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ABSTRACT

The Significant Bilingual Instructional Features (SBIF) study identified, described, and verified features of bilingual instruction of a wide variety of limited English proficient (LEP) students. This report describes a two-year substudy tracing the experience of 85 LEP students from five nationally distributed sites representing varied ethnolinguistic groups (Mexican, Puerto Rican, Cuban, Chinese, and Navajo). The study examined two broad aspects of the students' experience: (1) the classroom context and instructional processes as they related to student performance, and (2) variation in the students' engagement and/or participation with the characteristics of the classrooms to which they were assigned. Data are analyzed here for the overall group and for each site, and results are compared for four student subgroups divided according to the amount of native language use in basic skills instruction. (MSE)

SIGNIFICANT BILINGUAL INSTRUCTIONAL FEATURES STUDY

STABILITY OF INSTRUCTIONAL SYSTEM AND PROCESS FOR A SAMPLE OF EIGHTY-FIVE STUDENTS IN THE SBIF STUDY

by

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and
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ABSTRACT

This study examined the experiences of a sample of limited English proficient (LEP) students over a two-year period. Eighty-five target students from five nationally distributed sites in Part I of the Significant Bilingual Instructional Features (SBIF) descriptive study were identified and followed into their classes in the second year of the study. To estimate the stability of classroom context, instructional process, and student performance, various types of observational data were collected in both years.

Two questions guided the resesearch: (1) What were the educational experiences of the target students in the two years? What were their classrooms like in terms of classroom context and instructional process variables? (2) Did students' engagement and/or participation vary with the characteristics of the particular classrooms to which they were assigned?

Data were analyzed from two perspectives. First, frequency distributions were calculated and examined for the overall sample and at the site level. Next, students were divided into four groups on the basis of the proportion of the students' native language (L1) used by teachers in basic skills instruction: (1) relatively high proportion in both years; (2) high in the first year, but low in the second; (3) low in the first year, but high in the second; and (4) low in both years. The first group, which represented exposure to a relatively consistent use of L1, and the second group, which represented a reduced use of L1 across years, were examined in detail.

In the first analysis, classroom context variables appeared to be relatively stable across Parts I and II. The proportion of time allocated to reading either remained the same or increased; it accounted for more than half of the school day at all sites. Time for math stayed about the same, between 15 and 20 percent. The proportion of time for whole group instruction seemed also to be stable, although at the Navajo (4) and Chinese (5) sites, the overall time was relatively less.

Instructional process variables were less stable. The proportion of basic skills time allocated to L1, for example, showed a decline at all but one site. Since regular classrooms and ESL teachers were added to the sample in the second year, this was to be expected. The functions of language changes showed a trend toward instruction and away from directions or behavioral feedback. Despite the drop in L1 use, Active Teaching ratings showed a general increase.

Student performance variables appeared to be stable. Both percent time engaged and percent time high accuracy either remained about the same or went up. The proportion of students classified by

participation types changed somewhat. The proportion of Types I, III, and IV increased, while II, V, and VI declined.

In the second analysis, comparisons were made between the experiences of students who had exposure to consistently high L1 use and those whose Part II teachers used considerably less. Grade level and oral English proficiency were also included as variables. For most students, classroom context variables appeared to be unrelated to the teachers' use of L1. For kindergarten and first grade students with low oral English proficiency, however, there was a concomitant reduction in the proportion of time allocated to reading, math, and whole group instruction, with a reduction of L1 use.

Instructional process variables showed a relatively stable pattern for all students, with one exception. For first grade students, the average frequency of language changes increased or decreased along with the proportion of L1 use.

Finally, the low OEP first grade students assigned to classes with less L1 use were also the only group to show a reduction in the proportion of time engaged. Percent time high accuracy, on the other hand, remained relatively constant, regardless of L1 use.

In Chapter Five, the fourth and fifth bilingual instructional features identified in Part I were considered, i.e., teachers' integration of English language development in basic skills instruction, and the use of cultural information. These, too, appear to have shown some stability across the two years of the study.

PREFACE

In October of 1980, the National Institute of Education (NIE) provided funding for the Far West Laboratory for Educational Research and Development (FWLERD) to form, in conjunction with eight other nationally prominent educational institutions and agencies, a consortium for the descriptive study of Significant Bilingual Instructional Features (SBIF). This is a three-year, multifaceted study of significant bilingual instructional practices and elements in bilingual instructional settings, and as such, it is part of the proposed work scope of the Part C Coordinating Committee on Bilingual Education Research (U.S. Department of Education). The intent is to provide important information that will increase understanding of bilingual instruction, and subsequently increase opportunities for students with limited or no proficiency in English to participate fully and successfully in the educational process.

The study was designed in two parts. Part I identified and described those features of bilingual instruction considered to be significant in terms of their consequences for limited English proficient (LEP) students. In Part II, these findings were verified in four major studies.

Part I of the study took place during the 1980-81 school year, and Part II occurred in 1981-82. Data analysis for Part I was accomplished by October of 1981. Part II data are undergoing analysis, and reporting will be completed by September of 1983, at which time the project terminates.

Overall Strategy of the Study

The SBIF descriptive study is one of several research activities guided by the Part C Research Agenda for Bilingual Education, in direct response to a Congressional mandate issued in 1978. In search of data to inform its consideration for renewal of support for bilingual education, Congress directed the Secretary of Education to "develop a national research program for bilingual education." In turn, the directors of the Office of Bilingual Education and Minority Language Affairs (OBEMLA) and the National Institute of Education (NIE) were instructed to coordinate a program of research to respond to Congress' questions.

Results from this study, along with those from other specially commissioned studies, are expected to provide Congress with information regarding instructional features that provide successful access to learning for LEP students, as well as the long-range consequences of these features. Furthermore, along with results from other studies conducted under the aegis of the Part C Research Agenda, findings

from the SBIF study are expected to inform practice, thus resulting in their inclusion in instructional programs for LEP students.

Consortium Formed to Conduct the Study

The study was conducted by a consortium of nine educational institutions and agencies, collaborating with school districts that serve ethnolinguistically diverse student populations. Consortium members, participating school districts, and targeted ethnolinguistic populations included in both parts of the study were:

- ARC Associates, Inc., in collaboration with the Oakland and San Francisco school districts, California, focusing on students whose home language is one of the Chinese languages--Sau-Lim Tsang, principal investigator.

- Far West Laboratory for Educational Research and Development, in collaboration with the San Francisco Unified School District, California, focusing on multilingual classrooms with students representing many home languages--Joaquin Armendariz, principal investigator.

- Florida State University, in collaboration with the Dade County Public Schools in Miami, Florida, focusing on Cuban and Cuban-American students whose home language is Spanish--Roger Kaufman, principal investigator.

- Hunter College of the City University of New York, in collaboration with Community School District 4, New York City, focusing on Puerto Rican students whose home language is Spanish--Jose A. Vazquez-Faria, principal investigator.

- Navajo Nation Division of Education in collaboration with schools serving the Navajo Nation in northeastern Arizona--Gail Goodman, principal investigator.

- Southwest Educational Development Laboratory, in collaboration with El Paso Public Schools, El Paso, Texas, focusing on Mexican and Mexican-American students whose home language is Spanish--Domingo Dominguez, principal investigator.

Consortium members and school districts participating in Part II only of the study were:

- CEMREL, Inc., in collaboration with the Chicago Public Schools, Illinois, focusing on classrooms in which the home language of many students is Spanish--Harriet Doss-Willis, principal investigator.

- Northwest Regional Education Laboratory, in collaboration with the Salem, Oregon, public schools, focusing

on students whose home language is either Vietnamese or Spanish--Alfredo Aragon, principal investigator.

- University of Hawaii, in collaboration with the Hawaii Department of Education, focusing on Filipino students whose home language is Ilokano--Morris Lai, principal investigator.

Description of the Study

As stated earlier, the study was designed in two phases. Part I identified and described features of bilingual instruction considered to be significant in terms of their consequences for students of limited English proficiency. This part of the study involved 232 target students in 58 classrooms at six nationally representative sites. Part II of the study focused on verification of the features and consequences identified during Part I. This second phase of the study included 356 target students in 89 classrooms at eight sites. Both parts of the study are described below.

Part I of the Study

Although it was not required by the RFP, schools and classrooms identified as successful bilingual instructional settings served as the focus of the study. In its proposal, the consortium argued that significant bilingual instructional features are more likely to be found in such settings. Thus, the 58 classrooms in the Part I sample were nominated by constituents at their respective sites to be among the most successful bilingual instructional settings in the participating school districts.

In its first year, the study addressed research questions related to six sets of research constructs. These appear in Table i, along with questions addressed and data sources tapped for information.

While the majority of data sources for the study were contained within the classrooms, two additional sources of information were also considered important. Both were located outside the immediate vicinity of the classroom, although they impinge upon and influence both instructional activites and their eventual impact or consequences for students of limited English proficiency. These are (a) what constituents of bilingual education--e.g., parents, teachers, students, administrators--consider indicators of success in bilingual instruction and what these mean for LEPs; and (b) what constitutes the macro-level context variables that further define and describe the school, district, and community in which the bilingual instructioral settings in the study are located.

Table i

Constructs, Research Questions, and Data Sources for Part I of the Study

CONSTRUCTS	RESEARCH QUESTIONS	DATA SOURCES
Indicators of successful bilingual instructional settings	What features/criteria do various experts among bilingual education constituent groups use in determining that a bilingual instructional setting (school and classroom) is successful? Constituent groups are: bilingual education program directors, principals, teachers, parents, etc. Are success indicators similar or different based on client groups, ethnolinguistic composition of LEPs population, site, level of eductaion (elementary school, junior high school, senior high school), and school classroom?	Open ended interviews with representatives of various client groups at each of six proposed Part I sites. Bilingual education classroom evidencing success criteria
Macro-level context data	What is the school, community, bilingual education program, and family context within which each of the sample classrooms is nested? What, if any, similarities/differences in the macro-level context exist across sites and classrooms?	Open-ended interviews with school principals, parents, others, at the classroom site. Review of available documents and program plans. Informal observations in community. Project director and data collector knowledge of community
Organizational structure of the classroom	(For each activity structure dimension) what forms are utilized in classrooms in bilingual schooling settings? Do differences on one dimension, e.g., language of instruction, interact with/appear to be related to differences in other dimensions, e.g., student choice?	Narrative descriptions based on in-class observations. General descriptive data obtained during in-class observation.
Allocation of Time	How is time allocated in exemplary bilingual schooling settings by content area, language of instruction, student language characteristics, resources, and category of teaching-learning activity? Does allocation of time differ according to configuration of macro-context levels?	In-class observations using stopwatch and coding sheet.
Teacher Variables	Which, if any, active teaching behaviors do teachers in successful bilingual schooling settings use when teaching reading and math?	Active teaching observation instruments.
	What expectations do teachers in bilingual settings have for LEPs and students who speak the majority language? What, if any, similarities/differences in expectations occur across teachers based on teacher's mother tongue, years of teaching in a bilingual education program, professional development related to instruction of LEPs? What sense of efficacy is expressed by teachers? Does efficacy appear to be related to teacher's mother tongue, etc.? (see above) In teacher's opinion, what is intent of instruction? Is intent similar/different depending upon student language, age, subject area?	Curriculum interviews.
	What patterns of interaction, in general, occur between teachers and students in bilingual schooling settings? What work activity and institutional demands are imposed by teachers in the classroom? Are these related to student's ethnolinguistic background, teacher's intent, sense of efficacy, expectations for students? What relationships exist, if any between teacher intent and what the teacher does during instruction?	Narrative description of teacher behavior.
Student Variables	What is the language proficiency in L1 and L2 of the LEPs in each classroom, based on teacher ratings and other data sources?	Teacher ratings of language proficiency; other already available proficiency data.
	What is the Academic Learning Time of LEPs in bilingual instructional settings, by classroom, site, and across sites?	Academic Learning Time data. Descriptive narratives of student participation in the classroom.
	What social cognitive understandings do LEPs express regarding instructional demands, teacher authority, distributive justice in application of classroom resources and specific work activity demands?	Social cognitive understanding interviews.
	How do LEPs participate in classroom instructional activities? Is one style of participation more productive for some students than others? What, if any, relationships exist between the LEPs' proficiency, ALT, participation style(s), and/or social cognitive understandings?	Narrative description of student behavior in the classroom. Participation style analysis.

From January through June of the 1980-81 school year, classroom data for Part I of the study were collected. There were two levels of data collection activites. The first (Level 1) involved the collection of several kinds of data from the sample classrooms at each of the consortium sites. At the second (Level 2), one or two classrooms were studied intensively at each site in order to produce an ecological case study for each.

