PERCEPTIONS ON THE IMPACT OF K-5 MANDARIN FOREIGN LANGUAGE INSTRUCTION ON STUDENTS' ACADEMIC, ATTITUDINAL, AND COGNITIVE DEVELOPMENT

A Dissertation submitted in partial fulfillment of the requirements for the Doctor of Education Degree in Educational Leadership

by

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DEDICATION

This dissertation is dedicated to my parents, Rómulo and Happy, for giving me the gift of acquiring many languages and learning about different peoples from an early age, and for their unconditional love and enduring support.

It is from them that I learned, and continue to discover, the most valuable lessons in life.
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ABSTRACT

PERCEPTIONS ON THE IMPACT OF K-5 MANDARIN FOREIGN LANGUAGE INSTRUCTION ON STUDENTS' ACADEMIC, ATTITUDINAL, AND COGNITIVE DEVELOPMENT

by

William David Chang

Doctor of Education Degree

in Educational Leadership

The purpose of this qualitative research study on two elementary Mandarin foreign language programs in a large urban school district is threefold: (1) to develop an improved understanding of existing research on elementary school foreign language programs; (2) to examine two Mandarin world language programs at two elementary schools in order to understand their instructional practices; and (3) to explore the perceptions and attitudes held by administrators, teachers, and parents involved in the two programs regarding the impact Mandarin instruction has on students' academic, attitudinal, and cognitive development. This dissertation study focused on interviews conducted with school site administrators, teachers, and parents, as well as, classroom observations, and a review of collected program documents. The study found that
elementary schools can choose from several types of program models for foreign language instruction documented in research literature. Additionally, the study found a wide array of instructional practices specific to each Mandarin program. Lastly, this research indicates study showed that, while administrators', teachers', and parents' perceptions and attitudes varied, they were unanimous in their belief that the attitudinal impact on students was most evident, and that more time is required to provide concrete evidence of positive impact on students' academic and cognitive development.
CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

The National Research Council (2007) points out that the American education system's lack of proper emphasis on developing students' ability to understand and study other languages and cultures of the world puts our citizenry at a critical disadvantage to compete in the increasingly complex and interconnected global economy of the 21st century. In response to this and similar warnings, some schools have created opportunities for students to start to develop linguistic and cultural proficiencies in world languages other than English that are predicted to be of critical need in the foreseeable future.

The majority of American public school students have limited opportunities to study world languages other than English and other cultures during their K-12 academic experience. When such opportunities are offered, world languages and cultures (also known as "foreign language") programs typically begin only in ninth grade or beyond. Moreover, fewer and fewer students are choosing to learn languages that are categorized as "less commonly taught languages" in the United States, such as Arabic, Mandarin, or Russian. These languages and cultures, while less commonly taught with respect to Spanish and French in the United States, are essential to meeting the changing demands of the 21st Century (National Research Council, 2007). Opportunities to learn about other languages and cultures are lacking, particularly in many low-income, minority, and urban school districts, where there may be a strong, but narrowly-focused, emphasis in
helping the student population achieve primarily in the core content areas of English language arts and mathematics (Committee for Economic Development, 2006).

For these reasons, it becomes imperative that educational research be carried out in order to add to the body of knowledge regarding the ways in which world languages and cultures programs can be successfully implemented and put into practice at various grade levels in the United States. The issue of starting the study of languages and cultures other than the student's own at an earlier stage than ninth grade is particularly relevant to educational leaders and practitioners in elementary and middle schools, as younger students are in more malleable stages of linguistic and cognitive development (Curtain & Dahlberg, 2010). The purpose of this research study is to document and describe the implementation of two Mandarin Chinese world language programs in a large urban school district. More specifically, this study examines the ways by which two elementary schools began to put their Mandarin programs into practice and analyzes the perceptions held by teachers, administrators, and parents about the impact that their Mandarin programs have on students' academic, attitudinal, and cognitive development.

Mandarin, in the present study, refers to modern standard Chinese. It is also referred to as guó yu, pu tong hua, hàn yǔ, or hua yu by Chinese-speakers (Coblin, 2000; Kane, 2006; Weber, 1997). Mandarin is the official language of the People's Republic of China and Taiwan (aka the Republic of China). It is also one of the four official languages of Singapore (along with English, Mayal, and Tamil), and one of the six official languages of the United Nations, with Arabic, English, French, Russian, and Spanish. Mandarin is also widely used in nations in and outside of Asia, and is spoken by 1.12 billion people either as a primary or second language (Kane, 2006; Weber, 1997).
While Cantonese Chinese was the more prevalent dialect used by overseas Chinese communities from the exodus of Chinese from seafaring ports in Canton and Amoy since the mid-nineteenth century, a majority of today's waves of Chinese immigrant communities may be characterized by their use of standard Mandarin (Chang, 1968). The study of Mandarin outside of China as a global language of business and international relations—as well as a heritage language for an increasing number of immigrant families—has replaced Cantonese in many overseas Chinese communities as the default Chinese dialect.

**Purpose and Significance**

The purpose of this qualitative study is to accomplish three research goals. First, this study seeks to develop an improved understanding of existing research on Foreign Language Programs in Elementary Education. Currently there is a wide variety of foreign language programs with specific foci and a variety of instructional objectives. Gladys Lipton (2010) uses the umbrella term FLES* (Foreign Language in Elementary School, commonly pronounced “FLES-star”) to include several instructional models spanning from foreign language exploration to foreign language study and foreign language immersion programs for grades kindergarten through eighth. Second, this study will examine two Mandarin elementary school programs in a large urban K-12 school district in order to better understand the instructional practices that are exercised in classrooms. Third, this study aims to explore what perceptions are held by administrators, teachers, and parents of the program’s impact on students’ academic, attitudinal, and cognitive development.
This study is significant as the body of research literature documenting the establishment and implementation of Mandarin language and culture programs at the elementary school level is still developing. Moreover, much of the research available is largely based on studies about world languages and cultures programs in Spanish, French, and German (Curtain & Dahlberg, 2010). At the same time, there is a nationwide surge of interest in Mandarin instructional programs by school districts and the communities that they serve. The increased public interest is likely a response in recognition of China's emergence as a critical and dominant player in the global economy and geopolitical arena. Furthermore, this study seeks to provide qualitative information to other practitioners wishing to implement Mandarin language and culture programs in the United States by carefully documenting and analyzing the approaches adopted by the two study schools to establish and implement the Mandarin programs that now exist at their sites.

This study has added significance because the Mandarin programs which were studied were both unique new programs with the purpose of teaching Mandarin language and Chinese culture to a majority of students who were not of Chinese heritage or from Mandarin-speaking households. Some Mandarin programs are considered to be heritage language programs because they are designed and implemented for students who come from Mandarin-speaking families or who share Chinese heritage, to further develop their ability to use Mandarin language and their knowledge of Chinese cultural practices and products. However, the Mandarin programs that were the subject of this dissertation seek to promote the benefits of learning Mandarin language and Chinese culture to a wider audience. In point of fact, both study schools have student demographics characterized
by a majority of students who are from Hispanic and African-American families, who have not had prior formal learning experiences in Mandarin language or Chinese culture. This demographic composition at the two school sites reflects the overall demographics of their school district.

The study was conducted primarily as a case study analysis following the ethnographic framework of research. The primary data collected were in the form of (a) interviews conducted with site administrators, (b) interviews conducted with teachers in the Mandarin program, and (c) interviews with parents of students participating in Mandarin instruction. Additional data included observations of classroom practice in the Mandarin programs, as well as a review of documents related to the implementation of each site's Mandarin program.

**Problem Statement**

This study seeks to address the problem of limited opportunities for students in U.S. public schools to acquire languages other than English, particularly Mandarin, in the elementary grades in the district where this study was conducted (Committee for Economic Development, 2006; National Research Council, 2007). While the district where the study took place had some elementary program models with varying levels of success in which a language other than English was used for instruction, such as two-way bilingual immersion, early-exit, and late-exit bilingual programs, these are either limited to specific populations (such as English learners, or in the case of two-way bilingual immersion programs, English learners who are proficient in the target language) or have limited bilingual development goals that can only be described as subtractive bilingualism, as in the case of early-exit or late-exit programs (Cloud, Genesee, &
Hamayan, 2000). During the time, (and in the district where this study was conducted) only three elementary schools offered Mandarin instruction. This study identifies the lack of articulation among elementary, middle, and high school program as a problem that decreases student's opportunities to fully achieve high levels of proficiency in a language other than English, by limiting or breaking up the typical study sequence for world languages other than English to less than four years, and mainly at the high school level. This study intends to offer options for schools to establish and implement additive programs that support acquisition of languages other than English for all students.

The climate for bilingual education in California established by a post-Proposition 277 electorate created a hostile environment for programs that sought to develop acquisition of languages other than English, particularly at the elementary school level in the district where this study was conducted, where a large number of students come to school still developing literacy skills in English. So-called “bilingual programs”, such as the early- and late-exit models, became only nominal as their objectives were to use the student’s home language to develop proficiency in English as a second language without regard for the maintenance of the home language during the process or after English proficiency was achieved. Students who “succeeded” through these “bilingual programs” became proficient in English at the cost of their home language. Hence, early- and late-exit bilingual programs are considered “subtractive” in nature because, given the opportunity to add English to the home language, they focus only on English and, in a sense, “take away” the student’s potential to fully develop proficiency in their home language. Only a few bilingual programs adopted a two-way bilingual immersion model (aka, dual language immersion), a highly structured model of implementation that seeks
to develop proficiency in both English and a language other than English (aka, “target language”). Like most elementary schools, the large majority of middle school programs followed the movement towards “English-only” instruction and focused on English language arts and mathematics, with world languages other than English only offered in a limited number of middle schools as introductory-level elective courses.

The absence of foreign language programs at the elementary and middle school levels relegated the responsibility of teaching world languages other than English to senior high schools, with the first year of world language instruction (e.g., Spanish 1) beginning in ninth grade. Not only did starting the study sequence so late in a student’s K-12 experience limit students to a maximum of four years of study of world languages and cultures, but it also ignored the opportunities students have to more naturally acquire language skills and cultural knowledge during the elementary and middle school years. It is during the earlier and more formative years in the K-8 study sequence when the second language acquisition process may be accomplished in a way that more closely mimics how the first language is absorbed and acquired naturally by human beings. Furthermore, instruction at the high school tends to be much more formal, with an emphasis on learning the rules, conventions, and structure of the language, rather than practicing the various uses of language in order to communicate and developing an understanding of the cultural practices and products of the people who speak the language.

Ten different languages are offered at the majority of senior high schools in the school district where the study took place, but most were of Western European languages, with Spanish and French courses dominating the curricular landscape. Critical-need languages, such as Arabic, Chinese, and Russian, are offered in relatively
few schools. The lack of articulation among elementary, middle, and high school programs further compounds the problem of how to establish well-articulated and effective pathways for an extended sequence of study of world languages other than English.

As mentioned previously, two-way bilingual immersion (TWBI) programs were an exception that offered hope for developing proficiency in a language other than English in the district where the research was conducted. In this school district, Mandarin was just beginning to be offered as a two-way bilingual immersion program in a small number of schools. Schools implementing TWBI programs in the district where this study took place follow specific guidelines. TWBI schools must submit an application form to the district office indicating that there has been about a year or two of planning time to consider and address elements that define successful programs, including communication with the school community to secure buy-in and commitment to the program over at least five or six years, roughly the amount of time it takes for the first kindergarten class to exit the elementary program in grade five. Schools wishing to establish TWBI programs must begin with kindergarten and add one grade every year. Schools must also form classes composed of English speakers wishing to learn the language other than English (the “target language”) and English learners who are proficient in the target language, in an ideal 50:50 ratio, not to exceed 70:30 in either group. This means that most TWBI schools are able to offer one or two classes per grade level that meets this class composition criterion, creating a TWBI “track” or what some might describe as “a school within a school”. Often, schools have to ramp up recruitment
efforts to maintain this ratio between English speakers and English learners who are proficient in the target language.

A key feature of two-way bilingual immersion program is that students are developing language and standards-based core academic content equally in English and in the target language. Instruction in TWBI programs is provided in both English and in the target language for all content areas. While the goal is to have equal time between instruction in English and the target language by fourth and fifth grade, many programs begin with an intensive dose of instruction in the target language (approximately 90% of the time, including literacy instruction) in kindergarten, with gradual increases in dosage of instruction in English with each passing grade. Student achievement in TWBI programs in the district where this study took place is generally positive. Despite the proven success of TWBI program models nationwide and the increasing popularity of, and demand for, TWBI programs locally, not all schools are able to meet the classroom composition requirements or at times sustain the commitment to growing a content-based academic program in two languages over the course of at least six years.

The school district in this study also has some schools with vestigial “bilingual programs”. While the term “bilingual” is used in the name, the target for these so-called bilingual programs is to help students with limited English proficiency achieve proficiency in English by capitalizing on skills such students may already have (or may be more readily developed) in their first language. These programs are known as “early exit” or “late exit” programs, depending on when it is determined that students have achieved sufficient proficiency in English in order to be reclassified as a fluent English speaker and programmed into mainstream English instruction. Typically, programs that
reclassify students before grade 3 are considered early exit, and programs that reclassify students in grade 4 or beyond are considered late exit. In either early exit or late exit programs, the objective is to achieve proficiency in English and reclassification from “English learner” to “English proficient”. Consequently, there are no goals or prescribed actions to develop or to maintain the student’s home language in order to achieve bilingualism or biliteracy.

While Mandarin is rapidly emerging as an option for the study in elementary schools in California as well as in other states, the school district in this study was just beginning to add Mandarin instructional programs. Aside from a handful of world languages pilot programs (including two-way bilingual immersion programs) in the elementary grades, Mandarin, in the school district where this study was conducted, is most typically offered at the high school level. With the addition of the public school choice movement and school innovation initiatives, there were two potential K-12 articulation pathways that created opportunities for students to study Mandarin from kindergarten all the way through high school. Other schools that offer Mandarin do so without the benefit of articulation from kindergarten through twelfth grade. The District where this research was conducted passed a motion that called for the district to provide all its students with the opportunity to study a language other than English for six to eight years of continuous study, beginning in the elementary grades, in order to achieve high level of proficiency in a language other than English. This motion implies and requires the establishment of articulated K-12 feeder pathways for the study of world languages.

Therefore, in order to better understand issues raised by the recent world languages motion, this study examined how two world languages programs were
implemented at the elementary school level. The study sought to address the question on what options, in addition to basic bilingual and two-way bilingual immersion models, exist to help schools provide students with pathways to bilingualism and/or biliteracy in English and in a language other than English. The study also intended to document how schools establish and implement effective programs. Moreover, this study aimed to identify effective practices from research and professional literature. This study collected data through review of documents related to program implementation, observation of classroom practice, and interviews to probe perceptions held by various stakeholder groups about the impact that such programs have on their students. The study specifically investigated what Mandarin instruction looks like in the participating elementary schools to reveal issues and dilemmas regarding the implementation of a world languages and cultures program that administrators, teachers, and parents may face in the current academic climate. The study did so to facilitate improved understanding regarding how foreign language programs begin to be implemented at school sites and how a system may be established for future implementation.

**Research Questions**

The following research questions presented served to guide the inquiry in this study. The first, second, and fourth research questions examined the characteristics of effective foreign language models in an elementary school setting in order to discover key considerations that school districts and school sites can utilize for establishment and implementation of new Mandarin programs. Furthermore, this study investigated the impact on students’ learning that foreign language instruction has within an elementary school setting. The third research question probed the perceptions, including attitudes and
beliefs, on the impact of the respective Mandarin programs held by administrators, teachers, and parents of the students participating in the Mandarin programs. This question sought to find out what program characteristics are valued by each of these stakeholder groups so that practitioners wishing to establish and implement new programs may benefit from the research by addressing these characteristics in the planning stages. This research data can serve to inform practitioners interested in future implementation on the impact the programs are having on administrators’, teachers’, and parents’ attitudes toward world language instruction. Thus, the information can further inform program design and implementation that is more closely matched with local wants and needs.

The research questions (RQ) are presented below:

1. What is known in the research about Foreign Language in Elementary School (FLES) programs?

2. What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?

3. What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students academic, attitudinal, and cognitive development?

4. What does classroom practice in these two K-5 Mandarin programs look like?

In order to answer the posed research questions, this dissertation study analyzed various aspects directly connected to the research questions driving this inquiry. For instance, the study examined the processes used to start and implement the programs at
each school site to include essential considerations in the planning or start-up process. It also analyzed challenges faced during the program start-up and examined the documents used in the planning process. This study also identified key players and what were their roles in making the programs happen.

Through interviews with school administrators, teachers of Mandarin, and parents, this dissertation also sought to uncover what perceptions each of these stakeholders held regarding the impact of Mandarin instruction on students' academic achievement, their attitudes towards learning languages, cultures, and people, and their cognitive abilities. The study sought to draw from these interviews any perceived benefits to the community or any perceived drawbacks from participating in the FLES program. The interviews also sought to describe the perceived level of commitment from teachers and administrators to continue to implement Mandarin elementary programs.

Using data collected from classroom observations, this study identified strategies used by teachers of Mandarin to make Mandarin language input comprehensible to students learning Mandarin as a foreign language. Attention also turned to strategies that teachers use to lower students' affective filter and to promote the learning of a language that may be perceived as difficult and extremely different from English (and hence extremely difficult to learn). The study documented and described the quality of interactions between teacher and student, as well as how students interact among themselves during structured Mandarin instructional time. In looking at teacher practices, the study sought to answer the question, "what does good instruction in Mandarin as a foreign language for elementary students look like?" Through classroom observations and interviews with school staff, the study documented what content was
being taught in the FLES program, how such content was determined, by who, and what
materials, including technology and other non-print materials, were being used to support
the delivery of instruction.

**Definition of Terms**

**Basic Bilingual Program** – A program that uses English and the student’s home language
for instruction, but with the goal of developing proficiency in English. Also known as a
transitional bilingual program.

**Bilingual Program: Early Exit** – A program that uses English and the student’s home
language for instruction, with the goal of developing proficiency in English by the time
the student completes grade 3.

**Bilingual Program: Late Exit** – A program that uses English and the student’s home
language for instruction, with the goal of developing proficiency in English by the time
the student completes grade 5.

**Cultural practices** – Behaviors of members of a particular group.

**Cultural products** – Tangible and intangible items created by members of a particular
group.

**Cultural perspectives** – Beliefs held by members of a particular group.

**FLES** – Foreign Language in the Elementary School programs, sometimes used as an
umbrella term to include various programs of world language instruction in grades K
through 8. As a specific program model, FLES calls for a minimum of 70 minutes a
week of instruction in world languages and cultures, with the goal of developing
proficiency in language and culture.
**FLEX** – Foreign Language Experience programs are elementary school programs that expose students to the study of language or languages and cultures in order to motivate them for further studies.

**Functional Proficiency** – The ability to carry out tasks with language. May be receptive (listening, reading, and viewing), or productive (speaking, writing, and signing).

**Heritage Learner** – A student who has acquired any level of proficiency in a language used at home.

**Pinyin** (aka *Hanyu pinyin*). The official system of transcribing Chinese characters using the Roman alphabet. It is widely used in China and also in Malaysia, Singapore, and Taiwan to spell out Chinese names in western publications, to input Chinese characters into computers, and also to teach Mandarin.

**Target Language** – The language that a learner intends to acquire. For English-speakers, the target language may be any language other than English.

**Total Physical Response (TPR)** – A teaching technique whereby a learner uses body movement to respond to language input.

**Two-Way Bilingual Immersion** – A program in which the target language is used to teach at least fifty percent of the core curriculum in the target language, with the goal to develop academic proficiency in English and in the target language. Two-Way Bilingual Immersion programs also require a classroom composition of English speakers and English learners who are proficient in the target language, ranging from 50:50 to 70:30.

**World Languages** – The term that is now used in increasing frequency in lieu of “foreign languages”. Its use supports the belief that languages are not foreign but rather are languages other than English.
Overview of Methodology

This study used an ethnographic approach to seek to understand the new Mandarin programs as distinct cultures to be studied. In this approach, the researcher sought to build an "insider's" understanding of the culture by observing and interacting with members of the culture being examined. This was a case study on how two schools in a large, urban school district implemented new Mandarin foreign language programs for grades K-5.

The research settings were at these two schools. Both were urban schools with predominantly Hispanic and African-American students but are located in two different parts of an large urban school district. One of the schools was a small K-6 school while the other is a small K-5 school. Both Mandarin programs initially resembled regular day Foreign Language Elementary School (FLES) program models in which time is used from the regular instructional day to teach students foreign language and culture. The classes typically lasted about thirty minutes a day, with a total of at least sixty to seventy minutes per week. Both schools offered the Mandarin FLES program to all their students, in contrast to schools where the program may be offered to specific groups of students. During the course of this research study, one of the schools changed their program to a two-way bilingual immersion model of instruction, where there was a more balanced ratio between students learning the target language and students who were already proficient in the target language, but learning English.

The research sample was purposeful because only those involved with the Mandarin programs were participants of the study. The research sample was also one of convenience because they were accessible to the researcher and have agreed, at least
preliminarily, to volunteer and take part in this study. Research participants included site administrators, teachers of Mandarin, parents of students in the Mandarin program. Data was collected through interviews, a review of documents related to the implementation of the Mandarin programs, and classroom observations of Mandarin classes.

Limitations and Delimitations

Factors Delimiting Study Parameters

The study was framed by the following constraints. There were only two schools that had identified K-5 Mandarin programs that resembled a foreign language study (FLES) model in the district where, and during the time when, this study took place. One of the schools chosen for the study started out as a pilot FLES program and, per community demand, evolved into a two-way bilingual immersion program. Both programs were new programs with less than two years of program implementation by the time data was collected for this study. The school district where this study took place was working on developing guidelines for implementing programs other than two-way bilingual immersion programs, but both programs were initiated based on local school decision-making rather than direct district mandates. At the time of this study, district leadership and personnel experienced a transitional phase of reorganization so institutional memory may be limited. The climate of teacher displacement and dismissal due to budget shortages during the time this study was conducted was considered as a possible source of bias that may have affected teachers’ attitudes, their willingness and/or availability to participate, as well as the content of what they shared in the interviews.
Potential Limitations

The present research study was a case study that sought to describe, not measure, perceptions held with regards to the impact of Mandarin foreign language instruction on students’ academic, attitudinal, and cognitive development over a relatively limited span of time, in two study sites, through qualitative research methods of observation, interview, and document review. The study is limited by the small research sample available and the relative young age of these programs.

Organization of the Dissertation

This study follows the organization set forth by the CSUN Doctoral Program Dissertation Chapter Guidelines for Ed.D. Candidates. Chapter One serves as an introduction to the dissertation, presenting the problem statement and research questions, establishing the purpose and significance of the study, and overview of the methodology. Chapter Two provides a theoretical framework for the study by presenting relevant professional and research literature reviewed. Chapter Three describes the research orientation and details of the methodology used to conduct the study. Chapter Four presents the findings from the data collected from interviews, classroom observations, and document review. Lastly, Chapter Five offers conclusions drawn from the data collected and analyzed, presents considerations and implications for educational leaders and practitioners, and offers recommendations for further research. The references and appendices follow.

The research conducted through this study is significant because of the rising interest in Mandarin foreign language programs in the elementary grades. As more and more communities recognize the emergence of Mandarin as one of the critical languages
for the 21st Century, elementary schools may benefit from learning about how the programs that were part of this study were established and implemented so that they may also establish their own Mandarin programs to serve their respective communities. Educators and schools seeking to implement Mandarin elementary programs may also benefit from this study by learning about the types of practices that are most conducive to learning of Mandarin language and Chinese culture. In addition, the qualitative research presented in this study may provide useful insights for other schools communities to understand what perceptions various stakeholder groups have regarding the impact of the Mandarin elementary foreign language program. The following chapter will present a review of the literature relevant to second language acquisition and foreign language programs in elementary schools.
CHAPTER II
REVIEW OF LITERATURE

Introduction

Chapter 1 of this dissertation introduced and began discussing the research problem to be investigated in this study. Namely, there exists a need for American students to develop proficiency in a language in addition to English as a valuable and necessary skill to succeed in the 21st century. More specifically, in the district where this study took place, there is a shortage of opportunities for students to fully develop knowledge of languages other than English beginning in the elementary grades and building up into middle and senior high schools. However, the district does have some existing programs that offer instruction in languages other than English to elementary school students. These include two-way bilingual immersion, early exit, and late exit basic bilingual programs. Two-way bilingual immersion (TWBI) programs follow specific models of instruction that balance English language acquisition with second (or target) language acquisition. They frequently require a particular student ratio between those students who are proficient in English learning the target language and those students who are proficient in the target language learning English (students who are classified as English Learners but have proficiency in the target language). TWBI programs contain student ratios usually ranging from an ideal 50:50 ratio to a more realistic 70:30 or 30:70 ratio. Although this flexibility in the classroom composition requirement exists, it is still typically difficult for schools to meet such ratios on a school wide basis, so the vast majority of schools are only able to implement two-way bilingual immersion programs as one strand within the school. For example, only one kindergarten
classroom out of three may offer the two-way bilingual immersion program, while students in the other two classrooms might experience the regular English-only curriculum. This results in the program being offered to only part of the population at a particular school and may lend itself to criticism suggesting that the program is not equitable as only some students “qualify”. Schools wishing to implement two way bilingual immersion programs need to start with kindergarten and add one grade level each year of implementation. Additionally, schools wanting to provide more immediate language choices to more than one grade level or wishing to start with a grade higher than kindergarten are not able to meet this criteria and thus cannot become “district-approved” TWBI programs.

Further program models that use a language other than English for instruction in the district where this research takes place are known as “basic bilingual” programs. Some of these basic bilingual programs are designated as “early exit” models, if their limited English proficient students achieve English proficiency by third grade. Still other basic bilingual programs are known as “late exit” models, because they have students reaching English proficiency beyond fourth or fifth grade. Unlike two-way bilingual immersion programs, “basic bilingual” programs seek to develop limited English proficient students’ proficiency in English but do not have a goal to develop or maintain proficiency in the language other than English. In contrast with TWBI programs, basic bilingual programs do not offer English proficient students opportunities to develop skills in a language other than English. Since the goal of these basic bilingual programs are to develop English proficiency by limited English proficient students, even at the cost of losing the primary language, these programs are considered to be “subtractive”.

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This study seeks to understand what feasible alternatives exist—aside from two-way bilingual immersion and subtractive basic bilingual programs—to promote the learning of world languages in elementary schools. Furthermore, this research explores how schools may establish and implement such alternatives effectively and work towards creating articulated feeder pathways from elementary to middle to high school. This is noteworthy because of the potential for other program models to bring world language instruction to students more quickly than the two-way bilingual immersion and basic bilingual models. This research study examined two school sites with Mandarin programs for elementary school students. The schools are located in a large urban school district in California, where the majority of students are of Hispanic and African-American descent. The study is significant because it documents the processes by which the two programs were established and implemented. As the study looks at implementation, it examines what classroom practice looks like and identifies best practices vis-à-vis existing research on second language acquisition and foreign language instruction in the elementary grades. The study also seeks to find out what school administrators, teachers, and parents perceive as the impact of the K-5 Mandarin program on students' academic, attitudinal, and cognitive development.

This chapter provides a theoretical framework that synthesizes research literature concerning second language acquisition and foreign language instruction in the elementary grades. It is by providing such a framework that I argue for the implementation of foreign language programs in elementary school as viable instructional models to provide schoolchildren access to the study of world languages before they reach high school. Research drawn upon for this study falls under two categories: (a)
literature dealing with second language acquisition, both in theory and in practice and (b) literature examining different models of second language acquisition to include foreign language in elementary school (FLES) and immersion programs. The theoretical framework provides research that examines the value of learning a language other than English for elementary students as well as different ways children learn to develop proficiency in a language other than English.

