this thesis research.

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[9] The OSA is administered to all third grade students in the state of Oregon in the Spring of each academic year. The OSA used in this study was administered by school officials in March, 1996. There was no participation by this researcher in the testing process itself.

QUALITATIVE METHODOLOGY

The primary focus of this study was to collect instructionally meaningful information about the sociocultural processes at work within a school context. These processes are functioning together during second language learning for school. The qualitative methodology established a rich and comprehensive portrait of the two subject groups for a descriptive comparison. This protocol included thirty-six hours of researcher observation and one-hour interviews with each participating teacher. These sources provided data contributing qualitative descriptions of the two programs. Figure 4 summarizes the data sources in the qualitative methodology.

1. Researcher Observations (supplied descriptive information).
2. Teacher Interviews (supplied information for completing the SC and AQS).

Figure 4. Data Sources in the Qualitative Methodology.

Researcher Observations

A structured observation provided instructionally meaningful information because it was the one assessment technique which permitted objective evaluation within the natural environment (C. Collier 1988:33). The researcher observed Solo and Dual subjects in their respective programs during interaction with teachers, cultural peers, and mainstream peers. They were observed within classrooms, on the playground, at lunch, in the computer room, and during various planned school activities such as school assemblies and fun runs. Each observation was guided by a set of predetermined criteria, including; length of observation, environment, activity, and observed behavior. The observed subject was described in terms of where they were, their interaction with

cultural and/or Anglo peers or teachers, what they were doing, and how they reacted and responded to each situation within each 20 minute observation interval. This researcher/interviewer has had a fair amount of exposure to the Spanish language and has done research on understanding of this language/culture outside of the current research. While not fluent in Spanish, the researcher has a low-intermediate level of understanding of the language[10] and a certain degree of familiarity with the cultural and linguistic background of Hispanic students. "The successful use of this technique requires that the observer be someone who is sensitive to and knowledgeable about the student's culture" (C. Collier 1988:33). These factors may have contributed to the skill of the observer and enabled a more informative and meaningful observation, such as what is linguistically and culturally appropriate for this group of learners. This is important to mention, in that effective observation helps to capture real-time, natural interaction patterns in all aspects of the subject's daily educational experience. Observation provided information about student's response to the learning environment within the classroom as well as information about their experiential background and social and cultural development.

Observations at Solo were conducted over a three day span in the first week of June, 1996. The following week, Dual subjects were observed for the same amount of time. The two subject groups were observed for 3 consecutive days each, for a total of 6 days of observation. Observations at each school took place from 9:25 AM-3:25 PM every day. The nine participating subjects from each program were dispersed in two classrooms. Observation time was split equally between the two classes and among the

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[10] This assessment is based on personal evaluation. The researcher can read and understand the Spanish language at an intermediate level according to Portland State University's standards.

nine subjects as evenly as possible. It was necessary for this researcher to commit to three consecutive days of observation of each program to gain a sense of continuity. This ensured that student behavior and interaction patterns were not emerging only during particular times of the day. Likewise, it was important that students gained a sense of familiarity with the researcher over time allowing for more natural and uninhibited interaction to have occurred between students. Table II summarize the observational sequence at Solo and Dual, respectively.

TABLE II

Observational Sequence at Solo and Dual

	Class 1 (5 subjects)		**Class 2 (4 subjects)**	
Program Solo:	Day 1-AM	9:25-12:30	Day 1-PM	12:30-3:25
	Day 2-AM	9:25-12:30	Day 2-PM	12:30-3:25
	Day 3-PM	12:30-3:25	Day 3-AM	9:25-12:30
Total Hours:		**9.05**		**8.55**
	Class 3 (5 subjects)		**Class 4 (4 subjects)**	
Program Dual:	Day 1-AM	9:25-12:30	Day 1-PM	12:30-3:25
	Day 2-AM	9:25-12:30	Day 2-PM	12:30-3:25
	Day 3-PM	12:30-3:25	Day 3-AM	9:25-12:30
Total Hours:		**9:05**		**8:55**

The researcher tracked each subject for several twenty-minute intervals and recorded individual behavior and language patterns in a notebook. All information was time stamped and recorded under individual subject pseudonyms in a consistent and reliable manner.

Teacher Interviews

After completing observations of the programs, the researcher met individually with four teachers for one hour interview sessions. The focus of these sessions was to

elicit information about student subjects enrolled in their classes. Prior to their interview sessions the four teacher informants received information about the goals and methods of this study. They were asked to read and sign a consent form (Appendix A) which ensured that none of the information they learned or obtained from this research could be used to influence future placement decisions of participating subjects. The interviewer read over the informed consent with each informant and answered questions before volunteers signed. The interview sessions were conducted after school hours in the individual teacher's classrooms. The four teachers interviewed were very supportive of this research project and seemed more than willing to take part in the interview sessions. The informants were encouraged to respond as honestly as possible to the questions asked by the researcher, basing their answers on their own experiences with these subjects and using as many examples and anecdotes as necessary to explain their responses. Each session was audio taped and transcribed.

These private and confidential interviews were designed to help examine the qualitative similarities and/or differences between two groups of Hispanic CLD students enrolled in two diverse SLA programs. Both subject groups came into their respective educational environments sharing similar background factors. The goal of the interviews was to help estimate from the teacher's perspective, their student's comprehensiveness of adjustment to the educational environment. The specific factors that may be contributing to different school performance and experience were assumed to be more familiar to the teachers who spent the year interacting with these students.

The content of the interviews focused upon questions from the SC, (see Appendix B for the original). Thirty-six indicators or "questions" from the SC served as the basis for the open-ended discussion about the CLD student's school and social

adaptation. The particular indicators of cultural factors that were selected to represent the five categories were compiled from extensive research by C. Collier (1988:2-20). The categories include: cultural and language, acculturation level, experiential background, sociolinguistic development, and cognitive learning style. Each of the categories includes between 3-8 indicators of factors that CLD students in particular may bring with them to the educational environment. Sample factors from the categories on the SC are: "comes from non-English speaking home" (culture and language), "doesn't interact with majority peers or majority cultural group" (acculturation level), "does not know how to behave in classroom" (experiential background), "rarely speaks in class" (sociolinguistic development), and "easily frustrated or low perseverance in completing tasks" (cognitive learning style). Teacher responses on the SC were scored as "yes", "no", or unanswerable. A "yes" answer was arbitrarily assigned a numeric amount of 2 while a "no" answer received a score of 1. Any unanswerable questions were simply not scored.

Researcher observation was used to compliment the incomplete information gathered from teacher interviews in the qualitative methodology. The information from the observation together with information from teacher interviews, contributed to the SC. This allowed for a discussion regarding the presence or absence of selected indicators of cultural factors for selected CLD subjects. In most cases the information provided by the five teacher informants matched the information gathered from the observations. In a few cases these two information sources did not agree. For example, according to researcher observation, one particular subject displayed insufficient English language skills compared to other CLD students. However, the teacher explained that this particular student had relatively solid overall English academic

skills and was able to perform at a level comparable to his or her CLD student peers. In this case and most others where these two sources did not match, the interview data served as the more stable source. There was rarely, if ever, enough justification on the part of the researcher to believe that what was observed was more valid than what the teachers divulged during the interviews.

QUANTITATIVE METHODOLOGY

Having described the qualitative protocol, it is now possible to lend the same detail to a discussion of the quantitative methodology followed. See Figure 5 for a summary of the data sources in the quantitative methodology.

1. Sociocultural Checklist - data collected during teacher interviews and during researcher observations.
2. Acculturation Quick Screen - data collected through review of records and during researcher observations.
3. Oregon Statewide Assessment Scores - data previously available.

Figure 5. Data Sources in the Quantitative Methodology.

The SC and AQS were taken from C. Collier's paradigm on assessing CLD students (1994) and are both currently used in the Vancouver, Washington Public School District for assessing CLD students on their adaptation to their educational environment. For a more detailed account of each please refer to Assessing Minority Students with Learning and Behavior Problems (C. Collier 1988). The AQS is scored specifically for factors affecting acculturation. The SC also scores acculturation factors, but in a broad manner. Used together, these instruments should pattern each other on this factor for a given student.

The AQS has been normed and validated and found to be reliable (C. Collier, personal communication, November 3, 1996). In contrast, the SC has not. Questions about the reliability and validity of this research are addressed in regard to this and other measuring instruments later in the chapter. In the following prose, the SC and AQS and their scoring protocols are described in more detail beginning with the SC. This is followed by a brief discussion of the Oregon Statewide Assessment.

Sociocultural Checklist

The Sociocultural Checklist (Appendix B) was developed to give practitioners information about sociocultural factors that CLD students in particular bring with them to the learning environment. Triggered by teachers having concerns about CLD student behavior or performance, the SC was developed as a planning tool that is ideally administered six weeks after the CLD student's entry into the educational program. It serves as an informal inventory that signals the presence of specific SC factors or "red flags" which may contribute to learning/behavior problems (C. Collier 1988). This information indicates a rough level of school/social adaptation. The goal of the SC is to inventory the characteristics CLD students bring with them into the American classroom that may not match those of the mainstream school culture. This mismatch has been found to be a source of behavior and/or learning problems for this population. Examples of these particular problems are: lack of, or seriously deficient academic achievement, disruptive classroom behavior, and other difficult problems for teachers to handle. Often times, the behavior and learning problems exhibited by the CLD population in a teacher's classroom are mistakenly diagnosed. These students are labeled "troublemakers" or "delinquents" by the teacher and referred to special programs

that are unnecessary. The SC was developed for the classroom teacher to prevent these instances of mistaken diagnoses. The presence of too many factors in any of these categories may indicate learning and/or behavior problems in the future for CLD students or cause misdirected referrals by teachers. Fewer factors indicates fewer "red flags" or few mismatching problems. In this study the SC was meant to determine if Hispanic CLD students enrolled in a two-way bilingual program will exhibit fewer sociocultural factors that contribute to learning problems than will students with similar background characteristics who are mainstreamed for a similar duration. In particular:

- Will the former exhibit fewer differences in cultural and linguistic background factors such as culturally appropriate behaviors that are different from mainstream America that may lead to learning problems?

For example, some of the learning and behavior problems exhibited by CLD students are: lack of or seriously deficient academic achievement, social and classroom behavior which is disruptive to instruction, or other problems difficult for the teacher to handle in the general classroom setting.

- Will the former be at a more advanced stage and pattern of acculturation?

For example, do they interact more with mainstream peers, expressing less isolation in cross-cultural interaction?

- Will the former be at a more advanced stage of sociolinguistic development and language transfer?

For example, do they naturally speak and interact with mainstream and cultural peers and have a heightened level of BICS and/or CALPs?

- Will the former exhibit fewer differences in present levels of experiential background?

For example, do they have increased pre-skills, increased exposure to the subject, and more familiarity with the material?

- Finally, will the former exhibit fewer cognitive and learning style differences that could result in academic failure?

For example, do they have fewer learning strategies that may be different or inappropriate in relation to the teachers teaching style?

Upon completion of the interview sessions, the researcher transcribed the audio taped conversations. From these notes the SC was scored for each individual subject based on the answers given by the informants during the interview. The informants were inaccessible to the researcher at this point since the school year had come to an end and school employees had left for summer vacation.

Acculturation Quick Screen

The AQS is a profiling instrument that guides the collection of information relevant to CLD student's level of acculturation, defined as; "the process of adapting to a new cultural environment" (Collier 1988:13). A full reference to the AQS can be found in Appendix C. The AQS was developed out of research into the effect of acculturation on referral and staffing decisions and was the focus of C. Collier's dissertation work (1985). It consists of eight items that approximate the acculturation levels of CLD children, including; number of months in U.S., number of months in school district, number of months in program, native language proficiency, English language proficiency, bilingual proficiency, ethnicity/nation of origin, and percent of minority enrollment. Specifically, it profiles acculturation differences employing interpretation guidelines for the rough estimation to their level of acculturation in the educational environment. The focus of this research employed the AQS to provide descriptive

profiles of Dual and Solo subjects and to approximate a measure of how acculturated each group was to the mainstream school culture. The acculturation variables scored included;

- adjustment over time, or amount of time spent in process,
- language proficiency,
- ethnicity/national origin, and
- amount of interaction, or quality/quantity of interaction.

These variables are operationalized in the AQS as:

- number of months in the U.S., number of months in the school district, and number of months in bilingual education program or ESL program,
- bilingual proficiency, L1 proficiency and L2 proficiency,
- ethnicity/nation of origin, and
- % of minority in present school.

The information on these cultural and environmental background factors on the AQS was summarized for each subject and a raw score tallied to estimate the number of actual months or percentages.

Oregon Statewide Assessment

The remaining step in the quantitative protocol was the collection of OSA scores in writing and mathematics. The OSA provides the state of Oregon each year with a means for monitoring student achievement in its public schools. It is a common yardstick for measuring schooling outcomes all over the state in that it measures performance on the curriculum goals adopted by the Oregon State Department of

Education (1996). All students attending public school in the particular grades the test is administered, are tested each year unless exempted due to a disability or lack of English language proficiency. Generally all students, with the exception of non-English proficiency (NEP) students were required to take the test. Writing and mathematics scores were obtained from school administrators and recorded for each subject under the chosen pseudonyms.

Having described the qualitative and quantitative methodologies used to gather the data to assess student's sociocultural development, it is now necessary to provide an in-depth description of their reliability and validity.

RELIABILITY AND VALIDITY

For an indicator to be useful in social science research "it must lead to quite consistent results on repeated measurements and reflect its intended theoretical concept" (Carmines & Zeller 1979:16). In the following discussion about reliability and validity it is important to recall that social science research is not an exact science to the extent that mathematics is, so it is an accepted fact that there is endemic measurement error. With this in mind, the methodology used in this thesis research will be explored in regards to the extent that it meets the above definition.

Hammill (1987) states that standardization is applicable to qualitative and quantitative protocols, and a knowledge of reliability and validity is important when interpreting data from these sources. Quantitative methodologies are those that are reliable and valid, while those that are qualitative usually show little sign of standardization. There are general advantages and disadvantages to the use of either in social science research. For example, while standardized tests are technically reliable

and valid and considered the most formal and objective means in quantitative assessment, the formality of this type of measure may provide limited information of little instructional use due to the test setting and the restrictive procedures generally followed during standardized test administration. On the other hand, qualitative methodologies have generally been considered to be unreliable and invalid since they have not been standardized. C. Collier (1988) argues, however, that "with precise and consistent administrative procedures, assessment techniques adapted for use with CLD students can yield reliable, valid results and can be interpreted in a consistent manner without being norm-referenced" (p.42). In sum, both types of methodologies can provide uniquely necessary and valuable data. The quantitative focus can provide generally "clean" data while the qualitative can be used effectively to understand more clearly instructional problems and to determine achievement and performance in areas not addressed by the quantitative procedures.

The data sources within this research methodology included; observations, interviews, the AQS, the SC, and outside data (OSA). These sources combined to form the basis of a triangular framework that contributed to the confidence of the answers found in the research. The use of statistical procedures additionally served to increase the confidence of the findings. Lastly, questions about the reliability and validity of this research were addressed in great detail with regard to the research protocol. In the following section the reliability and validity of the research methodology will be discussed in an attempt to convince the reader that rather than simplifying the task, using a multi-dimensional research protocol provided a more reflective picture of the complexities of this type of SLA research while maintaining a reliable and valid methodological construct.

Acculturation Quick Screen (AQS)

Subject records were reviewed for information necessary to complete the AQS. Because the two schools were within one school district, all student files included a standardized page that was filled out for all new incoming students. Records within both programs provided similar types of information and both schools kept student records that were equally contributive of student background and history. Representing one piece of the quantitative methodology, it is argued that the AQS possesses reliability and validity for at least three reasons:

First, the AQS is reliable and valid for the group of learners in this research. The AQS was normed in five districts in Colorado using a cross section of students and Hispanic 1st-7th random sample (C. Collier 1985). This instrument consistently patterns findings across subject groups in a variety of different settings in its measure of acculturation. The subjects used in this research, while not randomly selected, come from a population similar to the one on which this measure was normed.

Second, the AQS is a reliable and valid measure for the purpose of testing acculturation. It possesses content validity in that it reflects a specific domain of content (acculturation). It also possesses construct validity in that it defines the characteristics of acculturation that are not directly observable, thus making it accessible to the outside observer. The AQS is an empirical measure that reflects the variables which were found to be statistically significant in affecting acculturation among CLD students. Researchers in the field (Adler 1975; Berry 1980) provided a basis upon which to test variables affecting the acculturation level of CLD students. In addition, the research conducted by C. Collier (1985) found a correlation between acculturation variables and selected education variables. Statistically significant differences were found between

language assessment, English language proficiency, minority enrollment, and acculturation for CLD children. Likewise, length of time in ESL/bilingual education was found to be a significant factor in acculturation. The AQS was developed to be a representative and comprehensive measure of acculturation and represents in a consistent manner the theoretical concept of "acculturation".

Third, the AQS is a valid measure in that professional educators in the Vancouver, Washington Public School District with multiple CLD subject populations, are currently successful in using the AQS to determine their CLD student's level of acculturation. This measure helps them to organize and explain how well CLD students are coping in their educational environment, thus guiding further assessment and instructional planning. For these reasons, it can be concluded that the AQS possesses face validity. Face validity concerns the judgments about an instrument after it is constructed, focusing on the extent to which it "looks like" it measures what it is intended to measure (Hatch & Lazaraton 1991). Based on its successful integration into the Vancouver, Washington Public School District's assessment procedures for CLD students, as well as the research development and statistics underlying its content validity, the AQS looks like it measures level of adaptation of CLD students in American schools. Thus, by possessing face validity it reinforces its content validity by its own accounts. In sum, the AQS is a comprehensive and representative quantitative measure that has been normed and is reliable and valid for purposes of this research.

Sociocultural Checklist (SC)

The researcher conducted interview sessions with the four informants, eliciting responses from teachers about their student's school/social adaptation. The instructions

given for the interview questions, the location and format of the interviews, and the recording and transcribing of data were identical for each of the interview sessions, conducted by one and the same researcher. These guidelines were established for each interview in order to minimize possible outside influences and to help establish a reliable and valid methodology. The interview sessions were based on questions taken from the SC. In the interviews, teachers volunteered information from their experience with the student subjects that directly related to their perception of student's school and social adaptation, thus providing the SC data. Prior to the sessions, local questions about the validity of the SC were addressed by insuring that each participant fully understood all of the questions being asked of them. When questions arose as to the meaning of what was being asked, the interviewer clarified the meanings. Due to vague answers to the questions on the SC, scoring guidelines were developed to protect the reliability of the results. All vague responses were recorded guarding for consistency and replicability in the interpretations. See Appendix D for a representative sample of SC scoring guidelines.

Because the SC examined the responses of a very limited number of respondents, it is not clear what the results would be if it were given to another group of teachers regarding the same students. Also, due to the time limitations of this research, the checklist could not be administered more than once with any one informant. Yet, it seemed unlikely that the informant's answers would have changed if done so. Currently, different teachers and educators in the Vancouver, Washington Public School District use the SC on varied groups of CLD students to determine if they are at a more or less progressed stage of adaptation to the school environment than others, as reflected by SC scores. At present, the SC has been successful in consistently and reliably

establishing these results across different teachers and subject groups (C. Collier, personal communication, November 3, 1996). Therefore, the results obtained from the SC can be argued to consistently and reliably reflect the intended outcome of the nature and purpose of the quantitative measure. The SC possesses reliability.

Unlike the AQS, however, the SC is an informal measure that has not been normed or validated. The SC is intended as an inventory of factors affecting CLD student's school and social adjustment and is considered informal since it has little or no evidence of standardization (C. Collier 1988). The five categories which establish the content of the SC were developed out of research on these variables and how they affect CLD children. One piece of evidence to support the claim that the SC is a valid measure for this research is the AQS. The AQS is a micro component of the SC in that it measures acculturation - one of the five categories on the SC. Therefore, the extent to which the results of the normed AQS patterned the results of the SC, lends face validity to the SC. Face validity in turn, reinforces the content validity of the SC. In sum, the SC is reliable and valid for the purposes of testing CLD student's adaptation to the school environment and adequately reflects this domain of content.

The final evidence supporting the claim that the SC is a reliable and valid measure of student's school and social adaptation relates to the context in which it was used in this research. The SC was used in conjunction with other measures and elicitation techniques in the methodology to assess student's sociocultural development. The extent to which results from the SC were compatible with other information sources used in this research is therefore important in this discussion. For example, since the results from the SC were consistent with the behavior and language patterns observed

by the researcher during the observation element, this would indicate that the informants were consistent and that the SC was reliable.