Level 1 data collection. For the 58 classrooms of the study sample, four sets of constructs were included in the Level 1 data collection. These were: (a) organizational structure of the classroom in terms of language of instruction, content (subject), work group size and composition, degree and nature of cooperation/collaboration among students, student choice options, nature and mode of teacher's evaluation of student work, and interdependency of these factors for work completion; (b) allocation of time by content, by language of instruction (L1 or L2) and by who is instructing (teacher or other adult), to use of instructional materials in L1 and L2, to LEP students and to others, and among different instructional activities; (c) teacher variables in terms of active teaching, teachers' expectations and sense of efficacy; and (d) student variables in terms of language proficiency, participation in classroom learning activities, academic achievement with emphasis on academic learning time for reading/language arts and mathematics instruction, and social cognitive understanding of students.

Level 2 data collection. The second level of the Part I study resulted in nine intensive, ecological case studies of bilingual instruction. These case studies were designed to obtain richer, more detailed information for nine of the classrooms included in the first level of data collection for Part I. The nine classrooms included two kindergarten classes, one first grade class, one combination grades one-two class, one second grade class, one combination grades two-three class, one combination grades three-four-five class, and two fifth grade classes.

Data were collected in the following sequence: (a) a teacher interview was conducted to determine instructional goals and how the classroom operates as an instructional-social system, as well as to describe a student who functions successfully in this system; (b) then, for each of three or four instructional events, (1) an interview was conducted with the teacher to determine the intent of instruction for that event; (2) observation of instruction followed, focusing concurrently on the teacher and on the four target students; (3) a debriefing interview was conducted with the teacher, to learn if instruction had proceeded as intended and if, in his/her opinion, target students had "learned" what was intended; and (4) debriefing interviews were conducted with target students to determine what they believed they were being asked to do, if they felt they had been successful at completing tasks and how they knew this, and their social cognitive understandings of how the classroom instructional-social system operates.

Table ii provides a list of documents and reports emerging from Part I of the SBIF study.

Table ii

Research Documents and Reports for SBIF Study: Part I

Document/Report Number	Title
SBIF-80-D.1	Description of the Study
SBIF-80-D.2	Research Design: Part I of the SBIF Study
SBIF-80-D.1.1	Overview of the SBIF Study
SBIF-81-D.1.1	Review of the Literature for a Descriptive Study of Significant Bilingual Instructional Features
SBIF-81-D.3	Sample Description and Data Gathering Schedules: Part I of the SBIF Study
SBIF-81-R.4	Preliminary Analysis of Part I of the SBIF Study
SBIF-81-D.6	Criteria to Select Instructional Features and Consequences for Limited English Language Proficient Students for Part II of the SBIF Study
SBIF-81-D.7	Research Design: Part II of the SBIF Study
SBIF-81-D.7.1	Accommodation of the Seminar of Scholars' Recommendations for the Part II Research Design
SBIF-81-R.7	Executive Summary of Part I of the SBIF Study
SBIF-81-R.6-I	Volume I: Introduction and Overview of Part I of the Study
SBIF-81-R.5/ R.6-II	Volume II: Success Indicators and Consequences for Limited English Language Proficient Students in the SBIF Study
SBIF-81-R.2/ R.6-III.1	Volume III.1: Bilingual Instructional Perspectives: Organization of Bilingual Instruction in the Classrooms of the SBIF Study
SBIF-81-R.3/ R.6-III.2	Volume III.2: Bilingual Instructional Perspectives: Allocation of Time in the Classrooms of the SBIF Study

Table ii (continued)

Research Documents and Reports for SBIF Study: Part I

Document/Report Number	Title
SBIF-81-R.6-IV	Volume IV: Teaching in Successful Bilingual Instructional Settings
SBIF-81-R.6-V	Volume V: Consequences for Students in Successful Bilingual Instructional Settings
SBIF-81-R.6-I-A.1	Appendix A.1: Macro-level Context Report: Site 01
SBIF-81-R.6-I-A.2	Appendix A.2: Macro-level Context Report: Site 02
SBIF-81-R.6-I-A.3	Appendix A.3: Macro-level Context Report: Site 03
SBIF-81-R.6-I-A.4	Appendix A.4: Macro-level Context Report: Site 04
SBIF-81-R.6-I-A.5	Appendix A.5: Macro-level Context Report: Site 05
SBIF-81-R.6-I-A.6	Appendix A.6: Macro-level Context Report: Site 06
SBIF-81-R.5/R.6-VI-B.1	Appendix B.1: An Ecological Case Study of Bilingual Instruction (English/Spanish) in Kindergarten: Site 01
SBIF-81-R.5/R.6-VI-B.2	Appendix B.2: An Ecological Case Study of Bilingual Instruction (English/Spanish) in Combined Grades 1 & 2: Site 01
SBIF-81-R.5/R.6-VI-B.3	Appendix B.3: An Ecological Case Study of Bilingual Instruction (English/Spanish) in Combined Grades 2 & 3: Site 02
SBIF-81-R.5/R.6-VI-B.4	Appendix B.4: An Ecological Case Study of Bilingual Instruction (English/Spanish) Grade 2: Site 03
SBIF-81-R.5/R.6-VI-B.5	Appendix B.5: An Ecological Case Study of Bilingual Instruction (English/Navajo) in Grade 1: Site 04
SBIF-81-R.5/R.6-VI-B.6	Appendix B.6: An Ecological Case Study of Bilingual Instruction (English/Cantonese) in Grade 5: Site 05

Table ii (continued)

Research Documents and Reports for SBIF Study: Part I

Document/Report Number	Title
SBIF-81- 5/ R.6-VI-B.7	Appendix B.7: An Ecological Case Study of Bilingual Instruction (English/ Cantonese) in Grade 5: Site 05
SBIF-81-R.5/ R.6-VI-B.8	Appendix B.8: An Ecological Case Study of Bilingual Instruction (English/Spanish) in Grade 1: Site 06
SBIF-81-R.5/ R.6-VI-B.9	Appendix B.9: An Ecological Case Study of Bilingual Instruction (English/Spanish) in Combined Grades 3, 4, & 5: Site 06
SBIF-81-R.6-C	Training Manual for Data Collection: SBIF Study
SBIF-81-R.8	State-of-the-Project Report: SBIF Study

Part II of the Study

Information from Part I data analysis provided the basis for Part II of the study. Part II has been carried out during the second and third years of funding (1981-82 and 1982-83 school years). It is intended to verify the findings from Part I. The verification activities include:

- o Verification of aspects of instruction identified in the Part I study classrooms in other ethnolinguistic bilingual instructional settings. To accomplish this, inquiry was focused on new classrooms added to the sample at three consortium sites (CEMREL, University of Hawaii, and Northwest Regional Educational Laboratory) as well as new classrooms at Part I sites (Study I-A/B).

- o Stability of the instructional system and process across two academic years. To accomplish this, ten teachers from the Part I classrooms observed during the 1980-81 school year were studied with a new group of students in Part II during the 1981-82 school year (Study II-A). Stability in terms of LEP students' participation in bilingual instruction was also studied. In doing so, 86 students observed in Part I were followed into their new classrooms in the 1981-82 school year (Study II-B).

- o Utility from both research and program improvement perspectives.

To accomplish this, teachers from four of the Part I study classrooms were asked to select, from among the variety of significant bilingual instructional features identified in Part I, those they considered most useful in irstructing LEP students (Study III).

- o Compatibility of Part I findings with those of related research--e.g., research on teaching per se, bilingual education research, successful schools research, research in related academic disciplines, and other research sponsored by the Part C Coordinating Committee. To accomplish this, Part I findings were addressed by recognized researchers in the above areas. They prepared analytical papers comparing their data with Part I findings, these were the focus of a national working meeting held in February 1983 (Study IV).

Table iii presents the list of reports associated with Part II of the SBIF study.

Table iii

Research Documents and Reports for SBIF Study: Part II

Document/Report Number	Title
SBIF-83-R.11	Site and Sample Descriptions SBIF Study: Part II
SBIF-83-R.12	Verification of Bilingual Instructional Features
SBIF-83-R.13	Stability of Instructional System and Process for a Sample of Ten Bilingual Teachers in the SBIF Study
SBIF-83-R.13.1	Stability of Instructional System and Process for a Sample of Eighty-Five Students in the SBIF Study
SBIF-83-R.15/16	Utility of the SBIF Features for the Instruction of LEP Students
SBIF-83-R.9/10	Compatibility of the SBIF Features with Other Research on Instruction for LEP Students
SBIF-83-R.14	Executive Summary: Part II of the SBIF Study

The current volume (SBIF-83-R.13.1) addresses issues of instructional stability for a sample of 85 students across two years of the SBIF study. Aspects of instructional context, instructional process, and student performance are identified and described. The overriding research questions guiding this data analysis were: What were the educational experiences of the followed students? What was their school performance over the two years?

Data on these research questions were collected in a variety of ways, including classroom observation systems, open-ended interviews with teachers, narrative descriptions of teacher behaviors, teachers' ratings of students' oral language proficiency, narrative descriptions of setting based on in-class observation, and review of research reports and documents developed for Part I of the SBIF study.

Charles W. Fisher
Principal Investigator
August 1983

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The National Consortium for the Significant Bilingual Instructional Features Study would like to acknowledge the contributions of the thousands of students and hundreds of classroom teachers who participated in the study. The dedication of the staffs at the nine consortium sites, and the sustained cooperation of district administrators and school principals were critical to the achievement of study goals. Approximately 100 data collectors representing five different language groups were involved in the fieldwork. The study was thoughtfully advised on research and policy issues by a Seminar of Scholars and a Policy Implications Advisory Panel. The talent, energy, and perseverance of all of these contributors is deeply appreciated.

During the analysis and reporting phases of the study there was substantive and editorial input from a wide range of people. The Consortium is especially grateful for the many contributions of the site project directors: Migdalia Romero and Ana Maria Villegas (New York); Maria Masud and Alicia Rojas (Florida); Ana Macias (Texas); Gail Goodman (Arizona); Larry F. Guthrie, John Lum, and Kalei Inn (Oakland, California); Joaquin Armendariz and Christine Baker (San Francisco, California); Astacia Wright (Illinois); Felipe Paris (Oregon); and Milagros Gavieres (Hawaii). The Consortium also acknowledges the special contributions of Elsie Gee for her organizational ability, high energy, constructive criticism, and perseverance in the planning, conduct, and management of the study, Carolyn Arnold, Mark Phillips, and Christine Baker for data analysis, Becky McReynolds for a broad range of editorial work, and Raquel Castillo, Patricia Ferman, and Peter Grace for coordination of document production.

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

List of Tables

List of Tables (continued)

CHAPTER ONE

INTRODUCTION AND OVERVIEW

The purpose of this study is to examine the experiences of a sample of limited English proficient students over the 1980-81 and 1981-82 school years. Target students from five nationally distributed sites in Part I of the SBIF study were followed to their new classrooms in the second year of the study. Comparable data were collected in both years in order to analyze the stability of classroom context, instructional process, and student performance.

A goal of bilingual education is for students to develop English language proficiency while continuing progress in their other academic subjects. Estimation of students' progress requires measures at two or more points in time. While some prior research in bilingual education has been longitudinal (e.g. Rossier & Farella, 1976), it has been based entirely upon outcome measures of linguistic and academic performance. That these measures may be inadequate for the assessment of skills of limited English-speaking children is well established (Cummins, 1981). Other aspects of student in-class performance have received little or no attention. Variations in the instructional context within which students' performances are measured are also important. In this study, we report descriptive information on the stability of proximal student outcome variables including engagement and accuracy rates as well as a variety of instructional context variables.

This chapter contains two major sections. The first presents the research questions which guided the study. The second is devoted to a description of the major research constructs and specifies those particular research questions relevant for each.

Research Questions

Two questions guided the data collection and analysis, one at the level of classrooms/teachers and one at the level of students. The first of these examined the stability of certain features of instruction identified in the first year of the study. The second asked how stable students' performance was in relation to variations in instructional context and process.

In Part I, five significant bilingual instructional features were identified and described: (a) teachers' intents for instruction were congruent with their organization and delivery of it; (b) teachers exhibited "active teaching" behaviors found to be related to increased student performance; (c) teachers mediated bilingual instruc-

tion by using both the students' first language and English; (d) teachers integrated English language development with academic skills development; and (e) teachers responded to and used information from the students' home culture. (See SBIF81-R.7: Executive Summary of Part I of the SBIF Study).

Question One

The first question asked in the substudy had to do with the instructional context and process of the target students' classes for Parts I and II:

> What were the educational experiences of "followed" students? What did their new classrooms look like in terms of organization, teaching, time allocation for subjects, and teachers' use of the students' first language?

To address this question, various features of instruction were examined. These included classroom context variables such as the time allocated to reading and math and the amount of whole group instruction employed. Instructional variables included a rating of active teaching behaviors, the amount of instructional time spent using the students' first language, the number of language changes per day during basic skill instruction, and an estimate of the function of those changes. Taken together, these variables will describe the classrooms into which students had moved, so that they may be compared across the two years.