**Research Literature on Second Language Acquisition**

**Acquiring Second Language at an Early Age**

There are various benefits to starting the study of foreign languages at an early age. First, learning a language early in life allows students an extended sequence of instruction that can lead to higher levels of proficiency (Curtain, 1990). The earlier a student starts to study a foreign language, the more chances the student has to reach proficiency at an earlier age which, may lead to continued study in that language or another language altogether. Several studies support the claim that an earlier start leads to better performance closer to native-like language mastery, including phonological achievement, syntax, and morphology (Johnson & Newport, 1989; Patkowski, 1980). Second, the study of foreign languages at an earlier age also enhances cognitive development, basic skills, communication skills (such as memory and listening), as well as students’ ability to develop global understanding (Curtain, 1990; Curtain & Pesola, 1994; Dumas, 1999). Third, as students’ linguistic and cultural proficiencies continue to be developed through adulthood, they may reap additional personal benefits, such as increased career opportunities (Curtain & Pesola, 1994).
Research literature on second language acquisition also indicates that there are benefits to be gained by students who start to study foreign languages during their elementary school years (Curtain, 1990; Dumas, 1999; Holman, 1994; Holman, 1998; Nash, 1997; Winslow, 1997). Studies on brain development support the idea that a child’s brain is better equipped to grow the connections needed for language learning before age 12 (Dumas, 1999). The notion of children's suitability to learn foreign languages due to the increased number of synapses and greater plasticity of young brains relative to adult brains is also supported by the Center for Applied Linguistics (1996). Researchers espouse views suggesting that there is a critical neurobiological "window of opportunity" for children to acquire a second language (Lightbown & Spada, 1999; Nash, 1997; Winslow, 1997). The actual age of span of this window varies with some studies citing the closing of this critical window as early as age six and seven (Dumas, 1999), while other studies suggest closure at age ten (Curtain, 1990), and still others as late as age 12 (Nash, 1997). Although language acquisition is still possible once past this critical learning period, the neurological processes available to the adult brain are different and less effective than those used by young children to acquire language in a more natural manner (Lightbown & Spada, 1999; Winslow, 1997). These findings support the notion that the elementary grades provide unique advantages for learning of additional languages that may not be learned as well or as naturally in later years. The benefits associated with learning foreign languages at an earlier age serve to encourage schools and school districts to develop policies for offering such opportunities for their students (Dumas, 1999; Los Angeles Unified School District Board of Education, 2008; Nash, 1997; Winslow, 1997).
Models for Achieving Second Language Proficiency

Various instructional models exist to support achievement of proficiency in a foreign language. Bilingual education has been a term broadly used to describe any program in which students learn English and a language other than English. However, there are distinct program models and various goals in terms of achieving proficiency in two languages within the blanket terminology of “bilingual education”. Based on their outcome, bilingual programs may be first classified as “subtractive” bilingual programs or “additive” bilingual programs (Cloud, Genesee, & Hamayan, 2000).

Subtractive bilingual programs use the student's knowledge of one language to achieve proficiency in another language, usually considered the dominant or mainstream language. Subtractive bilingual programs focus on the support and development of only the dominant language. These have been used mainly for students with limited English proficiency to help them acquire proficiency in English. In California, subtractive bilingual programs trade the students' knowledge of his or her home language for proficiency in English. In the district where this study takes place, “basic bilingual” programs that aim solely to help English learners develop proficiency in English are examples of subtractive programs because there is no emphasis or actions taken to maintain the student’s proficiency in their home language once proficiency in English is achieved. Commonly found examples of subtractive bilingual programs include transitional bilingual programs that are labeled as "early exit" or "late exit" transitional bilingual programs.

The second major type of bilingual program is known as an additive bilingual program. Additive bilingual programs, as implied by the name, seek to add proficiency
in another language. Students who successfully complete additive bilingual programs learn one or more languages in addition to their home language. Two-way bilingual immersion (TWBI) programs are examples of additive bilingual programs, where a group comprised of English proficient and target language proficient children, led by their teacher, learn each other's primary language in an instructional day designed to devote 50% of the time to the study of English and 50% of the time to the study of the target language in an academic setting (Cloud, Genesee, & Hamayan, 2000). In the district where this study took place, two-way bilingual immersion programs exist in three languages other than English and are offered at several schools, mostly at the elementary level.

Other types of instructional models that help students achieve proficiency in a second language include what are referred to in the research literature as: Foreign Language in Elementary School (FLES) and Foreign Language Exploration (FLEX) programs (Lipton, 2010; Met, 2008). These programs differ from typical "basic bilingual" and two-way bilingual immersion programs in various ways. FLES programs provide elementary school students instruction in a language other than English and seek to develop communicative proficiency through sequential study. FLEX programs are often delivered in English and provide elementary school students opportunities to learn about foreign languages and cultures. Furthermore, both FLES and FLEX models seek to promote student interest in further study of languages and cultures to reach higher levels of linguistic and cultural proficiencies. They do so by promoting further language development as students move through formal study of language and culture in middle school, high school, and beyond.
FLES and FLEX programs are two program models that open the door for students to achieve proficiency in a foreign language, even though such achievement may come much later in the students' academic career. While FLES programs in the United States have enjoyed somewhat of a resurgence in the late 1990's, FLES traces its roots as far back as the late 19th Century America (Lipton, 1998). In addition to being the name of the specific program model for foreign language instruction in the elementary grades, Lipton (2010) has coined the term "FLES*" (pronounced “FLES-star”) to be an umbrella term for all types of elementary school foreign language programs. This term includes foreign language programs that span the gamut from foreign language exploration to foreign language immersion and two-way bilingual immersion models for students from grades K-8.

This study adopts the use of the term FLES as a specific program model, rather than as an umbrella term. According to the World Language Content Standards for California Public Schools, FLES programs are defined as those that devote a minimum of seventy minutes of instruction a week to develop proficiencies in a world language and culture (California Department of Education, 2010). FLES programs typically serve English proficient students who are seeking to develop proficiency in a language other than English (Lipton, 2010; Met, 2008). FLES programs were once popular options in the 1960s as the United States sought to achieve superiority in world political arena against the backdrop of the “space race” through a highly educated citizenry in mathematics, science, and foreign languages. As such, FLES programs incorporate the sequential study of a foreign language into the elementary school curriculum (Met, 1991). FLES pedagogy varies, but the literature recommends that FLES teachers use as much of
the target language for instruction as possible (Lipton, 2010). This allows students to get as much exposure and positive modeling of the language in order to develop receptive mastery and move towards language production. FLES programs vary by virtue of the intensity and frequency of instruction in the foreign language and do not explicitly seek to teach academic core subject content using the target language, even though connections to reinforce what students are learning or have learned in other subjects in school are encouraged. In other words, FLES programs do not include standards-based lessons to deliver mathematics concepts, but may use the target language to teach students how to read the calendar in the target language and/or culture. The Standards for Foreign Language Learning in the 21st Century, published by the American Council for the Teaching of Foreign Languages (ACTFL), is a widely-used document to help educators determine what students should know and be able to do in their various foreign language programs (American Council on the Teaching of Foreign Languages, 2009). In California, the World Language Content Standards for California Public Schools document informs practitioners on the general content to be taught through foreign language program models, including FLES and FLEX.

FLEX stands for "Foreign Language Exploration". The World Language Content Standards for California Public Schools defines FLEX programs as those that seek to expose students to the study of new languages and cultures in order to motivate them for further study (California Department of Education, 2010). There are no guidelines about the minimum instructional time, and FLEX teachers often use English as the language of instruction. (Lipton, 2010; Met, 2008). FLEX programs may be short term and not
developmental in structure, where as FLES programs tend to be sequential in nature to allow for structured acquisition and development of a second language (Met, 1991).

Implementation of a Foreign Language Elementary School (FLES) Model

Defining Elements of FLES Programs

FLES programs seek to develop linguistic and cultural proficiencies in students in the elementary grades. Defining elements of FLES programs include a sequential program of study, structured instructional time, qualified teachers that are proficient in the target language and culture, and pedagogy that support second language acquisition (Lipton, 1998; Lipton, 2010; Met, 1991). The first defining element of FLES programs is that they include sequential study programs that are articulated from one grade to the next. Some programs cover grades K-5 while others cover a shorter span of grades. The longer the sequence of study, the more opportunities students have to develop proficiencies in the target language and culture (Met, 1991). While most FLES programs are well-articulated within the elementary school span where they do exist, the disconnect has been with middle school (Lipton, 1998). Students who complete a FLES program need articulated foreign language offerings at the middle school level to help them continue to develop their linguistic and cultural proficiencies. However, more often than not, there are no foreign language offerings at the middle school, so students have to start back from the beginning with foreign language learning at the high school level (Lipton, 1998).

The second element of FLES programs is that they have structured instructional time (Lipton, 2010; Met, 1991). FLES programs meet for a specified number of minutes to provide structured instruction in the target language and culture for students. Met
(1991) calls for a minimum of ninety minutes, two to five times a week, while the World Language Content Standards for California Public Schools prescribes a minimum of seventy minutes a week (California Department of Education, 2010). Classes for the FLES program are not simply arbitrary fillers when students need something new to do. FLES time is structured and regularly scheduled to provide opportunities and conditions for language development, whether they occur within or outside of the school day. FLES time may be integrated with content instruction such as music, art, physical education, or it may occur beyond the school day during before- or after-school programs (Curtain & Dahlberg, 2010; Lipton, 2010).

The third element of FLES programs is that teachers are highly fluent in the target language and deeply knowledgeable about the target culture (Lipton, 1998; Lipton 2010; Met 1991). Native speakers of the language, or those with near-native speaker proficiency (non-native speakers who have acquired high levels of proficiency in the target language and culture through advanced study and experience living/working in a country where the target language is spoken), are highly desirable. FLES programs are ideally conducted with as much target language immersion for students as possible (Lipton, 2010). FLES teachers employ a variety of strategies aligned with second language acquisition to help students develop communicative proficiency. Grammatical accuracy is important as well, but should not be the focus of FLES programs (Lipton, 1998). The priority in FLES programs is for students to learn to communicate in linguistically- and culturally-appropriate ways (Lipton, 2010).

The fourth defining element of FLES programs is that they employ pedagogy that is aligned with language acquisition theories (Lipton, 2010). FLES teachers use the
natural approach in language acquisition to provide the optimal conditions for students to develop proficiency in each domain of language: listening, speaking, reading, and writing (Lipton, 2010; Shrum & Glisan, 2010). FLES teachers use realia, total physical response, regulation of speech, and other strategies to increase comprehensible input in the target language for their students. FLES teachers are keenly aware of the natural order hypothesis and respectful of their students' silent period. Hence in a well-articulated FLES sequence of study, language production is not expected in the early stages. The World Languages Content Standards for California Public Schools echoes this approach by defining only stages of language development that are not tied to any particular grade or amount of instruction. FLES teachers help scaffold opportunities for students to produce language in a safe learning environment to reduce anxiety and lower the affective filter only after much comprehensible input has been provided to students.

A Structure for Implementation of FLES Programs

Cloud, Genesee, and Hamayan (2000) claim that intensive study of second languages in enriched educational programs results in educational, cognitive, and economic benefits to individuals as well as to society. The authors focus on three forms of enriched education that promote the acquisition of English along with additional languages and cultures: (a) second/foreign language immersion for English-speaking majority students, (b) developmental bilingual programs for language-minority students, and (c) two-way immersion programs for language majority and language minority students.

Second/foreign language immersion programs provide opportunities for language majority (English-speaking) students to acquire a language other than English. These
programs use a second or foreign language (e.g., Mandarin or Spanish) to teach at least 50% of the curriculum during the elementary and/or secondary grades. Variations of second language immersion programs exist in the U.S., Canada, and around the world. Despite differences in program design and delivery, all second/foreign language immersion programs seek to promote grade-appropriate levels of development and achievement in the second language. They also strive for functional proficiency in the second language as well as an understanding and appreciation for the culture of the target language group. Second/foreign language immersion programs vary according to the grade in which immersion is first introduced for academic instruction and also vary in the amount of second language used for instruction. In *early immersion* programs, the second language is used for instruction in the academic areas as early as kindergarten or grade 1. Some early immersion programs use the second language exclusively for academic instruction for up to three years before English is introduced for academic instruction. In *middle or delayed immersion* programs, the second language is introduced for academic instruction usually in grade 4. In *late immersion* programs, the second language is not used for academic content instruction until the end of the elementary school sequence or the middle school years.

Developmental bilingual programs provide opportunities for language minority students (i.e., students whose first language is a language other than English) to learn English and/or develop proficiency in their first language. Cloud, Genesee, and Hamayan (2000), use two categories within the broad coverage of bilingual education to describe bilingual programs according to their objectives. In *transitional* (early exit) bilingual programs, the student's first language is used only up to the first three years of
instruction until the student is able to make a transition into an English-only curriculum. Developmental (late exit) bilingual programs aim for bilingual proficiency and use at least 50% of the curriculum delivered in the language other than English throughout the elementary grades in order to fully develop proficiency in the language other than English. Developmental bilingual programs have the following objectives: (a) the maintenance and development of students' primary language (other than English), (b) the achievement of full proficiency in grade-level academic English, (c) the integration of language minority students into all-English classrooms, and (d) the development of positive identity for both students within the target language/culture group and students from the language-majority culture (Cloud, Genesee, & Hayaman, 2000).

Two-way bilingual (dual language) immersion programs combine the objectives of second/foreign language immersion programs and developmental bilingual programs. Two-way bilingual immersion programs provide opportunities for both language majority (English-speaking) students to learn a second language, while providing language minority students who are proficient in the target language other than English to develop proficiency in English. The salient features that distinguish two-way immersion programs from the other two program models described is the incorporation of both language majority and language minority students in the same class (at an ideal ratio of 1:1) as well as the active use of strategies that promote learning and cooperation across the language majority and language minority cultures. Two-way immersion programs seek to develop age-appropriate academic skills and knowledge, along with functional proficiency in English and in the target language, as well as the understanding and appreciation of any cultural differences.
Both English-speakers and English-learner students stand to gain academically from the study of a second language. Cloud, Genesee, and Hayaman (2000), claim that English-speaking students can achieve high levels of proficiency in a second language without sacrificing or compromising their development and achievement in English. One example of a Canadian immersion program involved students whose primary language was English, who were taught academic content from kindergarten through grade 2 entirely in French. Even the language of communication with the teacher was French. English was introduced for language arts only in the second grade. Cloud, Genesee, and Hamayan (2000) state that "the findings are clear and consistent", that students in second/foreign language immersion programs "acquire the same proficiency in English and achieve the same levels of competence in their academic subjects (e.g., mathematics, science, and social studies) as comparable English-speaking students who attend all-English programs". Students in second language immersion programs are able to use their second language "to do all their school work, communicate with their friends and teachers in school, and with others outside school comfortably, effortlessly, and effectively" (Cloud, Genesee, & Hamayan, 2000). Students in such programs achieve all these language proficiencies while acquiring high levels of communicative proficiency in a language other than English.

In addition, Cloud, Genesee, and Hamayan (2000), claim that immersion programs are also effective for struggling students from low socio-economic backgrounds or students who have lower levels of achievement. The researchers state that students who come to the U.S. with little or no proficiency in English "make better progress in acquiring English and in academic development if they receive some schooling in their
primary language at the same time they are introduced to English as a second language" (Cloud, Genesee, & Hamayan, 2000). They argue that a strong foundation in primary language literacy skills provides a solid foundation for English learners to build English skills, and that English learners who develop strong skills in literacy in their primary language can then apply these skills in their acquisition of English literacy skills. The researchers cite evidence indicating that English-speaking Canadian students receiving instruction in French from kindergarten to grade 6 outperformed students in a control group on a variety of English language tests (Cloud, Genesee, & Hayaman, 2000). The authors relate these gains to bilingual students' ability to gain insights about their primary language as a result of learning a second language. Such insights help students to better use their primary language. These researchers also make the claim that fully proficient bilinguals outperform their monolingual peers in "tasks that call for convergent thinking, pattern recognition, and problem solving" (Cloud, Genesee, & Hamayan, 2000).

**Implementing FLES at Different Grade Levels**

Foreign Language in Elementary School (FLES) programs may occur before or after school, or incorporated into the regular school day (Lipton, 2010). Furthermore, FLES programs also vary according to the grade levels at which they are implemented. Some programs start at the kindergarten level (or earlier) while other programs begin to expose students to foreign languages only after a strong foundation has been established for literacy in English, typically at or beyond grade 3 (Lipton, 2010). Boyson (1997) and Boyson and Thompson (1998) assessed oral and listening proficiencies of students in grades 3 and 5 in Georgia’s model Elementary School Foreign Languages program (ESFL). The languages represented were Spanish, French, German, and Japanese.
Boyson (1997) found that students in grade 3 performed at junior novice mid- to junior novice high- levels which suggests that these students were making “impressive progress” towards the goal of becoming fluent in the language they were learning as early as grade 3 (Boyson, 1997). In a subsequent study, Boyson and Thompson (1998) compared the foreign language oral and listening performance of students in grade 3 with students in grade 5. They found that students in grade 5 typically scored one level higher in both oral fluency and listening proficiency than students in grade 3 and were reaching “commendable levels of proficiency” (Boyson & Thompson, 1998).

Regardless of grade level, instructional practices in FLES programs need to be standards-based and appropriate to the students’ age and where they may be on the language development stage. In California, the recently published World Language Content Standards for California Public Schools Kindergarten through Grade Twelve provides a framework and guidance to teachers and administrators implementing World Languages and Cultures programs. Prior to the release of the California standards, many practitioners used the Standards for Foreign Language Learning: Preparing for the 21st Century (aka, “national standards”) (American Council on the Teaching of Foreign Languages, 1995) as a reference for curriculum, instruction, and assessment. While the grade-levels at which FLES is implemented appear to be a local decision, it is important that the programs be articulated with a study sequence in mind regardless of when they begin (Curtain and Dahlberg, 2010; Lipton, 2010).

The content of FLES programs typically deals with language and culture (Heining-Boynton, 1990; Lipton, 2010). That is, FLES programs teach language for the sake of communication with content that is typically driven by exposing students to
cultural practices and/or products. In addition, music, the arts, and sometimes physical education, lend themselves as the academic content areas that are taught with the foreign language as the vehicle for instruction (Curtain & Dahlberg, 2010). For example, a FLES class may be studying about the Chinese New Year through songs and dances typical of the holiday in China, or learning vocabulary in Mandarin of winter clothing items worn in ancient and modern China during the New Year season. In addition, there are program models known as content-based FLES that call for stronger connections to core content standards (Lipton, 2010; Met, 1991). Content-based FLES classes use the foreign language to deliver instruction using a variety of language sheltering strategies, but the content being addressed is derived from the core academic areas for that particular grade level (Curtain & Dahlberg, 2010; Lipton, 2010). In a content-based FLES model, students may be accomplishing the objectives established by the state’s mathematics standards, but the class is conducted in the foreign language. This is similar to a foreign language immersion approach but with more limited scale. For instance, students in a foreign language immersion model would spend at least half the day in academic content classes delivered in the foreign language compared to just one or two periods for students in content-based foreign language program models. Even in purely language- and/or culture-driven FLES program models, the literature recommends that teachers use FLES to reinforce skills that students are learning in the core academic areas during the regular school day (Curtain & Dahlberg, 2010; Lipton 2010; Met, 1991). If students in grade 1 are learning addition of one-digit numbers in first grade, the FLES lesson might incorporate number games that allow students to practice enumeration and simple addition while developing receptive, and eventually productive, mastery.
Best Practices with a FLES Model

In reviewing research on best practices utilizing a FLES model of second language acquisition, several studies shed light on ways to teach students a second language while simultaneously allowing them to hold on to the first language they already have. Case in point, a study conducted by Ernst-Savit, Statzner, and Wenger (1998), documented the creation of a K-5 FLES language that resulted from a collaborative effort between a research university and a local elementary school. The “best practice” in this study highlighted the establishment of such partnerships between local elementary schools and institutions of higher education as a way to teach a foreign language to children by using pre-service teachers as a resource for the school/district without incurring a direct cost expenditure to train and pay existing district teachers (Ernst-Savit, Statzner, & Wenger, 1998). This is particularly salient these days, since most school districts and sites lack qualified teachers to teach such foreign languages and have district budgets that are becoming increasingly constrained. Perhaps just as important, pre-service teachers can bring fresh perspectives and new research-based strategies to which they are exposed in their university pre-service training programs to the schools in these types of partnerships. Therefore, these types of partnerships should be sought out and used as a reference point for the development of new elementary foreign language programs.

Sustained use of the target language in the classroom by the teacher and students is another hallmark of "best practices" in FLES programs. According to Krashen (1981), second language production by students is preceded by long periods of exposure to language models and input from the teacher. During this stage of language acquisition,
students are developing receptive mastery, learning to hear and make meaning of the utterances and sounds of the target language that are slowly becoming familiar to them and will eventually make sense as new words. It is a common mistake to require or pressure students to produce language independently before they are ready to move out of the receptive stage as their confidence has not been fully built up (Krashen, 1981).

Students who are pressured to produce language prematurely experience negative feelings of frustration and anxiety, which leads to the raising of what is known as "the affective filter" (Krashen, 1981). The affective filter is a defense mechanism that is usually manifested by learners who feel high levels of anxiety. This affective filter restricts or prevents the ability to produce language, thus, giving the appearance of being "frozen", stunned, or unable to react or respond. Students who are still developing receptive mastery and who are not ready to produce language on their own should never be forced to speak until they are ready (Easley, 1995).

For those who have acquired enough receptive mastery and are ready to tackle some language production challenges, Easley (1995) argues for the importance of holding high expectations for them. Easley (1995) suggests that teachers demand students who are ready to produce language on their own to produce complete sentences. Since verbal communication is most often the primary communicative form in the FLES classroom, even the simplest sentences sets students up to have a more productive FLES experience. Therefore, these types of strategies allow teachers to stimulate the use of complete sentences by students that are more complex and originate from simple sentences (Easley, 1995). One such strategy is the use of calendar routines. Through teaching and reinforcing calendar routines, teachers create opportunities for students to rehearse simple
sentence constructions such as "Today is Monday", or "This is the month of May", or, "Today is a sunny day". With practice and repeated exposure, students will be able to construct more complex sentences based on the simple sentences by manipulating the teacher's questions (Easley, 1995). Another suggested strategy involves memory card games. For instance, students flip over cards and are given a full sentence as a model, e.g. "this is an elephant", instead of just "elephant". Upon flipping over another card, the teacher may add an extended prompt, such as "Are these alike or different?", allowing students to manipulate the words from the teacher's question to construct a response in a simple but complete sentence, such as "they are different", instead of just "different".

From a Vygotskian perspective, the second language classroom should be viewed as a place where students have specifically negotiated opportunities to interact with each other and with the teacher (Schinke-Llano, 1995). Thus, learning is viewed as a social endeavor whereby development results from the structuring of opportunities for meaningful verbal interaction to establish "dialogic" or verbal relationships between language novices and language experts (Schinke-Llano, 1995). From this perspective, language is not something to be taught as an object, but rather as a tool to be used to enable students to participate in social activities (Schinke-Llano, 1995). Teachers taking such an approach to teaching language view the classroom as a social setting with opportunities to enable students to find their own voice rather than as a place to fill up students with information.

Two Vygotskian "best practices" proposed by Schinke-Llano (1995) are (a) learning language in the context of authentic use, and (b) keeping the classroom alive with social interaction. The first best practice pays particular attention to the teacher's
role as a mediator of student language development and not the holder of knowledge that is parceled out to students in piecemeal. Over-regulation from the teacher, often seen as "the sage on the stage", may impede the student's achievement of "self-regulation", which is the desired stage of development as the learner is no longer limited by the content ("object-regulation"), by the teacher ("other-regulation"), and is free to construct meaning and develop learning (Schinke-Llano, 1995). The second "best practice" from Schinke-Llano involves the teacher keeping the classroom thriving with collaborative activity through structured social interaction that provide structured opportunities to make the learning social (Schinke-Llano, 1995). Through such an approach, working with peers creates cognitive dissonance that fosters students’ cognitive restructuring and growth. Even when students of different abilities are paired together, the more capable student still benefits from the interaction because as the student explains concepts or content to his or her less experienced peer he or she is simultaneously internalizing the language content knowledge being taught (Schinke-Llano, 1995).

Effective FLES classroom interactions should emphasize the dialogic activities and keep a balanced and cautious approach to memorization and drill, even though the memorization and drill have their own place in the FLES classroom as well (Gass, 1995). This emphasis on, and awareness of, the role of the teacher to enable students to move towards self-regulation in the second language classroom drives the nature of student-student and student-teacher interactions as well as the choice of classroom activities and assessment methods. Glass (1995) argues for FLES programs to be based on a core of children's literature. Compared to instruction guided by textbooks and workbooks, using children's literature creates a more organic learning experience for students learning a
second language. Furthermore, the use of children's literature also creates openings to use authentic content from the culture of the people who speak the target language. Student activities such as games, songs, paired activities, storyline sequencing, story illustration, and role-play help students develop vocabulary skills in the second language and reinforce skills from English language arts (e.g., concepts about print, character development, among others). Further research elaborates on the importance of role-play in the FLES classroom. Role-play promotes second language acquisition by lowering students' affective filter thus, allowing them to lose their inhibitions as they live vicariously through a character (Purcell, 1993). Furthermore, augmentation of language production skills, increased self-esteem, and cultural appreciation are all possible outcomes when students' affective filters are lowered as they take on a new persona through role-play.

Educators considering implementation of FLES programs should take research-based recommendations of "best practices" into consideration, particularly in light of programs that are based on drill and repetition, paper and pencil worksheets, and driven solely by activities in a textbook (Glass, 1994; Purcell, 1993). The use of children's literature in the second language classrooms—particularly folk tales or other culturally-relevant selections—coupled with interactive student activities such as games and role-play create a more social classroom environment in which to develop authentic language skills.

**Implications for Utilizing FLES to Teach a Second Language**

Starting in the 1960’s and continuing into the 1990’s, numerous research studies of immersion and FLES programs were conducted on the relationship between learning a
second language early in life and cognitive ability (Robinson, 1992). According to Robinson’s (1992) summarization of such studies, the experience of learning two languages leave students "with a mental flexibility, a superiority in concept formation, and a more diversified set of mental abilities” (Robinson, 1992).