Oregon Statewide Assessment (OSA) Scores

The Oregon Statewide Assessment in mathematics and writing provided an outside measure of student's academic development, thus contributing to the quantitative methodology. This test is a normed and validated measure of student achievement at the third grade level as described in the report issued by the Oregon State Department of Education (1996).

In sum, the quantitative methodology using the AQS, SC, and OSA was combined with qualitative information gathered from observations and interviews to provide the foundation of a reliable and valid construct of sociocultural development.

MEANS FOR PROFILING COMPARISON GROUPS

The qualitative methodology employed in this thesis research will be summarized into a descriptive and comparative profile of a submersion and two-way program and presented in the first half of Chapter IV. A picture of these two environments is painted to provide context for a discussion of the quantitative methodology, presented in the latter part of Chapter IV. Three assessment instruments within the quantitative methodology are utilized to determine if any statistically significant differences exist in terms of sociocultural development between subjects enrolled in a two-way bilingual program and those subjects who were mainstreamed.

Once all the data had been collected and summarized, the information was given to a local statistician for analysis. The data were analyzed using one parametric and two

non-parametric statistical tests including the Two-sample unpaired t-test and the 2 x 2 Chi-square test and Mann Whitney U tests, respectively. The quantitative measures used in this study to determine subject's level of sociocultural development were questions from the AQS, SC, and OSA scores in writing and mathematics. Specifically, AQS factors were compared between groups to determine a rough level of acculturation. The SC analysis was meant to measure school/social adaptation. Group responses to the 36 individual questions, and to the five broader categories to which each question belonged, were compared. Lastly, the OSA group mean scores were compared to measure student's academic development.

Summary

This chapter described the complex methodology followed in this research. Both qualitative and quantitative methodologies were discussed in terms of their place in the overall protocol followed, in the goal to measure the sociocultural development of two groups of CLD students. The reliability and validity of the methodology used was discussed at great length, followed by an introduction to the means for profiling the two groups and the means of analysis used. The results of this thesis research are provided next.

CHAPTER IV

RESULTS

This chapter summarizes results of the determination of whether differences exist between two groups of Hispanic CLD students in terms of sociocultural development. The questions asked in this study were:

- What are the characteristics of an elementary school program that is supportive of CLD students,
- What are the characteristics of an early childhood educational model that attempts to socialize CLD children to a new set of standards, and finally,
- Is there a difference between students attending a two-way bilingual program and a submersion with pull-out ESL program with respect to sociocultural development?

The first two questions will be addressed in the first part of this chapter, through a qualitative comparison of the educational environments and subject groups. This information was collected through researcher observation and teacher interviews. A portrait of each environment and subject group is provided first so that sufficient context exists for a discussion of the quantitative results that follow. It is the strong view of the researcher that in this type of social science research, statistical results are most effective when discussed within the context from which they were taken. The statistical analysis of AQS, SC, and OSA score results are presented with the goal to answer the third question above.

QUALITATIVE METHODOLOGY

The school district in which this research was conducted is located in the state of Oregon. In order to protect the privacy of research participants the school district used will hereafter be referred to as "Apple". Apple, east county's largest school district is

located in a low-income, rural outlying area east of Multnomah County. The area's principal industry is agriculture. Migrant farm workers, mostly Hispanic, work in local berry farms and processing plants. Because of its rural location and agricultural base, this section of Multnomah county is an area where more and more migrant families come to work and live for a good part of the year. Socioeconomic status is very low across the school district. Most families in the district live below the poverty level and Apple has a 100 % migrant student/family poverty rate according to the Apple school district 1995-96 free and reduced lunch data. As the population of low-income families has risen in this part of Oregon so too has the population of students whose culture and language are different from mainstream America. In the past three years there has been a 73% growth of non-English proficient/limited-English proficient (NEP/LEP) students in the Apple school district and 10-15% of the population served by Apple are recent immigrants (Department of Education Comprehensive School Grant 1996). Figure 6 summarizes CLD student growth that has taken place over a 4-year period in the Apple school district.

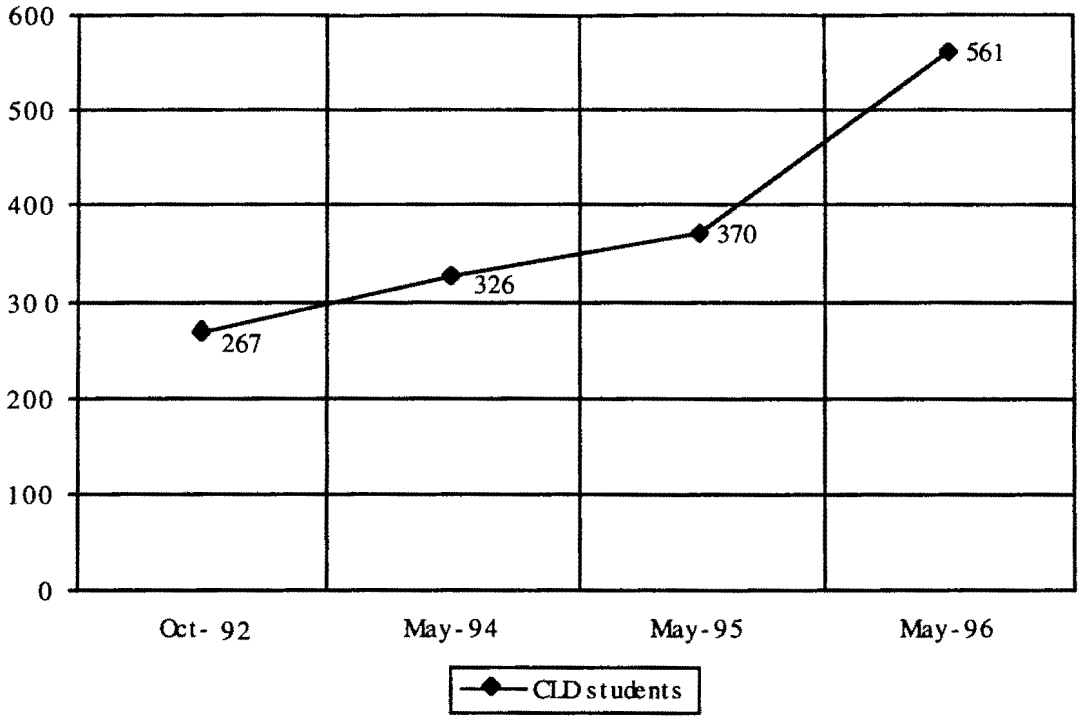

Figure 6. Apple School District CLD Student Growth Over a 4-Year Period.

Schools

The subjects used in this study came from a two-way bilingual program and a submersion with ESL program. Dual, the two-way bilingual program, is larger than the submersion program, Solo, with a student population of 556 and 412 students, respectively. The elementary schools represented in this study have the largest numbers of migrant students within the Apple school district. Furthermore, Dual has the highest population of CLD students in the district (28%) and Solo has the second highest population of CLD students (20%) as well as the lowest socioeconomic status of all the schools in the district. The similar demographics between these comparison groups

most likely result from the close proximity of the two schools which are only three miles apart from each other. Table III summarizes the school's population statistics.

TABLE III

School's Population Statistics

Solo	Dual
412 total student population	556 total student population
Lowest socioeconomic status in district	Second lowest socioeconomic status in district
20% CLD Student Population (second highest in district)	28% CLD Student Population (highest in district)

Classrooms

Classroom characteristics were different by program in terms of classroom composition and how students were grouped. Dual's classes were a 16/14 and 21/13 split of CLD to English-only students while Solo's classes were a 6/17 and 6/19 split of CLD to English-only students. This is a much lower population of CLD students. The average class size in Dual was 32 students. This is a 30% larger class as compared to the 24 student-per-class average in Solo. See Table IV for a summary of these data.

TABLE IV

Classroom Demographics

Classroom 1 & 2: Solo	Classroom 3 & 4: Dual
24 average students per class	32 average students per class
6 CLD & 6 CLD	16 CLD & 21 CLD
17 English-only & 19 English-only	14 English-only & 13 English-only

Observed differences between students within each environment were noticed during the time of researcher observation. First, student conduct was less restricted at Dual. Outside the classroom students were often laughing and running in the halls.

Inside the classroom students chatted over the teacher's voice during lessons and moved around the classroom freely. During the three days the researcher observed this environment, there were no instances of discipline except for the occasional punishment for running in the halls. A lesser degree of organization appeared, from observations, to be more tolerated by Dual teachers. To the contrary, at Solo rules were posted in multiple locations (in English only) and were observed to be strictly enforced inside and outside the classroom. With the occasional exception, students were orderly and followed the required protocol expected by the school administration during these three days.

Second, language use patterns differed as observed within the two programs. During the observation element at Solo, Spanish was used only during CLD-CLD student peer interaction. Spanish-speakers used their native language when asking other Spanish-speaking peers for clarification within the classroom and during private, informal conversations with each other at school. At recess Spanish-speakers generally played together in groups where Spanish dominated the conversations. However, if an English speaker joined these conversations they changed to English immediately.

At program Dual, CLD students used both Spanish and English in both formal (classroom) and informal (personal) situations. Within the classroom CLD, students used Spanish with teachers, cultural peers, and occasionally with mainstream children participating in the program. They were also observed using English in the same situation. During recess, certain CLD students always played with their cultural peers while other CLD students always played in mixed language groups. Finally, Spanish was the language of choice during CLD peer interactions and English was the dominant mode of communication otherwise.

Programs

Both programs follow the state curricula standards and expectations. In terms of instructional treatment however, the programs represent two distinct instructional plans. That is, Dual promotes a bilingual environment for learning for CLD students while program Solo supports an English-only environment for educating CLD students. At Dual the written curricula in language arts and math is available in Spanish and English while this information is available in English only at Solo.

Administrators in both programs represented the theoretical and instructional concepts underlying their programs. In sum, the language policy decisions agreed to at Solo (in the submersion program) were put into practice by administrators and teachers who communicated only in English, regardless of student/parent needs. Paperwork sent home to families and school assemblies were conducted in English, and only the English language was used in communication between students and teachers. The Spanish language was never used by any administrator in Solo during the researcher's three-day observation and school tour (with the exception of the bilingual aide). Similarly, the administration at Dual implemented the bilingual aspect of their language program. This was observed by the use of Spanish in several functions of the school. For example, a bilingual secretary welcomed parents and visitors in the front office. Forms, current event flyers, and messages for parents were offered in either language according to the parent's needs. Lastly, bilingual teachers used Spanish not only for instructional purposes but were also observed to converse in it during their breaks.

Teachers

Teachers in each program were not completely comparable with respect to their ethnicity, training, or language proficiency in the education of CLD students. One teacher in the two-way program was Hispanic and fluent in Spanish. The other three teachers in the programs were not Hispanic and not sufficiently proficient in Spanish (to teach in it). This information was learned by the researcher during teacher interviews. In sum, while all teachers held the same credentials for teaching in public schools none of the four teachers who participated in this project said they had any special endorsements or official training for meeting the needs of CLD students. Currently in Oregon, no special certification exists. In 2001, Oregon will require that ESL and bilingual teachers hold appropriate endorsements for the state.

Language Status Classification

The subjects for this program comparison came from two different types of third grade elementary programs designed for CLD children in the greater Portland metropolitan area. The population sample was drawn exclusively from a CLD student population. All of the students were considered non - or limited English (NEP/LEP) at the time the research was conducted and came from a Mexican cultural background.

Both participating programs follow the state curricula standards and expectations in determining language classification. Upon arrival to each school all non-native English speaking students are provided with a Home Language Survey. The Home Language Survey determines the language first learned, spoken most often by the student, and spoken by persons in the student's home. Both Spanish and English versions of the form are provided at Dual. At Solo this form is in English only but

interpreters are available upon request. All students who have experienced a second language environment are then provided with language assessments to determine their level of English proficiency and their identification to receive ESL services. Once it is determined that English is not a student's home language the IPT family of standardized tests are administered in order to determine one of three levels of student language proficiency: NEP/LEP, or fluent status. The specific tests are the IDEA Oral Proficiency Test for testing basic contextualized communicative skills and the IPT reading/writing test for assessing the decontextualized, academic language skills in reading. Both tests are normed having overall reliability and validity. All eighteen subjects chosen for this study had been classified as NEP upon arrival to their program, having few or no L2 skills and little formal education in their L1. All but two subjects had been enrolled in the two third grade programs since the beginning of the 1995-1996 academic year. One subject from Solo had only been in the current program for four months and a subject from Dual had been enrolled for only two months. At the time this research was conducted these two subjects were NEP classified while the remaining 16 subjects had been reclassified from NEP to LEP. Those 16 students had studied in their respective program between one and four years. Their classification was elevated to LEP along the way. Table V summarizes this classification information:

TABLE V

Language Status Classification

	Solo	Dual
NEP classified upon arrival	9	9
LEP classified upon arrival	0	0
NEP classified as of May 1996	1	1
Re-classified LEP as of May 1996	8	8
"Graduated" from second grade in same program	5	7
Entered program during 1995-1996 academic year	4	2
Time in program		
Up to 12 months	4	2
Between 12-18 months	1	1
Between 18-24 months	2	1
Between 24-30 months	1	2
Between 30-48 months	1	3
Over 48 months	0	0

Study Participants

A 15 male/ 3 female Hispanic third grade native Spanish-speaking CLD student population represented the subject pool from which the information for this study was collected. The two groups of study participants were closely comparable with respect to student background. There were no differences between programs in terms of Spanish language use in the homes of study participants. Fifteen subjects were born in Mexico and three in Southern California near the U.S./Mexican border. The age range of the eighteen student subjects was between 9-11 years old. Parents and school authorities gave permission for these 18 subjects and no others. Subject background information is summarized in Table VI.

TABLE VI

Subject Background Information

Background Information	Solo	Dual
Participants	9	9
Male	8	7
Female	1	2
Home language = Spanish	9	9
Country of origin = Mexico	7	8
Country of origin = U.S.	2	1
Age	avg. 10.16	avg. 9.94

While students used in this study share similar demographic backgrounds, they were educated in diverse educational environments providing for an interesting condition for comparison. This comparison is described in further detail.

Dual Group: Two-Way Bilingual Program

Nine subjects were chosen from the two-way bilingual program at Dual. The Dual program was started in 1992 with the goal to preserve L1 resources and support the promotion of L2 learning for both native speakers and non-native speaking students. The same curriculum goals that apply to all elementary schools in the Apple school district provide the basis of instruction in both the L2 and L1 portions of the student's programs in the Dual program. Outcomes are the same as for all schools in the district except that Spanish is used as the medium of instruction for half of the day.

Dual teachers divided the curriculum according to their language abilities, promoting acquisition of a second language through subject matter. The curriculum was balanced so that Spanish and English instruction were always complementary but not duplicated in order to meet individual student's needs (Reynolds School District # 7 Report 1994). The second language was learned through content material instruction

rather than through explicit formal language instruction (ESL). This held true for CLD students as well as majority English-only speakers. Limited English Proficient (LEP) students were not separated out for formal L2 instruction in program Dual since support in the L1 and L2 already existed within the classroom from their Spanish-speaking teachers, aides and peers. However, non-English proficient (NEP) students were pulled out of the classroom in order to receive formal ESL instruction during their initial time in the program.

Language and culture validation and development were observable goals at Dual for both the mainstream and CLD student population. This was apparent during observations at the school which provided evidence that Spanish and English were important languages and that customs and family traditions were highlighted. The glass cases lining the halls at Dual were full with brightly colored piñatas, homemade jewelry, handmade textiles and family photographs. Posters and class projects on the other walls were created using both languages. The poster in Figure 7 is one example of how Dual integrates and validates both languages. A collage of CLD and mainstream student family photographs filled the middle of the original poster.

La educacion comienza	*Education begins*
en casa	*at home...*
and continues at	*y continua en*
school	*la escuela*

Figure 7. Bilingual Poster in the Dual School Hallway.

Dual program curriculum

The major goals of the Dual curriculum were to provide a second-language program in which all students maintained normal progress in achieving the objectives of the district's curriculum and developed proficiency in listening, speaking, reading, and writing Spanish and English, and communication in a second language (Department of Education Comprehensive School Grant 1996).

The two participating third grade classrooms from program Dual shared a joint curriculum. All students beginning in grade K-5 had a native English-speaking teacher and a bilingual English/Spanish-speaking teacher. Instruction from the bilingual teacher was in Spanish for half the day and English for the other half. Students spent 50% of instructional time in each language. Starting from the first day of school, students received instruction and classroom communication in the second language and in the native language. Classroom activities such as Spanish vocabulary development helped to acclimate English-speaking students to Spanish while also meeting typical kindergarten goals for Spanish-speaking students, and vice-versa. Instructional programs in PE, music, and the Media Center (computer literacy studies) were also included in the language mix. Not all CLD students took part in the Spanish development classes and not all English-speaking students chose to participate in the foreign language program within the two-way bilingual program. These students were exposed to the English-only curriculum within the program.

The composition of the classrooms changed throughout the day as some students moved back and forth between content area instruction in the two languages. Yet the classes remained a constant and relatively proportional mix of native English-speaking and native Spanish-speaking students, which promoted communication at the student's

levels. The students were permitted to use their native language but the teachers instructed using the target language. Students had access to two teacher's aides within the two classrooms: one who was bilingual, and the other a monolingual English speaker.

ESL curriculum at Dual

English as a Second Language (ESL) is a critical component of any bilingual program and ESL teaching made an important contribution to the learning process of NEP students in program Dual. The main goal of ESL was for students to acquire the English necessary to perform in English-only classrooms (in this case within the English-language portion of the two-way bilingual curriculum). Students received intensive instruction in listening, speaking, reading, and writing in English. The curriculum of the ESL class included not only the skills related to the language arts and literature of the mainstream classroom but also the vocabulary and topics and concepts which assisted the students in being successful in areas such as math, science, social studies, health, career and technical education (Portland Public Schools ESL/Bilingual Program 1993). NEP students were removed from the classroom for 30 minutes per day to receive explicit English language instruction or for more time depending on their language needs. Most LEP students remained in the classroom where ESL support was available through teachers, aides, and peers. Table VII provides a sample of a typical day for the bilingual and English-speaking teacher at Dual. For example:

TABLE VII

Sample Daily Schedule at Dual

	Classroom #1 Bilingual teacher: 50/50 mix Bilingual content material instruction	**Classroom #2** Monolingual English-speaking teacher: Monolingual content material instruction
AM 9:15- 12:25	-Homeroom -Spanish language arts (oral language development, vocabulary, journal writing) -Spanish reading -Spanish mathematics/science -Spanish writing	-Homeroom -English language arts (oral language development, vocabulary, journal writing) -English reading -English Mathematics/science -English writing
PM 1:00- 3:15	-English reading (different from AM) -Social studies/Geography (English) -Health/safety (English) -Computer (English and Spanish) OR Art and Music (English)	-English reading (different from AM) -Social studies/geography (English) -Health/safety (English) -Computer (English) OR Art and music (English)

An example using the above figure helps to track the movement patterns throughout the day of a Hispanic CLD student participating in the two-way program. Grouchy starts the day at 9:15 in classroom #1. He remains in classroom #1 for Spanish language arts and Spanish reading until 10:40. At 10:40, he moves to the English-only side for nearly an hour of English mathematics and science. Finally, he moves back to classroom #1 for Spanish writing from 11:30-12:25. After lunch and recess, Grouchy remains with the bilingual teacher who teaches mostly in English from 1:00-3:15.

Majority English speaking children who are learning in two languages throughout the day also follow a similar schedule receiving instruction in the second language during the morning hours. Those students who do not participate in the second language program usually remain with the English-only instructor throughout the day.

Solo Group: Submersion Program

Nine subjects in this study were chosen out of program Solo. The goal of Solo was to promote L2 learning without support or preservation of the L1. This group was exposed to standard grade level curriculum and all subject areas were taught solely in English. The classrooms had some ESL support and only occasional bilingual support provided to them throughout the week. For an overview of these distinct program characteristics see Table VIII.

TABLE VIII

Program Characteristics

Solo	Dual
Promote L2 only	Promote full bilingualism for CLD and mainstream English speakers
L2 learned initially through explicit ESL instruction (NEP) then through in-class content material instruction in English only with sporadic in-class consulting from a bilingual aide	L2 learned initially through explicit ESL instruction (NEP) then through in-class content material instruction in both languages
Access to one English speaking teacher, one bilingual aide, and one monolingual English speaking ESL teacher (NEP only)	Access to a Bilingual teacher, a bilingual aide, a monolingual English speaking teacher, a monolingual English speaking aide, and a monolingual English speaking ESL teacher (NEP only)

The Solo program differed from Dual as reflected by the student's work displayed throughout the school. While the halls were brightly and neatly decorated with talented student art work and writing samples, none of it reflected other languages or cultures of students.