An important aspect of this question concerns the degree to which Part II classrooms exhibited the five instructional features identified and described in Part I. Those instructional process variables listed above provide information on the presence of the second and third of the features identified in Part I, i.e., presence of active teaching behaviors and teachers' use of L1 and L2 in instruction. Some data are also available on the fourth and fifth features, i.e., teachers' integration of English language development and use of cultural referents.

Question Two

The second question concerned the performance of target students across the two years. In Part I, measures of Academic Learning Time (allocation of time to subject matter, engagement rate and percent time on high accuracy tasks), and instructional participation were obtained. It was of interest, to examine how stable these characteristics of students were, given variation in instructional context and process from the first to the second year of the study.

> What evidence can be provided concerning students' performance over the two school years? Did students' engagement and participation vary with the characteristics of the particular classroom they entered?

Research Constructs

Instructional context, instructional process and student variables were examined for the two overriding research questions. Instructional context variables included the time allocated to reading, math, and whole group instruction. Instructional process variables measured the time allocated to use of the students' first language, the number of language changes made by the teacher, the pedagogical function of those changes, and a rating of the active teaching behaviors exhibited by the teacher. Aspects of student behavior investigated in the study included measures of Academic Learning Time, with estimates of engagement rate and percent time on high accuracy tasks, and student instructional participation types. Each of these variables, and the construct from which it was derived, is examined in this section.

Aspects of Instruction

The literature on teaching and instruction demonstrates that teachers make a difference in student learning (Good, 1979; Rosenshine, 1979; Brophy, 1979). The way teachers organize instruction, allocate and use classroom time, present academic materials to students, as well as the kinds of expectations they hold for students and for themselves as professionals responsible for the teaching process, are among important aspects of instruction shown in recent research to be related to students' learning gains.

The organizational structure of bilingual classrooms and the allocation of time to bilingual instruction serve as two perspectives from which to view the instructional system in dual language settings. Each is described below.

Instructional context variables. The teaching-learning process that occurs in bilingual classrooms is a complex phenomenon. The interactions between approximately 30 students of varying academic and linguistic skills, a teacher, and possibly an instructional aide cannot be explained through simple methods. Classrooms are social systems requiring organization of action for the accomplishment of academic tasks. Thus, in analyzing classroom instruction, attention to the social as well as the psychological behavior of individuals is required.

Bossert (1978) suggests that the ways in which classrooms are structured to achieve order and facilitate the accomplishment of academic tasks influence achievement.

> What students are exposed to should affect what they learn. Yet the structure and methods used to transmit the content of curriculum and to facilitate the development of required skills are also important determinants of learning.

The organizational structure of classrooms is particularly important in bilingual settings, since the diverse linguistic and cultural backgrounds of participants in bilingual instruction require an awareness of and a sensitivity to culturally-based differences in the organization of instruction. Clashes between the manner in which interaction is typically organized in the students' home culture and the way instruction is structured in schools can limit student participation in classroom activities and ultimately lead to low academic attainment (Erickson & Mohatt, 1982; Heath, 1982; Philips, 1972).

Classroom interaction does not always take the form of a single encounter involving the class as a whole. Occasionally, students are grouped into several situations for focused interaction, and at times, they have a choice as to which activity and/or which group to join. More frequently, however, students are assigned by the teacher to a given instructional group on the basis of student characteristics, such as academic skills, grade level, and, in bilingual classrooms, language proficiency. In other instances, students are provided with an assignment and are expected to complete it independently, at their own desks. Each of these organizational arrangements or activity structures places different social demands on students insofar as classroom participation is concerned. Within such a frame of reference, the notion of activity structures provides important insight into the study of classroom organization in which the cultural and linguistic diversity of bilingual instructional settings has been considered.

A modified version of the activity structures construct developed by Bossert (1979) was incorporated into the SBIF study, and a thorough discussion of this construct appears in the report entitled Bilingual Instructional Perspectives: Organization of Bilingual Instruction in the Classrooms of the SBIF Study (SBIF-81-R.2/R.6-III.1, November 1981).

For purposes of this study, three components of activity structure are considered.

1. Time Allocated to reading. Expressed as proportion of the school day allocated to reading instruction (either in L1 or English).

2. Time Allocated to mathematics. Expressed as proportion of the school day allocated to mathematics instruction.

3. Whole Group Instruction. Expressed as proportion of the school day spent in whole group instruction.

Instructional process variables. Two facets of the teaching process were included in the the study: (1) the allocation of time to bilingual instruction and the teachers' use of the students' language (L1) and English (L2) in instruction; and (2) active teaching behaviors exhibited by the teachers. A description of each facet and a rationale for its inclusion follows.

Use of students' language in instruction. Time is a critical variable in classroom learning and teaching. Examining monolingual settings, Wiley and Harnischfeger (1974) found that student achievement was related to length of the school day and the absentee rate. A positive relationship between instructional time and learning outcomes in specific subject areas has been reported by McDonald (1975), Hess and Takanishi (1974), Stallings and Kaskowitz (1974), and Carroll and Spearett (1967). It follows, then, that data on the amount of time available for instruction and its distribution by content areas may prove valuable in the study of teaching and learning in bilingual classrooms.

In bilingual classroom settings, the distribution of time by language of instruction is of critical importance. In this study, attention was focused on the amount of time allocated to the use of L1 and L2 by the instructor. The frequency of language changes and their pedagogical functions were also recorded. Each time the teacher changed languages, the observer made note of it and simultaneously estimated the function of the statement, i.e., whether it was for instructional development, procedures and directions, or behavioral feedback.

Particularly relevant to the study of instruction for students of limited English proficiency is the teacher's use of language and culture in mediating classroom learning. Three mediators of instruction were derived from data in Part I of the SBIF study. These are: (a) using L1 and L2 for instruction; (b) integration of English language development with instruction in basic skills; and (c) responding to and using information from the students' home culture. When present in bilingual settings, these three elements of instruction have been shown to contribute to LEP students' classroom participation (Tikunoff & Vazquez-Faria, 1982; Tikunoff, 1983). Therefore, in describing the instructional process in bilingual settings and its stability over time, attention is given to the teacher's use of bilingual mediators.

Active teaching. Active teaching is an empirically grounded concept developed from information obtained through direct observation of instruction, primarily in elementary school classrooms, and particularly in basic skills subjects. Active teaching includes elements of instruction shown to be consistently related to students' learning gains.

Research on teacher effectiveness has not yielded specific guidelines on universal teaching skills associated with student achievement. However, Good (1979) contends that effective teaching, at least of reading, language arts, and mathematics, can be identified along particular behavioral dimensions.

Four clusters of active teaching behaviors reported in the literature on effective instruction were included in the SBIF study: (a) a clear focus on academic goals and subject matter; (b) elements of direct instruction, such as active presentation of information, constant monitoring of student progress, and providing immediate

feedback; (c) classroom management; and (d) high expectations of instructors for their students and for themselves. These clusters of behaviors are specific enough to focus attention on those elements of instruction pertaining to student learning gains, yet broad enough to allow for difference in the form in which the behaviors are manifested from one classroom to another.

Aspects of Student Behavior

In addition to the teacher variables described above, aspects of student behavior were also examined. Academic Learning Time and student participation styles were used as measures of students' performance.

Academic Learning Time. Academic Learning Time (ALT) is a measure of student learning as it occurs. In Academic Learning Time is defined as the time a student spends in a particular content area engaged on learning tasks with a high degree of accuracy. The basic components of ALT, then, are the time allocated to the content area, student engagement into, and percent time on high accuracy tasks. In this study, two aspects of students' ALT are reported, percent engaged time and percent time on high accuracy tasks.

Recent research (Fisher, et al., 1978) has shown that Academic Learning Time as a measure of student learning is more proximal to instruction than achievement scores, can be observed during instruction, can be measured repeatedly, and is related positively to student achievement.

Student participation types. In order for students to acquire basic skills in school, they must be able to participate competently in the learning tasks assigned to them. Since classrooms typically include 30 students, a teacher, and possibly other adults, competent participation requires that students learn to behave in ways that not only facilitate completion of tasks, but also support interaction with the other members of the classroom group. Classroom instructional activity requires frequent interaction with others, so that students tend to develop patterns of responses to instructional demands during classoom activites. Based on prior research and classroom observations, Ward & Tikunoff (1981) categorized student participation patterns into six types. These were utilized for the SBIF descriptive study, and a brief description of each follows.

Type I participants are success-oriented students who may be capable of carrying out more than one task simultaneously. They like to work alone, seldom interrupt others or seek help, but know how to initiate interactions with the teacher or others if help is necessary. Type II participants are also oriented toward success, but are more social and enjoy frequent interactions with classmates and the teacher. Type III students are dependent on others, and require feedback and assistance if they are to accomplish instructional tasks successfully. Type IV students attend to tasks, but with little or not active involvement; they seldom volunteer answers

or initiate interactions. Type V students frequently isolate themselves from the classroom activities, and are only sporadically engaged in instructional tasks. Type VI students tend to be disruptive and act out during instructional time. These last two types are to some extent "deviant" participators who usually have low ALT.

Classification of students by participation type was based on ratings completed by teachers at the beginning of the school year. Students were rated on 21 student behaviors associated with student participation. For a more complete description see Guthrie, Ward, Tikunoff, and Mergendoller, 1982.

CHAPTER TWO

METHODOLOGY

This chapter describes the methodology used in Substudy II-B, and is divided into three sections. The first is a description of the overall sample for the study. The second section provides information on the data sources for the study, and the third is a description of the analysis procedures followed in the study.

Description of the Sample

This section provides a description of the teacher and student samples for substudy II-B. Included are (a) a description of the sample selection process, (b) characteristics of the sample of classes, and (c) language characteristics of the target student sample.

Sample Selection Process

The sample selection process was conducted at the site, class, and target student level. The steps taken in each are descibed below.

Site. In Part I of the SBIF descriptive study, instruction was examined in a sample of settings/classrooms nominated as successful. Selection of sites and classrooms involved two phases. First, six sites were selected using certain selection criteria. Among the factors considered were the following: variety of ethnolinguistic groups, geographic distribution, variability in language characteristics (both in L1 and L2) in the client population, and amount of bilingual education program experience. For a detailed discussion of each of these factors and selection guidelines for the study sites, see Sample Description and Data Gathering Schedule: Part I of the SBIF Study (Document SBIF-81-D.3). Second, within each site, classrooms were selected by utilizing (a) subjective criteria generated by a nomination interview procedure, and (b) objective criteria drawing from characteristics usually present in bilingual education programs. A total of 58 classrooms were identified. For a thorough discussion of the classroom selection procedure, see Preliminary Analysis of the Data for Part I of the SBIF Study (SBIF-81-R.4, July 1981).

Classes. Since Substudy II-B was intended to describe the educational experiences and performances of target students who were observed in both Part I and Part II of the SBIF study, the sample of classes for the substudy was determined in large part by the availa-

bility of the students. Only Part I target students who remained in elementary school were considered: Part I students who moved on to middle or junior high school, transferred to another school, moved out of the area, or were retained in the same grade were not included. Of the 232 target students in Part I of the study, a sample of 200 were still available in the second year. At each of the five continuing sites, a maximum number of followed students was sought, with the result that out of a potential 200 students, 85 were included. These students, who had been in a total of 30 classes in Part I, had been assigned to 39 classrooms in Part II, taught by 41 teachers.

Target students at five Part I sites were followed into their assigned classrooms. This was done without regard for the particular characteristics of the Part II classroom; unlike Part I, we established no selection criteria in regard to teacher or program. Part II classes were thus selected from a less purposive sample than those examined in the first year. This represents a significant change form Part I of the study, since it allows for the possibility of teachers who were neither nominated as successful nor bilingual. By following target students to any new class, we were able to extend inquiry to a variety of instructional settings. Some students were assigned to bilingual teachers who participated in the previous year; others were assigned to teachers not included in the Part I nominated sample. Of this latter group, a portion had been exited from their bilingual program and were in regular monolingual-English instructional settings. It is important to note that, while some of the same Part I teachers were included in Substudy II-B, no student had the same teacher for both years.

Target students. For Part I, four target students were selected from each of 58 classrooms on the basis of three criteria: oral English proficiency (OEP), sex, and instructional participation style. Information on these criteria was obtained from the participating Part I teachers, who were asked to rate the OEP of each of their students on a scale of 1 to 4, with 4 representing the highest level of proficiency (Fuentes & Wisenbaker, 1978). They also rated students' participation using a form that described 21 participation characteristics. Following procedures developed previously (Ward & Tikunoff et al., 1981) students were categorized into six participation types.

The goal of the selection process for Part I was to obtain from each class: (a) two students who were rated at oral English language proficiency Levels 1 or 2; two students rated at oral English Proficiency level 3; (b) a balance of males and females; and (c) students who represented different participation styles. If during target student selection there was a conflict among the three selection criteria, the selection was made based on the priority of the criteria. English language proficiency was considered most important, followed by sex, then by instructional participation style. Thus, if there were only boys in a particular class with English proficiency Level 1 or Level 2, then more boys than girls were chosen from that class. Similarly, if the available range of participation types would have prohibited an equal sample of boys and girls, then the balance of the sexes was maintained. Obviously, for Substudy II-B of Part II, an

added selection criterion was whether a target student had participated in Part I of the SBIF study.