From this perspective, Robinson illuminates the fact that learning multiple languages from an early age provides students with a distinct cognitive advantage relative to peers who had no such language learning opportunity. Cognitive benefits include heightened sensitivities to properties of the home language, superior non-verbal problem solving, increased ability for divergent thinking, higher levels of performance in metacognitive processing and in analysis, synthesis, and evaluation (Bamford & Mizokawa, 1990; Diaz, 1984; Foster & Reeves, 1989; Hakuta, 1990; Robinson, 1992; Landry, 1973; Landry, 1974; Lapkin, Swain, & Shapson, 1990). Hence, language acts as mediator that drives at student's thought processes and shapes the student to learn appropriate social behavior and interaction (Vygotsky, 1962). Therefore, a student who has to make sense of a second language has to think harder in order to perceive, receive, store, and recall information in two languages (Vygotsky, 1962). High levels of proficiency translate into more cognitive benefits while low levels of proficiency are associated with negative consequences of bilingualism (Genesee, 1987; Robinson, 1992). Average levels of proficiency in a second language do not show evidence of positive cognitive benefits nor cognitive deficiencies (Genesee, 1987; Robinson, 1992). Therefore, a critical implication for practitioners seeking positive impact on cognitive development as a result of FLES programs is to ensure program quality that leads students to achieve high levels of proficiency in the second language.
Moreover, the research reviewed also demonstrated that children who have studied a foreign language perform better on standardized tests and tests of basic skills in English, mathematics, and social studies (Rafferty, 1986; Robinson, 1992). The relationship between early foreign language instruction, basic skills, and standardized exams is important because finding time during the instructional day to devote to the study of a foreign language is a real challenge for practitioners. Concerns are often raised by practitioners about protecting instructional time to promote student achievement in the core curriculum (Robinson, 1992). One study compared student performance on English language arts by 13,000 students in grades 3 through 5 who participated in a foreign language study program to their peers who did not receive foreign language instruction but received additional English language arts instruction instead (Rafferty, 1986). By the third year of foreign language study, students who participated in a foreign language program performed twice as well in English language arts as their counterparts who received additional instruction in English language arts (Rafferty, 1986). Even in the short term, academic performance in math and language arts of grade 3 students was higher than the performance their monolingual counterparts after only one semester of a Spanish FLES program, although there were no significant differences in their performance in reading (Armstrong & Rogers, 1997). In this study, one teacher reported specifically reducing instructional time in mathematics in order to accommodate the FLES program (Armstrong & Rogers, 1997; Robinson, 1992). Performance in mathematics was initially lower for students participating in a FLES program but by the third year of FLES, students participating in foreign language instruction tended to outperform their monolingual counterparts (Rafferty, 1986; Robinson, 1992).
Furthermore, studies reveal that the academic benefits of FLES programs impact more than just those at the top of the class (Robinson, 1992). Students of average ability in grades 4-6 who participated in a FLES program achieved higher in reading than their counterparts of above-average ability (Garfinkel & Tabor, 1991). Students of below-average ability and who are considered at risk due to socioeconomic status and/or minority affiliation performed as well as their monolingual peers in listening comprehension and speaking, even though they lagged behind in reading ability and grammar (Genesee, 1992; Robinson, 1992). Students with learning disabilities, especially those who are mainstreamed, also benefit from second language instruction in elementary and middle school programs (Robinson 1992, Andrade, Kretschmer, & Kretschmer, 1989). Extended study of a foreign study also provides academic benefits. Students who averaged four or more years of foreign language study outscored their peers who studies four or more years in any subject area on the verbal section of the SAT exam (Cooper, 1987; Robinson 1992; The College Board, 2003; The College Board, 2004). In addition, students who averaged four or more years of foreign language study had equal performance on the mathematics section of the SAT exam to those who had studied mathematics for four years or more (Cooper, 1987; Robinson 1992; The College Board, 2003; The College Board, 2004). Students who participated in immersion programs, even though part or all of their instruction was delivered in the target language, perform equally well as, or surpass, their monolingual peers in English language tests in the academic content areas (Robinson, 1992).

Implementation of FLES programs yields academic benefits documented by various research studies. The implication for practitioners is to start high quality
programs in the early grades so that all students may reap the benefits found in the various studies. The College Entrance Examination Board’s findings are particularly poignant because, in order for students to average four or more years of foreign language study (and reap the associated academic benefits), students must have been given opportunities sometime during their K-8 study experience (Robinson, 1992).

Early study of a foreign language also yields attitudinal benefits by fostering awareness, respect, and appreciation of global diversity (Curtain & Dalhberg, 2010; Met, 1991; Pesola, 1991; Robinson, 1992). These attitudinal benefits are maximized when students receive instruction in a foreign language before the age of ten (Lambert & Klineberg, 1967; Robinson, 1992). Children before the age of ten are at optimum openness to things and people they perceive as foreign, as they move from egocentrism to reciprocity (Lambert & Klineberg, 1967; Robinson, 1992). Compared to fourteen year-olds, children ten years of age were more friendly and open toward people they perceived as being different from themselves (Lambert & Klineberg, 1967; Robinson, 1992). The implications for practitioners seeking to implement FLES programs and maximize attitudinal benefits have to do with offering structured and sequential foreign language programs beginning in the elementary grades that include a great deal of exposure to, and information about, the cultural practices and products of the people that speak the language. In addition, research indicates that students need to be exposed to foreign language (and culture) instruction before the age of ten in order to take full advantage of their development from egocentrism to reciprocity and reap the associated attitudinal benefits. Practitioners need to keep negative attitudes about speakers of other
languages in check in order to reap the highest yield by students in respect and appreciation for global cultures (Robinson, 1992).

Chapter Summary

This chapter began by examining research literature on second language acquisition and various program models used in second language teaching. Second language acquisition literature indicates that the optimum time for learning a foreign language is generally as early as possible in the child's life, preferably before the age of ten to twelve. The central implication of this area in second language acquisition literature is that effective foreign language programs need to start prior or during this critical second language acquisition window in the student's elementary school experience and for programs to be effective and of high quality so that high levels of proficiency may be expected.

The chapter went on to present different models for achieving second language proficiency. A distinction was made between subtractive and additive bilingual program models. Attention was directed to additive bilingual program models such as Foreign Language Exploration (FLEX), Foreign Language in Elementary School (FLES), and Immersion programs that offered students a range of possibilities in developing various levels of language and/or cultural proficiencies. The chapter presented the defining elements of FLES programs and focused on these programs as a model for helping students acquire a second language.

Finally, the chapter presented the implementation of FLES as a “best practices” model for teaching second language and implications for using FLES to teach a second language. The chapter presented a summary of studies of the relationship between
students receiving early second language instruction and cognitive, academic, and attitudinal benefits.

In the next chapter, I present the research methodology that was drawn upon during the data collection and analysis stages of this study. The study adopts the ethnographic research tradition in order to qualitatively identify patterns and regularities in the process of implementation of the Mandarin programs, in the way instruction in Mandarin is delivered, and in how participants report their perceptions of the impact of Mandarin instruction on students.
CHAPTER III

METHODOLOGY

Introduction

Chapter Two provided a theoretical foundation for the study by presenting research literature concerning second language acquisition and foreign language instruction. The chapter discussed theoretically based literature dealing with second language acquisition as well as research literature examining different models of second language acquisition in elementary school programs. This chapter gives a detailed account of the methodological approach used to conduct the study. The research study is fueled by an effort to learn more about the design, implementation, and practices of world language programs in elementary schools in a large urban school district. The study also seeks to understand the impact of K-5 Mandarin foreign language programs on students’ academic, attitudinal, and cognitive development as perceived by parents, teachers, and administrators. In doing so, this study seeks to answer the four research questions posed in Chapter One in order to understand how two K-5 Mandarin language programs were brought to fruition as well as the efforts (and/or desires) to sustain, alter, or suspend them. By interpreting the behaviors and thoughts of program stakeholders at the two schools as a case study and by drawing upon an ethnographic approach, this research seeks to find answers to the research questions through the eyes and experiences of those involved in these particular Mandarin programs. The study is significant as it offers information and insights that are "native" to the experiences of the schools in the study and may be applied to schools and districts seeking to start similar programs. This chapter will be comprised of the following eight sections:
Research Questions

The research questions for this study emerged from the need to know how elementary school Mandarin programs are established, what the research says about second language acquisition, what Mandarin instruction looks like, and what perceptions are held by administrators, teachers, and parents of students in these Mandarin programs. In seeking to form a deeper understanding of K-5 Mandarin foreign language instructional programs, this study addresses the following research questions (RQ): (1) What is known in the research about Foreign Language in Elementary School (FLES) programs? (2) What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs? (3) What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students' academic, attitudinal, and cognitive development?, and (4) What does classroom practice in these two K-5 Mandarin programs look like?
Research Paradigm and Tradition

The interpretive paradigm best describes the intellectual orientation utilized for this study. Interpretivists believe that realities—or what people believe to be true about the world—are constructed as people interact with one another in specific social settings over time (Schram, 2006). The researcher aims to understand "reality" through the point of view of those who live in it, using specific social, political, ethnic, and other contexts. Interpretivists assume that all constructs of reality have equal value and validity.

Interpretivists tell a story based on the various constructs (from others) studied and create a new reality. As an interpretivist researcher, I engaged in direct interaction with the perspectives and behaviors of the Mandarin elementary foreign language programs being studied. This was accomplished in order to shed light on the reality being co-constructed among stakeholders initiating K-5 Mandarin World languages programs at two school sites.

While it might be expected that an interpretivist researcher's work may set some degree of reform in motion, this paradigm does not automatically imply advocacy or activism. One of the principal implications of the interpretivist paradigm is that it includes a desirable dose of objectivity. This is important because, in addition to assuming the role of the researcher, during the time of the study I was also employed by a school district and was responsible for monitoring and support of world language programs (see Role of the Researcher). Therefore, using an interpretivist orientation can help to avoid perceptions of bias or passing judgment on programs implemented by schools. In other words, during this study, the interpretivist orientation helped to further separate the roles of the “researcher” who was collecting, analyzing, and interpreting data.
from that of the “district administrator within" responsible for overseeing district world
language programs.

The research tradition I have adopted for this study is ethnography. Ethnographic
studies seek to describe and interpret cultural behaviors of a group of people (Schram,
2006). Ethnographic studies seek to construct culture through interpretation and writing
in the ethnographic tradition, as it is agreed by scholars that culture itself is invisible and
intangible. Ethnographic work is most commonly undertaken through observation of
study participants. The researcher seeks to identify patterns and regularities in behavior
of human social activity (Schram, 2006). Some basic assumptions of the ethnographer
are:

- Human behavior and how people make sense of their lives are highly variable and
  locally specific.

- There are differences and patterns between ideal behavior, actual behavior, and
  projective behavior.

- Two ways of discerning these patterns and behaviors is through "experiencing"
  (observing/participating) and "inquiring" (interviewing) about experiences and
  what they mean to the participants.

- Ethnographers must uncover what participants do. Ethnography is not exhaustive
  or absolute, rather it is bound by limitations in time, circumstance, and
  perspective.

The orienting concepts of ethnography are "culture" and "contextualization"
(Schram, 2006). Culture is an abstraction, a conceptual framework that ethnographers
use to make sense of the behaviors, concepts and practices arising from the human social
activity that they seek to describe and analyze. Contextualization is the concept of studying things holistically, rather than just the parts. Contextualization, or the holistic orienting concept, calls for ethnographers to consider how the parts and the whole affect each other to construct a more complex view of human social behavior (Schram, 2006).

This study applied these two concepts by observing and analyzing two elementary schools and their Mandarin programs as unique cultures. Observations, interviews, and document reviews helped to construct meaning about this culture from the perspective of its members (parts), their interactions, and the artifacts that they use and/or produce.

The ethnographic research tradition connects to my intellectual orientation of interpretivism by guiding me to observe, describe, and interpret the experiences and behaviors of a group of people as they live day-to-day within their culture. The purpose of the study is to understand how a world language program is initiated (hence creating an unique culture) and what are the efforts and desires to sustain, alter, or suspend it. The study also intends to discern critical teaching and leadership practices from observation and inquiry of the culture, its participants, their behaviors, interactions, and products.

**Research Setting/Context**

Pseudonyms were used throughout this study in accordance with ethical research practices to protect study participants. The study sites were two elementary schools (school A and school B) in Baylis Unified School District (BUSD), a large urban school district located in California. BUSD serves over 300,000 students in grades pre-kindergarten to 12 and is among the largest school districts in the nation. Approximately 75% of BUSD's student population is Hispanic, 10% African-American, 8% White, 5% Asian-American, and 2% Native-American/Pacific Islander or Other. BUSD is
considered a "program improvement" (PI) school district as the majority of its schools have had difficulty meeting student achievement outcomes over time as established by the No Child Left Behind Act of 2001 (NCLB).

School A

School A was an elementary school with a population of approximately 300 students enrolled in Kindergarten through Sixth grades. In terms of student enrollment relative to other elementary schools in the district, School A was considered to be a small school. School A’s student population distribution was comprised of: 80% Hispanic, 15% African American, 4% White, and 1% Asian. Within the student population, 44% were considered English Language Learners (ELLs)—most of whom reported Spanish as their home language—and 84% of the students were on Free/Reduced Meal Plans, qualifying the school with a Schoolwide Title I Plan.

The staff at School A consisted of 18 credentialed teachers, including 3 special education teachers, and 2 administrators. 10 teachers were White, 5 are Hispanic, 1 was African American, and 2 were Asian American. Mandarin at School A started out in ’09-’10 as a pilot Foreign Language in the Elementary School (FLES) program with assistance from a local university’s Chinese language and culture outreach program and evolved into a two-way bilingual immersion (TWBI) model during the course of this research study. Two teachers of Mandarin taught their respective kindergarten classes using a two-way bilingual immersion model.

School B

School B was a new K-5 school and was part of a reform effort centered upon small, innovative schools to provide new models of educational excellence to promote
positive learning environments. School B had approximately 250 students enrolled. School B's student population distribution was comprised of: 80% Hispanic, 10% African American, 5% White, and 5% Asian and others. Approximately 65% of students were considered ELLs with Spanish and Korean as the predominant home languages reported. School B was not a schoolwide Title I school, although it served many economically-disadvantaged students and their families.

The staff at School B consisted of 10 credentialed teachers, including 1 special education teacher, and 1 administrator. Of the 10 teachers, 4 were White, 3 were Asian, 2 were Hispanic, and one was African American. Mandarin at School B started out in ’10-’11 as a pilot program with a FLES model out of the school's initiative. School B’s feeder secondary school is High School B, a 6-12 span school that also offered Mandarin as a foreign language at all grade levels 6-12. The secondary program in Mandarin at High School B were considered separate from the K-5 program at School B, and was not part of this research study.

Mandarin Programs in the Two Schools

The Mandarin programs at School A and School B provided the research context for this dissertation study. The Chinese language and culture outreach program (OP) at the local university was a non-profit outreach program affiliated with China’s Ministry of Education and is supported through funds from China. This program was instrumental in the start-up of the Mandarin FLES program at School A by providing and funding stipends for volunteer teachers of Mandarin. The teaching volunteers divided up their work to reach all classrooms at School A and taught students 45 minutes of Mandarin language and Chinese culture during regular school hours four days a week, Monday thru
Thursday. This model lasted for one academic year, during which community members put School A on the path to creating an English/Mandarin two-way bilingual immersion program. At School B, Mandarin was taught by 3 classroom teachers, each covering grades K-1, 2-3, and 4-5, providing direct instruction for 30 minutes a day, five days a week.

At their inception, the Mandarin programs at both school sites were considered FLES programs because of the instructional time investment (a minimum of 70 minutes a week to be considered a FLES program) (Lipton, 1994, 1998). Over the course of this study, however, School A’s program evolved from a FLES model to become a two-way bilingual immersion model (Cloud, Genesee, & Hamayan, 2000). School A and School B were selected as study sites because their pilot Mandarin programs were unique and innovative in the BUSD. More detailed descriptions and rationale for the research sample will follow under the heading "Research Sample and Data Sources".

**Concerns About the Mandarin Programs in the Two Schools**

At the time this study was conducted, a systemic concern of the programs at both schools was program sustainability. The outreach program from the local university provided volunteer teachers for one academic year but was not able to provide additional program support beyond the first academic year. Along the same lines, while the intent was to create continuity by building a feeder pathway from elementary to middle school and high school, there were no specific continuation or articulation plans in place, beyond talk about intent, at the time of this study.

In the best-case scenario, students that graduate from School A’s two-way bilingual immersion program and complete six years of immersive language and core
content instruction in Mandarin from kindergarten to grade 5 would move on to a specifically-designed and differentiated TWBI program at the middle and high schools, offering students at least 3 periods of academic content or electives courses delivered in the target language (e.g., 7th grade math in Mandarin, 9th grade biology in Mandarin) and not just advanced levels of Mandarin as a foreign language courses. Creating such a system involves staffing, scheduling, and enrollment considerations. School A’s feeder middle school was, at the time of this study, in the process of establishing Mandarin as a foreign language coursework as part of their student integration school program. (Student integration program schools attract applicants from all over the district, not just from the school’s neighborhood). School A’s feeder high school, also a student integration school, offered Mandarin as a foreign language in grades 9-12. Since the English/Mandarin TWBI program was still in its first year at the elementary school, the articulation to the middle school and to the high school (which offers a variety of world language coursework) had not yet been clearly delineated.

At School B, articulation was less of a concern because of the similarities between the programs (both are Mandarin as a foreign language programs, rather than immersion programs) and more direct working relationship between School B and its feeder secondary school, High School B. While the Mandarin programs received acclaim from those who know about them, details regarding: (a) how the programs came to be at the two study schools, (b) who were the key players involved in program design, and (c) what considerations were included (or left out) during the conception of these programs were not widely known among the BUSD community. Therefore, this study sought to shed light on these key aspects of program implementation.
Another area of concern was teacher preparation and quality of instruction. At the time of the study, the teachers displayed various degrees of familiarity and proficiency with effective teaching strategies for delivery of instruction in their respective program models. The use of volunteer teachers also raised concerns related to their preparation to adequately teach students without ongoing on-site supervision from an expert or more experienced teacher. Since the volunteer teachers were not fully-credentialed teachers in California, they were not completely familiar with the wide repertoire of instructional strategies needed to attend the specific needs of elementary students in California learning what could be their second or third language (approximately 40% ELLs).

**Sampling Strategy Used to Select the Research Sites**

The sampling strategy used to select the research sites is the “intensity” sampling strategy, which is defined as “information-rich cases that manifest the phenomenon intensely, but not extremely” (Miles & Huberman, 1994). The strategy is appropriate for the selection of Schools A and B for this dissertation study because the phenomenon is the establishment of a K-5 Mandarin foreign language program in schools where the majority of the population is Hispanic and African-American, with a negligible number of heritage learners. The phenomenon of the Mandarin foreign language programs translates into the creation of a culture at these two research sites for the ethnographer. The "intensity" comes in the selection of the sites that started with a FLES program model instead of a more "extreme" initial approach such as full language immersion, or a light approach such as foreign language exploration or FLEX program model (Lipton, 1994). The sampling strategy connects with the research purpose and research questions posed in the first chapter of this dissertation because this research documents how such
world languages programs get started in elementary schools, particularly noting the various considerations for school-site administrators, as well as the perceived impact of foreign language study at the elementary level on English Learners and non-heritage speakers of the target language. The intensity of the manifestation (first programs of their kind, time allotment exceeding the recommended minimum for FLES programs, and the "treatment" group of the entire student population) lends itself to gathering more information about implementation of the program as well as practices that lead to measurable student outcomes in (target) linguistic and cultural proficiency.

**Personal Connections to the School Sites**

The connections to the sites were purely professional. I was not employed at either school in any capacity nor did I have children or have acquaintances with children attending either school. I worked with the administrators and their staff to provide service and support of their world languages programs at their request. However, Mandarin is one of my personal heritage languages, and I hold a special curiosity about effective teaching and learning of Mandarin language and Chinese culture in California for non-Chinese and heritage Chinese learners alike.

I visited both sites, met with the administrators, and obtained their permission to use their school sites in this study. I met with the Mandarin teacher volunteers and some of the mainstream programs’ teachers on staff in both schools. I also met with the local university's outreach program staff overseeing the teaching volunteers. In addition, I had no existing professional relationships with the parents/students at both school sites.

At School A, I had established a visitation routine during the 2009-2010 school year to observe teaching practices of the teaching volunteers and provide them with
instructional coaching support. This addressed a need stated by the principal, who felt that it was important to supervise and provide instructional support to the teaching volunteers in addition to the regular teaching staff in order to ensure quality instructional delivery of Mandarin. Working in this capacity with School A staff facilitated gaining access to School A on a regular basis and allowed me to establish some degree of visibility, rapport, and trust with the various stakeholders at the school site.

At School B, I provided the principal and his leadership team information on program models (immersion, FLES, FLEX, etc.) and on resources specific to the teaching of Mandarin and world languages in general, such as the California World Language standards, and introduced him to professional organizations to facilitate the networking and professional learning of teachers of Mandarin.

I established and maintained rapport with my study subjects by conducting scheduled visitations and providing ongoing support through debriefing, sharing of resources and materials, and overall problem-solving as necessary. I believe that having adopted a Concerns-Based Adoption Model (like Maslow’s Hierarchy of Needs) (Griffin & Christensen, 1999) helped to establish trust and rapport by addressing the needs of (and supporting) individuals to feel safe about their “basic” needs in their working environments and also have a way to fulfill higher-order expectations.

I introduced my role as researcher in person and also through written communication (introductory letter). During the in-person meeting/greeting and on the written communication, I clarified the purpose of my study, my research questions, and highlighted how their participation in this study will help to add to the greater body of knowledge about elementary Mandarin language and culture programs. I also pointed
out that the data gathered would be reported anonymously or with the use of pseudonyms in the study. I also explained how other educators who may be contemplating (or in the process of) starting similar world language programs at the elementary level may benefit from learning of the variables that contribute to the successes and/or challenges to the Mandarin programs at School A and B.

My professional relationships with both schools facilitated entry and access. However, I felt obliged to accommodate to the various pressures and sources of stress (e.g., staff reduction and layoffs, budget development timelines, among others) affecting personnel at all levels in School A and School B. I worked proactively to establish and maintain rapport and trust before starting the data collection process.

**Research Sample and Data Sources**

The research sample used in this study included school staff and parents at School A and School B associated with the Mandarin programs. The data sources at both schools included interviews with administrators, teachers, and parents, classroom observations of the Mandarin program, as well as the collection of documents (e.g., lesson plans, instructional materials, student-and teacher-created artifacts, school publicity and informational material). The variety of the research sample and data sources address the four research questions posed for this study concerning elementary school Mandarin foreign language programs. Interviews provided rich descriptions of perceptions of staff and parents on the values and quality of implementation of their Mandarin program. Classroom observations and review of documents helped triangulate the data collected through the interviews.
Interviews, observations, and document review are appropriate data sources because they support the ethnographic tradition used for this study. Teachers, administrators, and parents are part of the culture of the Mandarin programs that are unique to School A and School B. These methods allowed me to gain an insider's perspective of the culture (Mandarin programs) being observed. The two orienting concepts of ethnography, culture and contextualization, suggest the use of these procedures (Schram, 2006). The information gleaned from these procedures helped to describe the culture being observed, and to establish the complexity of the culture, of its "natives", and their behaviors/products (Schram, 2006).

The sampling strategy used to select the study participants was the criterion based strategy. Participants were chosen based on their participation or involvement in the K-5 Mandarin foreign language programs (e.g. principal of the school, Mandarin teaching volunteers, teachers of students participating in the Mandarin program, and parents of students receiving Mandarin instruction). The intent of using this sampling strategy was to be able to report perceptions of the Mandarin programs from the participants' perspectives. The sample, as a group, consisted of educators and parents who were either directly or indirectly involved with the Mandarin programs in their respective elementary schools. Their involvement in the implementation of these new and unique programs constituted the criteria for their selection.

**Instruments and Procedures**

This study seeks to describe how the Mandarin programs were implemented, to describe classroom instruction, and to probe perceptions held by administrators, teachers, and parents about the impact that the Mandarin program had on students. The study used
three main instruments: (a) interview protocols, (b) classroom observation protocols, and (c) documents for review. An interview protocol based on the research questions was utilized to obtain information from administrators on how their programs were conceived and implemented. Interview protocols for teachers and parents were also used to obtain information about the implementation of the Mandarin programs. All three interview protocols included open-ended questions to probe administrators', teachers', and parents' perceptions on the impact that the Mandarin programs had on students in terms of academic aptitude, cognitive development, and attitudes towards learning and peers.

A classroom observation protocol served to record teacher-student and student-to-student interactions in the classroom setting. The classroom observation protocol also helped to collect information on the people present in class (e.g., teacher assistant, parent helpers, visitors, and so forth) and information on classroom composition (e.g., number of boys and girls), and the classroom's physical set up. Documents related to the implementation of the Mandarin programs and classroom artifacts created by students or by teachers provided additional information used to frame and triangulate data collected from the aforementioned instruments.

Research participants in this study were protected through documents that guarantee their anonymity and safeguard that information gathered for the study cannot and will not be used for evaluative or punitive purposes. These documents include the information letter and participant consent form requiring the signatures of the participants to indicate their understanding of the terms and parameters of the study, and to indicate their willingness to partake in the study. Participants were reminded of always being able to stop and withdraw at will with no obligations or further questions asked. Pseudonyms
were used for all participants, work locations, and affiliations. To further protect the identity of participants, gender was randomly changed in the narratives when it did not affect the data being interpreted. Grade level affiliations were also generalized (e.g., "early elementary teacher" instead of "2nd grade teacher") for the same intention.

Approval of the forms required by the district's External Research Review Board and the university's Human Subjects Review Board were obtained to validate and guarantee protection of the rights of human subjects involved in research studies.

**Data Collection Method**

The data collection method used in this study is comprised of: 1) interview, 2) document review, and 3) observation. Interviews with open-ended questions elicited "rich, thick descriptions" (Bloomberg & Volpe, 2008) and allowed for the clarification of statements to probe for further information. Document reviews provided corroborative evidence to claims made in interviews by way of printed, concrete materials, whether they were informational flyers, official school and district bulletins, or samples of teacher- or student-created classroom artifacts. Observations allowed the researcher to enter and make note of the richness of the socio-cultural context in which the participants live.

These methods are appropriate to the research purpose of interpreting behaviors and thoughts of those involved in School A's and School B's Mandarin programs as they yielded rich data, not only about opinions or perceptions but also allowed for elaboration and observation of actions, behaviors, and cultural products directly from the "natives" in the culture being observed (Bloomberg & Volpe, 2008). The three methods complement
each other, and this triangulation helps to enhance the methodological validity and provide an in-depth understanding of the study (Bloomberg & Volpe, 2008).

**Interviews**

The study involved interviewing 1) the current principals or their administrative designees in charge of the Mandarin programs, 2) the teachers of Mandarin, and 3) parents of students in the Mandarin programs. Interview protocols were used as data collection instruments. Interviews sought to glean anecdotes, insights, and perspectives from the principals, the teachers of Mandarin, and randomly selected parents with children in the Mandarin programs, per recommendation/invitation of the principal and teachers. The information gleaned from these interviews fed the evaluation of the research questions proposed for this study.

The interview protocols used for each participant group were differentiated according to research questions and the tasks and duties carried out by individuals of that group. The interview protocol for administrators focused on program design, program implementation and their perceptions on the impact of the Mandarin program on their school and their students' academic, cognitive, and attitudinal development. Interview protocols for teachers focused on classroom practice, their perspectives on successes and challenges, and their perceptions on the impact of the Mandarin program on their school and their students development in academics, cognition, and attitudes towards learning and towards their peers. Interview protocols for parents focused on their perspectives on the successes and challenges of the Mandarin program, and their perceptions on the impact of the Mandarin program on their children and the value of such program for their community.
Participants were reached via study announcements and informational letters disseminated through the principal or a designee. The principals were asked to support this research study by helping reinforce the importance of participating in research activities (e.g., during meeting with teachers, making announcements at grade-level faculty meetings, etc.). Scheduling time for interviews and observations was difficult, particularly with school site personnel, during these times of critical reductions in staff and heightened all-around accountability for student achievement and productivity. To accommodate schedules of school-based personnel, multiple interview time/location options were offered to conduct telephone interviews or follow-ups, if face-to-face interview were not possible within the timeline of this study. All interviews with school personnel were conducted after contractual hours at the school site or a place of the participant’s choosing. Interviews were conducted under the condition that they would not disrupt any regular instructional activities at the school or prevent the participant from performing "other duties as assigned" beyond their regular duties.

**Document Reviews**

Principals and teachers were asked to share any documents related to the planning of the K-5 Mandarin programs (e.g., memoranda of understanding (MOU), contracts, lesson plans, informational brochures, recruitment flyers, professional development agendas, etc.) that might help paint a more comprehensive picture of the implementation of the Mandarin programs. These documents also served to support claims made during the interviews regarding the design and implementation of the Mandarin programs. The study sought to find out how much information has been documented and/or is available.
for reference. Materials were reviewed off-site or on-site as long as the act of document review did not disrupt the day-to-day instructional activities of the school.