Solo program curriculum

At Solo all CLD students were placed within a mainstream content class. In the classroom they were provided with the state mandated curricula for the appropriate grade level. Classroom activities included reading, writing, vocabulary development, and instruction in the usual content areas: mathematics, social studies, etc. Teachers instructed using the L2 as the target language and students were not permitted to use the L1 except during a bilingual consultation and with other Spanish-speaking students for clarification purposes. The teachers at Solo found ways to incorporate the CLD student into their curricula by teaching at higher and lower ends of a subject. If a student was at one of these extremes they were able to move to other classrooms for the time of content area instruction. For example, mathematics was taught by teacher 1 and 2 in Solo at the same time every day. Teacher 1 taught to low-beginners while teacher 2 taught to intermediate students. CLD students moved according to which mathematics level best met their needs. Otherwise, classroom composition remained the same throughout the day with a small number of CLD students moving between classrooms and one NEP subject pulled-out for ESL instruction.

ESL curriculum at Solo

The submersion with ESL pull-out program had been intact at Solo elementary since 1992. But by 1996 the population had more than quadrupled so in the middle of the 1995-1996 academic year the school administration chose to replace pull-out ESL with in-class consulting using a bilingual aide. In this arrangement LEP students remained in the mainstream classroom where they were assisted by the bilingual aide during content area instruction. One bilingual aide was available on a part-time basis to

assist approximately 88 Hispanic LEP students who made up 81% of the school's NEP/LEP population. Remaining NEP students continued to be pulled-out for formal ESL instruction. This left the one current ESL teacher (with no second language) to handle as many as 109 LEP students (Department of Education Comprehensive School Grant 1996). This support was available to NEP/LEP students for approximately 30 minutes or more each day depending on their language needs. An individual schedule for each NEP student was determined by language proficiency scores and the ESL and mainstream teacher assessments of student's language proficiency levels. Provided below is Table IX with the chronological structure of a typical day at program Solo. This visual representation allows the reader to compare Solo's curriculum with Dual's.

TABLE IX

Sample Daily Schedule at Solo

	All LEP and Mainstream Students (English Language Only)
AM	-Announcements, flag salute, fluoride, lunch count -Reading/Handwriting/Test -Recess -Reading/Handwriting/Quiet projects or Alternative subject (PE, music, etc.) -Lunch/Recess
PM	-Mathematics -Social Studies -Recess -Writing -Line-up to go home

The descriptive comparison of the two educational environments in this study uncovered qualitative differences between Dual and Solo. Dual subjects were reported by teachers and observed by the researcher to show positive academic changes since their entry into the two-way bilingual program. They displayed higher self-esteem and lower levels of stress. Teachers provided positive and caring attitudes and had high

expectations of students. Conversely, the Solo program had nothing explicit built into the curricular goals for augmenting the relationship between the mainstream classroom and CLD students, and researcher observations and teacher interviews reflected that. Teachers had low expectations of students, and students experienced high levels of stress. However, there was one similarity between programs. All four of the participating teachers were supportive and caring about their students. They wanted their students to suceed and cared for their well-being. A visual representation of the similarities and differences between comparison groups is provided in Table X.

TABLE X

Qualitative Methodology Results

• **Dual** -Observed and reported positive academic change -Lower levels of stress -Higher self-esteem -Higher teacher expectations -Positive and caring teacher attitudes
• **Solo** -Nothing explicit built into the curricular goals for alleviating conflict between mainstream classroom ad CLD children -Higher levels of stress -Lower teacher expectations -Positive and caring teacher attitudes

The results from the qualitative methodology provide the context for presenting the results from the quantitative methodology. Both types of information are considered important in attaining the goal of this research.

QUANTITATIVE METHODOLOGY

The three questions asked in this study were:

- What are the characteristics of an elementary school program that is supportive of CLD students,

- What are the characteristics of an early childhood educational model that attempts to socialize CLD children to a new set of standards, and

- Are there significant differences between students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL program with respect to sociocultural development?

The first two questions were addressed in the preceding section of this chapter. It is the last of these questions that will be addressed in the following prose.

Due to the small sample size used in this research, parametric and non-parametric statistical measures were used in order to achieve accuracy. The two groups were compared using a Two Sample Unpaired T-test (t-test) as the parametric measure and the Mann Whitney U and 2x2 Chi-square (chi-square) tests as the non-parametric methods of statistical analyses. These tests were used to analyze interval, ordinal, and nominal data, respectively, that were gathered in this study.

The t-test is a powerful statistical measure requiring a strict normal distribution in the samples measured. AQS factors and OSA scores were normally distributed interval data so the t -test was chosen for these parts of the analysis. Interval data, where each interval unit has the same value, were analyzed for determining the probability that the group means from the OSA and AQS results truly differ. Results of these comparisons that showed a value below the significance level of $p \leq .05$ would indicate that differences were considered statistically significant and the subjects came from different populations.

The relationship between individual mean group responses on the Sociocultural Checklist (SC) and program type was measured by the chi-square test. This test was used to compare the observed and expected difference between groups on 36 questions from the SC. The SC results were presented as arbitrary numbers (2 = yes and 1 = no) constituting nominal data and requiring this non-parametric statistical test. Each question was analyzed first in a frequency distribution chart to approximate whether the distribution between the two groups was normal at which point the chi-square test was administered.

The Mann Whitney U test was used to determine whether any statistically significant differences existed between groups on SC category averages. This test was chosen to compare the two groups on the basis of their ranks above and below a median. The SC categories constitute ordinal data since they are presented as averages, thereby lacking the equal intervals and discrete differences defining interval data.

In sum, the t-test was used to analyze group mean responses from the AQS and to determine if OSA mean scores were statistically different. Results from this analysis showed no measurable difference between groups for either set of data indicating that these two groups probably do not come from different populations. There were no statistically significant results for any of the SC category means as determined by the Mann Whitney U test either. While the chi-square test did not find a statistical difference between group responses on a majority of SC questions, question #10 (*Oral expression contains considerable code-switching)* was found to be measurably different for the two groups. The results of the quantitative methodology; measuring level of acculturation, school/social adaptation, and academic development, will be described and explained in more detail in terms of these conclusions.

Level of Acculturation

The first statistical analysis compared scores on the AQS to determine if a difference exists between the two groups in terms of acculturation level. The analysis, using the t-test on the individual factors from the AQS, was meant to indicate whether there were or were not measurable differences in terms of the acculturation level between students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL program. The goal was to complete the AQS for each subject and compare the mean scores of each group. However, after the student record reviews, teacher interviews, and researcher observations had been completed, it was clear that the AQS could not be completely analyzed as originally planned. Due to confounding factors, only two of the questions from the original eight on the AQS were analyzed. There were at least two factors contributing to this unexpected setback:

First, the similarity in responses from the comparison groups resulted in non-contrasting information for two of the eight questions. Questions 7 (*Ethnicity*) and 8 (*% of minority in present school)* resulted in identical group scores rendering non-contrastive information. In retrospect this is not surprising since the groups were matched for background factors during subject selection. Knowing this, the result was neither insightful nor helpful. Therefore, neither question 7 nor 8 were considered for further analysis.

Second, information needed to score two of the remaining six cultural and environmental factors was not available through data collection means used in this study. The information was either too difficult to find or limited by time issues. Information was available at Dual on questions 4 (*Bilingual proficiency*), and 5 (*Native*

language proficiency) since students are formally assessed in both languages upon entry to the program. However, there was little to no native language proficiency information available from the Solo program. This resulted in the omission of these results for both groups since no comparison could be made. Subsequently, the data loss forced the researcher to reconsider the remaining factors on the AQS. Because the intentional use of the AQS was to measure student's level of acculturation, the two factors that have been shown to correlate more strongly with student's acculturation level were focused on instead of attempting to score the remaining four. The two factors statistically analyzed were: 3 (*Number of months in ESL/bilingual education)* and 6 (*English language proficiency).* The choices made by the researcher in this regard were influenced by Juffer (1983) and C. Collier (1988). According to Juffer, the length of time in orientation to the acculturation process is highly correlated with degree of acculturation. Therefore, *Number of months in ESL/Bilingual education* was considered to be an important factor to explore. Also, since "language is the primary medium through which culture and experiences are shared and transmitted from generation to generation and is a primary element in the acculturation of minority students" (C. Collier 1988:16), *English language proficiency* was also further analyzed.

A t-test followed the verification that the underlying frequency distributions were normal on AQS factors. The initial hypotheses tested were:

- Are there statistically significant differences between the two groups in terms of time in ESL or bilingual education, and
- Are there statistically significant differences between the English language proficiency level of the two groups?

Table XI illustrates the mean score comparison between the two groups for the individual questions from the AQS. Parenthesis () indicates those questions that

rendered non-contrastive information while an X (x) represents those factors that were omitted due to a lack of data. All of the raw AQS data can be found in Appendix E. Figure 8 provides a visual representation of the first three factors, as measured in months.

TABLE XI

AQS Mean Responses by Comparison Group

	Dual	**Solo**
1. Time in U.S. (months)	35.78x	36x
2. Time in school district (months)	26.3x	25.5x
3. Time in ESL/Bilingual education (months)	17.22	25.56
4. Bilingual proficiency	0x	0x
5. Native language proficiency	0x	0x
6. English language proficiency (scaled)	3.194	3.58
7. Ethnicity/Nation of origin (scaled)	(1)	(1)
8. % of minority in present school (scaled)	(3)	(3)

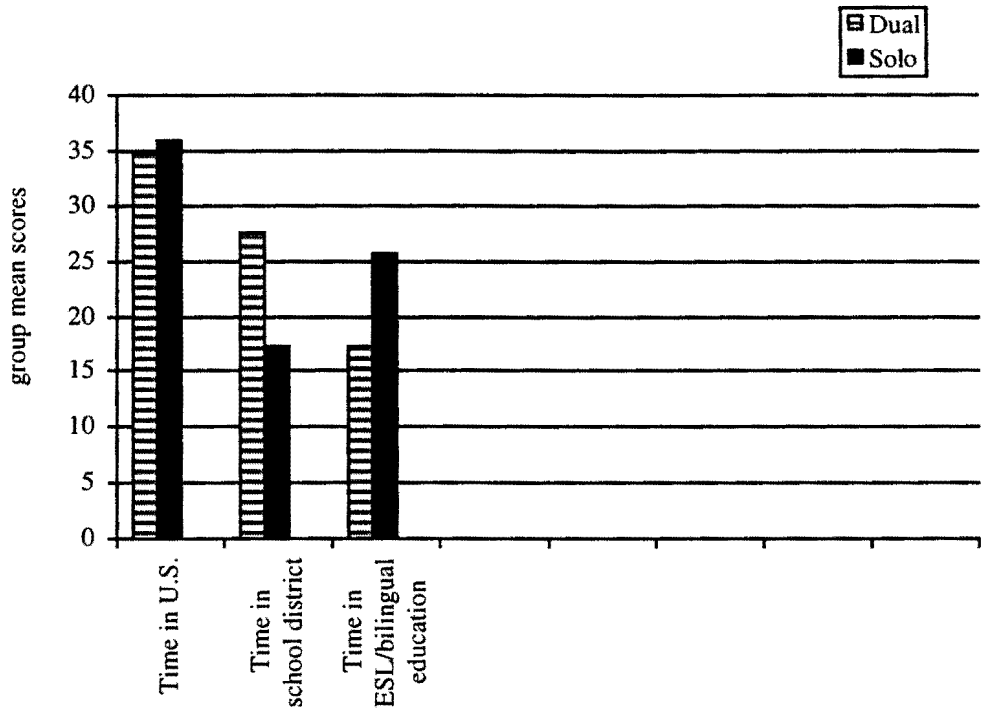

Figure 8. Mean Responses (in Months) for Acculturation Quick Screen Factors 1-3, Measuring Acculturation Level.

While there is no observable difference between groups in terms of *Time in U.S.*, there appears to be a somewhat assessable difference in student's *Time in school district.* Dual students were in the same school district for a longer duration as compared to Solo students but were not enrolled in the bilingual program for as long as Solo children were in ESL. The former conclusion is based solely on observable differences, but because this factor was not chosen for further analysis, this finding is not supported by statistics. *Time in ESL/Bilingual education* was analyzed using the t-test. A resulting p value of 0.1834 suggests that no statistically significant difference exists between the two groups

and that *time in ESL/Bilingual education* is not a statistically significant factor either.

Figure 9 represents the scaled scores for factors 4-8.

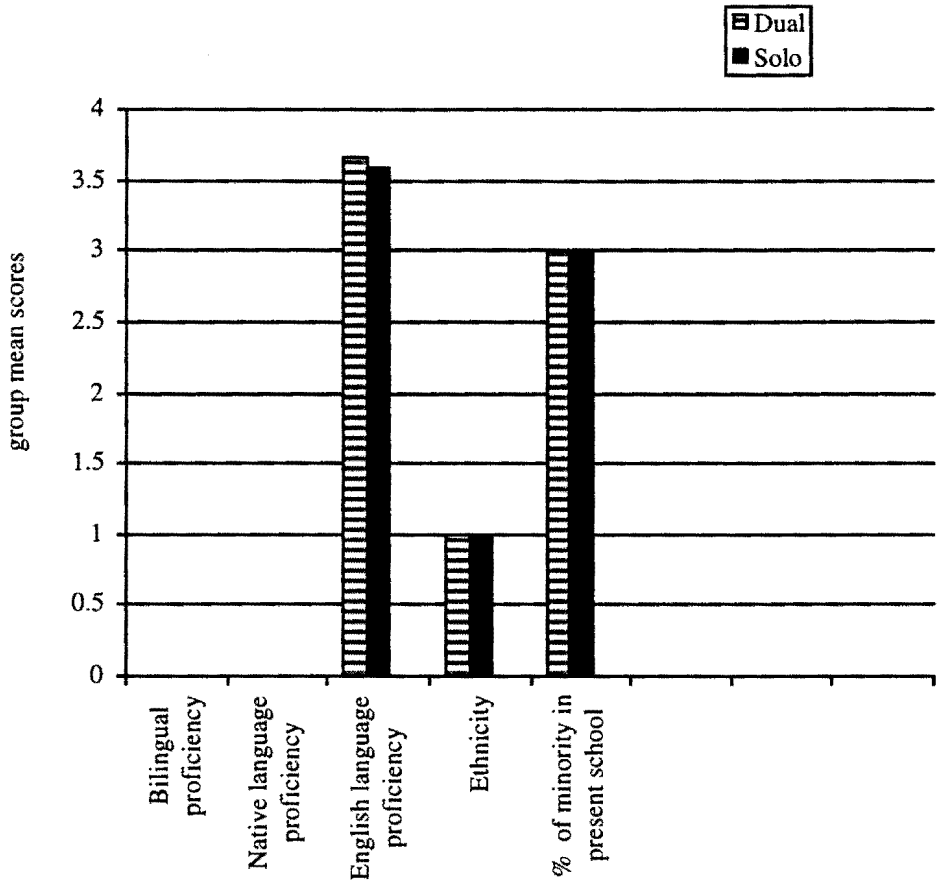

Figure 9. Mean Responses (Scaled) for Acculturation Quick Screen Factors 4-8, Measuring Acculturation Level.

As discussed earlier there is no difference between groups for the factors of *Ethnicity* or *% of minority in present school.* Additionally there appears to be no observable

difference in English language proficiency between those students who attended the two-way bilingual program and those who did not and the resulting p value of 0.6587 generated by the t-test bears this out.

School/Social Adaptation

The second statistical analysis compared the two programs in terms of subject's school/social adaptation as measured by the SC. The results from the chi-square test on the individual questions from the SC were meant to indicate whether there were or were not statistically measurable differences between students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL program, in terms of sociocultural factors that may contribute to difficulties in American schools. Following teacher interviews it was clear that certain questions from the checklist would not be further analyzed for reasons similar to those encountered with the AQS. First, the similarity in responses from the two groups on seven of the 34 questions resulted in non-contrasting information. Like the AQS results, knowing that the two groups were selected based on their similarity in culture and language, this information was not helpful and therefore not considered for further analysis. The unanalyzed questions were: 1 (*Comes from non-English speaking home*), 2 (*Comes from a culture or ethnic group different from mainstream America*), 3 (*Culture values support of family/group over individual effort*), 4 (*Comes from non-English speaking geographic area*), 5 (*Culturally appropriate behaviors different from mainstream America*), 14 (*Low socioeconomic status*), and 21 (*Doesn't speak English*).

The second reason that individual questions on the SC could not be further analyzed was that most teachers were unable to provide answers for questions about

particular students. Certain questions required a deep personal knowledge of each student and their learning style. The researcher realized this shortfall and during the course of the study understood that this type of knowledge could not be easily conferred. As a result, the following factors were omitted entirely: 16 *(Disrupted early childhood development)*, 22 (*Limited CALP in native language*), 29 (*Few cognitive learning strategies appropriate to classroom/school*), 30 (*Cognitive learning styles different or inappropriate in relation to teacher's instructional style*), 33 (*Displays difficulty with task analysis*), and 34 (*Displays difficulty with cause and effect*). Table XII illustrates the mean score comparison between the two groups for 34 individual questions from the SC. Parenthesis () indicates those questions that rendered non-contrastive information and an X (x) for those questions that were omitted. For more detailed accounts of the SC data, the raw numerical data representing each subject response to all 34 questions can be found in Appendix F.

The chi-square test was used to analyze the remaining 21 questions from the SC. This analysis found that a statistically significant difference exists between comparison groups on mean group responses to question 10 (*Oral expression contains considerable code-switching).* This question is marked in Table XII with a star (*) and bolded to set it apart from the other data. While this result might seem minimal the researcher can be confident that the difference found was indeed significant since most group differences were diminished during subject selection.

TABLE XII

Mean Group Comparison for 34 Factors from the Sociocultural Checklist

Question	Dual	Solo
1	(2)	(2)
2	(2)	(2)
3	(2)	(2)
4	(1.9)	(1.8)
5	(2)	(2)
6	1.6	1.3
7	1.1	1.3
8	1.4	1.3
9	1.1	1.3
10	**1.6***	**1.1***
11	1.2	1.3
12	1.6	1.2
13	1.2	1.1
14	(2)	(2)
15	1.2	1.3
16	0x	0x
17	1.2	1
18	1.2	1.1
19	1.9	2
20	1.2	1.1
21	(1.1)	(1)
22	0x	0x
23	1.2	1.6
24	1.6	1.7
25	1.1	1.3
26	1.8	2
27	1.9	2
28	1	1.3
29	0x	0x
30	0x	0x
31	1.6	1.3
32	1.2	1
33	0x	0x
34	0x	0x

The mean group responses for the 34 individual questions from the SC are presented below in Figures 10, 11, 12, 13, and 14. As mentioned earlier, the results for Dual and

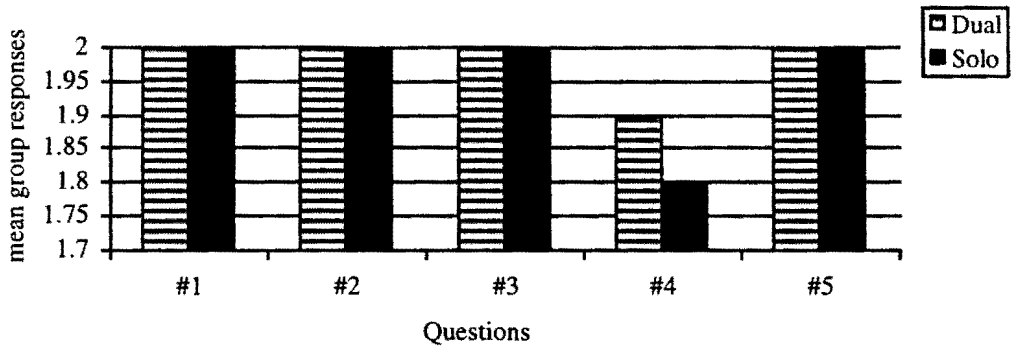

Figure 10. Mean Responses for Sociocultural Checklist Questions 1-5, Measuring Culture and Language.

solo and are almost identical for questions 1-5 with teachers generally answering "yes" to the questions asked about their students in this category. There appears to be no apparent difference in the culture and language between those students who attended the two-way bilingual program and those who did not. The patterns of responses for questions dealing with culture and language are quite similar between Dual and Solo groups for questions 1-5 as represented by Figure 10. This is not a surprising result as homogenous comparison groups were purposely created in the initial stages of the research (see Chapter III, subject selection). While question 4 (*Comes from non-English speaking geographic area*) shows a slight difference between the groups, this is most likely due to the fact that two subjects from Solo and one subject from Dual were born in Southern California and not in Mexico. However, since these children were raised in a Hispanic family and cultural environment during their early years in the U.S. this was not considered to be a true difference. As mentioned above, statistical analysis was not deemed necessary in determining further the lack of relationship between program type and subject's culture and language.