Characteristics of the Sample Classes

In this section, we present information on both the overall sample, i.e., those classes of students from which target students were selected, as well as on the teachers of those classes. Data in these categories provide information on the context within which target students were studied.

Even though the degree of diversity found in the Part I target student sample was impossible to maintain for Substudy II-B, the substudy sample continued to display considerable variety in grade levels, class sizes, proportions of language minority students, languages spoken, and language proficiencies. The teachers in the sample represented different languages, levels of professional training, and years of teaching experience.

Table 1 offers an overview of the Substudy II-B sample including the number of target students, the grade level, class size, and proportion of language minority students for each of the 39 classes (Part II) in the substudy. Information on target students is contained in Table 2.

Table 1 presents several characteristics of the sample teachers, such as level of professional training, native language, extent of bilingual professional training, and years of teaching experience. Also included in Table 1 is whether a teacher's class had been nominated as a successful bilingual education setting, and whether the teacher was bilingual. All clases in Part I were both nominated and taught by bilingual instructors.

The table shows that there were from one to five target students in each Part II substudy class. Grades 1 through 6 were represented, with a minimum of three grade levels at each site. The class sizes ranged from 8 to 36 students, with an average of 22 students per class across sites. Classes with low enrollments were part of pull-out bilingual programs. Two of the classes were taught alternately by a teacher who was bilingual in the students' first language and a teacher who spoke only English; this resulted in a total of 41 teachers for the 39 classes.

The proportion of language minority students (LMS) per class ranged from 61 percent to 100 percent; the average proportion of LMS across sites was 94 percent. In some cases, pull-out bilingual programs also account for high percentages of LMS (e.g., at Site 3).

Information on teachers' formal training and language background is presented. The data showed that 25 of the 41 teachers (or 61 percent) had bachelor's degrees, 15 (or 37 percent) had master's degrees, and 1 (or 2 percent) had a Ph.D.

Table 1

SBIF Substudy II-B Sample Description

SITE 01

Target Students	Grade	Class Size	% LMS	Level of Teacher's Training	Teacher's Native Language	Teacher's Bilingual Training	Teacher Nominated	Years of Experience
110	3	20	95	B.A.	Spanish	Degree in Bilingual Education	Yes	1-5
109, 103 059	2-3	17	100	M.A.	Spanish	"	Yes	6-10
202, 211	3	20	95	M.A.	Spanish	"	Yes	1-5
214	3-4	27	85	B.A.	Spanish	"	Yes	1-5
216	1-2	21	95	M.A.	Spanish	"	Yes	6-10
210	3-4	21	95	M.A.	Spanish	"	Yes	1-5
161, 156 176	1	36	81	M.A.	Spanish	"	Yes	1-5
302, 319 323	5-6	20	100	M.A.	Spanish	"	Yes	11-15
309	6	32	100	M.A.	Spanish	Bilingual Degree & Workshops	Yes	1-5
002, 025 005	1	35	91	B.A.	Spanish	Inservice & workshops	Yes	1-5
019	1-2	20	95	B.A	Spanish	Inservice & Workshops	Yes	1-5
255, 273 256, 276	6	36	81	B.A	Spanish	Bilingual Course-work	Yes	1-5

% L1 = percentage of instruction time in students' first language
% WG = percentage of instruction time with whole group

Table 1 (Continued)
SBIF Substudy II-B Sample Description

SITE 02

Target Students	Grade	Class Size	% LMS	Level of Teacher's Training	Teacher's Native Language	Teacher's Bilingual Training	Teacher Nominated	Years of Experience
002, 004	3	22	100	B.A.	English	E.S.L.	No	6-10
104	1	24	88	B.A.	Spanish	none	No	1-5
252	4	35	89	M.A.	Spanish	Bilingual Education Degree	No	11-15
302	4	34	85	Ph.D.	Spanish	Inservice & Workshops	No	21-30
502, 504	1	23	61	B.A.	Spanish	"	No	6-10
551, 552 554	1	23	61	M.A.	Spanish	"	No	16-20

% L1 = percentage of instruction time in students' first language
% WG = percentage of instruction time with whole group

SBIF Substudy II-B Sample Description

SITE 03

Target Students	Grade	Class Size	% LMS	Level of Teacher's Training	Teacher's Native Language	Teacher's Bilingual Training	Teacher Nominated	Years of Experience
100, 101	3	14	100	B.A.	English[a]	Degree in Bilingual Education	No	6-10
051, 052 053, 054	3	10	100	M.A.	English	Bilingual Coursework	No	6-10
001	1	9	100	B.A.	Spanish	Degree in Bilingual Education	Yes	6-10
450	5	8	100	B.A.	English	"	Yes	6-10
500	6	8	100	M.A.	English	Bilingual Coursework	No	16-20

% L1 = percentage of instruction time in students' first language
% WG = percentage of instruction time with whole group
[a] Teacher did not speak the students' first language

Table 1 (continued)
SBIF Substudy II-B Sample Description

SITE 04

Target Students	Grade	Class Size	% LMS	Level of Teacher's Training	Teacher's Native Language	Teacher's Bilingual Training	Teacher Nominated	Years of Experience
370, 380 360, 395	1-2	14	100	B.A.	Navajo	Degree in Bilingual Education	Yes	6-10
390, 398	1	16	100	M.A.	Navajo	Bilingual Coursework &Inservice	Yes	6-10
190, 180 160, 170 195	3	16	100	M.A.	English	Bilingual Coursework	No	1-5
040, 070 020, 060 046	1	27	100	B.A.	Navajo	Bilingual Coursework	Yes	6-10
095, 090	2	17	94	B.A.	Navajo	Inservice	Yes	1-5
096	2	15	100	B.A.	German	Bilingual Coursework	No	6-10
146	4	20	100	B.A.	English[a]	Bilingual Coursework	No	11-15
280	2	20	100	B.A.	English[a]	Bilingual Coursework	No	11-15
230	1	23	100	B.A.	English[a]	Bilingual Coursework	No	1-5
030	1	21	100	B.A.	Navajo	None	No	1-5
420, 440 430, 447	2	15	100	B.A.	Navajo	Bilingual Coursework	No	6-10
520, 547 540, 545	6	20	100	B.A.	English[a]	Inservice	No	6-10

% L1 = percentage of instruction time in students' first language
% WG = percentage of instruction time with whole group
[a] Teacher did not speak the students' first language.

SBIF Substudy II-B Sample Description

SITE 05

Target Students	Grade	Class Size	% LMS	Level of Teacher's Training	Teacher's Native Language	Teacher's Bilingual Training	Teacher Nominated	Years of Experience
351, 352 353, 354	1	32	100	M.A.	Chinese	Bilingual Coursework	No	16-20
001, 002 003, 004	2	27	88	B.A.[b]	Chinese	Bilingual Credential &Workshops	Yes	6-10
				B.A.	German[a]	Inservice	Yes	16-20
151, 154	1	29	90	B.A.[b]	English	Bilingual Coursework &Inservice	No	11-15
				M.A.	English[a]	Inservice	No	21-30
204, 252	3	30	93	B.A.	Chinese	Inservice &Workshops	Yes	16-20

% L1 = percentage of instruction time in students' first language
% WG = percentage of instruction time with whole group
[a] Teacher did not speak the students' first language.
[b] This class was taught alternately by two teachers. The percentage of L1 reflects a composite of the language used by both teachers.

The largest proportion of the teachers (37 percent) had taught for 6 to 10 years; the next largest group (34 percent) had 1 to 5 years' exerience; 13 percent had 16 to 20 years; and an equal number had 11 to 15. With regard to language background, 41 percent were native speakers of Spanish; 32 percent spoke English as their first language; 15 percent spoke Navajo; and 7 percent spoke Chinese. Overall, 33 of the 41 teachers (80 percent) spoke their language minority students' first language, while 8 (20 percent) did not.

The substudy teachers reported having a variety of professional training experiences in bilingual education. Only two teachers (4 percent) said that they had had no bilingual education training; nine teachers (22 ercent) reported receiving several types of bilingual education tra ning. As Table 1 shows, 14 of the teachers (34 percent) reported that they had degrees in bilingual education while another 14 said that they had taken coursework in the area of bilingual education. Eleven teachers (27 percent) indicated that they had participated in inservice training, and seven (17 percent) had taken part in workshops. One teacher's special training was limited to teaching English as a Second Language (ESL).

Characteristics of the Students

Among the data collected for the SBIF target students was information related to their language background, the languages they spoke, and their rated oral language proficiencies in both English and their first language. These and other data are reported on Table 2. Target students were language minority students, and were almost equally divided by sex. Oral English proficiency ratings showed that about 60 percent of the followed students were rated on the high end of the scale. This is not surprising, given that all students had spent at least one year in a nominated successful bilingual classroom. As for students' first language, approximately half were native Spanish speakers, more than onethird spoke Navajo, and the remainder were Chinese speakers. Ratings of first language oral proficiency showed that over 90 percent were rated as a 3 or 4.

Data Sources

This section describes the data sources and analysis procedures utilized in Substudy II-B. Data were collected on three types of variables: (a) classroom context variables (allocation of time, amount of whole group instruction); (b) instructional process variables (use of L1 and L2, active teaching ratings, frequency and purpose of language changes); and (c) student variables (engaged time, percent time high accuracy, student participation style).

Table 2

Characteristics of SBIF Substudy II-B Student Sample

Site	No. of Classes	No. of Target Students	Sex		Language Background		Oral English Proficiency Rating				Students First Language			Oral Non-English Proficiency Rating			
			M	F	LMS	EP	1	2	3	4	Spanish	Navajo	Chinese	1	2	3	4
01	12	23	11	12	23	0	2	4	10	6	23	0	0	0	4	8	10
02	6	10	6	4	10	0	1	3	4	2	10	0	0	1	0	1	6
03	5	9	4	5	9	0	1	1	0	7	9	0	0	0	0	0	9
04	12	31	15	16	31	0	4	13	3	9	0	31	0	0	2	5	21
05	4	12	6	6	12	0	1	1	7	3	0	0	12	0	0	1	11
TOTAL	39	85	42	43	85	0	9	22	24	27	42	31	12	1	6	15	58

LMS = Language Minority Student
EP = English Proficient

Classroom Context Variables

Three aspects of classroom context were considered, all having to do with the allocation of class time to certain activities: reading, mathematics, and whole group instruction. Information on allocation was collected through direct observation using a coding procedure designed for that purpose. Trained observers coded classroom activities at regular intervals during the school day. In Part I of the study, samples were taken every 15 minutes for four days of instruction. In Part II, three times a day for four days, observers recorded all major shifts in the activity structures of the class, e.g., a change in subject matter focus. For detailed information on the coding procedures, see SBIF Study Data Collection Manual, Part I and Part II.

Instructional Process Variables

Two broad facets of instructional process were considered in the study, teacher use of students' first language (L1) in instruction and active teaching behaviors.

Use of L1 in instruction. As discussed earlier, the ways in which teachers use students' first language in instruction is of critical importance in bilingual education. How often teachers use L1 and to what purpose can be an important factor in students' understanding. In this study, two aspects of language use were examined, the frequency with which teachers alternated languages, and the apparent function of the first statement after a language change. Data on teachers' language use were obtained through direct observation and coding during two full days in each classsroom. Each time the teacher changed languages, whether to L1 or English, the observer noted the time and judged whether the first statement was for the purpose of instructional development, procedures and directions, or behavioral feedback. A complete description of the data collection procedures can be found in the SBIF Study Data Collection Manual for Part I and Part II.

Student Variables

Data collected on student behavior was of two types. First, data were collected on thier Academic Learning Time in both Part I and Part II. These data are reported in terms of percent engaged time and percent time on high accuracy tasks. Second, students were classified according to the Student Instructional Participation Types described earlier.

Academic Learning Time. Academic Learning Time was assessed by directly observing target students during reading, language arts, and mathematics instruction. The ALT observations system calls for the observer to focus on one target student for a moment, code that student's behavior on a series of categories, then focus on a second target student and code that student's behavior. As a result, for

any observation period, coding was done about every three minutes for each student.

There were slight differences in the procedures followed in the two parts of the study. In Part I, data were collected during basic skills lessons on three different days, separated by one or more weeks for any particular classroom. In Part II, data for each classroom were collected on four separate days, but within a two-week period.

Student instructional participation type. Over time, students develop patterns of behavior in their classroom participation. Prior to data collection in each part of the study, teachers were asked to rate each student's performance according to the 21 behaviors used in the classification scheme. These data were then scored and frequency distributions by type calculated. For detail information on the data collection procedures, see SBIF Study Data Collection Manual, Part I and II.