**Observations**

Observations of classroom practice encompassed the third method of data collection for this study. A "warm-up" period of observations (not as a researcher, but as an interested education professional) prior to starting the formal data collection process was conducted to establish a familiar presence in classrooms and in the school sites. This was additionally conducted to begin the process of establishing positive rapport and trust. The data gathered from observations composed a picture of what classroom instruction looked like for the teachers as well as for the students. This directly supports the evaluation of the research questions proposed for this study. In addition, data from observations were also used to gauge effectiveness of instruction and to inform next steps or recommendations for future action to strengthen the program.

**Data Analysis Techniques**

The data analysis technique followed is the responsive interviewing model (Miles & Huberman, 1994). The responsive interviewing model consists of two phases. The first phase included the preparation of transcripts and the development and refinement of concepts, themes and events. The interviews were then coded to match the identified concepts, themes, and events. The second phase involved comparing concepts and themes across the various interviews or describe them collectively.

The process in this particular study involved interviewing principals, teachers, and parents directly involved with the Mandarin programs at their respective schools. The interviews were recorded on a digital audio recording device, then transcribed verbatim.
by the researcher into separate text documents (one per interview, per participant). The data was prepared for analysis by uploading it through Atlas.ti software and coding it through the various options on Atlas.ti (open, in vivo, etc.). The data was analyzed to identify trends and patterns of text or codes through Atlas.ti tools such as “word cruncher”. This data analysis process connects to my research tradition of ethnography as it seeks to report perspectives gathered from rich and vivid accounts by those who are “natives” of the culture being studied/observed. The process of developing “codes” that align with themes and concepts found and/or refined supports the search for answers to the research questions about how two elementary schools in a large urban K-12 school district start and implement Mandarin programs.

**Role of the Researcher**

The researcher often assumes various roles (and with them, biases) in addition to that of the researcher (Bloomberg & Volpe, 2008). These multiple lenses and perspectives that I use to view and understand the world are all undeniable parts of who I am, including who I am as a researcher. Bias is inevitable but can be kept under check and need to be properly stated to help contextualize the study for its audience. As the researcher/principal investigator in this study, I am responsible for planning, designing, and executing the study, with the guidance and support, primarily from my dissertation adviser, but also from the other faculty assigned to this doctoral cohort and, to a certain extent, my cohort colleagues. I also wear other hats: I am a Mandarin heritage language-speaker; I am a parent of Mandarin-speaking children; and as an employee involved with curriculum and instruction in a public school district, I am also a program advocate as
well as a representative to the public. Each of these roles has their influence on the subjectivity of the study as it is processed through my various filters.

My role as the principal investigator is to identify the problem, pose research questions, and design a process by which data may be collected, analyzed, interpreted, and reported. In relation to the research setting, I wore my researcher "hat", and expected that it would be inevitable to completely separate myself from my role as the professional educator and district staff involved with curriculum and instruction in the area of world languages. I was an "insider" because of my professional affiliation as an employee of a public school district, in relation to the administrators and teachers participating in this study. Teachers of Mandarin also perceived me as an "insider" because I am a native speaker of Mandarin. In relation to parents, I was also considered an "insider" as I introduced myself in my many roles, as researcher, as district employee, but more importantly to parents, as a parent of school age children also enrolled in public schools. Yet, at the same time, I was also perceived as an "outsider" because I was clearly not a member of each school's particular culture. I was an "outsider" to parents being interviewed because my children did not attend the same schools and I did not live or participate in daily activities in their communities.

As an advocate for world language programs, I adopted a position to showcase the benefits evident in the data collected in my study, or those already documented and cited by other researchers. However, I accepted the possibility that the particular treatment may not have yielded any such benefits throughout the duration of this particular study. As a program advocate I was able to use the perceived programmatic challenges that surfaced in the collected data to look for answers that may strengthen the Mandarin
programs. As a representative to the public, I was committed to share the results of this study with interested members in the community in order to garnish support for Mandarin and other world language programs at the elementary level.

I propose that my various roles involved in this research process are not conflicting. Managed through the role of the researcher, the roles of advocate and public representative can offer some real solutions to any obstacles or detriments in School A’s and School B’s programs. After all, the true program advocate wants only the best programs to shine and unproductive and unnecessary practices to be reformed so that programs can provide the maximum benefit to their students and stakeholders.

My role as an employee involved in curriculum and instruction of a public school district may have influenced teachers to behave and act differently than if I were not affiliated with the district. I attempted to mitigate this bias by establishing a familiar presence on campus and by building rapport through frequent classroom visitations and coaching conversations, and by reiterating that the data collected for this study would be reported collectively with any identifying information removed. I anticipated that trust would be difficult to establish because district personnel are often considered as "outsiders" in relation to a school’s staff, but I hoped that the fact that I did not have supervisory authority over the instructional practices at both study sites helped me to establish at least a fundamental level of trust.

Some strategies I employed to counter the effect of the researcher on the case:

- Spending more time on-site
- Using unobtrusive measures
- Clarifying my objectives and intentions/transparency/accessibility
• Conducting some interview off-site/convenient to participant

• Understating potential problem/being low-key, avoiding the "superhero" complex

Some strategies I adopted to counter the effect of the case on the researcher:

• Including informants from all levels (peripheral and former actors)

• Spreading out visits/minimize “becoming native”

• Including dissidents and marginals, other points of view

• Triangulating using several methods

• Not showing off expertise

• Focusing on research questions

• Avoiding to "solve the problems" of the school site

While these are all generally-accepted strategies to mitigate bias in research studies, they are appropriate to this study's ethnographic approach because they aim to reduce, as much as possible, the impact that the researcher/ethnographer may have on its research subjects and vice-versa, so that the study may truly and accurately report rich and vivid accounts of the interactions and behaviors of the observed culture and its "natives". In addition, this researcher used the interpretivist paradigm, which has a certain level of built-in objectivity, as a framework for this study (Schram, 2006).

**Chapter Summary**

This chapter began by providing a detailed account of the methodological approach used to conduct this study. This researcher used an interpretive paradigm and an ethnographic research tradition to qualitatively answer the research questions posed in Chapter One. This chapter provided a description of the research setting and context of the two schools where this study took place. In addition, this chapter explained the
sampling strategies used to select the research site and research participants. The chapter further illustrated ethical issues, as well as the methods used to collect and analyze data. The chapter closed by studying the biases relevant to the role of the researcher and offered specific ways in which these biases (and their effects) were mitigated to protect the validity of the study. The next chapter will present the data collected through the methods described in this chapter.
CHAPTER IV
FINDINGS

Introduction

Chapter Three provided a detailed account of the methodological approach used to conduct this qualitative study. This study draws upon an interpretivist orientation and an ethnographic research tradition to learn more about the design, implementation, and practices of Mandarin foreign language programs in two elementary schools in a large urban school district (Schram, 2006). This study additionally seeks to understand perceptions held by administrators, teachers, and parents of the impact that Mandarin instruction has on students. In order to interpret the behaviors and perceptions voiced by those involved at the two elementary school sites, an ethnographic approach to the data analysis is utilized. By doing so, this research seeks to better understand the implementation of Mandarin foreign language programs at the elementary level through the eyes and experiences of stakeholders involved in the program (principals, teachers, and parents). The theoretical framework used for this research study includes research literature on (a) second language acquisition, (b) descriptions of different instructional models for second language acquisition in the elementary grades, (c) descriptions of effective practices for second language acquisition in elementary grades, and (d) implications of foreign language instruction on students’ academic, attitudinal, and cognitive domains.

This chapter presents collected data for this study and explains how these data were analyzed. Data for this research is comprised of interviews with principals, teachers, and parents from the two study sites, as well as classroom observations, and a
review of documents related to program implementation. The data analysis conducted within this chapter is presented in three sequential sections as they relate to each type of data collected. Interviews with principals, teachers, and parents are presented in the first section of the chapter because they provide rich and descriptive first-hand accounts of program design, implementation, and perceptions regarding the impact Mandarin instruction on students. Classroom observations of Mandarin instruction are presented in the second section of the chapter as they provide ethnographic insight into how—and to what extent—it was that the researcher became part of the culture being observed. The third section of this chapter provides data from documents related to the Mandarin programs’ design and implementation. These documents are provided in addition to classroom observations to help triangulate analysis of collected data from interviews and classroom observations.

The research questions (RQ) that this study seeks to address are presented below:

1. What is known in the research about Foreign Language in Elementary School (FLES) programs?

2. What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?

3. What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students' academic, attitudinal, and cognitive development?

4. What does classroom practice in these two K-5 Mandarin programs look like?
The theoretical framework presented in Chapter 2 of this dissertation addresses the first research question. By reviewing previous research studies and theories concerning Foreign Language program development, this study is better able to build further theoretical understandings upon an accepted theoretical foundation, thus providing a theoretical lens through which to analyze the collected data set from this study.

The data collected through interviews, classroom observations, and review of documents, serve to answer the remaining research questions. They do so by providing evidence concerning program implementation, description of classroom practice, and participants’ perceptions on the impact of Mandarin instruction on students. Therefore, each of the following sections presents a description of the type of data collected as well an explanation of the steps taken during the data analysis phase of this study.

**Section I: Interviews with Principals, Teachers, Parents**

Interviews with principals, teachers, and parents were recorded over a span of two months, from April 2011 through June 2011. Each of the principals at the two Mandarin program study sites were interviewed using an interview protocol created specifically for participating principals (see Appendix C). Five teachers involved with the Mandarin program from both study sites were also interviewed using an interview protocol designed for teachers (see Appendix D). Lastly, three parents from both study sites were interviewed using a protocol written specifically for parents of children enrolled in the Mandarin program (see Appendix E).

Audio interviews were collected using a digital voice recorder and transcribed utilizing an ethnographic analytic perspective. Once these data were captured, two levels
of data analysis were conducted. First, initial verbatim transcripts were produced from the interview data to provide a detailed record of the audio interview itself. Once each transcript was produced, it was carefully reviewed to analyze potential thematic responses by the interviewees. The second level of analysis involved uploading the interview transcription files onto Atlas.ti (qualitative data management software) to review the data and identify emergent themes within the data set. Using Atlas.ti, data was first reviewed for codes to be attached to quotes from the interview data set. Similar codes were then organized into code families that addressed specific research questions posed in this study.

Next, a comparison of code families across interviews was conducted in order to locate potential recurring interview response themes across each type of interview participant. Identified themes indicate perceptions concerning the impact of Mandarin instruction on students as well as considerations to be taken during the implementation of future world language programs. Table 4.1, on the following page, presents an initial analysis of interview responses from principals, teachers, and parents regarding various aspects of the Mandarin program implementation at each school site.
Table 4.1
*Principals’, Teachers’, and Parents’ Interview Responses*

<table>
<thead>
<tr>
<th>Interview Participant Pseudonym</th>
<th>Principals</th>
<th>Teachers</th>
<th>Parents</th>
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<tbody>
<tr>
<td>P1</td>
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<tr>
<td>Pa3</td>
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</tbody>
</table>

**Interview Response Categories**

**FLS Programmatic Perceptions**
- Classroom practice
- Commitment to maintaining Mandarin program
- Community/Parent involvement
- Funding
- Inequity issues perceived by community
- Rationale for Mandarin program
- Scheduling
- Staffing
- Teacher support

**Classroom Practice Perceptions**
- Best practices in FLES
- Classroom management
- Curricular materials
- Lesson planning
- Teacher prior training/experience
- Teacher support

**Student Impact Perceptions**
- Academic impact
- Attitudinal impact
- Cognitive impact
- Impact on community
- Impact on school

From Table 4.1 data, it should be noted that specific patterned responses emerged throughout the interviews themselves. As each study participant was interviewed, using similar interview protocols, responses by the interviewees began to indicate specific
themes. Consequently, such themes served to guide the data analysis documented throughout this chapter. Furthermore, these research themes were directly connected to the initial research questions posed in this dissertation study. Since the first research question is addressed in chapter two of this dissertation, the following subsections report patterns found according to the second, third, and fourth dissertation research questions.

(RQ2) What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?

Data collected by interviewing principals, teachers, and parents indicate that there are several aspects concerning program design and implementation that should be considered by anyone seeking to implement similar Mandarin programs. These aspects are: (a) staffing, (b) funding, (c) scheduling, and (d) teacher support. Data analysis findings are provided for each subcategory.

Principal Responses on Staffing

As shown in Table 4.1, both principals reported that staffing qualified teachers for their Mandarin programs was a challenge. Interviewed principals indicated that it was extremely difficult to find adequately trained Mandarin teachers for each school site. Both principals stated that ideal Mandarin teachers not only have high levels of proficiency in Mandarin language and different aspects of Chinese culture, but should also be experienced with age-appropriate pedagogy for teaching Mandarin, classroom management, and lesson planning. Interviewed principals also stated that such individuals have been hard to find and place in the Mandarin classrooms at their school sites. Some of the candidates considered by the principals had proficiency in Mandarin,
knowledge of second language pedagogical strategies, or classroom experience, but seldom had high degrees of all three ideal qualities.

Speaking about interviewing various candidates to fill a Mandarin teacher vacancy, P1 stated: “Another teacher, who is fluent in Mandarin, was interested in teaching Mandarin but was a 10+-year district veteran who knew nothing about teaching Mandarin”. Such a response suggests the difficulties principals face when seeking ideal candidates to fill Mandarin teacher vacancies to implement successful Mandarin programs. Furthermore, this indicates that principals will have to provide ongoing and intense support for those who are hired to develop teaching skills that promote effective learning of Mandarin in the K-5 classroom.

P2 responded: “we got a number of people applying, but they were, even though they had BCLAD in Mandarin, they were fresh, they had never been in a classroom. And in the interview, we could not see them working here and being successful, even though they had a BCLAD. They had to be strong, you know”. This response further indicates that it was difficult to find well-qualified staff with adequate classroom experiences to be successful instructors of Mandarin. Principals are increasingly aware that success in classroom practice is dependent on many variables and goes beyond holding a particular type of teaching or language teaching certification.

In addition, P1 stated that, “the biggest weakness of our FLES program last year, I would say, would be in the quality of the teaching. Not because we didn't have good people, but we had people who had just no understanding, skills, and knowledge in basic teaching methods and pedagogy, classroom management, and lesson planning”. What this response indicates is that teachers who were employed to staff the Mandarin program
were well-intentioned individuals but suffered a lack of various critical professional skills that might have yielded a positive impact on the effectiveness of the Mandarin program.

While teachers were selected initially for their knowledge of Mandarin language, their lack of skills related to pedagogy, lesson planning, lesson delivery, and classroom management led one principal to perceive the teachers’ weaknesses as a significant programmatic weakness. Since there are still relatively few teachers who are highly proficient in Mandarin and are highly effective in pedagogy, lesson planning, lesson delivery, and classroom management, the selection of teaching staff for the Mandarin program should be a major consideration in the planning stages of any school wishing to implement an effective Mandarin program.

Referring to constraints to staffing Mandarin vacancies due to contract-based policies regarding the obligatory placement of displaced teachers due to budget cuts, P1 added: "the district’s human resource (office) is not the easiest to maneuver. We're having to hire from the outside. Experienced teachers of Mandarin certainly aren't in the district, they just don't exist in our district. But we have to maneuver through Human Resources to be able to hire from the outside and sometimes it's really convoluted, a lot of red tape that we have to go through, and then after you have selected your candidate, you can't hire them because of the 'must place' teachers". Hiring policies at the time this study was conducted made it extremely difficult for principals to adequately staff their Mandarin world language programs.

Teacher Responses on Staffing

Responses from teachers also reflected their awareness of the difficulty to find highly-qualified Mandarin teaching staff. T1 reported: “From what I heard from other
schools, it's very difficult to find teachers who can teach Chinese, who have the credentials, the BCLAD. They may know how to speak but they may not have the academic foundations in Mandarin, so it was challenging to find a teacher last year”.

This teacher’s response emphasizes the difference between those who only possess basic communication skills in Mandarin because they are native speakers of the language or have acquired near-native proficiency without formal study of the language, from those who may have native- or near-native speaker language proficiency and have engaged in formal academic studies of the Mandarin language. Merely being fluent and conversant in the target language does not necessarily mean that one can effectively teach it. This suggests that principals need to look deeper into teacher qualifications and consider what training or experiences a candidate may have aside from just having communicative proficiency in Mandarin.

**Principal Responses on Funding**

Both principals reported funding as an important consideration. Funding considerations include: (a) funding to hire qualified teachers, (b) funding for purchase of curricular materials, and (c) funding to support teachers for additional hours worked to create curricular materials. To address the issue of funding to hire qualified teachers, P1’s school collaborated with a local university to use university-funded volunteer teachers in Mandarin classrooms. P1 stated in the interview: “I didn't have to worry about where they were housed, the university had housing for them. I didn't have to worry about their transportation. I didn't have to worry about paying them”. This approach offered the distinct advantage of not incurring costs for the school, and also providing Mandarin-proficient personnel who could teach Mandarin lessons on a
scheduled rotation to all students at the school, much like an arts or physical education 
teacher would. The experience at P1’s school site was part of a pilot program designed to 
help schools jump start Mandarin programs while the school could find a more 
permanent solution to funding teachers. The volunteer program was designed to last only 
one to two years and was quite effective during its implementation in the sense that 
schools were staffed with Mandarin-proficient volunteer teachers during the pilot period.

Although this program was in existence during this study, both principals 
interviewed eventually hired regular teaching staff based on their school norm with 
qualifications to teach Mandarin. For instance, the principal of School A hired two 
kindergarten teachers to teach Mandarin even though he only needed to fill one 
immediate vacancy. The principal hired the second teacher, who had the requisite 
language proficiency but lacked experience teaching Mandarin, so that he could be 
prepared to teach Mandarin the following year. P1 reported: “we hired him to teach 
right now in English while learning about teaching Mandarin. So next year, he will be a 
Mandarin teacher also”. This indicates that P1 was aware of the staffing challenge and 
was proactive in planning ahead to groom a new hire in anticipation of the vacancy in the 
following school year.

Principals also reported on funding needed for instructional materials. For 
example, P1 stated that, “in terms of instructional material, you know, the way I support 
my teachers is to enable them to get whatever they need and find a way to help them buy 
the materials they need, if they can be purchased. But funding is an issue”. This 
response indicates that, while principals may be eager to support teacher requests for
school-purchased instructional materials, school funding for such materials remains limited.

P2 reported that, “I'm really afraid because of the budget crisis and all the cutting. Right now we have $700 in instructional materials for next year, like $2 for office supplies, to run a school like this, we need about $25,000 to $30,000, you know”. At one school, because of their experimental school status, the principal was able to request district funds to buy instructional materials for Mandarin, for the first year. P2: “They paid for it for the first year. So, that was just a little bit of change [referring to money], but it helped us, you know, as far as having district support in that”. At the other school, materials for their FLES program were donated through the university. However, both principals reported that teachers created much of the instructional materials themselves because commercially available instructional materials did not meet their teaching needs or because they were not accessible due to a lack of funding.

Both principals were cognizant that their Mandarin teachers spent much of their own time preparing materials and planning Mandarin lessons. Interview data suggests that principals would like to be able to somehow reward teachers for their work outside of contractual hours, but found it difficult to do so without adequate funding. P1 reported: “And, you know, for a brand new language [program], and not being able to pay him for every bit of work that he's doing. So, he's donating a lot of his time, you know, which is great but I would like to pay the teachers for the work that they do [on their own time], but that resource isn't there”. P2 stated: “if you're trying to scrounge for resources and you don't have time, time is so valuable. Up to this point, I couldn't pay anybody to really plan, you know, on top of what they're already doing. So, that's been a
struggle”. P2 added: “Not having enough money to pay, or time to give, but we're going to try to fix that for next year, so we can set aside money so I can pay teachers for planning time”. This is significant because it means that both principals are in touch with the realities of the amount of extra work that Mandarin teachers do on a daily basis.

While monetary compensation for all work done outside contractual hours is not a permanent solution, it can prevent morale from sinking, especially considering the pressures of creating a new program from scratch. The teachers of Mandarin at the two school sites not only taught Mandarin, but also were responsible for teaching the elementary curriculum. Therefore, they had greater responsibilities to plan lessons and prepare the necessary teaching materials for both English and Mandarin curricula. The analysis of this principal interview data indicates that setting aside funds to support extra teacher planning time would be an important consideration as schools design their world language programs for implementation.

**Teacher Responses on Funding**

Teachers’ responses to the interview protocols did not address funding as extensively as principals interview responses did. However, one teacher gave substance to the principals’ funding perceptions: “I also spend a lot of my own time making stuff, you know. Like, PowerPoints, I have to scan the words, and google the images to actually make the PowerPoints. We only bought one K-1 set of the song books, so I went home and scanned every page. I used to just prop the book under a document reader, but this is best, but then it takes a lot of time. I have to scan it, I have to crop it, and I'm doing all this on my own time”.

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In addition, two of the teachers interviewed reported that increased funding would bring additional opportunities for the Mandarin program. T3 said in the interview that he wishes funding could be used to hire guest teachers from China to co-teach: “I've heard that some schools have funding for a guest teacher from China. I think I could use someone to co-teach with, that would be helpful. Having someone else in the classroom would definitely be more helpful. Teaching alone is fine, but having support in the classroom by another teacher would be a plus, so we can focus on different skills and needs”. T3 added that funds could also be used to attend professional conferences for professional development: “In June, there is a Mandarin Teacher Conference, so I would like to go to that and learn something new. I want to learn strategies that can help make learning fun for the students”. T4 reported that he would like to have funding for technology, but that funding was the administrator’s domain: “I mentioned technology, I want to include that piece in. We don't have a lot of computers in the classroom. I don't know about the funding and all that, but that's from the administrative point [of view]”.

These data suggest that teachers (for the most part) were not overly concerned with funding for the program in the same way that principals were. Rather, the teachers’ responses indicate that they were interested in the opportunities that additional funding might provide to enhance their program or to participate in professional development opportunities.

**Principal Responses on Scheduling**

Another key consideration in the design and implementation of the two Mandarin programs in this research study was scheduling and the allocation of time from the instructional day. Both schools offered Mandarin using a FLES model for 30 – 45
minutes during the school day. P1 responded: “At the time, in discussing this concept of teaching this FLES Mandarin class on a daily basis, 4 days a week, one of the concerns was instructional time, when can we do it? We had an urgent, urgent need to increase test scores. So certainly we had to be very diligent and very careful about how we use instructional time”. This response indicates that the principal understood the urgency related to increasing test scores that was widespread in his school district, and also that scheduling FLES within the instructional day presented some implications about having to be efficient in how the school used instructional time in order to make the Mandarin FLES program possible. P1 added: “We decided we would do Mandarin half an hour a day during the instructional day, just FLES Mandarin, not through a core subject, not through PE, not through art or music, just Mandarin.” In order to provide the benefits of the Mandarin program to the largest number of students, P1 chose to implement FLES within the instructional minutes of a regular school day. However, in later conversations between P1 and his school district, P1 found out that the district had specific requirements for instructional minutes. The district required him to alter the way the program was offered to incorporate Mandarin with instruction in the arts, music, or physical education in order to account for the instructional minutes for each subject required. P1 added: “At the time, to be honest, I didn't know that wasn't OK by the district, so we did it”. This data reveals that the scheduling of Mandarin time into the instructional day needs to be a major consideration in the planning and development of such a program.

At the second study site, P2’s responses indicate a different approach to scheduling for his FLES program. P2 reported: “We have block scheduling, which
means that the students rotate into the classrooms and when they get into the particular block, they get subject matter instruction as well as an additional 30 minutes of Mandarin instruction”. P2’s school was able to schedule 30 minutes of FLES Mandarin in addition to subject matter instruction because the school participated in a pilot program in his school district that allowed for more flexibility in scheduling for innovative programs. This suggests that leaders at the district level can support the implementation of an innovative program like one in Mandarin instruction by exercising some flexibility with scheduling requirements while still holding schools accountable for student performance.

**Teacher Responses on Scheduling**

Teachers also reported that instructional time is a consideration. One teacher indicated that students could do more if more time were allotted for Mandarin instruction. “And, so ideally they could do it every day, they could soar, but because it’s, like I said, every three days or so, and so it kind of makes the schedule a little harder”. This indicates that teacher sees potential for student growth if Mandarin were offered consistently on a daily basis, rather than on a 2-, 3-, or 4-day schedule as determined by other curricular priorities.

Another teacher reported that he had to make changes to the Mandarin schedule in order to help students with English literacy skills, which were a priority. “And so, in the beginning of the year, I was regularly teaching Mandarin daily for 40 minutes. But it’s impossible because when kids come to you struggling to read and write in English at grade level, you have to play catch up. At the beginning I was, I came in all gung-ho, but then I started to cut Mandarin down to 20 minutes, to 15 minutes, and then I had to move it out completely. So, I modified it myself to teach Mandarin in the afternoons but that
means that the kids can't have it every day because of their afternoon rotations. So, then they would get it every three days‖. This statement points to the need for additional curricular minutes to be set aside specifically for Mandarin. It has implications for schools to design schedules that help integrate Mandarin with other subjects so that everything can be delivered during the regular instructional day.

Speaking on the importance of maintaining a regular schedule for Mandarin, another teacher added: “I try not to cut out Mandarin from the schedule because I don't want the kids to think that we do it only when we can. It's pretty challenging, especially to teach the content‖. This response not only indicates that Mandarin is offered with limited regularity, but also indicates that this teacher has an awareness that adjusting the schedule at the expense of Mandarin time communicates the wrong kind of message to students. This is significant because it shows that Mandarin is important to both teachers and students, and schools really need to consider when in the daily and weekly schedules to consistently offer Mandarin without interruption like other prioritized subject matter.

**Principal Responses on Teacher Support**

Principals’ responses suggest that they were supportive of their teachers’ contributions to their respective Mandarin programs. Generally, comments from principals about supporting teachers fell under two categories: classroom instruction, and instructional materials. One principal stated: “I think support is two-fold: 1) supporting instructional materials, and 2) actually supporting instruction ---*instruction*”.

Another principal reported: “As a principal, for Mandarin support, I just walk into classes. Um, I see the teachers are doing a good job, as far as using a lot of visuals, lots of TPR (total physical response), the right strategies to do it‖. One principal said that it
would be ideal to visit classrooms every day, but acknowledged the reality of high demands on a principal’s time on a daily basis: “So, ideally I would say, it would be very nice to go every day. When you can go every day, chances are, twice in the week you might have a discussion, doesn't have to be a formal discussion, you can have an informal discussion with the teacher about what you saw, whether it's something great, some questioning, some wondering, or something to improve upon. That would be ideal to me”. The principal further added: “In reality, I think I go to the classroom probably at least three times a week. I go to different rooms really for different purposes. For some rooms I try to be there, literally, to find out what the teacher is doing, because those are the teachers I more or less have concerns about. I want to make sure that they are on the right track. If I don't understand what they are doing, it gives me an opportunity, an opening to say, hey, can you explain that to me, and that conversation might lead to, hey, how about this, have you thought about that? Other teachers that I don't worry so much about: I basically show up in the room. I don't stay very long. Basically I want to make a statement of presence to the kids: your principal is here; this is a reminder that I'm here and you need to do your job. Sometimes I say a word of encouragement, sometimes I say a word of correction. Um, so the kids know I am committed, and for the teachers most of the time I see something nice and I complement them”. The principal explained: “They're in there every day teaching, so I feel it's important for me to learn from them. It's important for me to know what's going on, important for me to know what they're doing, and important for me to go in the classroom, even if it is just for a few minutes to look for evidence of the kids getting it. So sometimes I might ask the kids, what are you doing? Why are you doing it? Do you know what standards you are learning?” This
indicates that principals can support teachers by observing instruction, asking questions, and providing feedback. Principals also convey to teachers and students alike their commitment and value of the program by their presence.