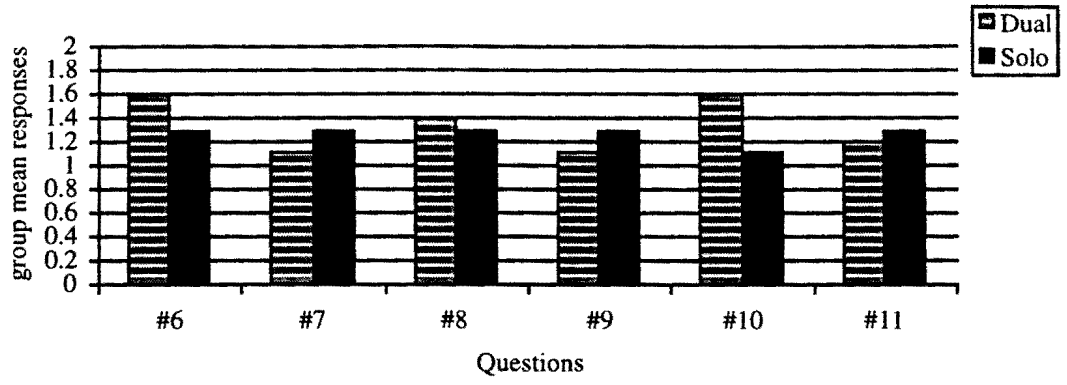

Figure 11. Mean Responses for Sociocultural Checklist Questions 6-11, Measuring Acculturation Level.

Unlike the previous SC category of culture and language, the category including questions 6-11, classifying acculturation level, showed a noticeable difference in response to two questions between group Dual and Solo and a statistically significant difference for one of those. The largest differences between groups show up in questions 6 (*Recent immigrant, refugee, or migrant*) and 10 (*Oral expression contains considerable code-switching*) as represented by Figure 11. The Dual program scored higher (or responded with more "yes" answers) than the Solo group on both questions. While a slight difference between groups appears noticeable on question 6, the chi-square test does not support this divergence between program types. Dual subjects answered more positively on question 10, a measurement of code-switching in subject's oral expression, and this difference was found to be statistically significant. The chi-square was used to test whether there exists a relationship between subject's oral code-switching and program type. A p value of 0.046 indicates that a relationship does indeed exist. See Chapter V for a more detailed discussion of this finding. The

remaining questions in this category showed little noticeable difference between the two groups. The statistical analysis bears this out.

Similar results occur with the questions in the following category, questions 12-20, dealing with experiential background factors (Figure 12).

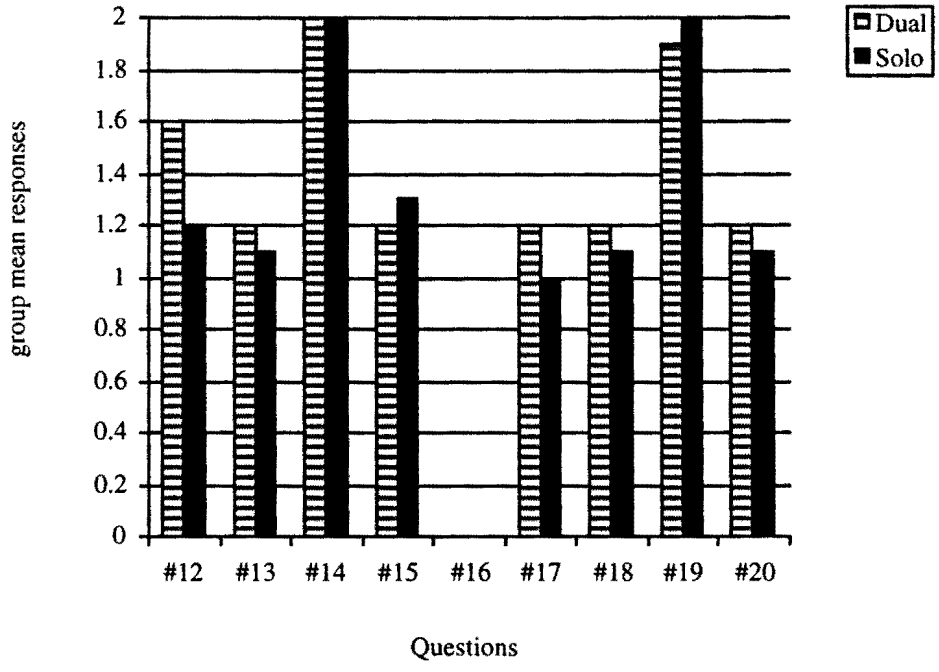

Figure 12. Mean Responses for Sociocultural Checklist Questions 12-20, Measuring Experiential Background.

As with the previous section, subjects from the two comparison groups scored similarly in the experiential background category. Question 12 (*High family mobility*) shows a slight divergence in scores with the Dual group scoring with more "yes" answers. This correlates with the observed (but not statistically significant) difference on the AQS, showing Dual students having spent less time in ESL/Bilingual education than Solo students, see Figure 8. However, with a p value of 0.1469 from with the chi-square test it is clear that no statistically significant difference exists between the comparison

groups and that no relationship exists between program type and family mobility factors. Analyses of the remaining seven questions in this category confirm the other observed similarities between groups.

This trend continues with questions 21-28 measuring sociolinguistic development. As Figure 13 represents, subjects in the Dual and Solo group again had similar responses to most of these questions. The lack of difference between groups is supported by statistical results as described below.

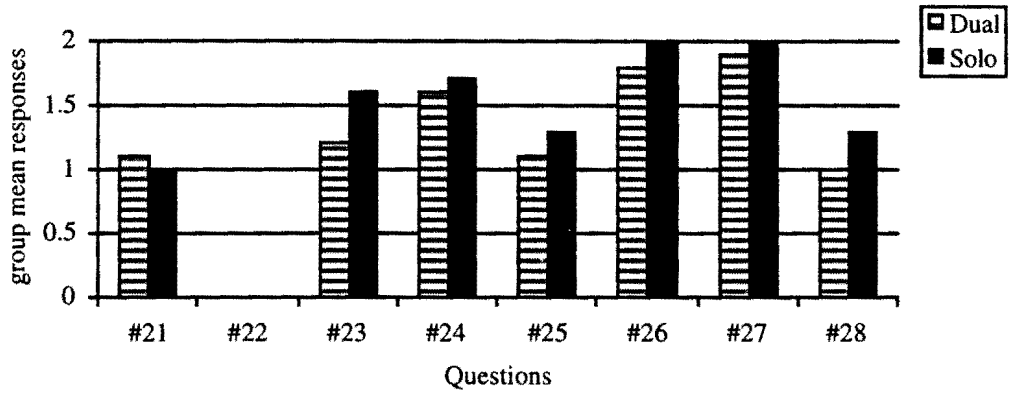

Figure 13. Mean Responses for Sociocultural Checklist Questions 21-28, Measuring Sociocultural Development.

Except for question 21 (*Doesn't speak English*), the Solo group generally showed more "yes" responses to these questions than the Dual group. However, it appears that there may exist a deviation between groups on question 23 (*Limited BICS in English*) as well as question 28 (*Appears to know English but can't follow English directions in class*). After statistical review, a p value of 0.3173 for question 23 confirms that program type is not a significant factor. However, results from question 28 may reflect a statistical "tendency" as the p value of 0.0578 is only slightly above the .05 alpha level ($p \leq .05$) set

for all tests. It is possible therefore, that a relationship may exist between this factor and program type.

The final section graphically represented in Figure 14 (cognitive learning style) finds program Dual answering "yes" more often to both questions than program Solo.

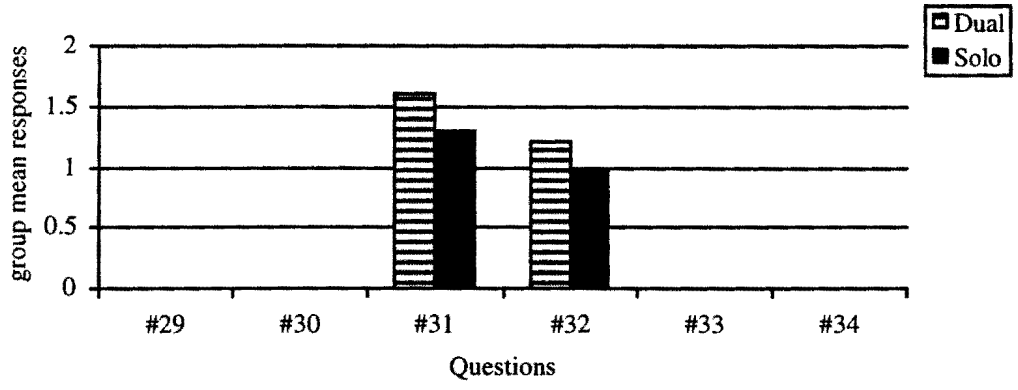

Figure 14. Mean Responses for Sociocultural Checklist Questions 29-34, Measuring Cognitive Learning Style.

Figure 14 shows a slight divergence in the scores for question 31 (*Easily frustrated or low perseverance in completing tasks*) with Dual subjects generally answering less positively (or with more "no" answers) than Solo to this question. However, again the chi-square test did not find any statistical difference between groups for this or the other factor in this category.

Along with the analysis of individual SC questions, the categories to which the 34 questions belonged were analyzed for possible group differences. The five original categories were: culture and language (questions 1-5); acculturation level (questions 6-11); experiential background (questions 12-20); sociolinguistic development (questions 21-28), and cognitive learning style (questions 29-34). The analysis of categories was meant to determine more specifically if these averaged results have an affect on student's

social and school adaptation. This analysis helped to answer the following questions: Are there statistically significant differences between the culture and language of students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL, are there statistically significant differences between the acculturation level of students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL, are there statistically significant differences between the experiential background of students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL, are there statistically significant differences between sociolinguistic development of students who have attended a two-way bilingual program and students who have been directly mainstreamed into a submersion with ESL and finally, are there statistically significant differences between the cognitive learning style of students who have attended a two-way bilingual program and students who have been directly mainstreamed into submersion with ESL?

The group mean responses for the five categories are summarized in Table XIII and a visual summary is represented by Figure 15. An X (x) denotes those categories not statistically analyzed.

TABLE XIII

Mean Group Comparison for 5 Categories from the Sociocultural Checklist

	Dual	**Solo**
Culture and Language: 1-5	1.98x	1.96x
Acculturation Level: 6-11	1.33	1.27
Experiential Background: 12-20	1.28	1.2
Sociolinguistic Development: 21-28	1.21	1.36
Cognitive Learning Style: 29-34	0.47x	0.38x

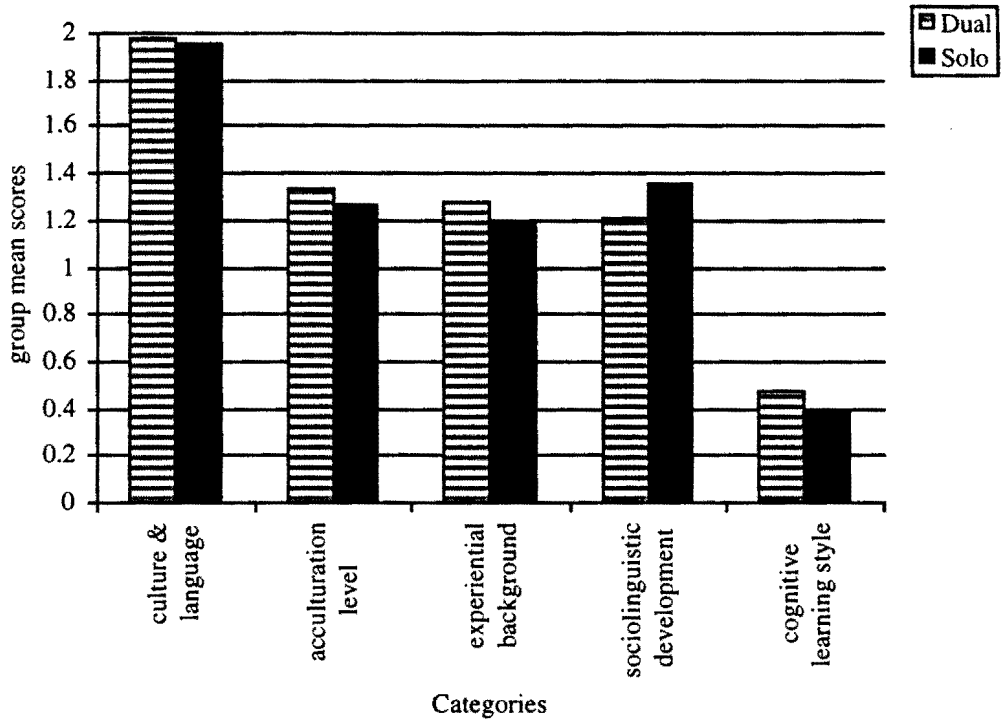

Figure 15. Mean Responses for Sociocultural Checklist Categories 1-5, Measuring School/Social Adaptation.

Observing Figure 15, the two groups show nearly identical raw scores in the culture and language category (questions 1-5) as denoted by a parenthesis () back in Table XII. The initial conclusion is that there is no difference between groups in terms of culture and language. Also, due to the missing information for cognitive learning style, this category was not considered for statistical analysis either. In short, these two categories were checked for resulting trends between comparison groups. There were no differences, and therefore, statistical analysis was not deemed necessary. The other individual questions that were omitted from the data did not disrupt the integrity of the

categories to which they belonged allowing for analysis of three remaining categories using the Mann Whitney U test. However, no statistical differences were found between the two subject groups in terms of acculturation level, experiential background, or sociolinguistic development. The resulting p values of 0.7573 (acculturation), 0.6588 (experiential background) and 0.0851 (sociolinguistic development) bear this out. Appendix G holds the raw numeric data from the category mean scores.

Academic Development

The fourth and final analysis conducted in this study involved comparing OSA scores in writing and mathematics to determine whether a difference exists between groups in terms of academic development. Writing and mathematics scores provided a formal measurement of the relative achievement levels of the groups in these content areas as measured by the OSA. This information source supplied data necessary to complete composite scores for education achievement levels.

One major problem encountered during data collection was that, contrary to initial information from school authorities, not all of the eighteen subjects selected had taken this statewide assessment. One subject from Dual had entered the program two months earlier and was not enrolled during the time the test was administered. The researcher discovered this only after subject selection had been completed and most of the data collection accomplished. For this reason test scores were collected from only seventeen of the eighteen subjects which probably affected the outcome of this analysis since the sample size was already small. Because the data was missing from Dual, the matching subject's score from Solo was also omitted from further analysis. Eight

remaining scores from each program were used to compare the groups in terms of academic development.

The OSA scores were analyzed using the t-test to determine the difference between the comparison groups for normally distributed interval data. Table XV summarizes the group means scores for both tests by comparison group. Individual subject scores are available in Appendix H.

TABLE XV

Mean Group Comparison for Scores on Oregon Statewide Assessment

	Dual	Solo
Writing test	15.89	13.22
Mathematics test	168.67	169.56

After verifying that the frequency distributions were normal, the means of the two groups were compared to determine whether they truly differ. The goal of the analysis was to confirm or deny the null hypothesis which claims that no statistically significant difference exists between the two groups in terms of academic achievement levels. The results of the writing test are presented in Figure 16, followed by a discussion of the results.

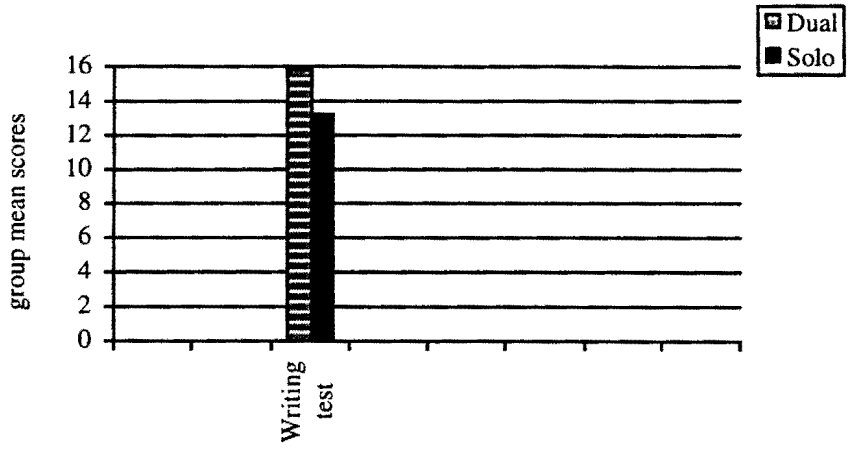

Figure 16. Mean Scores for Oregon Statewide Assessment in Writing, Measuring Academic Development.

The visual representation of group mean scores on the writing test shows a small observable difference with group Dual having a higher mean score. After statistical analysis the results from the writing test scores ($p = 0.1741$) indicate that there is no reason to reject the null hypothesis and that these samples do not come from different populations. The observable difference in group mean writing test scores is therefore disconfirmed. The mathematics scores in Figure 17 similarly show no difference between groups.

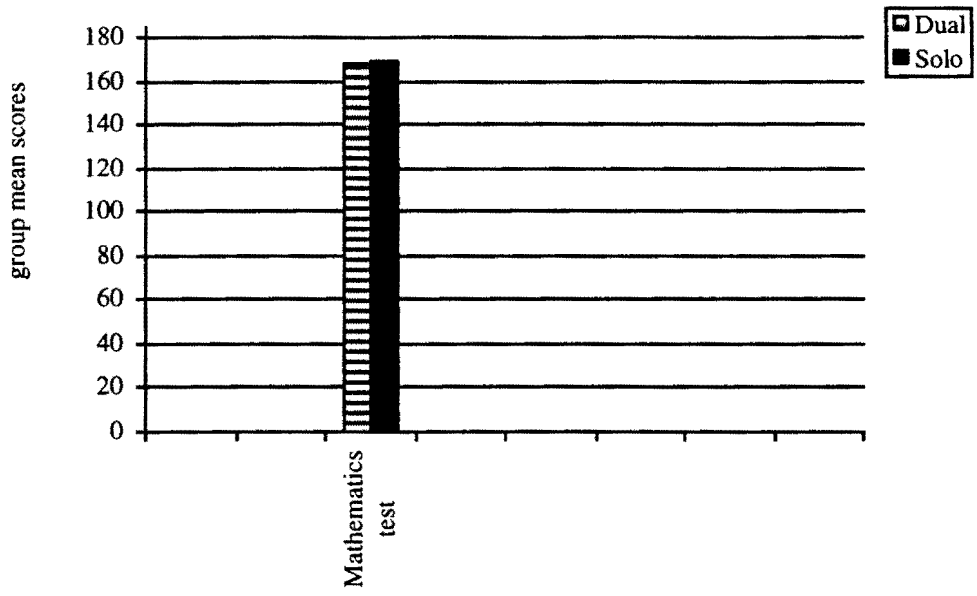

Figure 17. Mean Scores for Oregon Statewide Assessment in Mathematics, Measuring Academic Development.

The group mean scores on the mathematics portion of the OSA initially indicates that no difference exists between groups in terms of this factor. The p value of 0.1741 from the t-test confirms this finding. The test performance of these two samples did not differ significantly on either the writing or mathematics assessment confirming that there may be no statistically significant academic advantages of attending the two-way bilingual program over being mainstreamed.

Summary

This chapter presented a qualitative and quantitative comparison between students enrolled in a two-way bilingual program and those who were directly mainstreamed. The goal was to define and describe the characteristics of each program

and statistically analyze whether there is a difference between programs in terms of sociocultural development. The AQS, SC, and OSA scores were analyzed, producing minimal statistical results and suggesting that participation in the two-way bilingual program may not be any better or worse than the direct mainstreaming of CLD children. However, the qualitative methodology centered around teacher interviews and researcher observations arguably points in the two-way bilingual program's favor. These findings from the qualitative and quantitative methodologies can be helpful to educators of CLD children in similar programs although they should not be generalized to other subject populations. These ideas are summarized in the next chapter under Implications for Teaching. Additionally, Suggestions for Further Research are provided with the hope that while this study rendered few statistically significant results, the qualitative findings were important. Also, with a differently structured methodology, and by applying the lessons learned by this researcher, it is believed that the quantitative results could be analyzed differently and with more successful results using a similar methodology. The limitations reached in this study are noted for this purpose. Chapter V begins with a discussion of the results that were attained in this research.