Analysis Procedures

Two questions guided the study. The first of these sought information at the level of the classroom: What were the characteristics of the first and second year classrooms for the target students? How stable were these characteristics over the two year period of the Study? The second question had to do with student performance across time. Given these variations in classroom context and instructional process, how stable was the behavior of target students?

Analysis was conducted at a descriptive level. Frequency distributions were obtained for the three types of variables described above for each year of the study. This made possible the comparison of features of instructional context, process, and student performace. The analysis was conducted in three phases. First, the analyses were done by site; this allowed for possible differences due to geographical or ethnolinguistic factors to emerge. Results are reported in Chapter Three.

In the second analysis, students were grouped on the basis of the differential use of L1 by their teachers across the two years. A significant bilingual instructional feature identified in Part I of the study was the teachers' use of English and the students' first language. At a minimum, this should mean that a certain portion of the instructional day was devoted to use of L1, for whatever purpose. In other words, the teacher had to be speaking L1 part of the time. It can be argued further that a critical variable in the school experiences of a limited English-speaking student is the relative amount of L1 used by his or her teacher. For many LEP students, understanding of basic lesson content will depend on whether teachers speak their language or not.

In order that we might explore this possibility, the average proportion of class time each student's teacher allocated to L1 in Part I was plotted against the Part II proportion. In this way, students who had a stable environment in relation to L1 (i.e., consistently high) could be compared with those who experienced a reduction in the teacher's use of thier language. "High" and "low" use of L1 were arbitrarily defined as falling above or below 25 percent of basic skills instruction. While this criterion may appear low, it should be reiterated that data were only from basic skills lessons; music, art, and transitions, for example, were excluded. As with the site-level analyses, frequency distributions were calculated for the different groups of students for each of the variables. These results are reported in Chapter Four.

The third phase of analysis was more qualitative in nature. In this phase, members of the research team at each site read through site reports from teacher analysis meetings and student and teacher protocols developed as part of the data collection, seeking evidence for the five significant bilingual instructional features identified in Part I. Special attention was given the fourth and fifth of these, teachers' integration of English language development with academic skills development, and their response to and use of information from the students' home culture. Results are presented in Chapter Five.

CHAPTER THREE

RESULTS: SITE DESCRIPTIONS

This chapter presents the results of the first phase of analysis, which focused on descriptions of student stability at each site. Overall frequency distributions for the total sample and for each site are given and discussed.

Total Sample

Eighty-five target students were followed into their new classrooms for Part II of the study. As a result, 39 classes (and 41 teachers) were identified. For the site-level analysis, frequency distributions were calculated for each of the study variables. These results are given in Table 3 for Part I and Part II for all sites. These are partitioned into classroom context variables, instructional process variables, and student variables.

There was a noticeable change in certain variables from Year I to Year II. At the level of classroom context, for example, over half the school day in Year I was allocated to reading; in the second year, this figure increased to nearly 60 percent. Similarly, the amount of time spent in whole group instruction went up from 49 to 58 percent. Time allocated to mathematics, on the other hand, remained constant.

Changes in instructional process were recorded as well. The proportion of time in basic skills spent using L1 showed a decline, from nearly 50 percent to less than 25. The number of language changes dropped, too. Active teaching ratings for the overall sample remained high, however, at 4.2.

At the level of student variables, target students' engagement rates and percent time high accuracy, two components of Academic Learning Time, increased. The proportion of time students were engaged during basic skills instruction went up from 71 to 80 percent. The percentage of that time they performed with high accuracy increased from 59 to 64 percent. In regard to participation types, the proportion of students categorized as Types I and II went down. Other types, who were more dependent or seldom actively participating (Types III and IV) increased somewhat.

Table 3

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (All Sites)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	85	.54	.59
Time Allocated to Math	85	.14	.15
Whole Group Instruction	85	.49	.58
Instructional Process Variables			
Proportion of time Lic	85	.44	.22
Language Change[b]	85	70	44
Functions of Language Change[c]			
For Instruction	85	.45	.47
Procedures & Directions	85	.39	.23
Behavioral Feedback	85	.18	.12
Active Teaching Rating[e]		4.2	4.2
Student Variables			
Engagement[c]	85	.71	.80
Percent Time High Accuracy[c]	85	.59	.64
Participation Type[d]	Year 1	Year 2	
Type I	23	16	.27 .19
Type II	16	9	.19 .11
Type III	9	17	.11 .20
Type IV	5	9	.06 .11
Type V	13	5	.15 .06
Type VI	4	2	.05 .02
Other	11	20	.13 .24
Missing	4	7	.05 .08

a proportion of school day
b frequency per day during basic skills
c proportion during basic skills
d proportion of target students
e average of 5 point scale

Site Descriptions

Site One: New York

In Table 4, the overall figures are given for Site One. Classroom context variables for target students at that site showed some change. The amount of the school day allocated to both reading and math dropped slightly from Part I to Part II. The time allocated to reading and language arts remained quite high (around 50 percent): 14 percent of the day was devoted to mathematics instruction in the second year. Whole group instruction, on the other hand, increased to over 70 percent of the day.

Differences in instructional process also appeared. Whereas in the first year, L1 accounted for nearly half the time in basic skills, in the second, it made up only about one-fourth. Within that time, however, teachers averaged over 100 language changes per basic skills day. In the previous year, they made only 14 per day. Active teaching ratings showed a decline from 4.5 to 3.9 out of a maximum 5. This suggests that the teachers added in Substudy II-B exhibited those behaviors identified in Part I as significant instructional features to a less degree than did Part I teachers.

Data on student variables can be described in the following way. Of the two components of ALT that were included, engagement rate went up and percent high accuracy went down. While the 23 students as a group were observed to be engaged more often in the second year, only about 25 percent of that time was spent on high accuracy tasks. Proportions of students classified as Participation Types I, II, and V decreased, while the proportion in Types III and IV went up.

Site Two: Florida

Table 5 presents the descriptive data on Site Two, Florida. Classroom context variables showed these changes: time allocated to reading and math remained relatively constant; the proportion of each day devoted to whole group instruction went up from 69 to 76 percent.

Changes in instructional process variables were confined to the frequency and function of language changes. They consisted of a decrease in the number of language changes per basic skills day, coupled with a change in the distribution of functions. The average proportion of first statements for instructional development and procedural purposes dropped, while the average proportion for behavioral feedback increased.

Student variables showed changes as well. Engagement rates increased over 20 percent from Year I to II. Although data on percent time on high accuracy tasks were unavailable for the first year, they approached 100 percent in Year II. The proportions of students typed by pattern of participation changed also. The proportion of Types I and V fell, while Types II, III, and IV increased.

Table 4

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (Site 1)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	23	.59	.51
Time Allocated to Math	23	.20	.14
Whole Group Instruction	23	.55	.72
Instructional Process Variables			
Proportion of time LI[c]	23	.46	.24
Language Changes[b]	23	14	106
Function of Language Change[c]			
Instruction	23	.37	.46
Procedures & Directions	23	.42	.34
Behavioral Feedback	23	.24	.20
Active Teaching Rating[e]	23	4.5	3.9
Student Variables			
Engagement[c]	23	.72	.82
Percent Time High Accuracy[c]	23	.53	.26
Participation Type[d]			
	Year 1	Year 2	
Type I	5	4	.22 .17
Type II	5	3	.22 .13
Type III	5	7	.22 .30
Type IV	1	4	.04 .17
Type V	4	0	.17 0
Type VI	2	2	.09 .09
Other	0	0	0 0
Missing	1	3	.04 .13

a proportion of school day
b frequency per day during basic skills
c proportion during basic skills
d proportion of target students
e average on 5 point scale

Table 5

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (Site 2)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	10	.56	.52
Time Allocated to Math	10	.18	.18
Whole Group Instruction	10	.69	.76
Instructional Process Variables			
Proportion of time L1[c]	10	.31	.33
Language Changes[b]	10	24	11
Function of Language Change[c]			
For Instruction	10	.49	.32
Procedures & Directions	10	.33	.21
Behavioral Feedback	10	.18	.30
Active Teaching Rating[e]	10	4.0	4.1
Student Variables			
Engagement[c]	10	.59	.80
Percent Time High Accuracy[c]	10	--	.97
Participation Type[d]			
	Year 1	Year 2	
Type I	4	1	.40 .10
Type II	1	2	.10 .20
Type III	1	2	.10 .20
Type IV	0	2	0 .20
Type V	4	2	.40 .20
Type VI	0	0	0 0
Other	0	0	0 0
Missing	0	1	0 .10

[a] proportion of school day
[b] frequency per day during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average of 5 point scale

Site Three: Texas

Table 6 presents the site-level information for Texas, Site 3. As with Sites 1 and 2, the amount of time allocated to reading remained high from Part I to II. At this site, the amount of time for math showed a slight drop. and the proportion of time for whole group instruction remained stable, at about 60 percent of the school day.

More dramatic changes were evident in the data on instructional variables. There was a decrease in the proportion of basic skills time allocated to L1, from 50 to 14 percent. As would be expected, the number of language changes dropped also, from 85 to 12 per basic skills day. Less predictable, however, was the increase in Active Teaching ratings from 4.1 to 4.9.

Student variables showed very little change; only a slight increase in engagement rate and percent time on high accuracy tasks. The proportion of target students rated as Type I participants increased to over 50 percent of the sample.

Site Four: Arizona

Table 7 contains descriptive data for Site 4, Arizona. In regard to instructional context variables, there was one notable change across the two years. The percent time allocated to reading went up from 40 to nearly 70 percent. Changes in the time allocated to mathematics were more modest, however, and the proportion of time allocated to whole group instruction remained relatively low.

For instructional process variables, the proportion of time in basic skills allocated to L1 dropped from 40 to 17 percent. This was no doubt a function of the addition of ESL and other monolingual English classes. The number of language changes dropped as well, from 117 to 32 per basic skills day. The overall Active Teaching rating remained stable at 4.3 for Part II.

Student variables revealed an increase in engagement from 67 to 80 percent, and virtually no change in percent time on high accuracy tasks. In terms of student participation, the proportion of students classified as Type I decreased somewhat. However, the number of students who fell into the "other" category increased considerably. Fully 61 percent of the followed target students could not be classified using the Student Instructional Particiption rating.

Site 5: California

Data on Site 5, California, are presented in Table 8. Here, a slightly different pattern of change was found in regard to classroom context variables. While the percent time allocated to reading increased slightly to 67 percent, the proportion of each day devoted

Table 6

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (Site 3)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	9	.55	.56
Time Allocated to Math	9	.21	.16
Whole Group Instruction	9	.61	.60
Instructional Process Variables			
Proportion of time LI[c]	9	.50	.14
Language Changes[b]	9	85	12
Function of Language Change[c]			
For Instruction	9	.20	.23
Procedures & Directions	9	.58	.33
Behavioral Feedback	9	.21	.11
Active Teaching Rating[e]	9	4.1	4.9
Student Variables			
Engagement[c]	9	.86	.88
Percent Time High Accuracy[c]	9	.93	.90
Participation Type[d]			
	Year 1	Year 2	
Type I	4	5	.44 .56
Type II	3	1	.33 .11
Type III	0	1	0 11
Type IV	1	0	.11 0
Type V	1	1	.11 .11
Type VI	0	0	0 0
Other	0	1	0 .11
Missing	0	0	0 0

[a] proportion of school day
[b] frequency per day during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average of 5 point scale

Table 7

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (Site 4)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	31	.40	.69
Time Allocated to Math	31	.08	.15
Whole Group Instruction	31	.41	.39
Instructional Process Variables			
roportion of time Lic	31	.40	.17
Language Changes[b]	31	117	32
Function of Language Change[c]			
For Instruction	31	.61	.43
Procedures & Directions	31	.29	.15
Behavioral Feedback	31	.11	.03
Active Teaching Rating[e]		4.2	4.3
Student Variables			
Engagement	31	.67	.80
Percent Time High Accuracy[c]	31	.70	.68
Participation Type[d]			
	Year 1	Year 2	
Type I	9	2	.29 .07
Type II	2	1	.07 .03
Type III	1	3	.03 .10
Type IV	3	2	.10 .07
Type V	1	1	.03 .03
Type VI	1	0	.03 .00
Other	11	19	.35 .61
Missing	3	3	.10 .10

a proportion of school day
b frequency per day during basic skills
c proportion during basic skills
d proportion of target students
e average of 5 point scale

Table 8

Student Stability: Classroom, Teacher and Student Variables for Years One and Two (Site 5)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading	12	.62	.67
Time Allocated to Math	12	.09	.22
Whole Group Instruction	12	.43	.44
Instructional Process Variables			
Proportion of time L1[c]	12	.24	.06
Language Changes[b]	12	52	15
Function of Language Change [c]			
Instruction	12	.49	.55
Procedures & Directions	12	.49	.13
Behavioral Feedback	12	.27	.13
Active Teaching Rating[e]	12	4.0	3.7
Student Variables			
Engagement[c]	12	.79	.72
Percent Time High Accuracy[c]	12	.68	.82
Participation Type[d]			
	Year 1	Year 2	
Type I	1	4	.08 .33
Type II	5	2	.42 .17
Type III	2	4	.17 .33
Type IV	0	1	0 .08
Type V	3	1	.25 .08
Type VI	1	0	.08 0
Other	0	0	0 0
Missing	0	0	0 0

a proportion of school day
b frequency per day during basic skills
c proportion during basic skills
d proportion of target students
e average on 5 point scale

to mathematics more than doubled from 9 to 22 percent. Whole group instruction remained at somewhat less than 50 percent of the time.