One principal stated: “If the principal is Mandarin-speaking, there's a little more that the principal can do” in terms of supporting instruction by providing language-specific guidance and assistance. However, in all likelihood, the great majority of principals of schools in the United States do not speak Mandarin. However, what this statement suggests is that support by any well-intentioned principal is possible, but those with Mandarin skills can provide additional language-specific support. One example of additional support includes the ability to take evidence from classroom discourse and use it to work collaboratively with the teacher to brainstorm ideas for subsequent instruction. The principal added: “I think it's important that the teacher has another person who understands teaching and the language to brainstorm and collaborate with”. This suggests that principals, particularly those who do not speak Mandarin, can enhance their level of support of their teachers and programs if they seek to learn the language themselves. In addition to being better able to provide support to their Mandarin programs, this action of “leading by example” would also allow principals to send a powerful message to the school community on the value of learning Mandarin for all members of the community: young, old, and anyone in between.

Principals were aware of their teachers’ contributions to the program by creating instructional materials. One principal stated: "If [the teacher] needs to create it, make it on his own, which is the majority of the stuff, then I enable him by providing as much of the planning time, preparation time that he needs on the clock as I can”. An example of
accommodating teachers to be able to create materials on non-instructional work time is the principal giving the teachers work time during meetings that were not directly related to Mandarin, such as meetings to analyze scores from reading/English language arts, “or other grade-level specific or content-specific interventions”. The principal added: “I don't really require him to sit through my meetings with my upper grade teachers to talk about math intervention, or something like that. So that's one way I feel I support in terms of instruction. Because he needs time. I think, if there’s one thing a Mandarin teacher needs, it’s time”. This indicates that principals were aware of the demands of the Mandarin program on teachers' preparation and planning time, and that principals supported their teachers by exercising flexibility in the selection of meetings the teachers of Mandarin needed to attend, so that these teachers could have more time during contractual work hours to plan, prepare, or collaborate for Mandarin instruction.

Another principal stated: “I envision myself also supporting the program by telling the teachers about resources. Showing other resources that there are, and when a teacher makes a proposal, and it makes sense, I always say ‘yes, you know, let's do that’. I never try to be the ‘block’ person, the one who says ‘you can't do this, you can't do that’. I'm always, ‘let's do it, how can we do it?’ So, just attitude, I guess”. As this principal suggests, support can also be in the form of informing teachers about existing resources, being aware of teachers’ commitments to professional development outside of work time, and being supportive by adopting a positive attitude that empowers, rather than blocks action.
Teacher Responses on Teacher Support

Teacher responses about support they receive from their administrators indicate mostly positive experiences. One teacher reports: “I think, in terms of the administration, I think the principal is really supportive”. Teachers identified several areas where they would welcome more support, such as planning, materials, technology, and structures to plan collaboratively with fellow teachers so that the content may be spiraled as students move up each grade level. One teacher reported: “I would need support when I am planning the lessons. Someone to help look at the lessons and know which parts I can twist or do differently, or suggest using materials. If I tried different angles to teach a concept and still couldn't reach the students, then where do I go for help? Any other support? I also mentioned technology, I want to include that piece in, but I don't know about the funding and all that. We don't have a lot of computers in the classroom. Also, for on-site planning, so that we can plan as a team, and when we plan I want to be able to see what we need to continue for the next meeting. Support for more consistency in learning. Like spiraling, so if I'm doing body parts in 2nd/3rd, what is the body parts lesson going to be extended for 4th/5th graders?”

Teachers also cited professional development and opportunities to teach with partners as areas where they would welcome support. One teacher stated: “In June, there is a Mandarin Teacher Conference, so I would like to go to that and learn something new. I want to learn strategies that can help make learning fun for the students. I want to look into TPR. I want to know more of how to teach primary kids a foreign language, especially ones who can't read so well (in English) yet.” Another teacher added: “I think I could use someone to co-teach with, that would be helpful. If I had someone else to
help me teach, we could take different groups, or have the co-teacher help explain things in a different way. One teacher might work on listening/speaking, the other could do reading/writing. Having someone else in the classroom would definitely be more helpful. Teaching alone is fine, but having support in the classroom by another teacher would be a plus, so we can focus on different skills and needs”.

(RQ3) What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students' academic, attitudinal, and cognitive development?

In the context of this study, "academic" refers to basic literacy, numeracy, and overall achievement in school; "attitudinal" refers to students' attitudes and their feelings about themselves and others; "cognitive" refers to students' ability to find solutions to problems, thinking divergently, and overall mental flexibility relative to their peers (Curtain & Dahlberg, 2010; Dumas, 1999; Foster & Reeves, 1989; Hakuta, 1990; Robinson, 1992). Data collected by interviewing principals, teachers, and parents indicate that they all agree that instruction in Mandarin offers a positive impact on students. However, their responses suggest different degrees of how they perceive these benefits to manifest themselves and when. A general trend revealed by the interview data is that administrators, teacher, and parents believe that more of an impact would be evidenced if the programs had more time to mature and develop.

Principal Responses on Impact of Mandarin Program on Students

Responses from principals indicate that students need more time exposed to Mandarin instruction in order for them to cite any academic benefits. They perceive their programs as being too new for academic impact to be solidly correlated to Mandarin
instruction. P1 stated: "I really can't comment on impact on academics and cognitive abilities because it hasn't been long enough." P1 added: "I can't really attribute our academic gain to one year of FLES because it was only one year, and we were doing a lot of aggressive, you know, intervention work: looking at data, so my more educated guess is that [intervention] work led to the academic gain. Also, another reason is that our FLES instruction was still in the very beginning stage for a big part of the year. We were still kind of, you know, unstable. Teachers were trying to improve upon things. So, I wouldn't say academic gains."

P2 commented: "As far as academic and cognitive, I don't know. We've only been doing it for about half a year". However, they project there would be a positive impact. P2 affirmed: "And academically, I'm hoping that Mandarin will engage them, so that they become studious, have study skills that will find interest in inquiry, in looking for information, trying to learn about things, being curious about things, curious about the world. What other people are thinking, what other people are saying, stuff like that". P1 concurred: "I expect in five years for our students in the Mandarin program to be high achieving in academics". These responses indicate that academic impact needs more time to develop and be recorded.

Principals most frequently cited positive attitudinal impact on students in Mandarin program because of the opportunities to learn about cultures other than their own. P1 indicated: "What I'm certain of, is from the FLES program, our children were exposed to some Chinese cultural elements that they would not have been exposed to, and they learned some Chinese traditions, some Chinese music, some Chinese art forms, and some Chinese holidays, that they probably wouldn't otherwise have a chance to learn
about". P1 added: "And because of being immersed in, you know, five years in both cultures, different elements from both cultures, just through their learning, cultural exposure, I would also expect that their attitude to the world, they'll have more global attitudes and their attitude towards other kinds of people would be more open and more tolerant". Further, P2 stated: "Attitudinally, I feel that our students are coming a long way in that aspect. We have other students communicating with kids in China, Taiwan, they just started or will be starting with India, and Korea. So they're learning that there are other people, other perspectives, so we're slowly growing that." Their responses suggest that exposure to more people and their cultures contribute positively to a student's attitudinal development by making them increasingly more aware of other people, their cultures, and perspectives.

Like academic impact, principals were reserved in their responses about cognitive impact because of the short time that their Mandarin programs have been in existence. However, their responses point to their faith that students' cognitive abilities will be positively affected by Mandarin instruction. P2 stated: "In five or ten years, I think the students will become more flexible in thinking, and come up with multiple solutions, that's what I expect from my students, for them to have the same benefits as the kids who are bilingual by nature, by family or home language exposure. That's what I'm hoping for". P1 added: "Cognitive ability, it takes, in my mind, it takes an even longer time frame to have an impact. Research shows that our children in the Mandarin program should have higher cognitive ability and higher academic achievement due to immersion, but, you know, being in year one, we really don't know". Both principals are hopeful that, given more time, their students will reap academic and cognitive benefits from
learning Mandarin language and Chinese culture. P1 stated: "I expect, in five years, that the Mandarin program students will be kids who would be good at problem solving and thinking more creatively, because having learned both languages different parts of their brains were accessed, as some parts would not have been accessed with only one language. So, I would assume, I would expect that their problem solving ability might be a little more fluid than someone who grew up with one language only".

**Teacher Responses on Impact of Mandarin Program on Students**

Teachers, like principals, indicate that Mandarin instruction's impact on students' academic achievement requires more time. T1 remarked: "I think right now it's too early to see, because students have just started the program". T5 echoed: "I think in terms of academics, I don't know. I can't tell if this is from Mandarin". They would need more time, and perhaps tools to measure academic achievement, and see what relationships may be drawn between academic gains and Mandarin instruction.

Teachers were more confident in their responses about attitudinal impact of Mandarin instruction on their students. T4 stated that, while she did not notice an academic impact, Mandarin has improved students' attitudes towards school and made a positive impact on their work habits: "And, so, in terms of academics, it's gotten them a little more excited about the school day or about Mandarin at least. When I asked them what are some things you're taking away with you when you leave school, some of the kids said 'Mandarin! We're going to take that away with us'. That's so valuable, and that came from them. I was like, 'oh, that's so nice!' So, I think it has definitely impacted them in a very positive way, I couldn't say if it's improved other areas of their learning, but I think it's definitely their work habits, at least in that area". T3 added:
“Academically, I'm not sure there’s an impact. But they're so curious and motivated to learn about everything, and they really like Mandarin time. I sometimes use Mandarin time as an incentive. I have some students who are shy, or who are not so good at math compared to their peers, but they like Mandarin because everyone is about the same level and they feel relatively successful, so it builds their confidence across the board."

According to T3, Mandarin has also created opportunities to become more knowledgeable about cultures other than their own, and hence, more tolerant. T3: "They also don't giggle when they hear Chinese anymore, they used to do that a lot at the beginning, just because the sounds were new to them. Now, they would say, 'Teacher, that kind of sounds like...' so they are kind of relating. Their attitude, just understanding that this is like a friendly language, their attitude has gotten better". T4 added that students know Mandarin provides additional opportunities for them, and that motivates them to learn: "They know that when they learn Mandarin they can get a better job, and they want to go to China. That part they know, it comes out from them. They say there are a lot of Chinese people in this world and they want to learn how to communicate. That's the impact".

In terms of Mandarin instruction's impact on students' cognitive development, teachers were measured in their responses, again citing their programs' newness as the main reason why they could not make such a determination correlating Mandarin and students' ability to problem solve and demonstrate increased mental flexibility. Teachers indicate that students need more time exposed to Mandarin instruction in order for them to cite any academic benefits. T1: "I think we can start to see the impact in about 2 or 3 more years, slowly". T3 claimed: "I don't know that I would notice cognitive impact. I
don't know that I've noticed that. I don't know what the research says about it. I know my kids are very creative. But it sounds like, maybe as the students get older, they may get better at thinking outside the box and problem-solving. I wish I spoke Spanish, because when I give them activities, sometimes I hear them talking with each other, but I don't understand what it is they're trying to do. So, if I understood, maybe I could get a hint of how they are solving a problem or what questions they are talking about. Like, I noticed a student who was working on an addition problem. She got the addition right, but just did it differently". Teachers seemed to be aware of potential positive impact on student's cognitive development but would like to know how to measure it and what has been documented in existing research about such impact.

**Parent Responses on Impact of Mandarin Program on Students**

Like the data from principals and teachers, data from parents about the impact of Mandarin instruction was generally positive but offered distinct points of view. Pa1 claimed that she has noticed Mandarin instruction's impact on her child's academic achievement: "I noticed that his grades were better last year because of Mandarin. His general work was better because he kept excited". The other two parents interviewed were less confident, illustrated by this representative statement from Pa2: "I think she is still young, so I don't know if she's getting all of it. I don't know if Mandarin has affected her studies. She is excited about learning Mandarin in school".

Regarding any impact of Mandarin instruction on their child's attitudinal development, parents cited student motivation, confidence, and happiness as indicators of a positive impact. Pa1: "In his behavior, I noticed that he seemed to be keeping himself busier in the challenge to learn. And, he is more confident about approaching other
people he thought can speak Mandarin with little hesitation. He just goes up and says hello in Mandarin. But at school, I haven't noticed that he has any new friends that speak Mandarin at school, not really". Pa2: "Emotionally and socially, she is happy, same as always. She is excited about learning Mandarin in school. I notice that she is able to listen in on conversations in Mandarin when we are out, and she seems to be able to understand what others, other kids in school who speak more Mandarin are saying, what they're talking about. She knows more or less how". Pa3 added: "He is really motivated about Mandarin. He talks about it all the time and even wants me to bring him to school on weekends because he thinks classes are still going on. I think learning Mandarin has been a great motivator. He's a happy kid in school now".

The parents interviewed did not provide specific responses to cognitive development. Data from all three parent interviews seem to suggest that they were unclear about the meaning of cognitive development or what the indicators might be. Pa1: "To tell you the truth, I haven't noticed any changes in how he solves problems, like a puzzle or a crossword puzzle". Pa3's response is illustrative: "So you mean, how he thinks? I don't know, it's not something I have noticed. I mean, he thinks like any other child. He thinks like before". These comments seem to indicate that parents did not yet witness dramatic cognitive impacts of the Mandarin program on their children. However, the parents did not appear to be quite clear as to what sorts of cognitive impacts the program may or may not have been having upon their individual child either. The fact that students had only started Mandarin instruction during that same year clearly indicates that the parents perceived cognitive impacts were unnoticed at the time of the interviews.
Section II: Classroom Observations

Classroom observations were recorded over the span of two months. A total of eight observations during Mandarin instruction, ranging from kindergarten to grade 5, were collected from both study sites. Classroom observations were collected by hand using an observation protocol, with the aid of a digital voice recorder. The purpose of conducting classroom observations was to be able to gain a more comprehensive understanding of program implementation through the daily experiences of teachers and students by being an observer in their midst. Observations of practice also allowed the researcher to confirm and validate concepts and ideas that were provided by participants during the interview process. Similarly, observations permitted the researcher to find instances of best practices in foreign language instruction that were aligned with the research literature. Common practices observed include the extensive use of the target language, the use of games and songs to promote second language acquisition, and the use of visuals and gestures to support comprehensible input for students. In order to answer the fourth research question posed by this research study, classroom observation data was reviewed and analyzed.

(RQ4) What does classroom practice in these two K-5 Mandarin programs look like?

Data collected from classroom observations help to reconstruct the various occurrences during regular instruction of the day-to-day interactions that comprise a teacher’s practice. Thus, the complexities of an individual teacher’s practice are multifaceted and varied and are not easily understood by educational researchers. These occurrences include how the teacher interacts with students, how students interact with
each other, how the teacher presents a given curriculum, and how students interact with the curriculum. Classroom observation data also includes the types of strategies and instructional materials teachers use to deliver instruction. These data help provide a description of what Mandarin instruction looked like at the two study sites. Table 4.2, below, presents a flowchart that illustrates the sequence of steps in the analysis of classroom observation data. The purpose of this flowchart is to present intentionally the structure and logic of the classroom observation data collection and analysis process employed in this study.

Table 4.2.

*Flowchart of analysis of classroom observation and document review data.*

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collected data from both study sites using a classroom observation protocol.</td>
</tr>
<tr>
<td>2</td>
<td>Transcribed classroom observation data, including observer’s comments.</td>
</tr>
<tr>
<td>3</td>
<td>Uploaded all transcribed observation data to Atlas.ti software.</td>
</tr>
<tr>
<td>4</td>
<td>Reviewed transcribed data for themes related to study Research Question #4.</td>
</tr>
<tr>
<td>5</td>
<td>Assigned codes to quotes and observer’s comments from transcribed data.</td>
</tr>
<tr>
<td>6</td>
<td>Organized various codes from the observation data into code families.</td>
</tr>
<tr>
<td>7</td>
<td>Provided transcribed data analysis related to study Research Question #4.</td>
</tr>
</tbody>
</table>
The first box of the flow chart indicates that classroom observations were conducted at the two study sites as the first step in the data collection process. Classroom observation data was collected during classroom visits using a classroom observation protocol specifically designed for this study (see Appendix F). The classroom observation protocol provided a template for the ethnographer to document field notes in a systematic way that would be uniform across classroom observations. The template included records of the time, event/activity, situation observed, descriptions of the setting, background information relevant to the lesson, descriptions of participants being observed, and a record of talk and activity that transpired during the classroom observation.

The second box of the flow chart points out that the classroom observation data was transcribed from the field notes on paper to electronic text documents. This was conducted in order to micro-analyze the plethora of classroom interactions taking place. The third box of the flow chart states that the transcribed electronic documents were then uploaded onto qualitative data analysis software, Atlas.ti. Once the data were uploaded onto Atlas.ti, the fourth box of the flow chart indicates that the data was reviewed to identify themes related to fourth research question of this study. The fifth box of the flow chart shows that codes were assigned to quotes and recorded comments from the ethnographer in the observation data. The sixth box of the flow chart addresses how related codes were then organized to form code families. Lastly, the seventh box of the flow chart indicates the presentation of analyzed transcription data relating to the third research question of this study. Each step in the classroom observation collection and
analysis process was carefully carried out to insure a certain systematic ethnographic validity of the observation data to be presented as part of this dissertation study.

Classroom observation data was collected over a period of two months, between April and June of 2011. A total of eight observations of Mandarin instruction spanning all grade levels were collected from the two study sites. Efforts were made to have representation from all grade levels and both study sites. Data was collected at least once for each available classroom where Mandarin was offered in each school site. School A only offered Mandarin in kindergarten. While school site administrators were generally welcoming of classroom observations, scheduling time with each teacher proved to be challenging as they were also engaged with many other obligations such as field trips, performance events, and year-end testing during the last couple of months of the school year. Therefore, the sampling method for classroom observations was a sample of convenience in order to accommodate teachers’ schedules as well as that of the researcher. Table 4.3, on the following page, shows the schedule, grade levels, and school sites of the classroom observation data.
Table 4.3
*Classroom Observation Data Collection Dates*

<table>
<thead>
<tr>
<th>Date</th>
<th>Grade(s)</th>
<th>Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/20/2011</td>
<td>K</td>
<td>School A</td>
</tr>
<tr>
<td>4/27/2011</td>
<td>K</td>
<td>School A</td>
</tr>
<tr>
<td>4/29/2011</td>
<td>K-1</td>
<td>School B</td>
</tr>
<tr>
<td>5/5/2011</td>
<td>K-1</td>
<td>School B</td>
</tr>
<tr>
<td>5/9/2011</td>
<td>K</td>
<td>School A</td>
</tr>
<tr>
<td>5/13/2011</td>
<td>2-3</td>
<td>School B</td>
</tr>
<tr>
<td>6/3/2011</td>
<td>2-3</td>
<td>School B</td>
</tr>
<tr>
<td>6/7/2011</td>
<td>4-5</td>
<td>School B</td>
</tr>
</tbody>
</table>

To protect participants' anonymity in this study, each instance observed was assigned a random “observation code” with a value between 1 and 8 that is not necessarily correlated with the chronological order in which the observations data were collected. Classroom observation data provides information on what instruction looked like during the time of this study. Several themes surfaced in the analysis of the classroom observation data collected. These themes include: (a) use of target language, (b) consistency in scheduling, (c) alignment of instruction to California World Language Content Standards, (d) grouping of students for instructional purposes, (e) use of games for instructional purposes, and (f) classroom management. The data indicates that there is variability in what Mandarin instruction looks like based on these themes or variables. Upon review and analysis of the data, each of these variables was given a rating of (+) high occurrence, (√) average occurrence, and (-) low occurrence. Table 4.4, on the next page, shows these variables in instruction in the context of the observations conducted.
Table 4.4

Variables in Mandarin Instruction

<table>
<thead>
<tr>
<th>Observation Code</th>
<th>Teacher Use of Target Language</th>
<th>Use of Target Language &gt; 90%</th>
<th>Scheduling Consistency</th>
<th>Alignment to World Language Standards</th>
<th>Varied Student Grouping</th>
<th>Use of Games</th>
<th>Classroom Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs1</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Obs2</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Obs3</td>
<td>-</td>
<td>-</td>
<td>√</td>
<td>√</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Obs4</td>
<td>+</td>
<td>-</td>
<td>√</td>
<td>+</td>
<td>-</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<td>√</td>
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<td>Obs7</td>
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<td>+</td>
<td>+</td>
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</tr>
<tr>
<td>Obs8</td>
<td>-</td>
<td>√</td>
<td>+</td>
<td>+</td>
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<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

+    High occurrence
√    Average occurrence
-    Low occurrence

**Teacher Use of Target Language**

The use of the target language by the teacher and by students is crucial to promote effective instruction and learning (Curtain & Dahlberg, 2010; Krashen, 1981; Lipton, 2010). Mirroring how we acquire our first language, second language acquisition theories posit that students will only be able to begin oral production of the second (or "target") language, only when sufficient meaningful and comprehensible input has been received (Krashen, 1981; Krashen & Terrell, 1983; Krashen, 1985). Hence, a high occurrence in teacher's use of the target language to provide meaningful and comprehensible input for students, especially those at the novice levels, is expected in effective foreign language classrooms.
In six of the eight classroom observations collected, the teacher used Mandarin as the primary language of instruction and communication with students, or for at least 90% of the time. One teacher, in particular, adopted a Mandarin-only persona when teaching his students as a strategy to avoid students' reliance on the teacher for English translations and help immerse students in Mandarin. This practice was corroborated by statements from interviews with the principal and with the teacher himself, and was evident in observations collected of classroom practice.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs4  1:50</td>
<td>P (parent) enters classroom and asks T (teacher), in English, about whether there are sufficient snacks for the class event the next day. While T is fully able to respond in English, he responds orally in Mandarin, with gestures towards snacks that have been collected on a table in the classroom. P, who appears to be an English-speaker who does not speak Chinese, does not seem surprised at the response, but plays along. In the meantime, T asks S (student) to translate what he says in Mandarin into English for P. T keeps her Mandarin-only image.</td>
</tr>
</tbody>
</table>

However, the use of the target language in and of itself is not sufficient. Learning depends on the target language to have meaning and be comprehensible to the learner. An example from the classroom observation data collected illustrates a missed opportunity for learning, even when the teacher stayed in the target language for the majority of instruction.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs7  9:44</td>
<td>T: Bā yīzǐ dài guò lái (bring your chair over here). S does not respond or react, does not seem to understand the oral instructions given. T walks over to S and brings over the chair closer to the front of the class. T continues to cover the topics in his lesson, but does not address this gap in understanding.</td>
</tr>
</tbody>
</table>

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This was a missed opportunity to add to student comprehension of what can be considered a high frequency phrase in the target language. Comprehensibility could have been enhanced by pointing, gesturing, and using total physical response (TPR).

In two instances observed, the teachers used both English and Mandarin for instruction, with instructions to students given in English, while the content and vocabulary were provided in Mandarin.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs3 2:03</td>
<td>T: Who is jiějie? (sister).</td>
</tr>
<tr>
<td></td>
<td>Ss: Sister!</td>
</tr>
<tr>
<td></td>
<td>T points to pictures in the big book.</td>
</tr>
<tr>
<td></td>
<td>T: What does dìdì mean? (brother)</td>
</tr>
<tr>
<td></td>
<td>Ss: Brother!</td>
</tr>
<tr>
<td></td>
<td>Ss point to the picture in T's book.</td>
</tr>
</tbody>
</table>

In some instances, instructions were given in English, then repeated in Mandarin, or vice-versa. One example:

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs3 2:15</td>
<td>T: I am going to pick...? Wǒ yào xuǎn... Sara! (I want to pick...) You will flip the page.</td>
</tr>
<tr>
<td></td>
<td>T: Nǐ kàn wǒ zuò. (Watch me do it.) You're watching me, Lucas.</td>
</tr>
</tbody>
</table>

The classroom observation data analyzed suggest inconsistencies in the teacher's use of the target language. Students who hear instructions in both English and the target language may grow accustomed to the teacher's use of English, and depend on the English translation rather than making an effort to process the target language models that they hear. Curtain and Dahlberg (2010) point out that "mixing languages, and translating from one language to the other, can cause confusion and tends to be
counterproductive for early language learners”. Teachers have to be particularly
cognizant of the needs of their students for highly comprehensible input and should
provide meaning by moderating the rate of speech, using gestures and non verbal
communication, as well as visuals and realia, and frequent comprehension checks.

Another finding related to the use of the target language that surfaced from the
data is the adoption of Chinese names for students. The great majority of students were
of African-American and Hispanic heritage, so they were not used to having a Chinese
name. Chinese names were used for students in three observations. The use of Chinese
names for students further contributes to helping students be immersed in the target
language and culture. Some names sounded like the student's given English names (e.g.,
Ｄà Wèì, for David) while others were common Chinese names with no apparent relation
to the student's given name (e.g., Ｌíng Ling, for Mayra). One teacher who did not use
Chinese names for his students said that he was going to be doing that in the near future,
but that he was looking to complete his list of names.

**Consistency in Scheduling**

The findings from interviews with principals and teachers participating in this
study revealed that instructional time was a key concern. While reviewing classroom
observation data, inconsistencies in scheduling of Mandarin lessons were found in five of
the eight instances recorded. In these instances, the instructional time was flexible and
did not occur on a recurring basis when the observations were collected (e.g., every day
at the same time). Scheduling is a significant variable because student mastery of
proficiency in the target language is directly proportional to the time during which they
are exposed to learning opportunities in the target language (Cummins, 1983). The next
Table, Table 4.5, shows the variations in scheduling for Mandarin instruction for each teacher's self-contained class.

Table 4.5
*Variations in Scheduling of Mandarin Instruction*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>1st visit</th>
<th>2nd visit</th>
<th>3rd visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1:00 - 2:20 PM</td>
<td>1:00 - 2:20 PM</td>
<td>1:00 - 2:20 PM</td>
</tr>
<tr>
<td>2</td>
<td>2:00 - 2:40 PM</td>
<td>8:30 - 9:00 AM</td>
<td>NA</td>
</tr>
<tr>
<td>3</td>
<td>10:30 - 11:00 AM</td>
<td>9:30 - 10:00 AM</td>
<td>NA</td>
</tr>
<tr>
<td>4</td>
<td>2:00 - 2:40 PM</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

The schedule of Mandarin instructional time in the immersion program was most consistent, with the similar activities and routines documented during each observation. The scheduling of Mandarin instructional time in the FLES program classrooms showed the most variation. This is not necessarily negative, as it may be that teachers have control over their schedule and may bring Mandarin to be covered earlier or later in the day as needed, or according to other school events or activities that have an impact on their schedule. Along the same lines, there is also the possibility that the teachers went out of their way to schedule Mandarin during the data collection process to make it possible for this researcher to collect this data. However, this finding on the variation of scheduling for Mandarin instructional time for some of the teachers in the study may also be interpreted as wavering commitment. After all, the more common practice is to "lock in" and protect instructional time of the disciplines that have priority. Take for instance, instructional time scheduling for English/language arts and mathematics at most schools are, for the most part, non-negotiables. This finding on variations in scheduling Mandarin instructional time echoes the concerns expressed by teachers about the perils of
such flexible schedules, as Mandarin may frequently be overlooked in favor of other
priorities. T5 commented on how Mandarin time is adjusted to meet other priorities at
the school: "I teach Mandarin four days a week. If there's something really urgent that
needs to be done that day, we shorten Mandarin and do a quick, like a 15 minute short
snapshot, but [Mandarin time is] usually for half an hour".