CHAPTER V

RESULTS, IMPLICATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

The purpose of this study was to determine whether there exists a positive correlation between enrollment in a two-way bilingual program and the sociocultural development of Hispanic CLD third grade students. The goal was to contribute to the existing pool of information that is currently available regarding the education of culturally and linguistically different children. Student record reviews, teacher interviews, and researcher observations together with the Acculturation Quick Screen (AQS), Sociocultural Checklist (SC) and Oregon Statewide Assessment (OSA) scores were combined to determine whether a difference exists in terms of sociocultural development between students enrolled in a two-way bilingual program as compared to their mainstream counterparts. Three statistical means were used in the quantitative methodology. A single statistically significant result from the t-test on question #10 from the SC indicates that students in the two-way bilingual program code-switch significantly more than students in the comparison program. All other statistical measures in this study were in agreement in displaying no measurable difference in the responses analyzed by comparison group. These results conclude that there may not be a measurable advantage for Hispanic CLD students who are enrolled in the two-way bilingual program relative to those students who are directly mainstreamed into the English-only program. Conversely, these results can be interpreted as an indication that there may not be a measurable *disadvantage* for Hispanic CLD students enrolled in the two-way bilingual program, where they are able to develop bilingualism. This supports the literature claiming that it is possible for this group of CLD students to attain bilingualism at no cost to their educational success. This perspective is valid for

proponents of bilingual education who claim that bilingually taught students can perform at par with monolingually taught students in terms of academic success. A discussion of the results and alternate explanations for the disappointing quantitative results are discussed in the section. This is followed by a discussion of several unintentional setbacks generated by the methodology used in this thesis research. The chapter will conclude with a discussion about the implications of these results for teaching and suggestions for further research into this topic.

DISCUSSION OF RESULTS

Since the students participating in the study were volunteers, they are most likely not representative of the total population. Therefore, results are valid only for these particular two groups of students, and findings from this study are considered to be relevant only to programs that serve Hispanic CLD students and programs that share the same characteristics as the programs in this study.

Code-Switching

A t-test was used to analyze possible differences by group on the AQS and OSA results. A chi-square test measured the individual questions from the SC. Lastly, SC categories were analyzed using A Mann Whitney U statistical test. Statistically significant results were found between groups only on the third analysis; comparing the mean group responses for individual questions from the SC. Dual scored significantly higher than Solo on question #10 (*Oral expression contains considerable code-switching*). One possible explanation of this result begins with a theoretical explanation for the function of code-switching. Bilinguals use language in order to communicate

and socialize, i.e. in order to function as members of a social group. Code-switching has been found to be a habitual and often necessary part of social interaction among bilinguals, who differ from monolinguals in that they use two different linguistic codes and may have access to two different cultures. The most general description of code-switching is that it involves "the alternate use of two languages or linguistic varieties within the same utterance or during the same conversation" (Hoffman 1991:110). To understand the difference in levels of code-switching in the two programs, speech patterns must be explained. The difference between the bilingual and monolingual speech patterns is that whereas mainstream students have only English at their disposal, two bilingual children in an interaction can rely on a four-way choice (the two languages and various forms of switched codes since they are able to code-switch in both their languages).

These choices in the bilingual's speech behaviors are represented in a diagram adapted from Hoffman (1991:117):

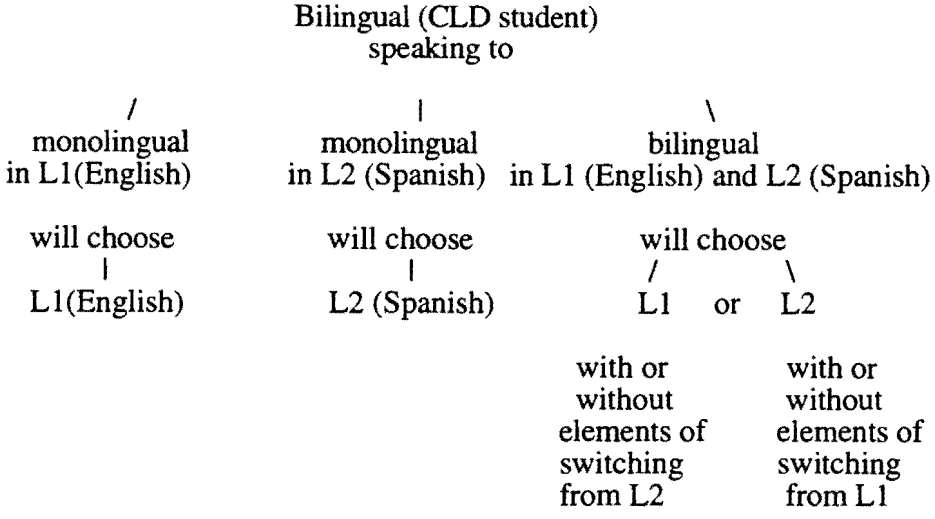

Figure 18. Representation of the Choices in the Bilingual's Speech Behavior.

Based on this representation one would expect that subjects from the two-way bilingual program may exhibit more code-switching for at least two reasons:

First, language use strategies revolved around conversation participants and their language use patterns in the two school communities. For example, CLD students in Solo were not permitted to use Spanish except for clarification purposes. Because English was the only language available for interactions in the academic setting at Solo, little code-switching can be expected as illustrated by the schematic layout above. Nevertheless, bilingual-bilingual interactions did occur in informal situations. Conversely, the higher level of code-switching observed at Dual can be attributed to the fact that students were permitted to use Spanish and/or English in the classrooms with

teachers and peers no matter which target language the teacher was teaching in. This opened up more opportunities for bilingual interactions at Dual.

Second, since only 25% of the students in the Solo classrooms observed were bilingual (see Chapter IV, Table IV for details) as compared to 58% in Dual, less code-switching can be expected to occur in Solo since there were fewer opportunities for bilingual interactions. Differing language use patterns and a lower bilingual student population are at least two reasons for the lower level of code-switching at Solo.

Outside of the above result relating to code-switching, all statistical measures used in this study were in agreement in showing no statistically significant difference in response to the three measures as analyzed by study group. Several alternate explanations for the lack of statistically significant difference found between comparison groups are discussed next including factors that may have affected student outcomes.

DISCUSSION OF ALTERNATE EXPLANATIONS

Instructional Treatment

The first possible explanation for the scarcity of statistical difference between groups in the outcome of this study is related to instructional treatment. While these two programs represent two distinct instructional programs on paper it is reported that during K-3 there is "little difference between programs, but statistically significant differences appear as students continue in the mainstream at the secondary levels" (Hakuta 1990:6). Past research has shown that determining the effectiveness of educational models in the short term generally does not result in a fair assessment of the differences between educational programs. This has been generally held true with research that is focused

solely on student's academic achievement levels. For example, according to Cummins (1986), the length of time generally required for the CLD student to achieve cognitive academic language proficiency (CALP), a context-reduced skill which is the "testable" material, is 5-7 years (to catch up to their native-English speaking counterparts). Testing before this time may not result in truly informative results needed to determine relative program success.

The current research was not based solely on individual factors such as academic achievement. Rather, the examination was based on the complex interweave of academic, social, cognitive, and linguistic factors defining the construct of sociocultural development. The hope was that subtle differences might emerge between groups in a relatively short period of time, but the lack of statistically significant results from the quantitative methodology does not support the original hypothesis.

On the other hand, differences did exist between programs as revealed by the qualitative methodology. Excerpts from teacher interviews help to describe the differences between instructional treatments from the teachers' perspectives. This evidence points in favor of the two-way bilingual program in terms of favorable instructional treatments for the development of CLD children's academic socialization. For example, one Solo teacher, Jose, spoke candidly about the environment at Solo and its effect on CLD students, acknowledging that the values of the school and its CLD children are in conflict. He began by explaining the fact that only one teacher in the entire school openly acknowledges that her students come from different cultures. This mismatch between home-school values causes undue stress on these children. "I think that you put more of a burden on kids by forcing them to code-switch culturally without

telling them what is happening". An experience he had earlier in the year confirms that this mismatch can result in unnecessarily stressful situations for these children:

> I subbed in a classroom a couple of weeks ago and I asked those in the class 'who speaks English?' and the kids eagerly raised their hands and said that they did. However, when we were doing the home language survey where we were talking to kids in a class where the teacher discourages them from speaking Spanish and they were very scared of that question...they were scared to death that they were going to be expelled and acted like they had been caught for doing something wrong for speaking another language.

Often these children are afraid to reveal their backgrounds for fear of discrimination or ridicule. Igoa (1995) found through her experience that "these children feel uncomfortable acting one way at school and another at home...Their maladjustment will manifest itself in a cultural split which will continue as long as no intervention occurs" (p. 45). According to Juan, no current intervention is occurring at Solo:

> I don't see this school making an effort. There's no real effort in the social studies unit...they are all about the U.S. They talk about communities near and far, they tend to stress things about the U.S. communities, overlooking things about Mexican, Russian, Romanian, or Loation communities. I saw something interesting on grandparents day. In one classroom they wanted to know where all the grandparents lived because so many people moved around...and they used a U.S. map! In that classroom it should have been a world map if not a map of all of North America but it was just a U.S. map so half the kids couldn't find where their grandparents lived. Symbolically, that doesn't say much about the school. Also, there is a definite behavioral pattern from CLD students whose needs are not being met at Solo. It's kind of the 'if you ignore me I ignore you' syndrome, so when students are disciplined in English they ignore it, yet, when they hear the same thing from me (in Spanish), they suddenly respond at attention.

Igoa has found that the lack of intervention at this early age will have long term consequences. Later in adult life, if these children become conscious of their two separate worlds it may be that they will "reject or deny their native culture; or may discover the part of themselves they left behind in childhood" (Igoa 1995:45). At that point, even if they want to regain this in adulthood it is sometimes difficult, and always

timely. For this reason especially, the school environment in the early years is the ideal place to socialize and acculturate young children to the new environment, while simultaneously developing the cultural resources they bring with them to the school. This allows the student to develop healthy bicultural selves. At Dual this is already happening for the students according to Mrs. Feliz, the Dual bilingual teacher. Frank, one of the Dual subjects has been in and out of submersion and bilingual programs over the past three years. Recently, his family finally returned to Dual so he could re-enroll in the two-way bilingual program. Mrs. Feliz explains that "he found no support in the other school and was getting no education whatsoever, while at Dual his confidence and self-esteem have been seeded for growth!". She speaks similarly about another Dual subject, Godly:

> He came to us in the middle of the first grade from a regular traditional school with low level skills, no reading, no writing, and very low social skills. He was very quiet. The first day he walked in here and saw that teachers were teaching in Spanish, it was just great, and so his whole self-esteem changed. Now he's reading, he's writing, he's doing math, he's doing everything. I've seen him blossom to a complete child.

At Dual it is recognized that "self-esteem is a by-product of academic achievement and of the child's own feeling of being potent and in charge if his life" (Igoa 1995:152). For example, Mrs. Feliz has seen great changes in Mary since she has been in the program. Like Frank's parents, Mary's parents enrolled her in Dual, requesting that she repeat her third grade year, following her lack of success in the mainstream classroom. "Mary has become really motivated...positive self-esteem, really hard worker, takes things home and finished stories that she didn't finish here. She has really changed. The bilingual program has been extremely beneficial for her". When asked why she thought the traditional program had not been successful for Mary, Mrs. Feliz responded that "when

these kids are in the traditional classroom sometimes they are ignored, and then they get bored". This sentiment is affirmed at Solo by one of the Solo teachers herself. Mrs. Good is aware (at least unconsciously) that CLD students in her own classroom are sometimes ignored, as she describes happens to her CLD student, Bird:

> Bird just sits back and watches and kind of blends in, and if they learn that, it is really easy to be overlooked and they fade into the woodwork. He was really good at that at the first of the year and I could go for days without having talked to him...it's kind of like 'the squeaky wheel gets the grease', so when they are really quiet sometimes they don't get the help they need.

Bird may actually be on the road to subsequent failure if what Shorris (1992) says is true:

> Children who do not speak English are no longer put into the lowest grade or declared mentally defective, but a child who speaks only Spanish and is not allowed to develop his conceptual abilities in his own language while he learns to speak another will fall behind his peers. After the first failure, the next comes easily; the pattern develops so quickly that a child in the third or second or even the first grade may be lost to despair.

The effect of exposing CLD students to a monolingual environment promotes the unconscious belief that essentially everything they value including; their language, history, and culture are not as worthy the mainstream counterparts. One effect this can have is that these students run the risk of over-identifying with the second language and culture, consequently losing their familial and cultural ties (Igoa 1995; Wong Fillmore 1985).

Teachers

Teacher training, attitudes, and expectations all played a part in student outcomes. Even with some of the multicultural standards and guidelines that are presently part of accreditation standards, pre-service teacher education programs may

not be adequately preparing teachers to work with CLD students (Meyer 1992). As summarized in Chapter IV, none of the four participating teachers had any special training in meeting the needs of CLD students outside of their teacher training program. It is possible that the inadequate training of teachers may have contributed to the lack of difference between groups in the quantitative methodology.

In terms of the qualitative methodology, however, there were some interesting findings in terms of teacher attitudes. Teachers in Solo and Dual exhibited positive and supportive attitudes towards their students through the researchers observation of their feedback and support. Mrs. Good, one of the Solo teachers, described the development over time of her student, Bird. "He went through a stage where he had no clue, then had a clue, then he understood but was pretending. He didn't understand because he was not confident and then we got to the point where he started achieving". Mrs. Good displays an understanding of the process a CLD student goes through during acclimation to a new linguistic and cultural environment. From her comments, she realizes that the process CLD students are going through involves several stages, which may include one where the student "checks out". Both teachers at Solo displayed a certain level of understanding about the complex process their CLD students go through in the mainstream classroom. Mrs. Light, the other Solo teacher, also displayed a special understanding of her very active CLD student, Rover, when asked if she thought he had a problem behaving in the classroom. "I don't THINK of him as having a behavior problem, now why I don't think...When I have a substitute, I don't put him down as needing extra help. I tend to separate him from other kids' behavior". During researcher observations this student clearly exhibited the presence of sociocultural factors that suggested a mismatch between his needs and values and those of the

mainstream American classroom. Mrs. Light's response indicates that she understands that this CLD child has come to her classroom with different needs and some of the behaviors he exhibits are probably a reaction to the different environment that he has been placed in without his understanding of what is happening. She is supportive of this student's needs and is able to set this student apart from true discipline cases. This student's behavior was probably related more to his transition into the new language and culture rather than a reflection of his personality. Jose, the Solo bilingual aide, reports that Mrs. Light "plays by the same rules with all the kids so I think that helps them not check out...I think tailoring things to second language kids, I think the way she has things set up is accessible for them already". When asked in the interview if she had ever heard Warren, one of her Hispanic students speak Spanish, she said:

> I've never heard him...like I said, he wanted to be called the English equivalent of his given Spanish name. That made me feel real uncomfortable but I said he had to talk to his parents first before I would do it because it made me feel real uncomfortable and his comment was 'I want to be an American'.

While this passage represents the culturally sensitivity of this Solo teacher it also sheds light on just how intense the mainstreaming process can be on a CLD student. By pushing away his given name, in essence he was trying to push aside his "cultural self" (Igoa 1995:34). Research in English-only programs reveals that if a school sends an unconscious message that the English language, and American values are the only that matter, children eventually internalize this.

The two program types also seemed to contribute differently to student's confidence and self-esteem. Teacher interviews at Solo suggest that CLD students surrounded by an English-only environment tend to exhibit more negative attributes, such as withdrawal. Students in the Dual program on the other hand, were described as

reacting very positively to the bilingual environment causing dramatic changes in their attitude and allowing them to take more risks in the learning process. In setting the stage for her own classroom Igoa (1995) addressed this issue:

> The more I am aware that each comes to the classroom with a valuable cultural history and language, and the more I show interest in who they are and what riches they have brought to this country, the more I can open the door for them to ask questions and seek information about the new environment. This opens the door for their bicultural selves to emerge. (p. 122)

"The importance of English is well established among CLD students: once they encounter English in school, students are quick to realize that the only language that counts is English" (Gonzalez & Maez 1995:1). These children embrace the second culture without looking back, thereby leaving their culture and family behind. This may suggest that it is necessary to provide not only understanding and guidance, but also some kind of home-school connection during CLD student's transition to the new culture.

Besides providing supportive environments, these Solo teachers also provided caring environments for these students, taking the time to get to know them on a personal level. In describing the behavior of Kelly, a CLD student, Mrs. Good explained that:

> Kelly would rather play and I think it is who is around some, who will talk to him if no one else will talk to him....his father died this last year so he's had some traumatic times in his life too especially this year...some of these children have other things in their life they are battling that have nothing to do with school necessarily.

This teacher illustrates that she understands that Kelly's playfulness is a behavior resulting from his struggle not only to fit into the mainstream environment but from difficulties from his past and his present living condition. In sum, Mrs. Good acknowledges her CLD students come to the classroom with different backgrounds,

different needs, and different strategies for handling the change. The importance of being caring is evident in Mrs. Good's teaching. This is essential to the success of the immigrant child. If the teacher understands then the student will feel better, and if understood the child doesn't feel discounted (Igoa 1995).

Both Dual and Solo teachers both provided positive and caring instructional environments. However, there were clear differences in terms of teacher expectations of students in each program. For example, Mrs. Light from Solo had low expectations for her students. When asked about Rover's behavior, she replied, "I do cut him a lot of slack. Why? I don't know but I do. Part of it is that there are certain things that I don't expect him to be able to do and I guess that's just part of his personality. That's just part of Rover". Due to an unconscious belief that this CLD student is not able to perform at an equal level with mainstream students, she employed a watered-down curriculum for his learning, sending the message that he is not expected to work as hard as other children in the classroom.

Conversely, Mrs. Feliz from Dual in speaking about Sprout's changes over the past year in the program claimed that:

> he's definitely realized that in this bilingual program there were goals to be met and it wasn't a play situation where you just came in. There were daily goals and there was communication with the mom and if he didn't accomplish his goals he knew that there were consequences. There was another boy who isn't here now who spent all year and he would not do homework or anything at all. Not that he wasn't capable but he just thought that was OK and then when he started to discover that there were demands put on him that he needed to do...his whole positive self...even the way he just walked down the halls changed, just the confidence in him. So definitely the Spanish kids, there's more of a support...the confidence.

Mrs. Feliz obviously expects more from her CLD students and implies that they are expected to succeed. Strong academic intervention is vital in the holistic education of CLD students. While instructional methods were not deeply examined in this research,

the main difference between teacher's attitudes in the two programs was that the expectations of students were higher at Dual than at Solo. This research did not draw upon the existing body of literature relating to teacher expectations. The factors that may have contributed to these results are not explained in any depth. In future research of this kind, the wide body of research on teacher expectations should be consulted in order that the factors that influence CLD student achievement can be identified and analyzed.

Observations and interviews indicated that teacher's attitudes towards learners may have affected the quality and quantity of the learning which took place in both programs more so than a teacher's lack of training. An important finding in this study is that supportive and caring teachers may affect the successful outcome of these learners as much as a trained and knowledgeable, but less sensitive teacher.

Time in Program

One explanation for the lack of statistically significant results from the quantitative methodology in the outcome of this study is related to subject's "*Time in program*". This study was conducted on student outcome as it related to the program type they had been enrolled in so the amount of time spent in either program was one of the more important determining factors. "*Time in program*" was not matched during subject selection in order that this variable would be analyzed for affect. All subjects chosen for this study had been classified as NEP at their time of arrival into their respective programs. However, because they had entered at different times (at some point between Kindergarten and their third grade year) there was no overall consistency for duration among the subjects for time enrolled in each program. Referring back to

Table V, Chapter IV, it is clear that there exists an uneven advantage for Solo subjects in that more of the subjects had been in this program for a longer duration. Over half of the Solo sample had been enrolled in the submersion program for over two years while over half of the Dual subjects had been enrolled in their program for less than two years. Because newer arrivals need time to adjust to their surroundings this raises the chance that the Dual group overall may have been facing increased adjustment challenges. Entering a new program, making new friends, and establishing a new school routine are stressful experiences that affect academic development. It is strongly felt that the variation in "*Time in program*" probably had a meaningful effect on the quantitative outcome of this study, most likely biasing results at the expense of the Dual program. However, the results as they stand provide support for the hypothesis that students enrolled in a two-way bilingual education program can perform academically, cognitively, socially, and culturally at par with CLD students who are directly mainstreamed.

Risk Factors Associated with Mobility

All eighteen subjects participating in this study came from low-income migrant families which may have affected student outcomes. Because their family lifestyles are transient, they require moving on a relatively frequent basis. The mobility of migrant families and disruption in the education of their own children negatively impacts CLD children. They often experience gaps in their schooling sometimes having to skip entire grades. Because the relative success or failure of CLD students is highly dependent on continuous and consistent attendance an educational program is only as good as the attendance record of its members. It is argued that both programs in this study would be

more successful in educating CLD children who have the luxury of starting school in kindergarten and attending throughout their early years of education. Unfortunately not all students in this study did. Program effectiveness at Solo and Dual were probably compromised by mobility factors. However, it is difficult to assess whether one program was affected more so than the other as a result.