Instructional process variables showed the following characteristics across the two years. First, the proportion of time in basic skills allocated to L1 dropped from 24 to about 6 percent. Recall that for Site 1, for example, these figures were 46 and 24, respectively. Similarly, the number of language changes fell from 52 to 15 per basic skills day. Active Teaching ratings dropped slightly, from 4.0 to 3.7.

For student-level variables, changes were recorded in both engagement, which fell slightly, and percent time on high accuracy tasks, which increased from 68 to 82 percent. Greater differences were found in student participation types, where the proportion of Type I, III, and IV students increased, and V and VI decreased.

Summary

Since this analysis was done at the site level, the emphasis was not on across-site comparisons. The students at each site varied considerably in number and grade level, rendering any comparisons we might draw less meaningful. Therefore, instead of emphasizing differences in the sites, we present an overall summary of the relative stability of each variable.

Classroom Context Variables

Reading. Time allocated to reading remained stable or increased for four of the five sites. At every site this figure was above 50 percent for Part II, and at Site 4, increased to nearly 70 percent of the school day. On the whole, therefore, teachers at all sites devoted a significant portion of their instruction to language arts and reading; at no site was the number below 50 percent in Year II.

Time allocated to math. The proportion of time allocated to mathematics instruction was relatively stable overall. At two sites the figure increased, at two it dropped slightly, and at the other, remained about the same. None of these changes were dramatic, however, and there was a range of only 8 percentage points, from 14 to 22, across all sites in the second year.

Whole group instruction. The proportion of time spent in whole group instruction was also a stable factor, either increasing or remaining stable across all five sites. Cross-site comparisons on this variable, however, show that the classes at the three Hispanic sites (1, 2, and 3) had consistently higher proportions of time in whole group instruction -- from 60 to 76 percent. At sites 4 and 5, on the other hand, less than half the time was allocated to whole group instruction (39 and 44 percent, respectively).

Instructional Process Variables

Proportion of time L1. Except at Site 2, where it remained about the same, the proportion of time in basic skills allocated to the students' first language went down. It dropped over 30 percentage points at two sites and accounted for only 6 percent at another in Part II. Given the diversity of teachers and classrooms included in the second year sample, this finding is not surprising. Some teachers, for example, were monolingual English speakers with no bilingual training. Other teachers presumably reduced the amount of L1 as students progressed in English language proficiency.

Number and function of language changes. At all but Site 1, the frequency of language changes during basic skills instruction decreased; at that site, the figure went from 14 to 106 per day. At the other four sites in Part II, the number of changes was between 11 and 32. The functions of language changes appeared to move toward instruction and away from procedures and directions or behavioral feedback. While the proportion of language changes made for instructional purposes did fall somewhat at two of the sites, it nevertheless remained the predominant function for those teachers.

Active teaching rating. In general, active teaching ratings increased. Only at Site 1 was there a noticeable decline, from 4.5 to 3.9, and at most sites the Part II ratings were over 4.

Student Variables

Engagement. Student engagement rates showed stability across the two parts of the study. They either increased or remained about the same at all but one site, and even there engagement rate was estimated at over .70 in Year II.

Percent time high accuracy. Accuracy rates for target students were also consistent. Only at one site was there a significant reduction, and percent time on high accuracy tasks for the overall sample went up to 64 percent.

Participation type. In regard to student participation types, the proportion of students classified as Types I, III, and IV appeared to increase, and the proportion of Types II, V, and VI fell.

CHAPTER FOUR

RESULTS: INSTRUCTIONAL PROCESS ANALYSIS

This chapter presents the results of the second phase of analysis, focusing on variations in the instructional context across the two years. A rationale for defining levels of use of L1 is given first; results and discussion of the analysis follow.

Use of L1 as Instructional Process

A number of instructional process variables were examined in the study. These included, for each teacher, the proportion of L1 in basic skills instruction, the number of language changes, the functions of those language changes, and active teaching ratings. Each of these variables provides valuable information about the teaching process experienced by the target student sample. The most critical of these variables for LEP students is the proportion of L1 used in basic skills instruction.

For limited- and non-English speaking children, the amount of time the teacher spends speaking their language may, in large part, determine whether or not they understand the procedures and directions for classroom activities as well as the subject matter content of schooling. Unless students understand, there is little likelihood of academic progress or success. We further hypothesize that the relative amount of L1 across the two years will affect student progess. Students who move from a high proportion of language support (teacher use of L1) in the first year to a classroom in which little or no L1 is used will have a more difficult time than those who experience a more consistent instructional environment.

For this reason, we have chosen to explore the substudy II-B data using the proportion of L1 as an independent variable. Data on the percent of time for basic skills allocated to L1 were available from both years. We thus were able to produce a scattergram of all students with the proportion of L1 in Year I and Year II as the axes. We then arbitrarily set 25 percent L1 as the criterion upon which to divide the sample into groups. The data used for the scattergram represents a portion of the time allocated to basic skills, primarily reading in English and mathematics. A large part of the school day, including non-academic lessons and transitions in which greater use of L1 might be expected, was excluded. Some perspective on the choice of 25 percent L1 is provided by the fact that the year I average in the SBIF sample was 25, with a range of .17 to .36.

Analytic Procedures

Group Definition

Based on the scattergram described above, students (and teachers) were divided into four groups. The distribution of target students by group is given in Table 9.

Table 9
Distribution of Target Students by Group

Group	Teacher Use of L1		Number of Students	Number of Teachers	
	Part I	Part II		Part I	Part II
A	>.25	>.25	32	12	14
B	>.25	<.25	41	16	18
C	<.25	>.25	0	0	
D	<.25	<.25	12	8	7

Group A is defined as those students having the experience of a relatively high use of L1, greater than 25 percent, in both years. Group B consists of students whose Year I teacher used L1 more than 25 percent of the time in basic skills, but whose Year II teacher did not. Group C is defined as students who went from a low to a high L1 use context. Group D contains students who experienced low L1 use in both years. Because students from the same class in Part I were in some instances assigned to different classrooms, the number of teachers for Part I appears exaggerated.

Analyses were conducted on all students, but are reported only for Groups A and B. Not only were the numbers of students in the other two groups much smaller, but A and B were of more interest as well. We wanted to explore the differences between those students whose teachers exhibited a consisently high use of L1 (A) and those whose Year II teacher used much less L1 in basic skills instruction (B).

Analyses

In addition to proportion of L1, other variables were also considered. These included grade level and students' oral English proficiency rating.

Grade level. Six grade levels were represented in each year -- K-5 in Year I and 1-6 in Year II. Because Kindergarten represents an experience of a different quality from later schooling (less academic instruction, only a half day), we speculated that the findings for those students who went from K to 1 might be different from the findings for students at higher grade levels. We therefore further divided Groups A and B into grade 1 (Year II) and grades 2-6.

Oral English proficiency rating. At the beginning of each year, participating teachers were asked to rate the oral English proficiency (OEP) of each student. We used a four-point scale in which 1 represented very limited proficiency, and 4, native-like proficiency in English.

Using these ratings for target students, we explored the possibility that variations in the amount of L1 used by teachers, were more critical for limited-English proficient students.

Results: Instructional Process Variables

Six analyses were conducted using the two groups defined on the basis of teachers' use of L1. The results of these are presented in this section and discussed.

All Students

Table 10 gives the results for all students in the two groups. Results are presented in much the same fashion as the site-level analyses, with the exception that differences for each variable have been calculated and entered, and proportion of L1 has been omitted, since that figure was used to define the groups. First, consider the classroom context variables. Different patterns of change were recorded for each group. The percent time allocated to reading from Year I to II, increased for Group A, but fell slightly to 48 percent of the school day for Group B. The time allocated to mathematics instruction remained relatively constant, while that for whole group instruction increased somewhat.

Instructional process variables reveal quite different results. In regard to the frequency of language changes per day, Year II teachers for Group A used more; Year II teachers for Group B, much fewer. Active Teaching ratings fell somewhat for the Group A teachers, but increased to nearly 4.5 for those instructing Group B.

Scores for components of Academic Learning Time increased for both groups of students. Engagement rates for Group B went up 14 percent against only 8 percent for the other group, but for percent time high accuracy, Group A showed a greater improvement. Proportions of students classified as different participation types changed in these ways: For Group A, Types I and V went down considerably;

Table 10

Student Stability: Classroom, Teacher and Student Variables for Years One and Two by Group (All Students)

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading			
Group A	32	.51	.58
B	41	.52	.48
Time Allocated to Math			
Group A	32	.14	.12
B	41	.16	.17
Whole Group Instruction			
Group A	32	.53	.62
B	41	.50	.56
Instructional Process Variables			
Language Changes[b]			
Group A	32	47	61
B	41	85	42
Functions of Language Change[c] For Instruction			
Group A	32	.45	.5[illegible]
B	41	.48	.34
Procedures & Directions			
Group A	32	.38	.29
B	41	.43	.23
Behavioral Feedback			
Group A	32	.18	.22
B	41	.15	10
Active Teaching Rating[e]			
Group A	32	4.2	4.1
B	41	4.3	4.5
Student Variables			
Engagement			
Group A	32	.73	.81
B	41	.66	.80
Percent Time High Accuracy[c]			
Group A	32	.47	.61
B	41	.65	.67
Participation Type[d]	Year 1	Year 2	
Type I			
Group A	10	5	.31 .16
B	10	10	.24 .24
Type II			
Group A	3	1	.09 .03
B	8	5	.20 .12
Type III			
Group A	4	8	.13 .25
B	4	8	.10 .20
Type IV			
Group A	3	1	.09 .03
B	2	7	.05 .17
Type V			
Group A	6	3	.19 .09
B	5	1	.12 .02
Type VI			
Group A	0	2	0 .06
B	4	0	.10 0
Other			
Group A	3	8	.09 .25
B	7	9	.17 .22
Missing			
Group A	3	[illegible]	.09 .13
B	1	[illegible]	.02 .02

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

Grades 2-6

In order to explore the effect of grade level, separate analyses were conducted for students who were in Kindergarten and first grade. First consider the findings for the students who, across the two years, were in grades 2-6. These data are presented in Table 11.

In regard to classroom context variables, very little change occurred. For the percent time allocated to reading, both groups remained at approximately 50 percent. The percent time allocated to math stayed at about the same level as well, although less than 20 percent. Finally, Group A students exprienced 5 percent less whole group instruction than the year before; Group B received nearly 10 percent more.

Instructional process variables also differed. First, the average number of language changes fell for both groups, to less than 25 per instructional day. In Group A, second year teachers alternated languages more for instructional reasons; in Group B, the average proportion was less for all three functions. Active Teaching ratings increased for Group B teachers, but remained about the same for Group A.

Student variables showed a pattern different from that seen in the overall sample. The engagement rates of both groups increased, and percent time high accuracy remained constant. Second-year levels were very similar: 80 percent engagement and between 55 and 65 percent time high accuracy. Student participation types varied in that, for Group A, Types I and II fell and Types III and VI increased. For Group B, there were practically no changes.

Grade 1

Grade 1 students are those who were in Kindergarten in for Part I of the study. Classroom contexts for them would of course be expected to change quite a bit, and they did. The percent time allocated to reading for those in Group A increased to 63 percent and in Group B to 79. These represented increases of 16 and 29 percentage points, respectively. Percent time allocated to mathematics remained fairly constant, while percent time for whole group instruction dropped 13 percentage points for Group B, and increased 7 for Group A.