Alignment of Instruction to California World Language Content Standards

Another variable that emerged from review and analysis of classroom observation
data collected was the alignment of Mandarin instruction to California World Language
Content Standards. Every lesson observed was aligned with these standards to a certain
degree, with variations in duration of lesson, rigor, and opportunities for students to
engage and practice the language. Since every participating teacher taught students at the
novice level, or Stage I, per the College Board's Language Learning Framework cited in
the World Language Content Standards for California Public Schools Kindergarten
Through Grade Twelve, the data was reviewed against the standards based on expected
student performance at Stage I. Table 4.6, on the next page, shows the standards
alignment for each observation collected.
Table 4.6

Alignment of Instruction to California World Language Content Standards

<table>
<thead>
<tr>
<th>Observation</th>
<th>Main Topic</th>
<th>Content Standards</th>
<th>Communication Standards</th>
<th>Cultures Standards</th>
<th>Structures Standards</th>
<th>Settings Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs1</td>
<td>High frequency words</td>
<td>1.1b,i</td>
<td>1.0, 1.2</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs2</td>
<td>Journal writing</td>
<td>1.1b,c,d,i</td>
<td>1.0, 1.2</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs3</td>
<td>Numbers</td>
<td>1.1b,i</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs4</td>
<td>Numbers/Centers</td>
<td>1.1i</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs5</td>
<td>Fruits</td>
<td>1.1l</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs6</td>
<td>Parts of the body</td>
<td>1.1n</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs7</td>
<td>Food</td>
<td>1.1l</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Obs8</td>
<td>Parts of the body</td>
<td>1.1n</td>
<td>1.0, 1.4</td>
<td>NA</td>
<td>1.0, 1.1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

NA: Not applicable

The World Language Content Standards for California Public Schools Kindergarten Through Grade 12 are organized in five categories: (a) Content, (b) Communication, (c) Cultures, (d) Structures, and (e) Settings. These categories "should be taught together and, in practice, merge into seamless instruction within the various stages of the Language Learning Continuum (California Department of Education, 2010).

The review of classroom observation data indicates that there is alignment of instruction with standards within the Content category for Stage I learners. Language is used to address a wide variety of topics, or content, that are appropriate to the age of the students, and also to their performance stage on the Language Learning Continuum (California Department of Education, 2010). The instructional topics chosen by the teachers aligned readily with discreet elements of daily life, including: family and friends, pets, home and neighborhood, calendar, seasons, weather, school, classroom, numbers,
time, directions, food, meals, parts of the body, among others (California Department of Education, 2010).

Instruction observed was also aligned with standards within the Communications category. Two principal goals of the Communications standards are (a) to help students "actively use language to transmit meaning while responding to real situations", and (b) to be able to "process language in linguistically and culturally appropriate ways while interacting with a wide variety of audiences" by engaging in interpretive (listen, read), interpersonal (dialogue, correspond), or presentational (speak, present, write) modes of communication (California Department of Education, 2010). The data reviewed suggest that all lessons gave students opportunities to "list, name, identify, and enumerate" in the target language (Communication Standard 1.4) (California Department of Education, 2010). For example:

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs3 2:17</td>
<td>T: Let's look at these numbers. Count with me.</td>
</tr>
<tr>
<td></td>
<td>T: Yī (one)</td>
</tr>
<tr>
<td></td>
<td>Ss: Yī</td>
</tr>
<tr>
<td></td>
<td>T: Èr (two)</td>
</tr>
<tr>
<td></td>
<td>Ss: Èr</td>
</tr>
<tr>
<td></td>
<td>T: Sān</td>
</tr>
<tr>
<td></td>
<td>T continues to count, and Ss repeat until they reach &quot;shí &quot; (ten).</td>
</tr>
</tbody>
</table>

However, there were limited opportunities for students to go beyond the above-mentioned language functions and actually "engage in oral or written conversations" (Communication Standard 1.1) in the target language or to "identify learned words and phrases in authentic texts" (Communication Standard, 1.5) (California Department of Education, 2010).
In the example above, the teacher then sent students off to complete a worksheet in which students associated the Arabic numerals 1-10 with Chinese numerals and their spelling in *pinyin*, a standard system for transcribing Chinese using the roman alphabet (Kane, 2006). The worksheet contained a blank template of an apple tree with figures of apples, large enough to allow students to write in them. Students had to trace the Chinese numeral over a grayed-out dotted example and then copy the Chinese numerals onto figures of apples on an apple tree template. While students were able to "interpret" written language by identifying Chinese numerals and pinyin, there was no evidence of additional structured or other planned activities that required students to identify Chinese numerals in authentic texts (Communication Standard 1.5), to engage in oral or written communication (Communication Standard 1.1), or otherwise to reproduce and present what they have learned in a culturally authentic way (Communication Standard 1.6) (California Department of Education, 2010).

The standards in the Cultures category allows students to make "comparisons and connections between languages and cultures" (California Department of Education, 2010). In order to understand and learn how to use language in culturally-appropriate ways, students must understand "the relationship between the products and practices of the culture and its underlying perspectives" (California Department of Education, 2010). None of the lessons observed provided evidence of explicit instruction in culture or connections to cultural aspects. The Cultures standards for Stage I call for students to use "culturally appropriate responses to rehearsed cultural situations", "associate products, practices, and perspectives with the target culture", "recognize similarities and
differences in the target cultures and between students' own cultures", and to "identify
cultural borrowings."

Language instruction was delivered in each lesson for which data was collected,
but culture was not part of it. On one documented occasion, while students were learning
vocabulary in Mandarin for "beef", "pork", "chicken", "fish", and "vegetables", one
student made the following comparison:

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs7 9:50</td>
<td>T shows PowerPoint slides with pictures of prepared dishes.</td>
</tr>
<tr>
<td></td>
<td>T displays picture of steak.</td>
</tr>
<tr>
<td></td>
<td>T: Niú ròu, niú ròu, niú ròu (beef). Dà jiā yī qǐ (everyone together).</td>
</tr>
<tr>
<td></td>
<td>Ss: Niú ròu, niú ròu, niú ròu,</td>
</tr>
<tr>
<td></td>
<td>S: Is it steak?</td>
</tr>
<tr>
<td></td>
<td>T: Zhè ge... steak jiào zuò niú bā (This... &quot;steak&quot; is called &quot;niú bā&quot;).</td>
</tr>
<tr>
<td></td>
<td>T: Xià yī ge jiào zuò shén me? (What is the next one?)</td>
</tr>
<tr>
<td></td>
<td>T displays picture of a pork dish, looks like a plate of sautéed meat.</td>
</tr>
<tr>
<td></td>
<td>T: Zhū ròu, zhū ròu, zhū ròu (pork).</td>
</tr>
<tr>
<td></td>
<td>Ss: Zhū ròu, zhū ròu, zhū ròu.</td>
</tr>
</tbody>
</table>

There was no evidence of additional connections to culture, or to establish differences
between cooking styles (for example, western steak compared with Chinese beef stir fry).
This ethnographer's comments included: "T's choice of visuals needs to be more
deliberate. The picture of a more common Chinese beef dish would have been a better
exemplar to blend in culture with language instruction. An option would be to ask
students what Chinese dishes they have had. Even if they call out fast food dishes, it
would help make the learning more relevant to students' prior knowledge. Also, T can
include pictures of animals, to tap into students' prior learning of animal names, to further
illustrate connection between "cow" and "beef", which in Chinese is a compound of "cow" (niú) and "meat" (ròu).

The data revealed that all lessons observed contained some instruction on the structures of Mandarin. As students develop familiarity with vocabulary in the target language, they also begin to comprehend the structures that the target language uses to convey meaning. Students also begin to discover patterns in the language system's grammatical rules, vocabulary, and elements such as gestures and nonverbal communication. The following data illustrates an instance when a student, unprompted, recognized a pattern in the structure of the vocabulary about food that the class was studying.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs7 9:40</td>
<td>T: Niú ròu (beef), zhū ròu (pork), jī ròu (chicken), yú ròu (fish), shū cài (vegetables).</td>
</tr>
<tr>
<td></td>
<td>T points to pictures on PowerPoint slide projected on whiteboard.</td>
</tr>
<tr>
<td></td>
<td>S: They all have ròu!</td>
</tr>
<tr>
<td></td>
<td>T: They're the same: ròu, ròu, ròu. It's just like math, we see patterns in these words.</td>
</tr>
</tbody>
</table>

The evidence collected further points to an emphasis on vocabulary, but not direct instruction in grammar rules nor discourse ("whereby speakers learn what to say to whom and when") (California Department of Education, 2010). The standards addressed have to do with using phonology to understand (Structures Standard 1.0) and produce (Structures Standard 1.1) words and phrases in context. Activities and interactions observed gave proof to alignment to these two standards under the Structures category. Not as evident were activities that supported students to identify similarities and differences in the orthography and phonology (beyond the obvious) of Mandarin and
languages that students know. However, the data collected included this unprompted comment from a student, whose cognitive functions verge on this notion of comparing input from the new language to language the student already knows:

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs8 2:15</td>
<td>T is reviewing vocabulary from parts of the body.</td>
</tr>
<tr>
<td></td>
<td>T: Ėr duo (ear), bí zi (nose), yān jing (eyes)</td>
</tr>
<tr>
<td></td>
<td>T points to her ear, nose, and eyes as she says each word.</td>
</tr>
<tr>
<td></td>
<td>Ss: Ėr duo (ear), bí zi (nose), yān jing (eyes).</td>
</tr>
<tr>
<td></td>
<td>Ss mimic teacher moves, point to their ear, nose, and eyes.</td>
</tr>
<tr>
<td></td>
<td>T: Zuǐ ba (mouth), jiān bǎng (shoulder), dù zi (stomach)</td>
</tr>
<tr>
<td></td>
<td>Ss repeat after T, mimic her movements pointing to their mouth, shoulder, stomach</td>
</tr>
<tr>
<td></td>
<td>S: Dù zi sounds like dulce (sweet, in Spanish).</td>
</tr>
<tr>
<td></td>
<td>S appears to be a Spanish-speaker.</td>
</tr>
<tr>
<td></td>
<td>T: Right! That's the beauty of being bilingual!</td>
</tr>
</tbody>
</table>

Knowledge of setting, or context, is important because the meaning conveyed by language is best understood when the setting or context is known (California Department of Education, 2010). The context helps define and add clarity to meaning of new language. In addition, knowledge of context helps students to use the new language in ways that are culturally-appropriate. The review of the classroom observation data revealed that lessons observed were partially aligned to standards in the Settings category. Standard 1.0 calls for students to use language in highly-predictable common daily settings. Classroom observation data indicates that students used oral and written language in common and predictable settings such as home and school. The following example illustrates a kindergarten' student's use of Mandarin to convey a need in the classroom, a relevant and age-appropriate daily setting for the student:
Another example that emerged from the data shows students using language to greet the teacher in unison. The practice of students greeting the teacher upon entering the classroom (or upon the teacher entering the classroom) is common in Chinese school settings.

The example presented is relevant because students used the courteous or formal form of the second person pronoun nín (you, formal), instead of the more familiar form of the second person, nǐ (you, informal). While this may merely be evidence of students repeating a memorized formulaic greeting, it is worth noting that they learned the culturally-appropriate term that was well suited to use in this classroom context while addressing the teacher.

There was limited evidence that students were given direct instruction on recognizing "age-appropriate cultural or language-use opportunities outside the classroom (Settings Standard 1.1). These activities might have taken form as reading stories about using language in non-school settings, viewing videos of children interacting with other children or adults in various extra-curricular contexts, or engaging
in structured role play to simulate a culturally-rich language exchange that takes place in the community. An example might be a depiction of a Chinese student's morning routine, from greeting good morning to grandparents who live with the family, through walking down the street to buy a scrambled egg from the vendor down the street, to saying goodbye to mom or dad as they are dropped off at school. These scenarios yield some possible learning about setting and context including, but not limited to: (a) how grandparents are greeted, (b) the language and courtesies expected of children when buying or asking for items at a restaurant or business, (c) what might be some typical breakfast items consumed in the target culture, and (d) how do children in the target culture show affection in public. Data collected provided one example of role-play that suggest language use outside the classroom, but the structure of the role play offered limited language and cultural learning.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs5 10:45</td>
<td>T explains how to play &quot;The Doctor Game&quot;. One S will role play a physician while the rest of the Ss will role play patients with ailments. T has prepared a can with slips of paper with parts of the body already written in Chinese using pinyin spelling on them. As each S comes to see the physician, they take a strip of paper and tell the physician the part of the body (written on the strip of paper) that ails them. T models.</td>
</tr>
<tr>
<td></td>
<td>T (as patient): Yī shēng, zǎo 'ān (Good morning, doctor.).</td>
</tr>
<tr>
<td></td>
<td>T (as physician): Zǎo 'ān. Nǎ lǐ tòng? (Where does it hurt?)</td>
</tr>
<tr>
<td></td>
<td>T (as patient, reading from strip of paper): Wǒ tóu tòng. (My head hurts.)</td>
</tr>
<tr>
<td></td>
<td>T: (as physician): Hǎo. Ná zhè ge yào. (OK. Take this medicine.)</td>
</tr>
<tr>
<td></td>
<td>T: (as patient): Xiè xie, yī shēng! (Thank you, doctor!)</td>
</tr>
<tr>
<td></td>
<td>T then picks a student to play the physician and gets the rest of the class to line up and prepare to play patients.</td>
</tr>
</tbody>
</table>

The objective of the activity was to practice vocabulary of the parts of the body, with little evidence pointing to explicit instruction about setting or context. Students achieved
the language objective, but the lesson might have been enriched with an intentional discussion on how to visit with a physician.

**Variable Student Grouping for Instruction**

Still seeking to answer the fourth research question of this study on what Mandarin instruction looks like at the two school sites, the data revealed student grouping as another aspect that defined instruction. Variable student grouping for instruction is beneficial to language learners because it diminishes the range of proficiencies that might exist between experts and novices in any given group (Shrum & Glisam, 2010). Students can work in small groups to solve problems or develop responses to tasks designed by the teacher. The affective filter is minimized when students work in small groups (Krashen, 1981). Groups vary in size, ranging from whole class, to large groups, to small groups, to triads, pairs, and down to the individual student. The use of small group and pair work has been found to be an effective instructional practice in foreign language classrooms (Gilzow & Branaman, 2000). Table 4.7, on the following page, shows the various types of instructional groupings evidenced in the classroom data collected.
Table 4.7

*Student Grouping for Instruction*

<table>
<thead>
<tr>
<th>Observation Code</th>
<th>Whole Class</th>
<th>Large Group (≥ 50%)</th>
<th>Small Group (&lt; 50%, ≥ 4)</th>
<th>Triads (3)</th>
<th>Pairs (2)</th>
<th>Individual (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs1</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs2</td>
<td>√</td>
<td></td>
<td></td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs3</td>
<td>√</td>
<td></td>
<td></td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs4</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs5</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs6</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs7</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obs8</td>
<td>√</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

All but one observation yielded evidence of variable grouping of students for instruction. For the purposes of this study, a "large group" was defined as more than 50% of the class but fewer students than the whole class. "Small group" was defined as a group of four or more students, but fewer than 50% of the whole class. Large group and small group instruction were evident when the teacher sent smaller groups to work collaboratively on other tasks and the teacher remained with the more numerous groups. Work in triads and pairs were evident when the teacher had presented content and wanted students to work and practice what they had just been presented. Teachers worked with individual students because the students came up to the teacher, and also as the teacher circulated and monitored student performance while students were working on an assigned task.
Conducted data analysis indicates that whole class instruction is by far the most widely used, with individual instruction as a polarized runner-up. Triads and pairs were used for the similar purposes, to have students work with, and obtain assistance from peers. All but one observation documented showed evidence of the use of various student grouping. Whole group instruction was the grouping evidenced in the instance where there were no changes in student grouping. In all cases, teachers started with larger groups and trimmed down to working with smaller groups. There were no instances of instruction starting with individual or pairs, then expanding to the whole group. There was no data to suggest that there was specific intentionality in the selection of members of a group (for example, proficiency level, buddy system, boy/girl, etc.). In all cases, groups seem to have been created by virtue of proximity of where students stood or sat in relation to each other, or the position of their desks in the classroom’s physical set up. All classrooms were set up for some degree of collaborative work with desks or chairs arranged in pods or in a "horseshoe" or "U" shape. None of the classrooms observed had desks arranged and separated in the traditional layout of rows.

Use of Games for Instructional Purposes

Games are often used by elementary and middle school teachers to create a setting for the acquisition of a second language. Games not only provide context for language practice, but also "an emotional connection and sense of play that brain research and teacher experience indicate can enhance both learning and memory" (Curtain & Dahlberg, 2010). Analysis of classroom observation data in this study revealed that games were evidenced in five of the eight lessons observed. These games piqued student
interest and provided motivation for student acquisition of the target language. Table 4.8 shows the occurrence of games documented in the observations collected for this study.

Table 4.8
Use of Games for Instructional Purposes

<table>
<thead>
<tr>
<th>Observation Code</th>
<th>Games</th>
<th>High-Frequency Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs1</td>
<td>Word Recognition</td>
<td>(Sampling) zuó tiān, yī zhōu, zhōu mò, zài jiàn, dà, xiǎo, gē gē, dì dì, mā ma, jiā rén</td>
</tr>
<tr>
<td>Obs2</td>
<td>Flyswatter Game</td>
<td>qián, hòu, bāi, zuò, yòu, gāo, dī, shàng, xià, shuǐ, lěng, rè, cháng, duǎn, fēi, shòu</td>
</tr>
<tr>
<td>Obs3</td>
<td>(None)</td>
<td></td>
</tr>
<tr>
<td>Obs4</td>
<td>(None)</td>
<td></td>
</tr>
<tr>
<td>Obs5</td>
<td>Stand up/Sit down</td>
<td>fēng lí, xī guā, lǐ zì, cǎo méi, chēng zi, píng guǒ, xiāng jiào, pú tao</td>
</tr>
<tr>
<td>Obs6</td>
<td>Doctor Game</td>
<td>yī shēng, yào, nǎ lǐ, tōng, tóu, yǎn jìng, bí zi, ěr duo, zuǐ ba, jiān bǎng, shòu bì, dù zi, tuǐ, jiǎo</td>
</tr>
<tr>
<td>Obs7</td>
<td>(None)</td>
<td></td>
</tr>
<tr>
<td>Obs8</td>
<td>Simon Says</td>
<td>tóu, yǎn jìng, bí zi, ěr duo, zuǐ ba, shòu zhī tou, jiān bǎng, shòu bì, dù zi, tuǐ, xī gài, jiǎo</td>
</tr>
</tbody>
</table>

The Word Recognition game helped students review high frequency Chinese characters that the teacher had posted on the bulletin board. There were approximately 50 or more characters. The Word Recognition game consisted in the teacher picking one student at a time to stand up and try to point to and read as many characters correctly in a given amount of time. The teacher kept track of the correct answers using the traditional Chinese tally system "正", also based on a system of fives. Other students listened while seated on the rug. At the end of each round, the teacher and the whole class counted the
tally marks in Chinese (thus practicing recitation of numbers and counting by fives), recorded the number of correct words recognized on the board, and gave the student a round of applause in a pattern commonly seen in Chinese television game shows.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs1 1:42</td>
<td>T: Gěi ài de gǔ lì (Let's give &quot;the encouragement of love&quot;).</td>
</tr>
<tr>
<td></td>
<td>T claps: clap//clap//clap-clap-clap//clap-clap</td>
</tr>
<tr>
<td></td>
<td>Ss clap with teacher: clap//clap-clap-clap//clap-clap-clap-clap//clap-clap</td>
</tr>
</tbody>
</table>

The teacher then picked another student to stand up in front of the class to point/read as many characters as possible. One positive aspect was that the student chose which words to read. While the game was motivating, one drawback was that only one student was actively engaged, while the rest of the class may have been actively listening or passively receptive. One alternative could have been having a student take care of the tallying. Another drawback was that students may have felt apprehensive about being singled out in front of the class, so the teacher needed to have an increased awareness of the students' affective filter and their level of confidence. In this observation, students kept track of their performance in character recognition on a thermometer-style chart that graphically displayed how many characters each student recognized correctly.

The Flyswatter Game was also used for character recognition. In the Flyswatter Game observed, the teacher picked three students to come to the bulletin board where the high frequency Chinese characters were posted on 3x5 index cards. The teacher gave each a flyswatter, and selected a fourth student to read or call out one character at a time. Of the three students with flyswatters, the first one to hit the index card with the character that was called out using the flyswatter first received a point for each correct character
hit. A positive aspect of the Flyswatter Game was that it was a fairly quick-paced game, and allowed for more than one student to be engaged. Since the teacher chose the characters the students "play with", this allowed the teacher to be intentional in the selection of characters, so that using them in the game can create additional and deliberate opportunities for review, particularly of characters that are more challenging to the students. An alternative to playing with the whole class could have been using this with a small group or at a learning center to reduce the number of students participating as listeners in the periphery.

The Stand-up/Sit down Game was used to help students review vocabulary of names of fruits. The teacher posted picture cards of fruits that the class had been studying, and asked students to sit down in the rug and wait for their turn to pick a fruit card. There were several fruits represented, and there were several cards of the same fruit. Once all students had chosen their fruit and were seated, the teacher started to recite the names of the fruits randomly in a relatively rapid succession. The teacher repeated each fruit name four times.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs5 2:05</td>
<td>T: Fèng lí (pineapple), fèng lí, fèng lí, fèng lí; xī guā (watermelon), xī guā, xī guā, xī guā; lí zi (pear), lí zi, lí zi, lí zi; cǎo méi (strawberry), cǎo méi, cǎo méi, cǎo méi...</td>
</tr>
</tbody>
</table>

Students stood up when they heard the name of their fruit called out and sat down when the name of a different fruit was called. The teacher repeated the game, but asked the whole group whether they would like to play it faster or slower. Students complied with a cacophony responses, "kuài!" (fast!) and "màn!" (slow!). Even while the louder responses appeared to advocate for a faster game, the teacher started out slower and then
picked up the pace as the second game progressed. This indicated some intentionality from the teacher to address the needs of all learners in the class, students who could quickly process the auditory input as well as those who needed to hear the sounds more slowly. A positive aspect of this game was that students were able to check with each other. If a student had a lí zì (pear) card and heard the teacher call out “lí zì”, the student could quickly look around to see if others with the lí zì (pear) card were also standing up. A variation of the game could have been to assign fruits to students so that they are not only picking the ones they are familiar with, which would put them just outside their zone of comfort and optimize their opportunities to internalize their learning (Krashen, 1981; Schinke-Llano, 1995).

The Doctor Game was used by the teacher to help students use vocabulary on parts of the body. The teacher created a label for the doctor and picked one student to role play the doctor’s part. All the rest of the students role played as patients with a particular part of the body that ached. The objective was to communicate to the doctor what part of the body ached using a standard sentence pattern modeled by the teacher. Patients reached into a jar with paper strips with parts of the body written in pinyin spelling that the teacher had previously prepared. This let them know which part of their body ached so that they could communicate that with the doctor. The doctor gave back a formulated response.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs5 10:45</td>
<td>T (as patient): Yī shēng, zǎo 'ān (Good morning, doctor.).</td>
</tr>
<tr>
<td></td>
<td>T (as physician): Zǎo 'ān. Nǎ lǐ tòng? (Where does it hurt?)</td>
</tr>
<tr>
<td></td>
<td>T (as patient, reading from strip of paper): Wǒ tóu tòng. (My head hurts.)</td>
</tr>
<tr>
<td></td>
<td>T: (as physician): Hǎo. Ná zhè ge yào. (OK. Take this medicine.)</td>
</tr>
</tbody>
</table>
T: (as patient): Xiè xiè, yī shēng! (Thank you, doctor!)
T then picks a student to play the physician and gets the rest of the class to
line up and prepare to pay patients.

A positive aspect of the Doctor Game was that students actually got to practice
language by using it in a dialogue, even if it was short and highly formulaic. It was
refreshing to see this in relation to witnessing other activities that focused on recitation of
discreet vocabulary items without much of a focus on actual communication. A
drawback was that the role playing took a lot of time and students spent much of the time
waiting in line, only to have just about a minute to complete this dialogue. The physical
layout of the line also created a situation in which students who were not located
immediately next to the doctor really did not have much reason to remain engaged. An
alternative would have been to run two lines, and also to explicitly add in directions so
that students have to say the part of the body that aches, but also point to it.

The Simon Says game is more commonly used in foreign language classrooms to
help familiarize students with verbs, particularly in the imperative form. In the data
collected for this study, Simon Says was used by the teacher to review vocabulary of
parts of the body, emphasizing on nouns. The teacher had students stand up around the
classroom and would offer "Simon Says" commands in English with vocabulary of parts
of the body in Mandarin. Students followed the commands and checked with each other
informally.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs8 2:35</td>
<td>T: Simon says: touch your tóu (head).</td>
</tr>
<tr>
<td></td>
<td>Ss touch their head.</td>
</tr>
<tr>
<td></td>
<td>T: Simon says: touch your dù zi (stomach)</td>
</tr>
<tr>
<td></td>
<td>Ss touch their belly.</td>
</tr>
</tbody>
</table>
The teacher went on to give more commands involving other parts of the body. She repeated some of them. Towards the end of the game, the teacher deliberately said one part of the body and pointed to another one, apparently to check whether students were merely mimicking her or were actually processing the vocabulary that they heard. A positive aspect of Simon Says was that it was highly engaging for this group of students and it appeared to lower everyone's affective filter. It also promoted receptive mastery by providing students opportunities to hear the word with language input provided by the teacher. A drawback was the teacher's use of English commands and the repetition of the verb "touch" for all commands. Alternatively, the teacher could have used commands in the target language and used a variety of other verbs to diversify Simon's commands, such as "pull your ears", "close your eyes", "point to your nose", "raise your hand", among others.

The use of games for instructional purposes in the world language classroom suggests that teachers are planning for instruction to be social and interactive. The use of games can lower some of the anxieties associated with performing in a new languages and allow students to acquire the language in more natural ways through their innate curiosity and interest in playing.

**Classroom Management**

Classroom management skills are identified as one distinguishing characteristic of effective teachers (Curtain & Dahlberg, 2010). Positive classroom management, including classroom procedures and routines, and rules and consequences, allow for valuable instructional time to be as productive as possible. Two major guidelines of
classroom management offered by Curtain and Dahlberg (2010) are: (a) maintaining a positive environment, and (b) establishing clear procedures. Data collected from classroom observations in this study yielded examples in various degrees of positive environments and clear procedures and routines.

The classroom environment was generally positive, with teachers enthusiastically personifying their mission to teach the target language and culture to their students. Student's positive reactions as Mandarin instruction began were evident in the classrooms.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs3 2:38</td>
<td>T is working with individual Ss, checking their work on numbers. After S finishes with T, he walks briskly back to his seat, while reciting èr shí bā (twenty-eight), èr shí bā, and adds a little scat, ba-ra-pah-pah. S appears to be in a very positive mood.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs5 10:25</td>
<td>T asks Ss to put away the math books and get ready to start Mandarin in three minutes. Ss cheer.</td>
</tr>
</tbody>
</table>

These examples are corroborated by statements documented in the interviews from teachers. T3 stated: "But they're so curious and motivated to learn about everything, and they really like Mandarin time. I sometimes use Mandarin time as an incentive. I have some students who are shy, or who are not so good at math compared to their peers, but they like Mandarin because everyone is about the same level and they feel relatively successful, so it builds their confidence across the board". T4 added: " I try to be excited and have that excitement transfer, but most of it comes from them. The students get really excited, so that makes it worthwhile. A lot of positive energy. Even
our RSP student. They really enjoy Mandarin, so the community as a whole for the most part, the parents really embrace it."

The data reviewed also yielded evidence of some classroom procedures and routines. Classroom procedures and routines mean that the teacher has set clear and concrete expectations for behavior and academic performance, as well as for how the classroom functions (Curtain and Dahlberg, 2010). There were procedures and established routines for entering the classroom, greeting the teacher, picking up materials, working in groups, reinforcement of positive behavior, and miscellaneous routines using the target language. The following table, Table 4.9, shows the occurrence of these procedures and routines in classroom observation data collected.