Additionally, because adult migrant family members have limited education and limited language skills their children tend to have; lower than average readiness skills such as language and content understanding; fewer appropriate childhood educational experiences; and little to no English speaking ability. CLD students from Hispanic families come to the school in a disadvantaged position. These confounding personal characteristics of the subject population in this study make any research a challenge.

School/Classroom Population and Composition

At the school and classroom level there were differences between programs. As mentioned in Chapter IV the CLD student population at Dual was quite a bit larger than Solo with 28% and 20%, respectively. This larger population may have accounted for the observed difference between the two programs in three ways:

First, referring back to Table IV in Chapter IV, Dual classes were larger than Solo's. The Dual program had a 30% larger class size than Solo with an average of 32 per class as compared to 24 per class. This factor may have had a negative effect on Dual student outcomes as a result of the higher student-teacher ratio. Less one-on-one interaction with teachers increases student's freedom and reduces teacher's control of the classroom. The observed chaotic environment at Dual may have resulted from this increased population.

Second, not only were there more students in general at Dual, but there were more CLD students. Both programs taught CLD and English-only students together in the same classroom but with differing population percentages. The two classrooms under exploration at Dual had a total of 37 CLD students with 27 English-only students. At Solo, 12 CLD students were integrated with 36 English-only students. Please refer back to Chapter IV, Table IV. The larger CLD student population of Dual may have accounted for the observed difference in student behavior. The students in Dual were observed to be more independent and unruly than students at Solo. This generalization was assessed for the entirety of the class, not only the eighteen subjects. Delgado-Gaitan & Trueba (1992) who have both done extensive research into the education of CLD students, found that the Mexican-American home socialization pattern stresses collective and social cohesiveness. Moving from group to group, sharing work, and interacting with other students in any situation inside or outside the classroom is considered normal behavior within the Hispanic culture. This type of behavior in an American school appears active and chaotic. Teachers with mainstream values tend to stress work that is done quietly and independently. While the higher CLD population at Dual was not the only cause of the observed chaos, it was likely most influential factor causing the qualitative difference in environments.

Third, the constantly changing composition of students in classrooms within Dual may have also contributed to the apparently over-active environment. Students at Solo generally remained in the same classroom throughout the day with the exception of NEP students pulled-out for ESL and a few students moving for different mathematics classes. Students continuously moving between the English-only and bilingual classroom at Dual could have contributed to this difference. When asked if their

students understood the rules of the classroom all four teachers answered almost unanimously that their students did. For this reason, it can be tentatively concluded that the assessed differences in behavior was probably not due to a lower level of socialization skills but rather due to the factors outlined above.

Program Vs. Policy

The program at Dual is nearly the theoretical opposite of Solo on educating CLD students. However, if given the means to choose, Solo's principal would have supported a curriculum incorporating student's L1. In theory, therefore, Dual and Solo administrators agree that a native language component is important and helpful in education CLD students. The difference is that, while a lack of economic resources limited the implementation of such a program at Solo, the principal at Dual took an active role, and earned Dual a comprehensive federal grant enabling his school to eventually implement an alternative to the submersion program. Also, regardless of the potential intentions at Solo, students who spend the better part of each day in that program can not help to notice if their native language and culture are rejected and that English is being treated as the only and best language. Ada (1993) speaks to this issue, when she says that "schools can never be neutral in this regard. The conscious or unconscious practices of the school, including its approach to literacy, serve to either validate or invalidate the home cultures, thus helping or hindering family relationships" (p. 158). By disconnecting the home-school connection, the Solo program invalidates the values of the home. Therefore, one important result from this thesis research is that regardless of program type, a conscious consideration for the background of the CLD student is imperative. Increased staff development can also contribute to a more effective SLA

program. Several formats are available for instructor training ranging from in-service workshops to conferences, to action research and self-directed learning.

Parental Choice

Parents of the eighteen subjects had a choice to some extent as to where to send their child for schooling. For example, the parents of one Dual student moved to an apartment within the Apple school district in order that their daughter could attend the two-way bilingual program. Another family returned their son to Dual after he had begun to fail in an English-only program outside of this district. While these low-income CLD parents may be the exception, their choices imply that parents are interested, concerned, and involved in their child's educational process. Parents intervening at this level may be more prone to helping their children with homework and checking on their child's progress at regular intervals. This factor could have negatively affected the Solo group outcomes since this may not have been the benefit of all subjects in this study.

Qualitative and Quantitative Methodology

The weaknesses of this research methodology definitely contributed to the inability to show measurable differences between comparison programs, and should be kept in mind for those who are thinking of utilizing this data for policy planning. The complexity of the methodology used led to several difficulties. To summarize, student records were reviewed, teachers were interviewed, and programs were observed by the researcher. These techniques served to deliver information necessary to complete the

AQS and the SC. OSA scores were already available from the administration of each school.

During the data collection process the researcher became aware of the limitations of the research methodology. The availability and comprehensiveness of data on each subject in the sample was the main limitation. Every effort was made to obtain the data without endangering student confidentiality. However, the limited data available from student records negatively affected the successful completion of the AQS. Also, while teacher interviews proved to be a valuable source of descriptive information, the SC was difficult to use since it required the teachers to have an extensive knowledge of their students current development. It also required more time to complete than was allotted for each interview. Finally, at Dual the OSA was being pilot tested in Spanish so some of the Dual subjects may have had an advantage in terms of test results. Beginning with the Acculturation Quick Screen, limitations of the quantitative methodology will be discussed.

Acculturation Quick Screen. Because the researcher had no direct access to students or parents and because student records were incomplete, it was difficult to assess some of the questions on the AQS relating to educational background to any relevant degree. Student records were reviewed to collect information necessary to complete the AQS. However, one problem with using student records was not knowing whether the information was reliable and whether there were consistent patterns across the available information (Wiederholt, Hammill, & Brown 1983). As the researcher progressed through data collection at both schools it was determined that much of the information needed for the AQS was not readily available in existing student records as previously believed. Also, some of the variables on the AQS were difficult to score due

to a lack of information, and some was just not possible. Consequently, AQS data were minimized greatly. The AQS was not used in its entirety thus calling into question whether the construct of acculturation was reliably and validly measured.

Sociocultural Checklist. One particularly confounding result of using this instrument was that the informant's answers to questions on the SC were not easily categorized by the researcher. An example of a common type of answer from informants on a question such as "Does she speak English?" was: "I think she is pretty close to understanding most of the sounds in English". Assessing a "yes" or "no" response to this type of answer was difficult and timely due to the inherent ambiguities in this kind of elicitation technique. The researcher was forced to make subjective interpretations, but guidelines were established for scoring purposes. Appendix D provides some representative examples of these guidelines. Yet, it was argued that the limitations encountered using the SC probably did not affect the measure of school/social adaptation. The SC was comprised of particular factors that were determined through research, to be important in assessing this construct. Therefore, even though the data collected from the SC was limited, since this tool was not used in isolation, the missing data probably did not affect the measure of the main construct as it might have if it was the sole measure. Also, since SC factors and categories were omitted for both sets of subjects alike, student outcomes were not biased or affected in any manner as such.

Oregon Statewide Assessment in Mathematics and Writing. While the standardized nature of the OSA provided a reliable and valid measure of student's academic achievement over the past year, a possible confounding factor in the reliability/validity of this measure for this research warrants some discussion. All

mainstream and CLD students at Solo were assessed on the OSA in English only. The Dual program, however, was chosen as a pilot school for field testing a Spanish version of the OSA for the first time. Therefore, all CLD students at Dual took the mathematics test in Spanish. The writing test itself was taken in English but directions were administered in Spanish. While this may cause some concern regarding test reliability/validity across subject groups, according to the administrator of assessment and curriculum for Portland Public Schools (S. Slater, personal communication, March 4, 1997), the test items are exactly the same on the monolingual and bilingual version of the assessment. Furthermore, translation was reviewed and accepted by bilingual educators. Slater also emphasized that the primary goal of the OSA is to be content valid, that is, to match a specified curriculum domain and the curriculum that is being tested. Since both versions of the test required the same skills, it is argued by Slater that both tests are equal.

It is difficult to know exactly to what extent the limitations presented in this study affected the reliability and validity of the protocol followed in this research. Rather than stating that the present research definitively identified subject's actual level of sociocultural development, it is probably more appropriate to claim that it assessed a rough comparison of sociocultural development by program.

A brief summary of the alternate explanations for the lack of statistically significant results in this thesis research finds that while both Solo and Dual program effectiveness most likely suffered from the fragmented schooling experiences of its members, the Dual program had a greater number of subjects enrolled for a shorter duration. In addition, the larger school and classroom population and the higher CLD student population at Dual may have negatively affected this group since they may have

received less one-on-one interaction with the teacher. Both Dual and Solo teachers displayed understanding and caring attitudes, but teacher expectations in program Dual were higher than at Solo. These higher teacher expectations, while not studied in depth, are considered a positive characteristic for the long term success of this population. On the other hand, because Dual subjects were required to perform at a higher level than Solo students, their overall achievement level may have been artificially lowered. Lastly, Dual students may have been advantaged in terms of more positive parental support, but the effects of this factor were not explored in this research.

Given that group Dual student outcomes appear to have been more negatively affected than Solo's, it is meaningful that Dual students still measured comparably with Solo students in the quantitative methodology. Despite the hurdles faced by students in Dual, they performed on par with the mainstreamed children. Together with the qualitative findings pointing in favor of the two-way program, these neutral results suggest that becoming bilingual and bicultural may come at no expense to the sociocultural development of CLD children. Long term studies of this kind may provide more insight into this hypothesis.

IMPLICATIONS FOR TEACHING

This study did not yield statistically significant results in regard to the question of whether any correlation exists between student's enrollment in a two-way bilingual program and their sociocultural development. However, there are other important and valuable implications for administrators, teachers, and the CLD student population that can be drawn from the results of this study. These study results especially have implications for teachers who have Hispanic CLD students in their classrooms.

In general, the results of this thesis research find that this population of Hispanic CLD students can attain a similar level of academic socialization when educated in a two-way bilingual program compared to a similar group educated in a mainstream English-only program. A tentative conclusion that deserves further research is that there is no negative effect on sociocultural development on those students learning using English half the day and their native language half the day. Therefore, it may be to the benefit of students to begin learning in a bilingual program as early as possible in the education process. Their entry into a bilingual environment does not seem to harm sociocultural development, and as they are succeeding equally with monolingually schooled CLD students. At the same time, they are developing two languages and two cultures.

Teacher Attitudes and Expectations

Observations and interviews revealed all teachers promoted a positive attitude about learning and were committed to teaching all of their students as best as they knew how. An important discovery in the current study was that teacher attitude seemed to affect student outcome more than their own training and possibly even more than the program policy or philosophy of the school. After all, none of the teachers had any special training in the education of CLD children; and and the Solo program promoted English while the Dual philosophy supported and valued the resources of the CLD student within the curriculum. These factors alone probably affect outcomes at Solo in the short run. Researcher observation and teacher interviews revealed that those teachers who were caring and supportive of the CLD children boosted the student's self-esteem and confidence. Additionally, high expectations for student achievement was also an empowering factor for these children. This possibly indicates that outside of

social, political, and economic factors imposed on a school, teacher attitudes and expectations are the most powerful forces in successful CLD student education. In her years of experience teaching immigrant children, Igoa (1995) also found teachers to be an important factor in the successful education of CLD students:

> In the end, regardless of policies, philosophies, theories, and methodologies, the success or failure of an individual child-the way that child experiences school-depends on what happens in that child's classroom, what kind of learning environment the teacher is able to provide, and how well the teacher is able to investigate and attend to the particular needs of that child. (pp. 8-9)

Although teachers often find themselves working within structural constraints in a school system, there are conscious steps that can be taken by teachers and administrators to show CLD students that their native language and culture are valuable. This could empower students and increase self-confidence.

Student Attitudes

Student attitudes also act as determining factors in their school success or failure. However, these attitudes are, to some degree, shaped in the classroom itself. The philosophy underlying the Dual program explicitly implies that a student's history, family, and self are valued at school. While the resources for bilingual staff are not always available, the in-class teacher can still make a difference. In-service professional development can provide an opportunity for mainstream classroom teachers to explore beliefs, pose questions, and gain new knowledge, skills, and attitudes with regard to CLD students and their attitudes. Igoa suggests that "we need to humanize our classrooms to best teach our students and facilitate the development of literacy, which is the most self-empowering skill a child can gain in school" (1995:9). When teachers provide a positive environment for their students, their students will more likely

response positively. For teachers looking to make a difference in their classroom, Igoa's Cultural/Academic/Psychological (CAP) approach to teaching immigrant children can provide them with some tools for enabling such an environment.

Administrators

One suggestion for school administrators is that if programs supporting CLD students were more widely dispersed throughout school districts in these lower socio-economic areas where the migrant family is the norm, CLD student's constant displacement may not affect the education process to the extremes that are seen today. According to Hoffman (1991) the most effective way in which a state can contribute to the bicultural person's well-being is by providing a variety of types of educational and cultural facilities which would suit the different needs of bilingual citizens. One avenue for districts with higher populations of CLD students might be to attempt to secure grants that would enable their school to implement a second language/second culture program. The Dual program is one example of a school taking charge and making a difference in the lives of their students. The underlying issue, Igoa (1995) says, is that in order to begin to see long term CLD student success, the school system needs to change. A teacher cannot do it all.

Classroom Teachers and the Sociocultural Checklist

The SC was designed with the intention of identifying the individual factors that may contribute to CLD student's difficulties in the American educational process. While the SC provided only one statistically significant result in determining differences between two groups of students, it proved to be extremely helpful to the participating

teachers for understanding why and how their CLD students act the way they do. The information collected about student's experience and response to particular environments and learning styles in the current research was one of the main contributions of this project. The implications for teaching is that the SC is a valuable tool for all classroom teachers who have CLD students in their classrooms. Past research has focused on the skills of the teachers and how they may be lacking and therefore contributing to the unsuccessful education of the CLD student. In this research, the SC served to enlighten teachers that some of the factors inhibiting successful education of these children may reside with the students themselves and not with the teacher or the school. From this point, teachers can establish student needs and provide necessary and appropriate assistance. A better understanding of CLD students is important for classroom teachers and the SC can serve to reassess past notions that teachers are failing their students. Instead, teachers are given a tool to assess more effectively what these "different" students need that the particular educational environment may not be providing. The SC can be used by the teacher in their classroom at any time, freeing them from a reliance on statewide academic assessments scores that taken alone, simplify the process of SLA. Instead, the results from this measure can immediately provide information that will lead to support for whichever students they feel may need additional help.

A final summary of these categories is provided so that the five factors most affecting CLD student's overall education are clearly outlined (C. Collier 1988:8-20). Both V. Collier's model of second language acquisition (1995) and Igoa's (1995) CAP intervention model that were presented earlier in this paper support the importance that teachers understand the complexity of the SLA process.

First, in terms of student's cultural and sociolinguistic background C. Collier (1988) states that:

> our educational system is founded on culturally based assumptions about what students should learn, how and where they should learn it, as well as why and when they will need this knowledge. Students reared in a different cultural environment will have learned a different body of knowledge and will have learned it in a different way. (p. 10)

Language occurs within a social and interactive communicative context. Therefore, by considering the cultural and sociolinguistic background of the subjects, teachers are better able to understand how these differences may affect student's educational development.

The second SC category is acculturation which includes a child integrating new cultural patterns into the cognitive and behavioral framework of the first culture. Therefore, students are scored on the psychological responses to the acculturation experience to determine their level of acculturation. For example, these include: withdrawal, loss of control, anxiety, low self-image, and stress are symptoms of a lack of acculturation. These symptoms in CLD children have often been mistakenly characterized by teachers as deviant behavior or a more general learning disability. C. Collier argues that instead these factors may actually be the psychological "side-effects" of acculturation that can be alleviated through minor intervention.

The third category of the SC, Experiential Background, focuses on the differences in CLD student's experience. The presence of these factors for any particular student effects differences in their response to the school environment. For example, a lack of previous education in their homeland may be playing a major role in a student's inability to naturally adapt to the current educational environment.

Sociolinguistic Development is category four. This category is used to describe the comprehensiveness of language development and usage. The student's sociolinguistic abilities in both the L1 and the L2 are identified in this category. "Language is the medium through which culture and experiences are shared and transmitted...and is a primary element in the acculturation of minority students" (C. Collier 1988:16). Therefore, if a student rarely speaks in class it may indicate that they are lacking the primary element of language which may affect their overall acculturative development.

Cognitive Learning Style, the final category on the checklist, is the way students respond to learning tasks and instructional environments. This depends largely on the CLD student's cultural background and experiences so that if the student has no previous schooling experience, their ability to develop and use cognitive processes may be adversely effected. Identifying the learning style can therefore help identify the student's need for exceptional support in this area.

The SC is one tool that can assist classroom teachers in their goal to provide the best educational environment possible to CLD children. Through a preliminary identification of some of the issues facing CLD children in the classroom, teachers are one step closer to helping them succeed.

SUGGESTIONS FOR FURTHER RESEARCH

The goal to increase educational standards in the United States needs to include further research on the types of programs that are most successful for educating CLD students. There has been an increase of CLD students within Oregon public elementary schools, especially Hispanic students who tend to experience high drop-out rates. This

problem forces meaningful and workable solutions. Further research into supporting a child's academic, linguistic, social, cultural, and cognitive processes should be a goal among researchers in linguistics and other related fields.

By comparing two demographically similar groups of students who were enrolled in philosophically and pedagogically very different learning environments, this research attempted to provide some insights into what kind of classroom environments aid in the schooling success of Hispanic CLD children. While it was found that there does exist a statistically significant difference between comparison groups in terms of code-switching, the quantitative methodology was inconclusive and further empirical research is warranted. However, the qualitative methodology was persuasive in pointing towards the success of the two-way program in developing bilingual and bicultural skills while simultaneously developing sociocultural skills.

Some suggestions for further research would be to attempt a similar study that is longitudinal in nature and allows equal time for all subjects in their particular program. Based on past research, tracking students for a minimum of five years would be ideal. This could be done in an MA program if graduate students in consecutive graduating classes followed the same group of subjects in their thesis research. This might allow the researcher(s) to more accurately measure the effect of program type on student's sociocultural development. It is also suggested that future researchers attempting a similar study use larger comparison groups. This would maximize the measurable subtleties that may or may not exist between programs.

Additional information that would be helpful for completing the measures used in this study would be student and parent interviews. While this would require a bilingual researcher or the hiring of an interpreter during interviews, this type of

information would be invaluable. The limitation of available and comprehensive data about factors such as language proficiency and family history were some setbacks of this methodology. Parental involvement could be assessed as well. Research suggests the importance of this factor in a child's educational process.

One implication of the current research was that student's attitudes may be very influential in their success or failure at school. For this reason, further research of this kind would be valuable. Student interviews could provide information, from a student's point of view, about some of the issues they face and stages they go through while in their particular second language environment.

Another suggestion for researchers interested in a similar study is to get formal training from the author before using the AQS and/or the SC. The availability and comprehensiveness of available data was a limitation of this study due to the unfamiliarity the researcher had with these tools.

Finally, for future research projects focused the social sciences, it is recommended that teacher interviews and observations are used. The benefits of the interviews were discussed earlier. In terms of observations, while some experts in the field consider this a highly subjective technique, (since the observer interprets the situation solely based on what he/she witnesses), this and other researchers argue that an outside observer can bring an objective eye to the environment, thus providing new and insightful information not previously considered by teachers or educators who work with these students on a day to day basis. In this research, the observational analysis was invaluable for examining student's sociocultural development and for providing information about subject's response to the learning environment in the classroom. Information about cultural and experiential background and cultural and sociolinguistic

development was also discovered through observations. Without a personal snapshot of the two school environments, teachers, and students, many of the differences discussed above could not have been identified. Therefore, the researcher recommends that any research dealing with school-based issues utilize a qualitative methodology.

CONCLUSION

While the lack of measurable results suggests that CLD students enrolled in a two-way bilingual program may not enjoy an advantage over the English-only group in terms of sociocultural development, it can also be argued that bilingual education does not necessarily deprive CLD students by developing two languages and cultures at the same time. The scarcity of statistically significant results in this study can be attributed, in part, to several methodological errors that must be taken into account when discussing the results of this research.

Subject selection procedures and the short term nature of this study should be taken into account. In addition, a lack of formal training by the author for the researcher on the AQS and SC, as well as bureaucracy and school site inconsistencies also contributed to the weaknesses that affected study outcomes. Because a weakness of this methodology was the size of the research population, these results should in no way be used for policy planning and implementation which could effectively deny CLD students the equal rights they deserve at school.