Instructional process variables reflected these patterns: The frequency of language changes per day increased for Group A teachers, but fell nearly 50 percent in Group B. The functions of those changes for students in Group A changed in that those for instructional development increased, procedures decreased, and behavior remained the same. In Part II, over half the language alternations made by teachers of Group A students were for instructional purposes; nearly a third were for procedures. For Group B, the average proportion of all three types was reduced. For those students, in the

Table 11

Student Stability: Classroom, Teacher and Student Variables for Years One and Two by Group and for Students in Grades 2-6

Variable		Number of Students		1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]					
Time Allocated to Reading					
Group	A	13		.55	.53
	B	34		.53	.53
Time Allocated to Math					
Group	A	13		.14	.14
	B	34		.16	.18
Whole Group Instruction					
Group	A	13		.39	.34
	B	34		.47	.56
Instructional Process Variables					
Language Changes[b]					
Group	A	13		51	17
	B	34		83	22
Functions of Language Change[c] For Instruction					
Group	A	13		.47	.56
	B	34		.42	.27
Procedures & Directions					
Group	A	13		.35	.31
	B	34		.45	.20
Behavioral Feedback					
Group	A	13		.17	.14
	B	34		.14	.04
Active Teaching Rating[e]					
Group	A	13		4.2	4.1
	B	34		4.4	4.6
Student Variables					
Engagement					
Group	A	13		.72	.79
	B	34		.64	.80
Percent Time High Accuracy[c]					
Group	A	13		.56	.55
	B	34		.64	.65
Participation Type[d]		Year 1	Year 2		
Type I					
Group	A	6	1	.46	.08
	B	8	9	.23	.27
Type II					
Group	A	2	0	.15	0
	B	6	5	.18	.15
Type III					
Group	A	0	3	0	.23
	B	4	4	.12	.12
Type IV					
Group	A	0	0	0	0
	B	2	6	.06	.18
Type V					
Group	A	2	1	.15	.08
	B	4	1	.12	.03
Type VI					
Group	A	0	2	0	.15
	B	2	0	.06	0
Other					
Group	A	2	1	.15	.39
	B	7	3	.21	.24
Missing					
Group	A	1	1	.08	.18
	B	1	1	.03	.03

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

Table 12

Student Stability: Classroom, Teacher and Student Variables for Years One and Two by Group and First Grade Only

Variable	Number of Students		1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]				
Time Allocated to Reading				
Group A	19		.47	.63
B	7		.50	.79
Time Allocated to Math				
Group A	19		.12	.10
B	7		.10	.16
Whole Group Instruction				
Group A	19		.58	.55
B	7		.58	.45
Instructional Process Variables				
Language Changes[b]				
Group A	19		45	55
B	7		88	41
Functions of Language Change[c] For Instruction				
Group A	19		.44	.56
B	7		.54	.43
Procedures & Directions				
Group A	19		.40	.29
B	7		.26	.17
Behavioral Feedback				
Group A	19		.25	.25
B	7		.21	.16
Active Teaching Rating[e]				
Group A	19		4.2	4.4
B	7		3.7	3.3
Student Variables				
Engagement				
Group A	19		.74	.83
B	7		.79	.77
Percent Time High Accuracy[c]				
Group A	19		.40	.66
B	7		.69	.78
Participation Type[d]	Year 1	Year 2		
Type I				
Group A	4	2	.21	.21
B	2	1	.29	.14
Type II				
Group A	1	1	.05	.05
B	2	0	.29	0
Type III				
Group A	4	0	.21	.26
B	0	4	0	.57
Type IV				
Group A	3	1	.16	.05
B	0	1	0	.14
Type V				
Group A	4	2	.21	.11
B	1	0	.14	0
Type VI				
Group A	0	0	0	0
B	2	0	.29	0
Other				
Group A	1	3	.05	.16
B	0	1	0	.14
Missing				
Group A	2	3	.05	.16
B	0	0	0	0

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

second year, about 40 percent were for instruction with less than 20 percent for the other two functions. Active Teaching ratings for Group A were much higher in both years. Not only were Group B teachers rated at less than 3.8 in Part I, but their scores fell 0.4 points in Part II. Group A, on the other hand, increased to 4.4.

Student variables reflected these changes. Engagement and pecent time high accuracy rates both went up for Group A, with percent time high accuracy climbing 26 percent. Group B students increased their percent time high accuracy somewhat. Student participation categories changed very little in Group A; most students were either Type I or III. In Group B, however, the proportion of Type I and II fell considerably.

In Year II, there were no students classified as Type II, but 57 percent in Type III. Overall, we can say that the effect of different experiences in regard to teachers' amount of L1 use was greater for students going from K to 1 compared to those in higher grade levels.

Grades 2-6 with Low OEP

In addition to grade level, students' oral English proficiency (OEP) might also be an important factor. We therefore further divided groups defined by allocated L1 time and grade. In other words, separate analyses were conducted for students in grades 2-6 in Year II with OEP ratings of 1 or 2. While this resulted in a much reduced sample, we considered it worth examining nonetheless. The results of this analysis are presented in Table 13.

In terms of classroom context variables, time allocated to reading remained relatively constant for Group A and increased slightly for Group B. In Part II, both received language arts and reading instruction in over 50 percent of the school day. Time allocated to math showed an almost identical pattern. The proportion of time devoted to whole group instruction, however, increased considerably.

Instructional process variables showed the following patterns of change. While there was a reduction in the frequency of language changes during basic skills instruction for both groups, it was most notable in Group B. The teachers for Group B in Part I made over 100 changes per day, but their teachers in Part I made only 38. The functions of first statements after a language alternation changed also. The proportion made for instructional development purposes increased for Group A, but fell for B.

Measures of ALT increased for both groups. Group A went up 16 percentage points in engagement and 21 in percent high accuracy. Group B, on the other hand, went up 36 percentage points in engagement and only 9 in accuracy. It is important to note that the Part II percentages for the groups are quite close in both areas. The

Table 13

Student Stability: Classroom, Teacher and Student Variables for Years One and Two for Grades 2-6 and OEP Less than or Equal to Two

Variable	Number of Students	1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]			
Time Allocated to Reading			
Group A	5	.55	.57
B	8	.48	.54
Time Allocated to Math			
Group A	5	.12	.13
B	8	.16	.21
Whole Group Instruction			
Group A	5	.34	.55
B	8	.56	.69
Instructional Process Variables			
Language Changes[b]			
Group A	5	61	49
B	8	104	39
Functions of Language Change[c] For Instruction			
Group A	5	.53	.67
B	8	.48	.45
Procedures & Directions			
Group A	5	.33	.19
B	8	.48	.30
Behavioral Feedback			
Group A	5	.14	.14
B	8	.14	.05
Active Teaching Ratings[e]			
Group A	5	4.2	4.1
B	8	4.5	4.5
Student Variables			
Engagement			
Group A	5	.62	.78
B	8	.47	.83
Percent Time High Accuracy[c]			
Group A	5	.45	.66
B	8	.53	.62
Participation Type[d]	Year 1	Year 2	
Type I			
Group A	2	0	.33	0
B	4	0	.13	0
Type II			
Group A	0	0	0	0
B	0	2	0	.25
Type III			
Group A	0	2	0	.40
B	1	0	.13	0
Type IV			
Group A	0	0	0	0
B	0	1	0	.13
Type V			
Group A	2	0	.40	0
B	1	1	.13	.13
Type VI			
Group A	0	1	0	.20
B	0	0	0	0
Other			
Group A	1	2	.20	.40
B	1	3	.13	.38
Missing			
Group A	0	0	0	0
B	1	1	.13	.13

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

percentage of students classified as Type I in instructional participation decreased for both groups, with Group A showing an increase in Type III and B in Type II.

Grade 1 with Low OEP

The subsample of students who were in grade one for Part II of the study and rated as "2" or below in oral English proficiency was also examined separately. Results are given in Table 14.

Classroom context variables showed that percent time allocated to reading went up for Group A, and fell only slightly for B. As a result, both were at very high levels for Part II of the study. Math time remained constant for Group A, but fell 7 percentage points for B. The proportion of time for whole group instruction increased for A up to 66 percent and dropped for B down to 55.

For instructional process variables, Group A had more positive results. First, in regard to language changes, Group A teachers in Part II alternated only an average of 8 times less per day than did their Part I counterparts. Group B, on the other hand, fell an average of 32 changes per day. The functions of these changes showed a similar pattern. In Part II, both groups allocated over 50 percent for purposes of instructional development. Group A teachers, however, made relatively more changes for procedural reasons, and Group B, for behavioral feedback. Active teaching ratings increased considerably for Group A, but fell for Group B.

Student variables showed changes as well. Percent engaged time went up for Group A, but down for B. For the second year, the first graders in Group A were nearly 85 percent of the basic skills time. Percent time high accuracy went up for both groups, especially for those students in group B. For Part II, Group A performed with high accuracy over 60 percent of the time, and Group B, over 75. So, while Group A students were engaged more in Part II, Group B students spent more of their time at high accuracy. Differences in student participation emerged as well. In Group A, the number of student categorized as Type I and Type V increased, while in Group B, Types III and IV went up.

Grades 2-6 with High OEP

Several of the target students in the upper grades were rated as relatively high in oral English proficiency. The results of the analysis of this subgroup are contained in Table 15.

For both Group A and Group B, the average proportion of the school day allocated to reading and language arts instruction fell to slightly over half the time. Time allocated to math remained relatively constant for the two groups. The proportion of time for whole group instruction increased for both, and to about the same degree.

Table 14

Student Stability: Classroom, Teacher and Student Variables for Years One and Two for First Grade and OEP Less than or Equal to Two

Variable	Number of Students		1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]				
Time Allocated to Reading				
Group A	12		.40	.64
B	3		.80	.72
Time Allocated to Math				
Group A	12		.10	.11
B	3		.17	.10
Whole Group Instruction				
Group A	12		.49	.66
B	3		.68	.55
Instructional Process Variables				
Language Changes[b]				
Group A	12		53	45
B	3		83	50
Functions of Language Change[c] For Instruction				
Group A	12		.40	.54
B	3		.45	.50
Procedures & Directions				
Group A	12		.43	.35
B	3		.32	.19
Behavioral Feedback				
Group A	12		.20	.24
B	3		.24	32
Active Teaching Rating[e]				
Group A	12		4.3	4.6
B	3		4.1	4.0
Student Variables				
Engagement				
Group A	12		.77	.84
B	3		.79	.74
Percent Time High Accuracy[c]				
Group A	12		.50	.63
B	3		.54	.78
Participation Type[d]	Year 1	Year 2		
Type I				
Group A	3	4	.25	.33
B	1	1	.33	.33
Type II				
Group A	4	0	.33	0
B	0	0	0	0
Type III				
Group A	0	2	.33	.17
B	0	1	0	.33
Type IV				
Group A	2	0	.17	0
B	0	1	0	.33
Type V				
Group A	1	2	.08	.17
B	1	0	.33	0
Type VI				
Group A	0	0	0	0
B	1	0	.33	0
Other				
Group A	0	2	0	.17
B	0	0	0	0
Missing				
Group A	2	2	.17	.17
B	0	0	0	0

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

62

Table 15

Student Stability: Classroom, Teacher and Student Variables for Years One and Two for Grade 2-6 and OEP Greater than or Equal to Three

Variable	Number of Students		1980-81 School Year	1981-82 School Year
Classroom Context Variables[a]				
Time Allocated to Reading				
Group A	7		.58	.51
B	13		.57	.54
Time Allocated to Math				
Group A	7		.17	.14
B	13		.17	.18
Whole Group Instruction				
Group A	7		.42	.63
B	13		.40	.59
Instructional Process Variables				
Language Changes[b]				
Group A			51	87
B			31	54
Functions of Language Change[c]				
For Instruction				
Group A	7		.47	.45
B	13		.41	.39
Procedures & Directions				
Group A	7		.32	.36
B	13		.46	.22
Behavioral Feedback				
Group A	7		.21	.19
B	13		.13	.11
Active Teaching Rating[e]				
Group A	7		4.2	3.7
B	13		4.6	4.3
Student Variables				
Engagement				
Group A	7		.76	.79
B	13		.82	.85
Percent Time High Accuracy[c]				
Group A	7		.58	.47
B	13		.79	.67
Participation Type[d]	Year 1	Year 2		
Type I				
Group A	4	1	.57	.14
B	2	6	.15	.46
Type II				
Group A	2	0	.29	0
B	3	1	.23	.08
Type III				
Group A	0	1	0	.14
B	1	1	.08	.08
Type IV				
Group A	0	0	0	0
B	1	3	.08	.23
Type V				
Group A	0	1	0	0
B	3	0	.23	.14
Type VI				
Group A	0	1	0	.14
B	1	0	.08	0
Other				
Group A	0	2	0	.29
B	2	2	.15	.15
Missing				
Group A	0	1	.14	.14
B	1	0	0	0

[a] proportion of school day
[b] frequency during basic skills
[c] proportion during basic skills
[d] proportion of target students
[e] average on 5 point scale

63

For the variables associated with instructional process, the major difference was in the frequency of language changes. In Group A, Part II teachers used an average of 36 more per basic skills day. Group B teachers used 16 fewer on the average. In regard to function, there was little change in the proportion of these used for instructional development or behavioral feedback. The proportion allocated to procedures and directions fell for Group B, while for Group A they increased. Active teaching ratings fell for both groups, especially for Group A, which rated only 3.7 in Part II.

Student variables behaved similarly across the two groups. Both remained high in engagement but dropped in percent high accuracy. Engagement rates were particularly high, at approximately 80 percent. While the percent time high accuracy decreased for both groups, for Group B the rate in Part II was 20 percentage points higher. For student participation, Group A went up in Types III, V, and VI; Group B increased in I and IV.