Table 4.9

_classroom procedures and routines._

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Obs1</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Obs2</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Obs3</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs4</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs5</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Obs6</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs7</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Obs8</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

Procedures for starting and ending were observed at the beginning and at the end of each lesson, but also included transitions between activities. For instance, in
Observations 6 and 7, students were observed waiting while standing in a single-file line until the teacher gave them the signal to go to their desks, at which point the whole class greeted the teacher and the teacher corresponded with his greeting to the class. In Observations 2, 3, 4, and 5, students knew the procedures for ending Mandarin time, which included picking up materials, tucking away their chairs, and asking the teacher for permission to line up for egress.

Observations also revealed classroom procedures involving materials management. In all instances observed, students were familiar with the location of the materials they needed for the class. In Observations 3, 4, 6, and 7, most of the materials students needed to complete tasks, such as crayons, pencils, erasers, pencil sharpeners, were readily available and within reach on table-top boxes for each student. Other materials, such as craft sticks, extra crayons, rulers, journals, and children's literature were organized in shelves or plastic containers around the room. In all cases, students seemed comfortable obtaining the tools they needed on their own, without requiring help from the teacher or peers. In Observations 1, 2, and 5, the teacher had organized some materials, e.g., journals, and distributed these materials to students by circulating around the room and placing them on students' desks, or by calling students up by name and handing the materials over.

Students seemed to know the procedures for working together in class. In instances when the teacher used various forms of student grouping for instruction, students transitioned smoothly from one form of grouping to another. In observations 1, 2, 3, 4, and 5, students quickly assembled on the rug or at another location specified by the teacher when whole group instruction was called for. In all but Observation 7,
students were able to shift from whole group to smaller working groups (including triads and pairs) when signaled by the teacher. (Observation 7 documented only whole group instruction.) There were no interruptions or distractions, such as "I don't want to work with..." or "Can I do this instead?" to the transitions in the various grouping strategies used by teachers. Student behavior stood out as being positive throughout the data collected. There was only one instance in which the teacher expressed what might be interpreted as a level of frustration.

<table>
<thead>
<tr>
<th>Time Index</th>
<th>Classroom Discourse/Observer's Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs3</td>
<td>S: What do I do? What do I do?</td>
</tr>
<tr>
<td>2:25</td>
<td>T: We're not having a very good day today...</td>
</tr>
<tr>
<td></td>
<td>Noise levels are high. Ss are working in groups, but some are on-task and some are off-task. Several Ss constantly go up to T, perhaps asking questions to clarify instructions.</td>
</tr>
<tr>
<td></td>
<td>T: OK. Leave your work. Come to the rug. We're not doing this anymore. I'll tell you why. We'll try this again on Monday. I'm very disappointed!</td>
</tr>
</tbody>
</table>

In all other instances, there were examples of reinforcement of positive behavior in Mandarin and in English, such as "hěn hǎo" (very good), "hǎo bàng" (super!), good job, well done, as well as other expressions of encouragement when student behavior and/or performance met or exceeded the established expectations, such as, "gěi ài de gǔ lì!" (Let's give "the encouragement of love", a cheer made popular by Chinese entertainment TV shows.) These examples of positive behavior support may also contribute to the positive classroom environment in general. There was also evidence of classroom charts and graphs that helped students monitor their own behavior, such as a tri-colored (green, yellow, red) graph system that the teacher and students used to monitor student behavior in Observation 3. Along with the chart, there were clothespins
with each student's name written on them. Every student started with the clothespin on the green circle. Students then moved their clothespins to yellow at the second warning from the teacher, and then to red. The data did not reveal evidence suggesting the consequences for negative behavior or rewards for positive behavior in the observed instances.

The data revealed only limited evidence of the use of routines in the target language. While there were nonverbal routines used to maintain and refocus attention such as the call and response clapping (to call attention, teacher claps a specific pattern, and students clap in response, using the same pattern as the teacher's pattern), instances of routines using the target language were very limited in the evidence collected. These other classroom routines are usually independent of the content taught, and promote the use of the target language for authentic communication in the classroom or school setting familiar to students. Examples of student use of target language routines include asking for permission to use the restroom, asking for permission to drink water, asking for classroom materials, or indicating a need such as warmth or hunger. Examples of teacher use of target language routines include giving directions for transitions, dismissal from class, giving instructions to operate classroom tools and equipment (turning on the lights, switching off the projector, lowering the blinds, etc.), and other miscellaneous classroom directions ("please speak louder so others can hear you", "please move closer to the board", "when you are finished, you can read a book", etc.).

**Section III: Document Review**

The review of documents in this study serves as the third source of data to triangulate and validate the information collected through the first two data sources: (a)
participant interviews and (b) classroom observations. In so doing, the document review additionally seeks to address research questions 2 and 4 of this dissertation.

(RQ2) What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?

(RQ4) What does classroom practice in these two K-5 Mandarin programs look like?

Documents relevant to the implementation of the Mandarin program were requested and collected from principals and teachers from the two study sites. The participants provided documents that were available on a volunteer basis. Documents requested include minutes of planning meetings relevant to the design or conception of the Mandarin program, contracts or memoranda of understanding related to personnel involved in program design and implementation, copies of flyers, brochures or other documentation communicating the program goals and details to the community, sample scope and sequence curricular maps, sample lesson plans, and other teacher- or student-created artifacts relevant to the Mandarin program. Table 4.10, on the following page, shows the documents that were provided by participants and collected for review. Some teacher- or student-created classroom artifacts were collected in form of digital photos while conducting classroom observations.
Table 4.10

Documents Collected

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Doc01</td>
<td>TWBI Program Application</td>
<td>School A</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc02</td>
<td>Information Session Flyer</td>
<td>School A</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc03</td>
<td>Mandarin Teacher PD Outlines</td>
<td>School A</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc04</td>
<td>Mandarin Program Student Recruitment Brochure</td>
<td>School A</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc05</td>
<td>School Information Report 09-10</td>
<td>School A</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc06</td>
<td>Student Recruitment Brochure</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc07</td>
<td>Teacher's Elect to Work Agreement</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc08</td>
<td>School Proposal</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc09</td>
<td>Parent Handbook</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc10</td>
<td>Teacher Job Announcement</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc11</td>
<td>Outside Funding Proposal</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc12</td>
<td>Outside Funding Letter of Support - Principal</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc13</td>
<td>Outside Funding Letter of Support - Board Member</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc14</td>
<td>Chinese Curriculum Map</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc15</td>
<td>Teacher/Peer Observation Protocol</td>
<td>School B</td>
<td>Implementation</td>
</tr>
<tr>
<td>Doc16</td>
<td>Student Journal</td>
<td>School A</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc17</td>
<td>Apple Tree Model Poster</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc18</td>
<td>Numbers 1-10 Poster</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc19</td>
<td>Daily Schedule</td>
<td>School A</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc20</td>
<td>Character Tiles</td>
<td>School A</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc21</td>
<td>Parts of Body Worksheet</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc22</td>
<td>Class Book</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc23</td>
<td>Preliminary Progress Report</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
<tr>
<td>Doc24</td>
<td>Chinese Made Easy 1 Text/Workbook</td>
<td>School B</td>
<td>Classroom Practice</td>
</tr>
</tbody>
</table>

Twenty-four documents varying in length, purpose, and audience, were collected and reviewed. The review process started with a first level of review by sorting each document into one of two categories: (a) documents that provide insight on program design and implementation, or (b) documents that provide insight on classroom practice. Each document was assigned a document number and was then reviewed on basis of the role each played in the design or implementation of the program (addressing research...
question 1), and on the basis of how they were used in classroom practice (research question 4). The review process involved notating the documents to find out what themes might emerge and might be recurring. The following section will present a brief description of each document reviewed. Recurring themes that surfaced from the documents are presented after the list of descriptions.

**Program Design and Implementation Documents**

Documents 1 through 15 fall under the category of documents that are related to program design and implementation. Document 1 was the application form used by School A to become transition from a Mandarin FLES instructional model to a Mandarin/English two-way bilingual immersion program. The form was a standard form used by School A’s school district. The intent of the form was to help interested schools indicate that they had gone through the planning steps and had met the various requirements (classroom composition, scheduling, community buy-in, plans for program maintenance) in preparation for implementation of a Mandarin two-way bilingual immersion program.

Document 2 was a school-created one-page flyer announcing an informational session on two-way bilingual immersion programs. The informational session was targeted at parents and interested community members. The flyer contained basic information on date, time, place, and purpose. A copy of the flyer was sent home with every student. Document 3 was an outline of topics of professional development that Mandarin teachers received at School A. The purpose was to document the content of the training that teachers received.
Document 4 was a brochure with information about School A's Mandarin/English two-way bilingual immersion program. Its purpose was to inform parents and community members of the existence of the program for student recruitment purposes. It focused on the uniqueness of the program and the benefits that it would provide to students. Document 5 was the School A's school information report from School A's school district. Its purpose was to provide information on various aspects of the school, including school demographics, facilities, student performance, and accountabilities.

Document 6 was a student recruitment brochure from School B. It was used to announce the school's mission, vision, and goals for students. It focused on the school's international theme. Document 7 was the "Elect to Work" agreement that teachers in School B had to sign. It served the purpose of a contract. It stated the school's mission, vision, and the responsibilities expected from teachers. Document 8 was the proposal to establish School B as an autonomous school. It covered the school's vision, mission, instructional design, staffing, budgeting, evaluation of personnel and plans for community involvement. Document 9 was School B's handbook for parents, students, and volunteers. Its purpose was to inform parents of the guiding principles of the school as well as various school policies, including student dress code, parental involvement, parental rights and expectations. Document 10 was a flyer announcing a vacancy for Mandarin teacher at School B. The two-page flyer informed potential candidates about the vision and mission of the school, listed requirements and desirable qualifications, and gave instructions on how to apply for the job.

Document 11 was a proposal written by School B to compete for outside funding to enhance Mandarin instruction. The document is in narrative form and describes School
B's proposal to use local and international partnerships to enhance the Mandarin program. It also contained information on proposed budgeting of the award funds. Documents 12 and 13 were letters of support attached to Document 11. The letters of support were written by the principal and by a school board member in School B's school district. Both documents served to signal commitment to the Mandarin program from various levels of leadership.

Document 14 was School B's curriculum map. Its purpose was to provide a roadmap for instruction based on themes and essential questions for each grade K-5. Items identified on the map included enduring understanding, essential questions by grade level, overarching theme, grade level theme, and sub-themes for each grade level. Document 15 was an observation protocol used by teachers at School B to collect evidence when conducting peer observations. The two-page form has blank spaces to collect "evidence" of what instruction "looks like" and "sounds like", and has an "implementation stages" scale from "1 (Emerging/Learning)" to "4 (Teaching/Coaching Others)".

**Classroom Practice Documents**

Documents 16-24 fit under the category of documents related to classroom practice, including teacher- and student-created artifacts. Document 16 was a page from a student's classroom journal. It served the purpose of providing a snapshot of what students can accomplish in writing using Chinese characters. The journal entry was age-appropriate and contained one sentence, "I like my friends", and had a student-created illustration to accompany it. Document 17 was a teacher-created poster, which recreated a worksheet students worked with. The teacher used the poster as a large visual, and used
it to model the procedures and tasks expected of students prior to having students work
on the worksheet independently. Document 18 was a teacher-created poster of numbers
1-10 in Chinese. It was posted in the classroom and was used as a model for students
while they learned how to say the names of the numbers in Mandarin and write each
numeral in Chinese characters. Document 19 was a daily schedule. Its purpose was to
show the times explicitly structured and set aside and dedicated to daily Mandarin
instruction. A printed schedule provided concrete evidence that suggested a higher level
of commitment to program implementation and classroom instruction.

Document 20 was a photo taken of Chinese character tiles that were created by
the teacher for students to use independently at a learning center. Each tile measured
about 1 square inch, had one Chinese character written on it, and was laminated. The
tiles were arranged in a plastic box with 1" dividers so that each tile had its own space.
The tiles were organized so that the tiles with the same character were stacked in the
same pile. The purpose of the tiles was to show an example of teacher-created
instructional material. Document 21 was a photo of a student worksheet on parts of the
body. The photo of the one-page worksheet was obtained during a classroom
observation. It served the purpose of helping students match the words for parts of the
body to a picture. Document 22 was a photo from a page of a class book about family
members. Each student contributed a page to the class book. It contained a sentence
frame in Chinese and completed with their own information. "I love my family. There
are ___ people in my family. I have _____________." The purpose of this document
was to provide an example of the type of work evidenced during some observations.
Document 23 was a teacher-created preliminary progress report for his students. The document served the purpose of informing students and their families of their progress prior to the issuance of the formal progress report by the school district. It includes indicators of student performance in several subjects, but curiously Mandarin is not listed. Document 24 was a set of textbook and workbook. This set served the purpose of providing an example of the type of published instructional material used in one of the programs.

**Recurring Themes in the Document Review**

The review of documents related to program implementation (Documents 1-15) brought up a key recurring theme of clarity of information. It was challenging to find recurring themes since the documents varied so much in purpose, depth, and intended audiences, but all spoke to some aspect of the schools' Mandarin programs. On one extreme, there were informational flyers and brochures which were intended merely to provide key information or reminders (for example, Documents 2, 4, 6, and 10). These flyers and brochures were no more than two pages in length and were intended for the general public to recruit students (Documents 2, 4, and 6) and/or teachers (Document 10). On the other extreme, there were application forms and proposals that were intended to obtain program status (Documents 1, 8, and 11). These forms ranged an average about 25 pages in length and included various attachments, letters, and signed forms, intended to provide program information to external organizations so that the schools may join their networks/programs and/or obtain funding to enhance their Mandarin programs.

The common thread was that the forms provided clear information on distinguishing features of the respective schools, and that the information was adequately
differentiated to address the needs of the intended audience. For example, the school mission and vision statements were cited in seven documents (Documents 1, 4, 6, 8, 9, 10, and 11). Mission and vision statements included wording such as "rich, supportive educational environment", "all learners to reach their full potential", "become productive global citizens" (Document 4), "participate and compete on a global scale", and "appreciation of various cultures, languages, and communities around the world" (Document 6). These statements indicate the schools' awareness of the need to provide high quality educational opportunities that expose students to knowledge beyond our local communities, particularly of other languages and cultures of the world. These segments were short and brief because they addressed the needs of the general public. However, in proposals and lengthier documents, mission and vision statements were crafted and presented in more verbose form and included elements such as "guiding vision of equity" (Document 8).

In relation to this study's second research question, what lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs? The analysis from the documents collected and reviewed suggests that clarity in communication about the Mandarin programs should be a priority for schools wishing to implement similar programs. Clarity in communication allows all stakeholders to be informed about the goals, student performance benchmarks, and other defining elements of the program. Such transparency can help increase community participation in the program. The variety of documents collected all points to information being available to the general public or other interested parties. Recruitment and informational flyers and brochures were readily
available and spoke directly and clearly to the distinguishing features of the schools, namely the opportunity to study Mandarin.

Implications for schools include further documenting and archiving meeting agendas, minutes and other documentation towards the planning and establishment of the program. Agendas and minutes, or notes, from such planning meetings were not available for this study. Their inclusion would have provided much additional insight on the steps and the thinking that took place as the programs were designed and primed prior to implementation. Another area of documentation that could be beneficial to schools is a record of parent meetings, including agendas, sign-ins, and copies of meeting announcements, whether in specific flyers sent home or included in generic school newsletters or bulletins. Such information is crucial when schools try to assert the community's buy-in and support.

Review of documents related to classroom practice (Documents 16-24) revealed the recurring theme of intentionality. While reviewing each document, the question that came up for all of them was "what was the teacher's intention?" or "what was the teacher's intended outcome?" Intentionality involves planning. While it was impossible to ascertain, based on documents of classroom artifacts, the depth of planning that occurred leading up to their use, their existence signals intentionality. A carefully-crafted teacher-created poster that is basically an enlarged copy of a student worksheet (Document 17) strongly suggests that the teacher had given prior consideration to how she would model the task for students so all students could see the enlarged visual. The availability of published textbooks and workbooks (Document 24) in the classroom signals that the school had planned for basic instructional materials to be available to
teachers and students. The existence of teacher-created learning tools (Document 20) suggests that teachers have planned instruction and judged that the basic materials were not sufficient to meet the learning needs of the students, so additional materials were created to meet student needs.

These documents related to classroom practice further complement insights gleaned from interviews and classroom observations that help to answer the fourth research question in this study, "What does classroom practice in these two K-5 Mandarin programs look like?" These documents of artifacts found in classrooms show evidence of what students can do but serve to corroborate the statement made by various principals and teachers during their interviews about the need to create additional materials for Mandarin instruction, and the time and effort that is required to create a sound instructional program that includes Mandarin.

**Chapter Summary**

This chapter began by presenting a detailed account of the various sources of data collected and reviewed to answer this study's research questions 2, 3, and 4. Findings from each of the data sources were presented and discussed in three sections. First, a thorough analysis of data collected from interviews with principals, teachers, and parents was presented. Second, the analysis of data from various classroom observations was reported. Last, an analysis of the various document reviewed was offered. A summary of the various analyses begins on the next page.
Analysis of interviews with principals and teachers regarding program implementation

Analysis of data from interviews with principals and teachers regarding the implementation of the Mandarin program revealed that administrators and teachers expressed that special consideration ought to be given to: (a) staffing, (b) funding, (c) scheduling, and (d) teacher support.

Principals were concerned about properly staffing Mandarin teaching positions and cited a shortage of candidates that were proficient in Mandarin and also knowledgeable about pedagogy and instructional matters. Review of the data found that principals cited concerns regarding funding teacher salaries, instructional materials, and support for teachers to perform additional instructional-related duties after contractual work hours, mainly to develop curriculum and instructional materials. Responses collected from principals also revealed that instructional time for Mandarin was a key consideration, especially in light of the emphasis on English literacy and mathematics driven by their district's desire to meet state and national accountability measures. Finally, the interview data found that principals expressed support for their Mandarin program teachers through facilitating the acquisition of instructional materials and promoting effective instruction through coaching and offering resources related to Mandarin instruction to teachers.

Interview data gathered from teachers revealed that teachers were aware of the challenges related to staffing teachers for Mandarin programs, and that Mandarin language proficiency alone did not make an effective teacher. Analysis from the teacher interviews also found that teachers cited funding for classroom materials and support as a
key consideration in the implementation of Mandarin programs. Review of teacher interview data further indicated that teachers expressed concerns regarding instructional time so that Mandarin instruction may be delivered consistently and not traded for other priorities that occur during the school day. The data also revealed that teachers cited high levels of support from their principals, and that teachers continue to welcome additional support.

**Analysis of interviews with principals, teachers, and parents regarding the impact of Mandarin instruction on students**

Data from interviews with administrators, teachers, and parents also found what perceptions each of these groups held about the impact of Mandarin instruction on students' academic, attitudinal, and cognitive development. The analysis found that administrators, teachers, and parents most clearly perceived a positive impact in students' attitudinal development. Interview responses also revealed that principals, teachers, and parents perceived that academic and cognitive benefits would be more evident when students had at least three or more years of participation in their respective Mandarin programs.

**Analysis of classroom observation data**

This study reported analysis of data from various classroom observations. The analysis found that teachers exhibited practices that were congruent with best practices identified in the research literature. These best instructional practices include (a) maximizing the use of the target language for instruction and classroom routines, (b) alignment of instruction with California World Language Content Standards, (c) using flexible student grouping arrangements, (d) incorporating games for instructional
purposes, and (e) adopting classroom management procedures that contribute to a positive classroom climate.

Analysis of documents related to program implementation and classroom instruction

The review of documents related to program implementation found that two schools sought to use the Mandarin programs to distinguish themselves from other schools and to attract students. The documents related to program implementation boasted the rationale and benefits for studying Mandarin and receiving a global education by including such claims as part of the vision and mission statements. The analysis of documents and artifacts related to classroom instruction provided evidence of the range of learning tasks that students were asked to perform and revealed many tools that were created by teachers to enrich their programs beyond the use of commercially-available published materials.

The next, and concluding, chapter of this dissertation recites a summary of this research study and its major findings, presents implications for policy and practice, and sets forth recommendations for future research.
CHAPTER V

DISCUSSION AND CONCLUSIONS

Introduction

This final dissertation chapter interprets and discusses the research findings generated from the examination of two new elementary (K-5) Mandarin foreign language programs within the context of a large urban school district in California. This chapter begins by presenting a summary describing the study. The provided summary includes an overview of the problem statement, a discussion regarding the purpose of this dissertation study, the research questions posed, the methodological approach taken in this research, and major findings resulting from the data analysis conducted. The chapter, and the dissertation, concludes with a discussion of the implications of this research study for educational policy and practice, and puts forward recommendations for future research related to this educational topic.

Summary of the Study

Overview of the Problem

The National Research Council (NRC) (2007) set forth that the American education system has placed little value on the acquisition of languages other than English and learning about cultures other than our own. The U.S. Committee for Economic Development (2006) further points out that our collective inability as Americans to properly include the understanding and study of world languages and cultures in our public school curriculum creates a threat to our national security which has severe implications for the future.
Locally, public school districts continue to struggle to overcome financial crises and severe budget cuts. This is taking place while districts simultaneously have to revolve their academic curricula around annual student achievement assessments as per the Academic Performance Index (API) and Adequate Yearly Progress (AYP). These two challenges of financial and academic accountability have prevented a large majority of schools from allocating the necessary resources in personnel, funding, and instructional time, to establish sustainable and rigorous instructional programs—and not as well-articulated K-12 pathways— that offer students opportunities to become proficient in world languages and cultures through at least six to eight years of study beginning in the elementary grades. In the district where this study was conducted, the majority of world languages and cultures courses start in grade 9 or beyond. Furthermore, Spanish, French, and other western European language courses dominate over 90% of the district's world languages offerings.

Starting with the first formal academic exposure to a foreign language during the high school years makes it virtually impossible for students to achieve high levels of linguistic and cultural proficiencies in the target language and culture. Providing our citizenry with opportunities for starting language learning at an earlier age (so that language learners may reach successful levels of proficiency) is especially critical for languages like Arabic, Japanese, and Mandarin. This is such an important foreign language learning issue that the United States Foreign Service Institute (FSI) has categorized these international languages as "languages which are exceptionally difficult for native English speakers" (California Department of Education, 2010).
Purpose Statement

The purpose of this qualitative study was threefold: (a) to develop an improved understanding of existing research on programs for foreign language education for elementary school students; (b) to examine two elementary school Mandarin programs in order to better understand their instructional practices; and (c) to explore what perceptions are held by school administrators, teachers, and parents about the impact that Mandarin instruction might have on students' academic, attitudinal, and cognitive development. The larger purpose behind the study’s objectives is to add to the body of research-based knowledge and provide insights that other practitioners may consider utilizing as they plan to establish and implement Mandarin language instruction or other world languages programs and cultures in their respective settings.

Research Questions

This study was designed to review existing research literature on foreign language programs for elementary school students in order to examine how two elementary schools established and implemented their Mandarin foreign language programs. Additionally, the study sought to find out what classroom instruction looks like in these programs as well as to formulate an understanding of the perceptions held about the impact that Mandarin instruction might have on students. Data was collected and analyzed to address this study's four main research questions (RQ):

1. What is known in the research about Foreign Language in Elementary School (FLES) programs?

2. What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?
3. What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students' academic, attitudinal, and cognitive development?

4. What does classroom practice in these two K-5 Mandarin programs look like?

Methodology

A qualitative methodology using an ethnographic research tradition was used to shape the inquiry and answer the aforementioned research questions in this research study. In the ethnographic tradition, the researcher seeks to form "an insider's understanding" of the culture being examined by observing and interacting with its members (Schram, 2006). The sources of data were drawn from administrators, teachers, and parents with children in elementary school Mandarin programs. The data was comprised of interviews, classroom observations, and documents pertaining to the implementation of the program, as well as those pertaining to classroom practice, which included teacher- and student-created artifacts.

Interview protocols were differentiated for use in the collection of data from administrators, teachers, and parents. The interviews were recorded using a digital audio recorder. A classroom observation protocol was created to document classroom discourse and ethnographer's comments. Collected interviews and observation protocols were transcribed, reviewed, and coded by the researcher as well as through the use of Atlas.ti software. Codes were grouped into code families that revealed broad themes that addressed the research questions. Documents were collected, organized, reviewed, and notated for codes and emergent themes related to the research questions.
Summary of Major Findings

This section is organized to address each of the four research questions, therefore providing a summary of this study's major research findings. For this reason, each subsection of the dissertation findings is presented in sequential order as it relates to the research question posed in this study.

Findings: (RQ1) What is known in the research about Foreign Language in Elementary School (FLES) programs?

This dissertation study reviewed research literature on second language acquisition at an earlier age (Curtain, 1990; Curtain & Pesola, 1994; Center for Applied Linguistics, 1996; Dumas, 1999; Holman, 1998; Johnson & Newport, 1989; Krashen, Long, Scarcella, 1979; Lightbow & Spada, 1999; Nash, 1997; Patkowski, 1980; Winslow, 1997). The reviewed research supports the claim that the study of a second language at the elementary school age provides unique advantages to students learning complex world languages over students attempting to acquire world language facility during the high school years. The principal benefit is that children's brains are optimally equipped to grow connections needed for language acquisition before the age of 12 (Dumas, 1999), creating a "neurobiological window of opportunity" during which time children can take full advantage of second language acquisition (Lightbow & Spada, 1999; Nash, 1997; Winslow, 1997). In sum, the prescription that emerged from a review of second language acquisition at an early age is "the earlier, and the more frequent students are provided with opportunities to acquire a second language the better".

The study additionally reviewed literature on various models that help achieve proficiency in a second language, including early- and late-exit transitional bilingual
programs, two-way bilingual immersion, Foreign Language in Elementary School (FLES), and Foreign Language Exploration (FLEX) programs (Cloud, Genesee, & Hamayan, 2000; Lipton, 2010; Met, 1991; Met, 2008). The models vary by objective, duration of instruction, and degree of exposure to the target language and culture being studied. Early exit and late exit bilingual programs serve the objective of using students' knowledge and the existing foundations in their home language to transition into a path towards proficiency in a second language. These transitional bilingual programs do not include the maintenance of the home language as a focus in their objective, and are hence known as "subtractive" bilingual programs because they "take away" the ability to become fully bilingual (and biliterate) from students (Cloud, Genesee, & Hamayan, 2000). Such transitional bilingual programs were once commonplace in California during the '80s and early '90s, before the passage of Proposition 227.

In contrast to "subtractive" bilingual programs, there exist "additive" bilingual programs that aim to put students on a pathway to proficiency in one (or more) additional language(s). These are often seen as enrichment programs that are part of the regular school day. However, some may also be found before-, after-school, or on weekends.

Programs with the least exposure to the target language often divert the emphasis on culture, such as FLEX programs, which are sometimes taught in the home language. The middle ground of second language programs contains sequential FLES programs that have a time and content structure, and aim to help students become proficient in language and culture through a sequence of study spanning several years, kindergarten through grade eight (Lipton, 2010).
Immersion programs are on the other end of the spectrum, devoting the most time and intensity to studying the target language and culture. The minimum prescription for instructional time in the target language in a typical foreign language immersion program is 50% of the day. Immersion programs often use the target language as a means for studying other core subject areas such as: science, mathematics, and literacy/language arts (Cloud, Genesee, & Hamayan, 2000; Met, 2008). To summarize the research literature reviewed, various programs exist to help students achieve proficiency in a second language, but the programs vary by instructional objective, duration of study in the target language and culture, as well as the degree of exposure to the target language and culture.