The school-based topic covered in this thesis was important and relevant research. Continued research of this type is necessary, but must be done in less of a vacuum than it has in the past. It is also important to do research in this area to add to the small amount of existing research upon which many policy decisions are being made

today. A greater amount of research and less simplified research, is needed for making more informed policy planning decisions. Finally, and most importantly, a greater supply of this kind of research should be provided towards a declaration for the universal rights of children . All children deserve equal rights in the educational system, and only a better understanding of what is the most effective education for them will lead to the equality they deserve.

In spite of the limitations in this research, bilingual education still represents one important option for and education which is more responsive to the needs of students who speak a native language other than English. The findings presented in this thesis support the literature claiming that educating the whole child requires supporting and developing several components in the SLA process. Acculturating and socialization CLD students to the school environment teaches them about what to expect from U.S. systems and institutions. This validation is essential to maximize their motivation and ability to learn and function to their potential. Otherwise, the result may be linguistic and cultural alienation, low expectations, low academic achievement, high dropout rates, and societal failure.

REFERENCES

Ada, A. (1993). Mother-tongue, literacy as a bridge between home and school cultures: The power of two languages. New York: McGraw-Hill School Publishing.

Adler, P. (1975). The transitional experience: An alternative view of culture shock. Journal of Humanistic Psychology, 15, 13-23.

Alva, S., & Padilla, A. (1995). Academic invulnerability among Mexican Americans: A conceptual framework. The Journal of Educational Issues of Language Minority Students, 15, Boise, ID: Boise State University.

Anstrom, K. (1996). Federal policy, legislation, and education reform: The promise and the challenges for language minority students. Focus: Occasional papers in bilingual education, number 5. Washington, DC: National Clearinghouse for Bilingual Education.

Baecher, R., & Coletti, C. (1988). Two-way bilingual programs: Language-learning-as-resource. Paper presented at the Annual Meeting of the American Educational Research Association.

Baker, K., & DeKanter, A. (1983). Federal policy and the effectiveness of bilingual education (pp. 33-86). Lexington, MA: Lexington Books.

Berry, J. (1980). Acculturation as varieties of adaptation. In A. M. Padilla, Acculturation: Theory, models, and some new findings (pp. 9-27). American Association for the Advancement of Science Symposium Series 39. Boulder, CO: Westview Press.

California State Department of Education (1990). Beyond language: Social and cultural factors in schooling language minority students. Los Angeles: California State University Evaluation, Dissemination, and Assistance Center.

Cardenas, J. (1977). Response I. In N. Epstein, Language, ethnicity, and the schools (pp. 71-84). Washington, DC: The Institute for Educational Leadership.

Carmines, E., & Zeller, R., (1979). Reliability and validity assessment. Newbury Park, CA: Sage University Press.

Collier, C. (1994). Multicultural assessment: Paradigm & strategies. Paper presented to Portland Public Schools, Portland, OR.

Collier, C. (1985). A comparison of acculturation and education characteristics of referred and nonreferred culturally and linguistically different children. Dissertation Abstracts International, 46, 2993A.

Collier, C. (1988). Assessing minority students with learning and behavior problems. Lindale, TX: Hamilton Publications.

Collier, V. (1987). Age and rate of acquisition of second language for academic purposes. TESOL Quarterly, 21, 617-641.

Collier, V. (1992). A synthesis of studies examining long term language minority student data on academic achievement. Bilingual Research Journal, 16, 187-212.

Collier, V. (1995). Acquiring a second language for school: Directions in Language & Education, number 4. Washington, DC: National Clearinghouse for Bilingual Education.

Collier, V,. & Thomas, W. (1989). How quickly can immigrants become proficient in school English? Journal of Educational Issues of Language Minority Students, 5, 26-38.

Crawford, J. (1987). Bilingual education: Language, learning, & politics. A special report. Education Week, 23, special supplement, 19-50.

Cummins, J. (1980). The construct of language proficiency in bilingual education. In J. E. Alatis (Ed.), Current issues in bilingual education. Georgetown University Roundtable on Language and Linguistics. Washington, DC: Georgetown University Press.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education of Bilingual Bicultural Education, Schooling and language minority students: A theoretical framework (pp. 3-49). Los Angeles, CA: California State University.

Cummins, J. (1983). Heritage, language, education: A literature review. Toronto: Ministry of Education, Ontario. (ERIC Document Reproduction Services No. ED 233 588)

Cummins, J. (1986). Empowering minority students: A framework for intervention. Harvard Educational Review, 56 (1), 18-36.

Cummins, J. (1991). Interdependence of first- and second-language proficiency in bilingual children. In E. Bialystok (Ed.), Language processing in bilingual children (pp. 70-89). Cambridge: Cambridge University Press.

Curiel, H., Rosenthal, J., & Richek, H. (1986). Impacts of bilingual education on secondary school grades, attendance, retention's, and drop-out. Hispanic Journal of Behavioral Sciences, 8, 357-367.

Department of Education Comprehensive School Grant (1996). The global classroom: A Davis elementary bilingual education (DEBE) project. Portland, OR.

Delgado-Gaitan, C., & Trueba, H. (1992). Crossing cultural borders. New York: The Falmer Press.

Garcia, E. (1983). Bilingualism, biculturalism, and the educational system. Journal of Non-White Concerns in Personnel and Guidance, 11 (2), 67-74.

Genesee, F., Polich, E., & Stanley, M. (1977). An experimental French immersion program at the secondary school level- 1969 to 1974. The Canadian Modern Language Review, 33, 318-332.

Giroux, H., & Mclaren, P. (1986). Teacher education and the politics of engagement. The case for democratic schooling. Harvard Educational Review, 56 (3), 213-238.

Gonzalez, G., & Maez, L. (1995). Advances in research in bilingual education. In directions in language & education. Washington, DC: National Clearinghouse for Bilingual Education, 1(5).

Goodenough, W. (1957). Cultural anthropology and linguistics. In P. Garvin (Ed.), Report of the 7th annual meeting on linguistics and language study. Monograph Series on Language and Linguistics, Number 9 (pp. 167-173). Washington, DC: Georgetown University.

Griego-Jones, T. (1994). Assessing students' perceptions of biliteracy in two way bilingual classrooms. The Journal of Educational Issues of Language Minority Students, 13, 79-93.

Hakuta, K. (1986). Mirror of language: The debate on bilingualism. New York: Basic Books.

Hakuta, K. (1990). Bilingualism and bilingual education: A research perspective. Focus: Occasional papers in bilingual education, number 1. Washington, DC: National Clearinghouse for Bilingual Education.

Hakuta, K., & Gould, L. (1987). Synthesis of research on bilingual education. Educational leadership, 44 (6), 38-45.

Hammill, D. (1987). Assessing the abilities and instructional needs of students. Austin, TX: Pro-Ed.

Hatch, E., & Lazaraton, A., (1991). The research manual: Design and statistics for applied linguistics. New York: Newbury House.

Hernandez-Chavez, E. (1984). The inadequacy of English immersion education as an educational approach for language minority students in the Unites States. In Studies on immersion education: A collection for United States educators (pp. 144-183). Sacramento, CA: California Department of Education.

Hirschler, J. (1994). Preschool Children's help to second language learners. The Journal of Educational Issues of Language Minority Students, 14, 227-240.

Hoffman, C. (1991). An introduction to bilingualism. New York: Longman.

Husband, C., & Khan, V. (1982). The viability of ethnolinguistic vitality: Some creative doubts. Journal of Multilingual and Multicultural Development, 3 (3), 193-205.

Igoa, C. (1995). The inner world of the immigrant child. New York: St. Martin's Press.

Inn, K. (1983). Assessment of self-concept: Bilingual Asian-American children. In Chu-Chang, M. (Ed.), Asian and Pacific-American Perspectives in Bilingual Education: Comparative Research. New York: Teachers College Press.

Juffer, K. (1983). Initial development and validation of an instrument to access degree of culture shock adaptation. In R. J. Bransford (Ed.), Monograph Series, 4, 136-149. BUENO Center for Multicultural Education, Boulder, CO.

Kagen, S. & Garcia, E. (1991). Educating culturally and linguistically diverse preschoolers: Moving the agenda. Early Childhood Research Quarterly, 6, 427-443.

Krashen, S. (1991). Bilingual education: A focus on current research. Focus, occasional papers in bilingual education, number 3. Washington, DC: National Clearinghouse for Bilingual Education. (ERIC Document Reproduction Service No. ED 337 034)

Lambert, W. (1984). An overview of issues in immersion education. In California State Department of Education Office of Bilingual Bicultural Education, Studies on immersion education- A collection for United States educators (pp. 8-30). Sacramento, CA.

Lambert, W., & Tucker, G. (1972). Bilingual education of children. The St. Lambert experiment. Rowley, MA: Newbury House.

Lindholm, K. (1987). Directory of bilingual immersion programs: Two-way bilingual education for language minority and majority students. Los Angeles, CA: Center for Language Education and Research. (ERIC Document Reproduction Service No. ED 291 243)

Long, M. (1983). Does second language instruction make a difference? A review of research. TESOL Quarterly, 17 (3), 359-382.

Marin, G. & VanOss Marin, B. (1991). Research with Hispanic Populations. Newbury Park: Sage Publications.

McGroarty, M. (1993). Learning a living culture: Places for teachers to start. "BEOutreach" magazine of California State Department of Education Bilingual Education Office, 4 (1), 8-9. Sacramento, CA.

McKay, S. & Wong, S. (1988). Language diversity: Problem or resource? Cambridge, MA: Newbury House.

McLaughlin, B. (1985). Second language acquisition in childhood volume 2: School age children. Hillsdale, NJ: Lawrence Erlbaum Associates.

Meyer, T. (1992). Language, thought, and culture: Combining bilingual/multicultural education. Working Papers in Educational Linguistics, 8 (1), 45-55.

National Center for Educational Statistics (1989). Dropout rates in the U.S.. Washington, DC: U.S. Government Printing Office.

Nieto, S. (1988). Equity in education: The case for bilingual education. Interracial Books for Children Bulletin, 17 (3-4), 4-8.

Oakes, J. (1985). Keeping track: How schools structure inequality. New Haven: Yale University Press.

Ochs, E., & Shieffelin, B. (1982). Language acquisition and socialization: Three developmental stories and their implications. Austin, TX: Southwest Educational Development Laboratory. (ERIC Document Reproduction Service NO. ED 252 065)

Ogbu, J. (1993). Variability in minority school performance: A problem in search of an explanation. In E. Jacob & C. Jordan (Eds.), Minority education: Anthropological perspectives (pp. 83-111). Norwood, NJ: Ablex.

Oregon State Department of Education (1996). Technical bulletin Oregon statewide assessment. Salem, OR.

Paulston, C. (1980). Bilingual education. Theories and issues. Rowley, MA: Newbury House.

Philips, S. (1970). Acquisition of rules for appropriate speech usage. In J. E. Alatis (Ed.), Bilingual and language contact. 21st Annual Roundtable, Georgetown University.

Porter, R. (1991). Forked tongue: The politics of bilingual education. New York: Basic Books.

Portland Public Schools ESL/Bilingual Program (1993). Bilingual education models & approaches: Theory, frameworks and practice. Portland, OR.

Ramirez, J. (1985). Bilingualism through schooling: Cross-cultural education for minority and majority students. Albany: State University of New York Press.

Ramirez, J. (1991). Executive summary to the final report: Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children. San Mateo, CA: Aguirre International.

Reynolds School District #7 Report (1994). Spanish/English second-language acquisition program. 17200 S.E. Alder Street, Portland, OR.

Rossell, C. (1988). The problem with bilingual research: A critique of the Walsh & Carballo study of bilingual education projects. Equity in Excellence, 23 (4), 25-29.

Rossell, C., & Ross, J. (1986). The social science evidence on bilingual education. Journal of Law and Education, 15, 285-418.

Rotberg, I. (1984). Bilingual education policy in the United States. Prospects Quarterly Review of Education, 14 (1), 133-147.

Shorris, E. (1992). Latinos: A biography of the people. New York: W. W. Norton & Company.

Shulman, L. (1987). Knowledge and teaching: Foundations for the new reform. Harvard Educational Review, 57 (1), 1-22.

Socket, H. (1989). Research practice and professional aspiration within teaching. Journal of Curriculum Studies, 21 (2), 97-112.

Spencer, D. (1988). Transitional bilingual education and the socialization of immigrants. Harvard Educational Review, 58 (2), 133-153.

Steinberg, L., Blinde, S., & Chan, K. (1984). Dropping out among language minority youth. Review of Educational Research, 54 (1), 113-132.

Swain, M. (1978). French Immersion: Early, Late, or Partial? Canadian Modern Language Review, 34, 577-585.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), Input in second language acquisition (pp. 235-253). Cambridge, MA: Newbury House.

Szapocznik, J., & Kurtines, W. (1980). Acculturation, biculturalism, and adjustment among Cuban Americans. In A. Padilla (Ed.), Acculturation: Theory, models, and some new findings. American Association for the Advancement of Science Symposium Series, 39, (pp. 139-160). Boulder, CO: Westview Press.

Thomas, W., & Collier, V. (1995). Language minority student achievement and program effectiveness. In press.

Trueba, H. (1983). Adjustment problems of Mexican and Mexican-American students. An anthropological study. Learning Disabilities Quarterly, 6 (4), 393-415.

Trueba, H. (1987). Success or failure? Learning and the language minority student. New York: Newbury House.

Trueba, H. (1988). Instructional effectiveness: English-only for speakers of other languages? Education and Urban Society, 2 (4), 341-62.

Trueba, H. (1993). From failure to success: The roles of culture and cultural conflict in the academic achievement of Chicano students. In Chicano school failure and success: Research and policy agendas for the 1990's (pp. 274-304). Los Angeles: CA. (ERIC Document Reproduction Service No. ED 387 285)

Trueba, H. & Delgado-Gaitan, C. (1988). Minority achievement and parental support: Academic resocialization through mentoring. Santa Barbara, CA: Research Report from California University Graduate School of Education. (ERIC Document Reproduction Service No. ED 299 339)

U.S. Department of Health, Education, and Welfare (1994). Office of Education, U.S. Government Printing Office, Washington, DC.

Wiederholt, J., Hammill, D., & Brown, V. (1983). The resource teacher. Austin, TX: Pro-Ed.

Wong Fillmore, L. (1985). Second language learning in children: A proposed model. Arlington, VA: Proceedings of a Conference on Issues in English Language Development for Minority Language Education. (ERIC Document Reproduction Service No. ED 273 149)

Wong Fillmore, L. (1986). Research currents: Equity or excellence? Language Arts, 63 (5), 474-481.

Wong Fillmore, L. (1991). When learning a second language means losing the first. Early Childhood Research Quarterly, 6 (3), 323-47.

Yamamoto, K., & Brynes, D. (1984). Classroom social status, ethnicity, and ratings of stressful events. The Journal of Educational Research, 77 (5), 283-286.

APPENDIX A

SUBJECT/TEACHER CONSENT FORMS

May 23, 1996

Dear parent or guardian,

In partial fulfillment of my Masters of Arts degree in Applied Linguistics at Portland State University, I, Karen Kuhn, will be conducted research within your child's third grade classroom. The information I will need for my study includes looking at your child's school records, and looking at his or her assessment scores on the State of Oregon assessment in math and writing. During this study, I will also sit in your child's classroom for a few days and observe their classroom interaction and general classroom personality. I will never directly interact with your child during the study for any research purposes. I will never use your child's name, the name of the school he or she attends, or the names of their administrators in my research. Instead, all participants in the research will be given pseudonyms (false names) to protect their privacy.

The research project I am proposing will explore two different classroom models and the possible effects they have on non-native English speaking students. I would like to collect information on how students are progressing in their language(s) and cultural development. In sum, the goal of this research is to try to understand the strengths and weaknesses of different classrooms in Portland Metropolitan area schools.

If you have any questions regarding this research study, I would be happy to answer them! Please return the signed consent form in the self-addressed, stamped envelope.

Thank you very much for your child's help!

Karen Kuhn
(503) 245-8540

Informed consent form

I, _____, allow my child to take part in a research study that compares English-only third grade classes with two-way bilingual third grade classes.

I understand that the study involves a review of my student's school records. The information needed by the researcher includes: My child's first language, country of origin, time since arrival to US, time in present school, and whether my child qualified for free or reduced lunch status.

I understand the researcher needs to look at test scores my child received on the Oregon State Assessment in Math and Writing.

Additionally, I understand that the researcher will be observing the students in my child's third grade class for two weeks during May-June. There will be no personal contact between the investigator and my child for research purposes.

Finally, I understand that the researcher will meet with my child's teacher to discuss my child's progress and development at school.

I understand that there are minimal risks involved in my child's participation in this study. The teacher could use the information they learn to affect placement decisions of my child. A precaution against this risk involves the teacher signing a confidentiality agreement that the teacher can not use the information learned from this research to make any kind of evaluation of my child.

Also, there is a risk that parents may remove their children from school if they don't want their child involved in this research. However, the consent form guarantees that participation in the study can be voluntarily stopped at any time and without a problem.

Finally, there is a risk that if the research shows large differences in the two programs, that the weaker program may be found to be potentially harmful to the lives of the learners. However, if the difference in the two programs is found to be very large, the researcher will immediately notify the principal of the weaker program and discuss the research findings.

The purpose of this study is to learn about how my child is progressing in his or her language(s), and how my child's first language and culture are influenced by their class at school.

Neither I nor my child may receive any direct benefit from taking part in this study. But the study may help to increase knowledge that may help others in the future.

Karen Kuhn, the principal researcher, has offered to answer any questions I have about the study and what my child is expected to do.

She has promised that all information I give will be kept confidential to the extent permitted by law, and that the names of all people in the study will be kept confidential.

I understand that my child may withdraw from this study at any time without hurting or affecting our relationship with his or her school, Portland State University, or any other institution.

I have read and understand the above information and agree to take part in this study. The second signature is my child's consent.

Date: _____ Signature (Parent): _____

Date: _____ Signature (Student): _____

If you have concerns or questions about this study, please contact the Chair of the Human Subjects Research Review Committee, Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, 503/725-3417.

Querido padre o tutor:

Me gustaria presentarme, mi nombre es Karen Kuhn y soy estudiante de posgrado en la Universidad Estatal de Portland. Como uno de los requisitos necesarios para terminar mis estudios de linguistica me gustaria recolectar cierta informacion acerca del salon de clases de su hijo/a, quien cursa el tercer ano, durante las proximas tres semanas.

Para hacer esto necsitare de su autorizacion para que su hijo/a pueda participar en el proyecto. Los estudiantes participantes no necesitaran hacer nada fuera de lo normal durante este periodo. Yo hare todo el trabajo!

Para este estudio me gustaria ver los resultados obtenidos por los estudiantes de tercer ano en los examenes de matematicas y escritura del estado de Oregon realizados a principios de esta primavera. Tambien me gustaria recolectar informacion de los archivos de los estudiantes para saber un poco mas acerca de ellos. Por ejemplo, cual es su lengua materna? y donde nacieron? La ultima parte de mi estudio incluye una observacion de tres dias en el salon de clases de su hijo/a. Durante este tiempo solo observare el aprendizaje de los ninos y no tendre interaccion con los estudiantes en ningun momento.

Cuando llegue el momento de escribir mi reporte final usando esta informacion protegere la privacia de todos los estudiantes, de los administradores, y de las escuelas dando nombres falsos a todos los involucrados. Los nombres reales nunca seran utilizados en este proyecto!

La razon por la cual he escogido estudiar salones del tercer grado es para entender mejor las diferentes experiencias educacionales a las cuales son sujetos actualmente los estudiantes en las escuelas publicas de Portland. Para lograr esto necesito observar como los salones de clase afectan el lenguaje y desempeno escolar de los estudiantes de tercer grado. Espero que los resultados de esta investigacion ayude a hacer evidentes los puntos debiles y fuertes de los distintos modelos educacionales en el salon de clase, lo que potencialmente beneficiara a la educaion en un futuro.

Si tiene preguntas respecto a esta investigacion yo estare encantada de contestarlas. My telefono es el (503) 245-8540. Si esta usted de acuerdo en que su hijo/a participe en el estudio, por favor firme y envie manana de regreso a la escuela la forma de consentimiento que encontrara en la siguiente pagina.

Muchas gracias por permitir a su hijo/a ser parte de este interesante proyecto!

Karen Kuhn
(503) 245-8540

Forma de Consentimitento

Yo_____(padre o tutor) permitire a _____ ser parte de este proyecto de investigacion en que se compararan dos modelos del salon de clases del tercer ano.