Summary

In this chapter, the sample for the substudy was partitioned on the basis of the percent of time teachers used the students' first language during basic skills instruction. In this way, we were able to make comparisons between the experiences of students who had a stable environment in terms of L1 use with those who did not. Because Kindergarten is presumably of differential quality from later schooling, the sample was further divided by grade level.

Classroom Context

Teachers' use of L1 appeared to be unrelated to classroom context, except for the very limited English proficient students in Kindergarten-first grade. For those students who had an OEP rating of 2 or less, a decline in L1 usage was coupled with a reduction in percent time allocated to reading, math, and whole group instruction. The context was stable, and even increased, for students who had more instruction in their own language.

Instructional Process

With the exception of the frequency of language changes per basic skills day, instructional process variables were generally stable from Year I to II. The exception was in the Kindergarten-Grade 1 group. For those students with consistency in teachers' use of L1 (A), the number increased; for their counterparts who experienced a drop in teachers' L1 use (B), the number declined. The low OEP Group A experienced some decline, but Group B's was much larger. Other variables related to instructional process were relatively stable for all groups.

Student Variables

With one exception, all groups defined by teachers' use of L1 and grade level maintained or increased engagement. The exception, low OEP first grade students in Group B, were engaged a smaller percentage of the time in Part II. This suggests that for those limited English proficient students who had less experience in successful bilingual classrooms, a decline in the teacher's use of their language can affect the proportion of time they spend on task. Percent time at high accuracy, on the other hand, remained about the same for all groups.

CHAPTER FIVE

QUALITATIVE ANALYSIS FOR INTEGRATION OF ENGLISH LANGUAGE DEVELOPMENT WITH BASIC SKILLS INSTRUCTION AND USE OF CULTURAL INFORMATION IN INSTRUCTION

The first question asked in Substudy II-B concerned classroom context and instructional process in the target students' classrooms in Part I and Part II. Analyses described in previous chapters examined a variety of relevant variables and indicated the degree to which Part II classrooms in the sample exhibited the instructional features identified and described in Part I. The instructional process variables considered in those analyses provided information on the second and third features, i.e., presence of active teaching behaviors and teachers' use of L1 and L2 in instruction. In this chapter we present information on the fourth and fifth features, i.e., teachers' integration of English language development with instruction in basic skills and use of cultural information in instruction. Results were derived from a qualitative analysis of teacher interviews and descriptive protocols developed from classroom observations in Part II.

Data Sources

Curriculum Interviews

Extended open-ended interviews were conducted with teachers at the beginning of Part I and Part II. These focused on a number of topics, including the design and rationale for the curriculum, instructional procedures followed by the teacher, and the teacher's perceptions and understandings of bilingual education.

In open-ended interviewing, the interviewer followed a topical scenario comprised of the essential topic areas to be covered, rather than a prescribed series of questions. Conscious of the kinds of information needed, the interviewer was free to pose questions, modify wording, and probe as necessary. So, while the structure of individual interviews varied, the procedure provided a most effective way of getting detailed information on crucial topics.

Descriptive Protocols

Descriptive protocols are narrative records of events occurring during an observation period. Positioned unobtrusively (but strategically) in the classroom, the data collector takes extensive notes

and develops descriptions of ongoing events. The purpose of the observation is to record as much important information about the teacher and/or students as possible; however, it is clearly impossible to record everything that happens, so some criteria for selection are necessary. These focus the observer's attention and guide the data collection.

During Part II of the study, teacher protocols were to provide an event-by-event account of how the teacher presented instruction. Observers concentrated on two broad areas of instructional behavior, i.e., instructional management and delivery, and use of language and culture. More specifically, these included: the presentation of information; maintenance of engagement; monitoring of students' learning; providing academic feedback; development of students' language; use of two languages in instruction, and use of/response to the students' culture.

Methods

For the analysis, two procedures were followed. First, a Teacher Analysis session was held at each site subsequent to data collection in each year of the study. In this meeting, participating teachers read and discussed their interviews and protocols. They focused on a number of areas; among them were the instructional features identified in Part I of the study. From this meeting, site project directors prepared written summaries of the teachers' analyses and comments during the meeting. Project staff then read through these reports and selected the most relevant and useful information. Second, project staff read through the teachers' curriculum interviews and protocols, seeking descriptions of events in which the instructional features were exemplified. The special focus of this second procedure was to identify instances in which teachers either integrated English language development with basic skills instruction or used cultural information in instruction.

Integration of English Language Development in Instruction

Findings from the Teacher Analysis sessions and project staff analysis of teachers' interviews and protocols revealed that, by and large, all teachers in the sample integrated English language development with basic skills instruction to some degree. Given the qualitative nature of the analysis, and the fact that a limited number of protocols were developed for any one teacher, this section emphasizes the presence of integration and how it was done, rather than a frequency of occurrence or comparison of teachers by site or group.

Pronunciation. There was evidence that several of the teachers integrated work on English language pronunciation with regular classwork. In some instances, teachers took into account informal contrastive analyses between the students' language and English and focused on points of possible interference. For example, one of the Navajo

teachers instructed students in the pronunciation of particular consonant clusters (e.g., sk) when they occurred in the vocabulary. At Site 5, one teacher took time out to demonstrate and explain how to produce v and w. "Put your lips between your teeth," she said, and then asked the students to repeat several words beginning with the letter v.

Because Chinese speakers often drop final consonants, several teachers at the California site concentrated on this point also. When a student mispronounced the word "egg," the teacher modeled the pronunciation and told him to repeat: "An egg. Say 'eggga,'" stressing the final g.

Insistence on complete sentences. Teachers also insisted on complete sentences when students gave an oral response. At Site 1, for example, a student called out an answer to a question about the reading passage, "Twelve." The teacher repeated his response, but then said, "He is twelve years old," which the student recited after her. A similar incident was recorded at Site 5 when the teacher modeled a complete sentence for a student who was having difficulty saying more than a word at a time.

Vocabulary development. Teachers also concentrated on English language vocabulary development. This was often done in connection with attention to student understanding, and involved providing definitions in both L1 and in English. At Site 4, for example, one teacher was observed to interrupt spelling drills to insure that students understood the meaning of the words they spelled. In other cases, teachers employed standard ESL techniques for this purpose, as at Site 5 where a teacher used pattern drills. Students shouted in chorus: "You were a doctor! He was a doctor! She was a doctor! They were a doctor!" The teacher asked, "Did you say 'They were a doctor'? They were doctors!"

Usage. Word usage was also a consideration of teachers. For instance, a teacher in San Francisco interrupted a reading lesson to remind students of the uses of "both" and "all." Another example comes from the New York site, where a student told his teacher, "I don't got a book." "You don't have a book," she corrected. "I don't have a book," he said.

Intonation. In some classes, intonation was a focus as well. This was particularly true at the Navajo site, since Navajo is a tonal language. There, teachers stressed intonation and contrasted various patterns to develop listening discrimination.

In these various ways, teachers were observed to integrate language development with instruction in basic skills. That evidence of this was found in each of the classes in the sample suggests stability for this instructional feature across the two years.

Use of Cultural Information in Instruction

Both in their interviews and in the Teacher Analysis sessions, teachers indicated they felt it important to use and be aware of elements of the studerts' culture. This was borne out in their protocols, where examples of the use of cultural knowledge and sensitivity were found. In this section, several of these examples are provided. However, as with the integration of English language development in instruction, the emphasis is on the presence of the instructional feature rather than its frequency of occurrence across different classrooms.

In a classroom in New York, students began to call out answers, and the teacher raised her voice, staring at one boy in particular. She spoke to him sternly in Spanish, "Sit up straight! Sit correctly like a macho." Since this teacher was from Puerto Rico, she was aware that, for the student, macho does not carry the negative connotations it does for North Americans. The Latin notion of machismo is something he strives for. Through her knowledge, the teacher was able to appeal to his own sense of self-respect.

At the Navajo site, senstivity to cultural norms appeared to be an important factor. Teachers mentioned, for example, that an uninformed or insensitive teacher might misinterpret culturally based student behaviors. Ir Navajo healing ceremonies called "sings," for instance, childrens' faces are painted and must rema n that way for four days. Under th se circumstances, teachers must know not to ask questions or force them to wash.

Repeated questioning or probing is considered rude in Navajo culture. Nor should one be singled out or made a public example. Teachers thus tended to question whole groups rather than individuals, allowing students to claim turns themselves. Sometimes teachers appealed to a third party. Not once, in any of the classrooms, was a child publicly shamed or reprimanded. When misbehaving, the child was taken aside or out into the hall for a private conference with the teacher.

Teachers at all sites made use of cultural referents. In a Chinese classroom, for example, a teacher explained the word "stilts" by referring to Chinese New Year celebrations. The co: ept of "face" was also used In one instance, a student raised her hand, but was unable to answer when called on. The teacher commented to her in Chinese, "If you don't know the answer and raise your hand, you lose face!"

Teachers' knowledge of the contrasts between the students' language and English also proved useful. In a mathematics class, for instance, the Chinese teacher explained differences between English and Chinese numbers in order to avoid later confusion. In Chinese, the one word for "ten thousand" is used as a unit; one "million," for example, is expressed as "hundred ten thousand."

Teachers in the Substudy II-B sample were found to use cultural information in instruction and to exhibit a sensitivity to aspects of the students' culture. In the Teacher Analysis meetings, teachers expressed a belief in the importance of using cultural referents.

CHAPTER SIX

SUMMARY AND CONCLUSION

This study examined the experiences of a sample of limited English proficient students over a two year period. Eighty-five target students from five nationally distributed sites in Part I of the SBIF descriptive study were identified and followed into their classes in the second year of the study. To estimate the stability of classroom context, instructional process, and student performance, various types of observational data were collected in both years.

Two questions quided the research: (1) What were the educational experiences of the target students in the two years? What were their classrooms like in terms of classroom context and instructional process variables? (2) Did students' engagement and/or participation vary with the charateristics of the particular classrooms to which they were assigned?

Data were analyzed from two perspectives. First, frequency distributions were calculated and examined for the overall sample and at the site level. Next, students were divided into four groups on the basis of the proportion of L1 used by teachers in basic skills instruction: (1) relatively high proportion in both years; (2) high in the first year, but low in the second; (3) low in the first year, but high in the second; and (4) low in both years. The first group, which represented exposure to a relatively consistent use of L1, and the second group, which represented a reduced use of L1 across years, were examined in detail.

In the first analysis, classroom context variables appeared to be relatively stable across Parts I and II. The proportion of time allocated to reading either remained the same or increased; it accounted for more than half the school day at all sites. Time for math stayed about about the same, between approximately 15 and 20 percent. The proportion of time for whole group instruction seemed also to be stable, although at the Navajo (4) and Chinese (5) sites, the overall time was relatively less.

Instructional process variables were less stable. The proportion of basic skills time allocated to L1, for example, showed a decline at all but one site. Since regular classrooms and ESL teachers were added to the sample in the second year, this was to be expected. The functions of language changes showed a trend toward instruction and away from directions or behavioral feedback. Despite the drop in L1 use, Active Teaching ratings showed a general increase.

Student performance variables appeared to be stable. Both percent time engaged and percent time high accuracy either remained

about the same or went up. The proportion of students classified by participation types changed somewhat. The proportion of Types I, III, and IV increased, while II, V, and VI declined.

In the second analysis, comparisons were made between the experiences of students who had exposure to consistently high L1 use and those whose Part II teachers used considerably less. Grade level and oral English proficiency were also included as variables. For most students, classroom context variables appeared to be unrelated to the teachers' use of L1. For Kindergarten-first grade students with low oral English proficiency, however, there was a concomitant reduction in the proportion of time allocated to reading, math, and whole group instruction, with a reduction of L1 use. Instructional process variables showed a relatively stable pattern for all students, with one exception. For first grade students, the average frequency of language changes increased or decreased along with the proportion of L1 use. Finally, the low OEP first grade students assigned to classes with less L1 use were also the only group to show a reduction in the proportion of time engaged. Percent time high accuracy, on the other hand, remained relatively constant, regardless of L1 use.

In Part I of the SBIF descriptive study, five bilingual instructional features were identified and described. Substudy II-B provided some information on the presence of four of those features in a somewhat different sample of classes. The second and third features concerned the use of active teaching behaviors in instruction and teachers' use of L1 and L2 in instruction. In this study, the consistently high ratings of Active Teaching suggest that teachers in Part II also exhibited these behaviors. While the overall proportion of L1 used in the classes declined, it is also the case that in some of the added classrooms, teachers spoke only English. For those who did use L1, they once again more often changed languages for instructional rather than behavioral purposes. In Chapter Five, we considered the fourth and fifth features, i.e., teachers' intergration of English language development in basic skills instruction and the use of cultural referents. These too, appear to have shown some stability across the two years of the study.

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