Entiendo que la investigadora vera los archivos para determinar la lengua materna del estudiante, su pais de origen, tiempo que ha vivido en los Estados Unidos, periodo por el cual ha asistido a la escuela actual y si recibe almuerzo gratis o a costo reducido.

Estoy enterado de que la investigadora, Karen Kuhn, recolectara los resultados de los examenes del salon de clases de mi hijo/a, que observara su salon de clases por tres dias durante las proximas dos semanas, y que observara de cerca el progreso y desarrollo de los estudiantes durante el presente ano escolar.

Entiendo que no existen riesgos mayores en la participacion de mi hijo/a en este proyecto. Todos los maestros participantes firmaran un acuerdo con la investigadora en el que se comprometeran a no utilizar la informacion derivada de la investigacion para evaluar a los estudiantes de manera distinta a la que lo hacen ahora.

El proposito del estudio es aprender acerca del progreso y desarrollo de los estudiantes de tercer grado dentro de dos tipos de salones de clases que son muy distintos en cuanto a su medio ambiente. Ni mi hijo/a ni yo recibiremos beneficios directos por tomar parte en este estudio, sin embargo los resultados podran ayudar a otros en un futuro.

Karen Kuhn, la investigadora, contestara a todas mis preguntas acerca de este estudio y acerca de lo que se espera que mi hijo/a haga. Ella promete que toda la informacion sobre mi hijo/a sera utilizada solamente para los fines de la investigacion y sera utilizada esclusivamente por ella. Los nombres e identidades de todas las personas participantes en el proyecto seran guardados cofidencialmente.

Entiendo que mi hijo/a podra dejar de participar en la investigacion en cualquier momento sin que ello afecte su relacion con la escuela, la Universdad Estatal de Portland o cualquier otra institucion.

He leido y entendido toda esta informacion y estoy de acuerdo en permitir a mi hijo/a participar en este estudio. La segunda firma es el consentimiento de mi hijo/a.

Fecha_____ Firma(Padre o tutor)_____

Firma(Estudiante)_____

Si tiene cualquier tipo de pregunta acerca de este estudio, por favor comuniquese con the Chair of the Human Subjects Research Review Committee, Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, 503/725-3417.

Participating Teacher Confidentiality Agreement

I, _____, (teacher's full name) agree that none of the data gathered, or information received as a result of my collaboration on this research project on "The relative effects of two programmatic models on the sociocultural development of limited-English-proficient (LEP) students", will be used in any present or future assessment or placement decisions of participating student subjects.

Date: _____ Signature: _____(teacher)

If you have any concerns or questions about this study, please contact the Chair of the Human Subjects Review Committee, Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, 503/725-3417.

APPENDIX B

SOCIOCULTURAL CHECKLIST

Sociocultural Factors		Selected Indicators of Cultural Factors
Culture and Language	1.	Comes from non-English speaking home
	2.	Comes from a culture or ethnic group different from mainstream America
	3.	Culture values support of family/group over individual effort
	4.	Comes from non-English speaking geographic area
	5.	Culturally appropriate behaviors different from mainstream America
		Total
Acculturation Level	6.	Recent immigrant, refugee, migrant, or resides on reservation
	7.	Doesn't interact much with majority peers or majority cultural group
	8.	Displays confusion in locus of control
	9.	Displays heightened stress or anxiety in cross-cultural interactions
	10.	Oral expression contains considerable code-switching
	11.	Expresses or displays sense of isolation or alienation in cross-cultural interactions
		Total
Experiential Background	12.	High family mobility
	13.	Limited or sporadic school attendance
	14.	Low socioeconomic status
	15.	Little exposure to subject or content or not familiar with material
	16.	Disrupted early childhood development
	17.	Few readiness skills
	18.	Does not know how to behave in classroom
	19.	Different terms/concepts for subject areas or materials and content
	20.	Retains survival strategies which are no longer appropriate
		Total
Sociolinguistic Development	21.	Doesn't speak English
	22.	Limited CALP in native language
	23.	Limited BICS in English
	24.	Rarely speaks in class
	25.	Speaks only to cultural peers
	26.	Limited CALP in English
	27.	Asks peers for assistance in understanding
	28.	Appears to know English but can't follow English directions in class
		Total
Cognitive Learning Style	29.	Few cognitive learning strategies appropriate to classroom/school
	30.	Cognitive learning styles different or inappropriate in relation to teacher's instructional style
	31.	Easily frustrated or low perseverance in completing tasks
	32.	Retains survival strategies which are no longer appropriate
	33.	Displays difficulty with task analysis
	34.	Displays difficulty with cause and effect
		Total

APPENDIX C

ACCULTURATION QUICK SCREEN

CULTURAL/ENVIRONMENTAL FACTORS	Raw Scores	Scaled Scores
1. Number of months in the United States		
2. Number of months in School District		
3. Number of months in ESL/Bilingual Education		
4. Bilingual Proficiency		
5. Native Language Proficiency		
6. English Language Proficiency		
7. Ethnicity/Nation of Origin		
8. % of Minority in Present School		
AQS Score Total:	----------	

AQS SCALE SCORING GUIDELINES

# of YEARS IN U.S./DISTRICT		# of YEARS IN ESL/BILINGUAL PROGRAM	
Under one year	= .5	Up to one year in directed instruction	= .5
One to two years	= 1	Between one and one and a half years	= 1
Two to four years	= 2	Between one and a half and two years	= 2
Four to five years	= 3	Between two and two and a half years	= 3
Five to six years	= 4	Between two and a half and four years	= 4
Over six years	= 5	Over four years	= 5

BILINGUAL PROFICIENCY		LANGUAGE PROFICIENCY	
Monolingual	= 1	Does not speak the language	= 1
Primarily L1, some BICS in L2	= 2	Has receptive comprehension	= 2
CALP in L1, BICS in L2	= 3	Limited fluency or BICS only	= 3
CALP in L1, some CALP in L2	= 4	Intermediate fluency in BICS/ some CALP	= 4
Bilingual BICS and CALP	= 5	Total fluency in BICS and CALP	= 5

ETHNICITY/NATIONAL ORIGIN		% MINORITY ENROLLMENT IN SCHOOL	
American Indian/Alaska Native	= .5	81%-100% of enrollment	= .5
Hispanic/Latino/Chicano	= 1	65%- 80% of enrollment	= 1
African/East Asian/Pacific Islander	= 2	45%- 64% of enrollment	= 2
West Asian/Middle Eastern	= 3	25%- 44% of enrollment	= 3
Eastern European	= 4	11%-24% of enrollment	= 4
Western European	= 5	0%- 10% of enrollment	= 5

APPENDIX D

SOCIOCULTURAL CHECKLIST SAMPLE GUIDELINES FOR RELIABLE SCORING

1) Ex: Rarely speaks in class?

Student 1/School B: -volunteers, even with the wrong answers, but likes to raise his hand
Answer: No

Student 1/School T: -Often speaks. Loves to speak, even if he has no clue. Likes to talk and be part of the discussion
Answer: No

2) Ex: Few readiness skills?

Student 2/School B: -First school experience. Isn't aware teacher is in classroom. Can only handle basic tasks such as cutting, pasting, etc.
Answer: Yes

3) Ex: Little exposure to subject or content or not familiar with material?

Student 2/School T: -Doesn't understand in L1 or L2. Lost in content, doesn't understand a lot.
Answer: Yes

Student 3/School T: -Does as well as English-speaking kids on content areas. Great math student.
Answer: No

4) Ex: Limited or Sporadic school attendance?

Student 4/School T: -Poor attendance. Misses more than anyone else in the class. Sporadic. Misses once every two weeks or twice every two weeks.
Answer: Yes

Student 4/School B: -Zero absences
Answer: No

APPENDIX E

ACCULTURATION QUICK SCREEN RAW DATA

1. Time in United States (in months, approximately)

	Dual	Solo
olive/ralph	40+ months	40+ months
gillette/sandy	40+ months	100+ months
godly/kelly	40+ months	30+ months
jerry/warren	21+ months	40+ months
tony/agua	20+ months	40+ months
frank/rover	100+ months	16+ months
mary/henry	50+ months	20+ months
sprout/bird	10+ months	100+ months
grouchy/chilly	2+ months	10+ months

2. Time in School District (in months, approximately)

	Dual	Solo
olive/ralph	40+ months	40+ months
gillette/sandy	40+ months	40+ months
godly/kelly	40+ months	30+ months
jerry/warren	19+ months	30+ months
tony/agua	20+ months	40+ months
frank/rover	16+ months	16+ months
mary/henry	50+ months	20+ months
sprout/bird	10+ months	10+ months
grouchy/chilly	2+ months	4+ months

3. Time in ESL/Bilingual education (in months)

	Dual (Bilingual Education)	Solo (ESL)
olive/ralph	40	40
gillette/sandy	30	40
godly/kelly	14	30
jerry/warren	19	30
tony/agua	20	40
frank/rover	10	16
mary/henry	10	20
sprout/bird	10	10
grouchy/chilly	2	4

4. Bilingual proficiency

	Dual Scale of 1->5	Solo Scale of 1->5
olive/ralph	0	0
gillette/sandy	0	0
godly/kelly	0	0
jerry/warren	0	0
tony/agua	0	0
frank/rover	0	0
mary/henry	0	0
sprout/bird	0	0
grouchy/chilly	0	0

5. Native language proficiency

	Dual Scale of 1->5	Solo Scale of 1->5
olive/ralph	0	0
gillette/sandy	0	0
godly/kelly	0	0
jerry/warren	0	0
tony/agua	0	0
frank/rover	0	0
mary/henry	0	0
sprout/bird	0	0
grouchy/chilly	0	0

6. English Language Proficiency

	Dual Scale of 1 -> 5	Solo Scale of 1 -> 5
olive/ralph	Fluency in BICS and CALP (4.75)	Intermediate fluency in BICS and some CALP (4.5)
gillette/sandy	Limited fluency or BICS only (3.5)	Intermediate fluency in BICS and some CALP (4.5)
godly/kelly	Intermediate fluency in BICS and some CALP (4)	Intermediate fluency in BICS and some CALP (4)
jerry/warren	Limited fluency or BICS only (3.5)	Intermediate fluency in BICS and some CALP (4.5)
tony/agua	Limited fluency or BICS only (3)	Intermediate fluency in BICS and some CALP (4.5)
frank/rover	Limited fluency or BICS only (3.5)	Limited fluency or BICS only (3.5)
mary/henry	Limited fluency or BICS only (3.5)	Has receptive comprehension (2)
sprout/bird	Has receptive comprehension (2)	Has receptive comprehension (2.25)
grouchy/chilly	Does not speak the language (1)	Has receptive comprehension (2.5)

7. Ethnicity/Nation of origin

	Dual Scale of .5 -> 5	Solo Scale of .5 -> 5
olive/ralph	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
gillette/sandy	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
godly/kelly	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
jerry/warren	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
tony/agua	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
frank/rover	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
mary/henry	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
sprout/bird	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)
grouchy/chilly	Hispanic/Latino/Chicano (1)	Hispanic/Latino/Chicano (1)

8. % of Minority in Present School

	Dual (31%) Scale of .5 -> 5	Solo (26%) Scale of .5 -> 5
olive/ralph	25%-44% of enrollment (3)	25%-44% of enrollment (3)
gillette/sandy	25%-44% of enrollment (3)	25%-44% of enrollment (3)
godly/kelly	25%-44% of enrollment (3)	25%-44% of enrollment (3)
jerry/warren	25%-44% of enrollment (3)	25%-44% of enrollment (3)
tony/agua	25%-44% of enrollment (3)	25%-44% of enrollment (3)
frank/rover	25%-44% of enrollment (3)	25%-44% of enrollment (3)
mary/henry	25%-44% of enrollment (3)	25%-44% of enrollment (3)
sprout/bird	25%-44% of enrollment (3)	25%-44% of enrollment (3)
grouchy/chilly	25%-44% of enrollment (3)	25%-44% of enrollment (3)

APPENDIX F

SOCIOCULTURAL CHECKLIST RAW DATA

CULTURE AND LANGUAGE RESPONSES BY SUBJECT (2=YES, 1=NO)

Name	Program	1. Comes from a non-English speaking home	2. Comes from a culture or ethnic group different from mainstream America	3. Culture values support of family/group over individual effort	4. Comes from non-English speaking geographic area	5. Culturally appropriate behaviors different from mainstream America
Olive	D	2	2	2	2	2
Gillette	D	2	2	2	2	2
Godly	D	2	2	2	2	2
Jerry	D	2	2	2	2	2
Tony	D	2	2	2	2	2
Frank	D	2	2	2	1	2
Mary	D	2	2	2	2	2
Sprout	D	2	2	2	2	2
Grouchy	D	2	2	2	2	2
Ralph	S	2	2	2	2	2
Sandy	S	2	2	2	1	2
Kelly	S	2	2	2	2	2
Warren	S	2	2	2	2	2
Agua	S	2	2	2	2	2
Rover	S	2	2	2	2	2
Henry	S	2	2	2	2	2
Bird	S	2	2	2	1	2
Chilly	S	2	2	2	2	2

ACCULTURATION LEVEL RESPONSES BY SUBJECT (2=YES, 1=NO)

Name	Program	6. recent immigrant, refugee, or migrant	7. doesn't interact much with majority peers or majority cultural group	8. displays confusion in locus of control	9. displays heightened stress or anxiety in cross-cultural interactions	10. oral expression contains considerable code-switching	11. expresses or displays sense of isolation or alienation in cross-cultural interactions
Olive	D	1	1	1	1	1	1
Gillette	D	1	1	1	1	1	1
Godly	D	1	1	1	1	2	1
Jerry	D	2	1	2	1	2	1
Tony	D	1	1	1	1	2	2
Frank	D	2	1	2	1	2	1
Mary	D	2	1	1	1	1	1
Sprout	D	2	1	2	1	2	1
Grouchy	D	2	2	2	2	1	2
Ralph	S	1	1	1	1	1	1
Sandy	S	1	1	1	1	1	1
Kelly	S	1	1	1	1	1	1
Warren	S	1	1	1	1	1	1
Agua	S	1	1	1	1	1	1
Rover	S	1	2	2	2	1	2
Henry	S	1	1	2	1	1	1
Bird	S	2	2	2	2	1	2
Chilly	S	2	2	2	2	2	2

EXPERIENTIAL BACKGROUND RESPONSES BY SUBJECT (2=YES, 1=NO)

Name	Program	12. high family mobility	13. limited or sporadic school attendance	14. low socio-economic status	15. little exposure to subject or content or not familiar with material	16. disrupted early childhood development	17. few readiness skills	18. does not now how to behave in class room	19. different terms/concepts for subject areas or materials and content	20. retains survival strategies which are no longer appropriate
Olive	D	1	1	2	1	0	1	1	1	1
Gillette	D	1	1	2	1	0	1	1	2	1
Godly	D	2	1	2	1	0	1	1	2	1
Jerry	D	2	2	2	1	0	1	1	2	1
Tony	D	1	1	2	1	0	1	1	2	1
Frank	D	2	2	2	1	0	1	1	2	1
Mary	D	1	1	2	1	0	1	1	2	1
Sprout	D	2	1	2	2	0	2	2	2	2
Grouchy	D	2	1	2	2	0	2	2	2	2
Ralph	S	1	1	2	1	0	1	1	2	1
Sandy	S	1	1	2	1	0	1	1	2	1
Kelly	S	1	1	2	1	0	1	1	2	1
Warren	S	1	1	2	1	0	1	1	2	1
Agua	S	1	1	2	1	0	1	1	2	1
Rover	S	1	1	2	2	0	1	2	2	2
Henry	S	1	1	2	2	0	1	1	2	1
Bird	S	2	2	2	2	0	1	1	2	1
Chilly	S	2	1	2	1	0	1	1	2	1

SOCIOLINGUISTIC DEVELOPMENT RESPONSES BY SUBJECT (2=YES, 1=NO)

Name	Program	21. doesn't speak English	22. limited CALP in native language	23. limited BICS in English	24. rarely speaks in class	25. speaks only to cultural peers	26. limited CALP in English	27. asks peers for assistance in understanding	28. appears to know English but can't follow English directions in class
Olive	D	1	0	1	1	1	1	2	1
Gillette	D	1	0	1	2	1	2	2	1
Godly	D	1	0	1	1	1	1	2	1
Jerry	D	1	0	1	2	1	2	2	1
Tony	D	1	0	1	2	1	2	2	1
Frank	D	1	0	1	2	1	2	2	1
Mary	D	1	0	1	1	1	2	2	1
Sprout	D	1	0	2	1	1	2	2	1
Grouchy	D	2	0	2	2	2	2	1	1
Ralph	S	1	0	1	1	1	2	2	2
Sandy	S	1	0	1	2	1	2	2	1
Kelly	S	1	0	1	1	1	2	2	1
Warren	S	1	0	1	2	1	2	2	1
Agua	S	1	0	2	2	1	2	2	1
Rover	S	1	0	2	2	2	2	2	2
Henry	S	1	0	2	1	1	2	2	2
Bird	S	1	0	2	2	2	2	2	1
Chilly	S	1	0	2	2	2	2	2	1

COGNITIVE LEARNING STYLE RESPONSES BY SUBJECT (2=YES, 1=NO)

Name	Program	29. few cognitive learning strategies appropriate to classroom/school	30. cognitive learning styles different or inappropriate in relation to teachers instructional style	31. easily frustrated or low perseverance in completing tasks	32. retains survival strategies which are no longer appropriate	33. displays difficulty with task analysis	34. displays difficulty with cause and effect
Olive	D	0	0	1	1	0	0
Gillette	D	0	0	2	1	0	0
Godly	D	0	0	1	1	0	0
Jerry	D	0	0	2	1	0	0
Tony	D	0	0	2	1	0	0
Frank	D	0	0	2	1	0	0
Mary	D	0	0	1	1	0	0
Sprout	D	0	0	1	2	0	0
Grouchy	D	0	0	2	2	0	0
Ralph	S	0	0	1	1	0	0
Sandy	S	0	0	1	1	0	0
Kelly	S	0	0	2	1	0	0
Warren	S	0	0	1	1	0	0
Agua	S	0	0	1	1	0	0
Rover	S	0	0	2	1	0	0
Henry	S	0	0	2	1	0	0
Bird	S	0	0	1	1	0	0
Chilly	S	0	0	1	1	0	0

APPENDIX G

SOCIOCULTURAL CHECKLIST RAW CATEGORY DATA

Name	Program	Culture and Language (5) X1	Acculturation Level (6) X2	Experiential Background (8) X3	Sociolinguistic Development (7) X4	Cognitive Learning Style (2) X5
Olive	D	2.0	1.0	1.00000000	1.16666667	1.0
Gillette	D	2.0	1.0	1.14285714	1.50000000	1.5
Godly	D	2.0	1.2	1.28571429	1.16666667	1.0
Jerry	D	2.0	1.4	1.42857143	1.50000000	1.5
Tony	D	2.0	1.4	1.14285714	1.50000000	1.5
Frank	D	0.9	1.4	1.42857143	1.50000000	1.5
Mary	D	2.0	1.0	1.14285714	1.33333333	1.0
Sprout	D	2.0	1.4	1.85714286	1.50000000	1.5
Grouchy	D	2.0	1.8	1.85714286	1.66666667	2.0
Ralph	S	2.0	1.0	1.14285714	1.50000000	1.0
Sandy	S	0.9	1.2	1.14285714	1.50000000	1.0
Kelly	S	2.0	1.0	1.14285714	1.33333333	1.5
Warren	S	2.0	1.0	1.14285714	1.50000000	1.0
Agua	S	2.0	1.0	1.14285714	1.50000000	1.0
Rover	S	2.0	1.8	1.57142857	2.00000000	1.5
Henry	S	2.0	1.2	1.28571429	1.66666667	1.5
Bird	S	0.9	1.8	1.57142857	1.83333333	1.0
Chilly	S	2.0	2.0	1.28571429	1.83333333	1.0

APPENDIX H

OREGON STATEWIDE ASSESSMENT SCORES

Mean Writing Scores

	Dual	Solo
olive/ralph	25.5	14
gillette/sandy	19	17.5
godly/kelly	19	15.5
jerry/warren	17	21
tony/agua	12.5	17.5
frank/rover	14	9.5
mary/henry	21.5	15
sprout/bird	14.5	9
grouchy/chilly	0	0

Mean Mathematics Scores

	Dual-directions in Spanish Scaled score	Solo- test in English Scaled score
olive/ralph	205	195
gillette/sandy	190	199
godly/kelly	200	183
jerry/warren	185	201
tony/agua	188	188
frank/rover	187	185
mary/henry	183	186
sprout/bird	180	189
grouchy/chilly	0	0

State standard in third grade is 206
State average in third grade is 201