The research on implementation of world language programs following a FLES model was reviewed (Lipton, 1998; Lipton, 2010; Met, 1991; Shrum & Glisan, 2010). The research identifies several defining elements of FLES programs: (a) a sequential program of study, (b) structured instructional time, (c) qualified teachers proficient in the target language and culture, and (d) pedagogy that supports second language acquisition. The literature also indicated that FLES programs differ in the grade levels that are offered. Some programs begin as early as pre-school or kindergarten while others start only after determining that a solid foundation in the first language has been laid, typically at grade three or later (Boyson, 1997; Lipton, 2010). Research indicates that, whether students start in grade three or in grade five, students reach "commendable levels of proficiency" in oral and/or listening performance in the target language (Boyson, 1997; Boyson & Thompson, 1998).
The literature described "best practices" in FLES instruction (Easley, 1995; Ernst-Slavit, Statzner, & Wenger, 1998; Glass, 1994; Krashen, 1982; Purcell, 1993; Schinke-Llano, 1995). These model instructional strategies cited in the research include: (a) establishing collaborative partnerships between elementary schools and research institutions, (b) maximizing the use of the target language during FLES instructional time by teachers and by students, (c) respecting students' "silent" period by providing them with many opportunities to develop receptive mastery before requiring them to produce language, (d) setting high expectations for all, (e) incorporating classroom routines in the target language, (f) using games to develop the target language, (g) planning for instruction that provides many opportunities for students to interact with each other and with the teacher, (h) designing instruction that is based on use of language in authentic contexts, (i) using authentic children's literature texts, and (j) incorporating role-play into language learning experiences.

Implications for using FLES as a model for second language acquisition were also reviewed in the research literature (Andrade, Kretschmer, & Kretschmer, 1989; Armstrong & Rogers, 1997; Bamford & Mikozawa, 1990; College Entrance Examination Board, 1992; Curtain, 1993; Diaz, 1984; Foster & Reeves, 1989; Garfinkel & Tabor, 1991; Genesee, 1987; Genesee, 1992; Hakuta, 1984; Lambert & Klineberg, 1967; Landry, 1973; Landry, 1974; Lapkin, Swain, & Shapson, 1990; Met, 1991; Pesola, 1991; Rafferty, 1986; Robinson, 1992). The literature revealed that students in FLES programs experienced cognitive advantages of a more diversified set of mental abilities (Robinson, 1992). Various studies show that students in FLES programs have documented higher achievement on standardized tests in English, mathematics, and social studies when
compared to control groups of peers who were not engaged in FLES programs (Armstrong & Rogers, 1997; College Entrance Examination Board, 1992; Garfinkel & Tabor, 1991; Rafferty 1996; Robinson, 1992). Review of the literature also revealed attitudinal benefits for students in FLES programs, including adopting a more open mind to move from egocentrism to reciprocity, and having more positive feelings towards members of a foreign group (Robinson, 1992; Lambert & Klineberg, 1967).

In summary, this research study examined second language acquisition literature that supported the onset of learning world languages and cultures in the elementary grades. The literature review also presented various types of instructional program models to help students acquire a second language. In addition, various research studies provided insight on defining elements of FLES programs and instructional "best practices". Finally, the research literature reviewed also provided evidence supporting academic, attitudinal, and cognitive benefits for students who study world languages at an early age.

**Findings: (RQ2) What lessons may be learned from two elementary schools in a large urban K-12 school district in the way they started and implemented their Mandarin programs?**

Backed by evidence from a document review, interview responses gathered from administrators and teachers served as the data source for these findings. This research study found that principals from the two study schools shared concerns and recommendations of considerations about their respective Mandarin programs: (a) staffing of qualified teachers, (b) obtaining adequate levels of funding, (c) structuring, protecting, and using instructional time, and (d) providing support to their teachers.
Principals' were concerned about staffing because the available personnel pool qualified to provide high-level Mandarin instruction is still limited. Their responses indicated the difficulty in finding a properly credentialed teacher who fulfilled all the following requirements: (a) a proficient speaker of Mandarin (with native or near-native fluency), (b) experience with classroom management, (c) experience with assessment, curriculum, and instruction, and (d) familiar with second language acquisition pedagogy. In addition, principals in this study reported that their school district's human resources policies, collective bargaining contracts, and the phenomenon of high numbers of teacher displacement due to budget cuts presented obstacles in their quests to hire the best-qualified and most appropriate staff for their schools.

Principals also cited funding as a key concern and consideration. Principals reported three key considerations related to funding: (a) teacher salaries, (b) instructional materials, and (c) support for teachers' work during non-contractual hours. Principals' responses suggested that foreseeing and preparing for these budget categories would contribute towards a smooth implementation of the program, beginning by securing funding to pay the teacher, and supplying the necessary instructional materials that are best aligned to the program's instructional objectives (including publisher, teacher-created, and classroom-use print or multimedia materials). Both principals in the study were emphatic about their acknowledgement of, and desire to remunerate teachers in the Mandarin program for the countless hours and tireless work. Examples of such diligence included designing curriculum and assessment tools, creating supplemental or replacement material, or performing other duties outside of contractual work time (e.g., regularly tutoring a group of students after school because the school schedule did not
allow them to have Mandarin during the school day, creating a web-based network for their students' parents) to help achieve the goals of the Mandarin program.

Principals also found that structuring time for Mandarin instruction during the day to be a key consideration. One principal reported that he was out of compliance with his district's requirements for instructional time in the core subject areas when he first piloted Mandarin at his school and incorporated it into the regular school day. The other principal reported that, due to his school's status as an innovation pilot school in the district, he had more leeway and flexibility about folding in the instructional time for Mandarin, as long as students would show the same academic achievement gains that was expected of all students in the district. Even with the flexibility and the district's blessing in place, the principal said that creating the schedule to allow for instruction for all students was a challenge.

With regards to teacher support, principals reported that their two main concerns are for (a) instructional materials, and (b) instruction. Principals indicated that they wanted to be supportive of their teachers by allocating or finding what funds might be available for teachers to acquire materials for instruction. One principal indicated that he took pride in serving as a resource for information that Mandarin program teachers might find helpful, such as information on professional development, conferences, student contests, cultural events, and other similar opportunities. Principals also mentioned that supporting instruction by taking time to observe teaching and learning, then conferencing with the teacher was critical.

This research study found that teachers from the two study schools shared concerns similar to those shared by their principals about their respective Mandarin
programs: (a) staffing of qualified teachers, (b) obtaining adequate levels of funding, (c) structuring, protecting, and using instructional time, and (d) providing support to their teachers.

Teacher responses during the interview indicated that they, too, were highly aware of the need for highly-qualified colleagues to teach Mandarin. They reported that merely being fluent is a necessary, but not sufficient, qualification to being qualified as a highly-effective teacher. The teachers interviewed varied in seniority, general classroom experience, Mandarin teaching experience in K-5, as well as fluency and proficiency in Mandarin. Teachers reported that teacher preparation and credentialing programs at the university do more to adequately prepare teacher candidates who are planning to teach Mandarin.

Interview data collected from teachers also revealed their concerns for funding, although their concerns were more generic and were focused on their classrooms rather than having the scope on the overall program. One teacher advocated for additional funding to bring a guest teacher from China who could co-teach with him. Another teacher cited that funding to support attendance at professional development conferences was a welcome idea and necessary intervention. Yet another teacher mentioned funding to acquire instructional materials for the classroom as well as technology such as laptop computers. Therefore, these data indicate a need for professionally trained teachers of Mandarin in both language proficiency and teaching pedagogy. Data collected from teacher interviews also shed light on their views about scheduling for Mandarin instruction. One teacher reported that he wished for more instructional time because he was confident that students would learn more Mandarin if given more time. Other
teachers mentioned consistency as a concern, as Mandarin is sometimes offered on a 2-, 3-, or 4-day schedule based on "other school priorities" and urgent affairs, rather than a regular, non-negotiable staple on the schedule. One teacher pointed out that it was up to him to protect Mandarin time for his students by not cutting it from his daily schedule based on other needs.

Lastly, during administered interviews, teachers commented on the support they received from their administrators. The data collected pointed out that all teachers interviewed concurred that their administrators were supportive of their efforts in the Mandarin programs. Teachers further reported that they welcomed more support in instructional planning, acquisition of materials, use of technology for Mandarin learning, and structuring of time during the work day to collaborate with colleagues in the Mandarin program.

In summary, data collected from interviews of principals and teachers shed light on concerns and considerations that others can learn from the establishment and implementation of the Mandarin programs at the two sites. Staffing, funding, scheduling instructional time, and teacher support were found to be recurring themes in the analysis of the interview data.

Findings: (RQ3) What are administrators', teachers', and parents' perceptions of their Mandarin program's impact on students' academic, attitudinal, and cognitive development?

Findings on perceptions about the impact of Mandarin instruction on students' academic, attitudinal, and cognitive development is derived from data collected by way of interviews with principals, teachers, and parents. The analysis of interview data
indicated that principals, teachers, and parents agreed that more time was needed for the
Mandarin program to show a positive impact on students' academic development, via test
scores and student achievement in literacy and mathematics, as well as other subject
areas. Several teachers and one parent reported that academic performance has increased
because students are more motivated by Mandarin and hence have adopted better study
habits. In terms of attitudinal development, principals, teachers, and parents agree that
Mandarin instruction had provided students with opportunities to be exposed to new
cultural learning. They further indicated that such exposure had at times translated into
increased self-confidence when approaching people of cultures different from their own
as well as improved attitudes towards learning about other languages and cultures and
towards learning in general. Lastly, this study revealed that the impact on cognitive
development was more difficult to define and, like responses regarding the impact of
academic development, participants indicated that the program would need more time to
show its impact on students’ cognitive abilities.

Overall, the findings of this dissertation study suggest that principals, teachers,
and parents were hopeful and expressed high levels of faith that the Mandarin program's
impact on students' academic, attitudinal, and cognitive development will be a positive
one in the coming years. Furthermore, principals, teachers, and parents expressed
perceptions that there were early indications of positive impact, particularly in attitudinal
development. Responses indicated that academic and cognitive benefits would be more
evident when students had at least three or more years participating in each of their
respective Mandarin programs.
Findings: (RQ4) What does classroom practice in these two K-5 Mandarin programs look like?

Classroom observations on eight different occasions provided the main source of data for these findings. The observations spanned grades K-5 and covered both study schools. This study found the following themes in the analysis of data collected from classroom observations: (a) teacher's use of the target language, (b) consistency in scheduling, (c) alignment of instruction to California world language content standards, (d) use of variable student grouping, (e) use of games for instructional purposes, and (f) effective classroom management.

The study found a relatively high occurrence of teachers using, and staying in, the target language for most of the time (approximately 90% of the instructional time). The data shows two instances in which Mandarin classes were taught primarily with English instructions, while students were asked to recite or repeat vocabulary in Mandarin. Analysis of the data also revealed that scheduling of Mandarin instruction varied from class to class and from site to site. The observations suggest that almost all content covered in instruction was aligned to Stage I (novice level) California World Language Content Standards in the five categories of content, communication, culture, structures, and settings. Alignment of instruction was strongest with the categories of content and communication. Weaker alignment of instruction was found with the categories of cultures and settings. The study also found that teachers observed were comfortable in using various forms of student grouping (such as small group, triads, and pairs), although all instances included and started with whole group instruction. The analysis of classroom observation data found evidence of the use of games for instruction, but it was
not consistent across the observed instances. This research study found that classroom management was generally positive, with teachers and students personifying enthusiasm for teaching and learning Mandarin. Classroom observation data suggests that students were familiar with classroom routines and procedures, and these had been the product of careful consideration.

In summation, classroom observation data revealed pieces of evidence and themes that helped create a picture of what classroom practice looked like in the Mandarin programs at the two school sites.

**Discussion**

This dissertation study examined the existing literature on foreign language elementary school programs and focused on how two elementary schools in a large urban K-12 district established and implemented their Mandarin programs. The research also looked at classroom practice and explored the perceptions held by principals, teachers, and parents about the impact of Mandarin instruction on students’ academic, attitudinal, and cognitive development. This study found that staffing, funding, scheduling, and teacher support are important considerations by principals and teachers regarding implementation of their respective Mandarin programs. The study also found that classroom practices observed during the data collection process were consistent with practices identified in existing research as effective instructional practices. Furthermore, this study uncovered that the perceptions held by principals, teachers, and parents about the impact of Mandarin instruction on students were generally positive. Responses from principals, teachers, and parents pointed out that attitudinal benefits were most evident. Their responses also indicated that a longer amount of time participating in their
respective Mandarin programs would allow for academic and cognitive benefits to be more evident.

**Considerations for Successful Program Implementation**

Principals in this study implemented FLES programs, at least initially, with the goal of adding a language to their students' ability (Cloud, Genesee, & Hamayan, 2000; Lipton 2010). Their programs fell within the definition of FLES and were designed to be delivered during the instructional day with language instruction lasting anywhere between 30-45 minutes a day for several days a week. Both principals were aware of the benefits and advantages that the study of Mandarin would offer students, in light of Mandarin's emergence as a global language of trade, culture, and diplomacy (Kane, 2006; National Research Council, 2007). Both principals worked with limited support and existing models from their district offices, and had to look for resources and experiment with their respective pilot Mandarin programs. One school's FLES program evolved into a Mandarin/English two-way bilingual immersion program while the other’s continued to grow in the FLES model (Cloud, Genesee, & Hamayan, 2000; Lipton 2010).

The insights that principals, teachers, and parents provided for this study are valuable to the field because they encompassed FLES program implementation experiences and made them available to be included within the larger body of knowledge concerning world language program models. Therefore, other researchers, administrators, and practitioners interested in establishing elementary school Mandarin programs may utilize this documented research study of their experiences, concerns, and recommended future considerations as a reference point when designing their own local programs.
Principals recommended that special consideration be taken in the staffing of teachers who are both proficient in Mandarin and knowledgeable of pedagogy, classroom management, and curricular issues. Another area for consideration that principals pointed out is funding. When districts do not allocate sufficient funds for the implementation of a Mandarin program, it is important to consider where the funding will come from in order to hire adequately trained teachers and to buy instructional materials to support the program goals. Principals also indicated that scheduling instructional time was a key consideration for others wishing to implement Mandarin language programs so that schedules remain regular and consistent. Teachers mentioned that students would be able to gain more progress in Mandarin language proficiency if they were given more time to learn (Cloud, Genesee, and Hamayan, 2000; Lipton, 2010).

Lastly, principals and teachers responses were mutually complementary in that principals acknowledged their teachers' diligence and willingness to go beyond the call of duty, and teachers reported feeling well supported by their principals. Support was cited in the form of classroom visits, coaching and conferencing, facilitating the acquisition of materials for instructional use, and providing resources relevant to professional development and other opportunities.

**Considerations for Classroom Practice**

Classroom observation data analyzed in this study suggest that—while there was some degree of variability—most practices observed were consistent with best practices documented in the existing research literature (Easley, 1995; Glass, 1994; Krashen, 1982; Purcell, 1993; Schinke-Llano, 1995). Best practices observed included high occurrence in the teachers' use of the target language for instruction, strong alignment of instruction
with California World Language Content Standards, use of flexible student grouping arrangements, the incorporation of games for instruction, and classroom management procedures and routines that contribute to a positive classroom climate. Consistent with the interview data, scheduling was the theme with the greatest variability as instructional blocks differed for a variety of reasons, even for the same class. The practices and rich descriptions of classroom interactions documented in this study provide other practitioners with an additional reference point with which to reflect on as they examine instructional practices in the context of elementary school Mandarin classrooms.

**Expectations of the Mandarin Program's Impact on Students**

This study found that principals, teachers, and parents perceived that the Mandarin program had a positive impact on students' attitudinal development. This is consistent with the research literature reviewed (Curtain, 1993; Lambert and Klinebert, 1967; Robinson, 1992). Administrators, teachers, and parents found that students benefited from the opportunities that the Mandarin program brought to them as they studied the language, cultural practices, products, and perspectives. Teachers and parents found that students were more motivated which in turn translated into better academic work habits. With regards to academic and cognitive development, the study found that most participants were reserved in their responses. Study participants cited the fact that more time is needed for the Mandarin language program to show measurable evidence of an impact on students' achievement in basic academic skills, their abilities to problem-solve, and an increased ability to exercise mental flexibility. However, responses indicate a positive expectation consistent with research that students (given time) in a Mandarin program will show academic and cognitive growth (Bamford & Mizokawa,

Limitations

This research study examined the experiences of two elementary schools implementing Mandarin programs and explored perceptions of principals, teachers, and parents on the impact of Mandarin instruction on students. While the study shed new light on the impact that such programs may have, this research additionally had several limitations suggestive of a need for further research in this area.

First, the findings represent only programs at two school sites, and both programs had less than a year of implementation during the time this research was conducted. During that time, one of the schools started out as a FLES model but consequently evolved into a two-way bilingual immersion model, while the other school remained using a FLES program model. Second, the other school in this study is a pilot school that has a degree of autonomy that the majority of schools do not have, therefore limiting the applicability of such a model to elementary schools with similar flexibility. Third, the sample of principals, teachers, and parents, was not sufficiently large enough to allow broad generalizations. The parent sample was mainly a convenience sample as this researcher recorded data from whomever was available through the teachers' courtesies in assisting with scheduling. Fourth, the intent of this study was to describe the perceptions held by principals, teachers, and parents and was not designed to measure the actual impact, thus suggesting further analysis into the actual impact that Mandarin language programs may or may not have upon students.
The small sample size makes the findings more specific to the experiences and context of the study sites. However, recommendations for future consideration and other insights expressed by principals, teachers, and parents may be applicable to most general situations. Like the study schools, most schools lack the necessary staff, funding, and structure to build high-quality foreign language programs from scratch. Like the study schools, most schools have limited time during the day, and are held accountable to the same levels of performance as per the benchmarks set by the No Child Left Behind Act of 2001. Like the study schools, the target audience is primarily students who are not of Chinese descent, and may benefit from learning Mandarin as a second or third global language. Like the study schools, Mandarin is likely to be a popular choice of communities that have a finger on the pulse of the global economy and future trends. Despite its limitations, the ability to generalize findings from this study should not be dismissed, given that the emergent themes are consistent with existing research from studies regarding second language acquisition in the elementary grades.

**Implications for Policy and Practice**

**Implications for Policy**

Cloud and Genesee (1998) claim that "linguistic and cultural competence will be the mark of the well-educated citizen of the 21st century". School districts need to make the study of world languages and cultures in the early grades a priority and part of the basic education of all children. While it is never too late to learn a new language, to delay the study of world languages and cultures until students have reached adolescence means we have missed what the research has identified as the optimal "window of
opportunity" during the students' elementary grades to reap unique benefits that the study of a second language can offer (Lightbown & Spada, 1999; Nash, 1997; Winslow, 1997).

Much of the existing research on the benefits of second language acquisition in the elementary grades requires that schools shift from a curriculum centered around basic skills in English literacy and mathematics to a more global and comprehensive curriculum that includes the study of world languages in addition to English. Effective practices in world language programs in elementary school support 21st Century skills of communication, collaboration, and creativity (Partnership for 21st Century Skills, 2011). This study found that the existing research clearly identifies that the study of world languages in addition to English has a positive impact on students' academic, attitudinal, and cognitive development. Communities need to be made aware of these benefits so that they may advocate for policies that call for strong world language programs to be included in our children's basic elementary public education. Providing all our children with the opportunity to study a language other than English in their early years as part of the basic elementary school curriculum holds great potential to transform students into future leaders in their communities and in the world.

As school districts create policies that support world language instruction beginning in the elementary grades, they should heed the considerations found in this study and the greater body of research, and should be prepared to fully support schools in staffing, funding, scheduling, and building teacher capacity. It is unfair to schools and school personnel when districts make motions to create policies that are politically-smart and generally popular, but fall short of committing adequate resources to help schools implement said policies. Funding and support within the district must be commensurate
with the expectations established by policies. Examples of district-level policies or reforms that can support world language programs at elementary schools include, but are not limited to: (a) allowing principals autonomy to hire the best staff not merely based on contracts or reassignment policies, (b) providing funding for the acquisition of instructional materials selected by the school sites, (c) allowing flexibility in scheduling so that world languages may be included as part of the regular day, (d) encouraging world languages and cultures programs to blossom to serve all students, regardless of English proficiency or reclassification status.

**Implications for Practice**

One implication stemming from the theme of intentionality that emerged from this document review is for schools to plan and prepare for selection and acquisition of instructional materials that best match their program's intended goals and their students' needs. While a publisher's instructional materials will always be unlikely to fully and comprehensively meet any single teacher's needs, the need for a teacher to go out on his own to look for and create additional materials to supplement curriculum may be diminished significantly if the selection process is intentional, thorough, and includes teachers' input. When schools are proactive to review instructional materials, and when schools are deliberate in the selection of such materials with teacher input, they are investing in time that will be saved from having to create additional supplementary materials.

The large amount of time searching and creating instructional materials was a recurring theme that also was reflected from data collected through interviews. Instructional materials may be known and reviewed by contacting sales representatives of
publishing houses, but also by attending the vendor exhibits at professional conferences, and also by word of mouth from teacher and principal networking.

Another implication related to classroom practice that emerged from this document review has to do with the intentionality of the tasks and activities that students are asked to do or to produce as evidence of learning. Second language learning, particularly in the early learning stages and for students of elementary age, needs to be alive and full of experiences that make the learning meaningful and memorable. These experiences should be rich in the use of oral language so students can hear language modeled by the teachers or other proficient speakers, and so that they may also hear themselves produce language (Curtain & Dahlberg, 2010; Lipton, 2010). The documents collected all provided evidence of students reading or writing. Schools wishing to implement new Mandarin programs might consider collecting student work that is not limited to pen and paper type of activities, but include a wide array of ways to showcase what students can do with the language. Today's multimedia resources are ripe for teachers to use and apply in foreign language classrooms as students may hear and see language used by other speakers in a variety of contexts, and also hear and see themselves using the language when they produce a recording of their own voices (Shrum & Glisan, 2010, Lipton, 2010).

In like manner, schools that choose to implement world languages and cultures programs should commit wholeheartedly, with input from all stakeholders. Schools must be intentional in the selection of staff, heeding the concerns brought up by this study that being fluent in the target language is a necessary (but not sufficient) requirement to be an effective world languages and cultures teacher in elementary school. Schools should also
be intentional in how they design and plan for the program. This extended planning stage allows practitioners to communicate all the necessary information about the program's defining elements to stakeholders so that input from all stakeholders may be received, therefore generating buy-in. An extended and thorough planning stage also allows practitioners to consider all the details and contingencies related to successful program implementation.

Planning should also take into account the instructional scope and sequence for each grade, as well as determine the performance expectations for each grade so that all stakeholders can witness the progress that students make. Schools should also commit to a regular schedule for world language instruction that is non-negotiable, so that instructional time in world languages and cultures is not given up in the name of other school priorities. Academic content can be integrated into the world languages curriculum by allowing teachers to work together and plan lessons that reinforce concepts taught in other subjects using a content-based FLES approach. Music, art, and physical education also lend themselves for delivery of FLES (Curtain & Dahlberg, 2010; Lipton, 2010). The intentionality of program design should also include funding considerations so that adequate levels of funding may be allocated and set aside for program implementation and/or program enhancement (such as staffing co-teachers or teaching assistants, purchasing instructional technology tools, professional development and conference attendance for administrators and world language teachers).

Teacher credential programs can support program implementation by preparing future Mandarin teachers with coursework and practical experiences to help teacher candidates become familiar with the linguistics demands of Mandarin and also with a
variety of age-appropriate pedagogical strategies that support elementary school students' acquisition of a second language. This would allow teachers of Mandarin in elementary schools to better apply formal linguistics training to age-appropriate pedagogy that would lead to increased student understanding, of the language and the culture being taught.

School administrators should plan ahead and anticipate vacancies for teachers of Mandarin, like P1 in this study, and consider hiring an additional qualified teacher when any vacancy becomes available so that the newly-hired teacher may be groomed and given proper support to successfully teach Mandarin in anticipation of program growth. Staying a step ahead of staffing needs also allows administrators more time to recruit the largest pool of potential candidates from which to deliberately select the best professional to deliver Mandarin instruction in alignment with the school's and the community's core values.

Teachers in the program need to continuously pursue professional development to learn best instructional practices and also to become more familiar with all that the research literature has to offer. Their constant application of these pedagogical skills will contribute to a program that is more research-based, scientific, methodological, and deliberate. Teachers should also engage in action research to become proactive in documenting their classroom experiences thereby adding to the greater body of knowledge, and make instructional decisions based on either qualitative or quantitative data.

Principals can offer support to their Mandarin teachers by making time available for teachers to work collaboratively or work on-site to diminish their need to take work home. Principals can exercise flexibility in determining what meetings the teachers of
Mandarin need to attend. If the objectives for the meeting are not relevant to the roles and responsibilities of the Mandarin teacher, principals should consider directing the teachers of Mandarin to use that time for planning, preparation, or collaboration for Mandarin instruction.

Parents and communities should also become more proactive in becoming knowledgeable about world languages and cultures programs: what the benefits are, what the performance expectations are, what the curriculum is, how the students will be assessed, what benefits may be expected, and what interventions might be most helpful. Parents can also take advantage to learn a new language along with their child. By doing so, they would communicate through their actions the value of lifelong learning.

**Recommendations for Future Research**

This study extends research on second language acquisition in the elementary grades, looking in particular, through the context of two elementary schools implementing Mandarin programs. Future research can include a larger research sample, perhaps covering various school districts. Future research may also include quantitative studies to measure the actual impact of the Mandarin program on students achievement on standardized tests or other performance measures, as well as measurable forms of cognitive and attitudinal development, compared to control groups. Additional research may also focus on documenting with a higher degree of precision how a program is started from the very initial stages through a longitudinal study covering several years into its implementation. Moreover, a longitudinal qualitative study tracking the development and life changes of students who start to study world languages and cultures in elementary school (through their college years) may also provide a different
perspective on the impact of world language instruction and produce a captivating addition to the research in this area of study.

Additional research can also seek to reveal the degree of acceptance of world language elementary programs by a large sample of schools and parents. Despite of perceptions on the value of world language programs, the irrefutable fact that world language programs at elementary schools are a minority, raises several questions that additional research may be able to answer: (a) what is the status of world language programs in the eyes of school staff, parents, and community members?, (b) are such programs generally accepted or are they considered to be marginal to the basic education of our children?, (c) what changes need to occur in the general population's mindset in order for world language study to be considered a basic part of elementary education for all students?

**Concluding Statement**

This study sought to add to the larger body of knowledge on second language acquisition, particularly relating to instructional programs for elementary students. Data was collected and analyzed to answer the four main research questions posed in the design of this study. The study found research studies supporting the benefits of students starting to learn a second language in their elementary school years, as well as research literature on the different program models that help students achieve proficiency in a second language. The study also revealed that principals, teachers, and parents had much insight to offer in regards to concerns and considerations related to program implementation, classroom practice, and regarding their perceptions of the kind of impact that Mandarin instruction had (or they expected to have) on students’ academic,
attitudinal, and cognitive development. While there are limitations to this study, the majority of the findings are able to be generalized and applicable to a wide audience of educational leaders and practitioners interested in establishing or implementing similar programs of their own.

Implications for policy and practice were presented, calling stakeholders at all levels to commit to making effective world languages and cultures programs a priority for students as we prepare them for future challenges with a truly global education centered around skills needed to be successful in the 21st century and beyond. Recommendations for additional research were provided to include larger sample sizes, quantitative studies to measure academic, attitudinal, and/or cognitive development of students studying world languages in elementary school, and longitudinal qualitative studies that tell the stories of students' development beginning in elementary school through their college years.

Thus, effective programs that help students become proficient in the use of world languages and cultures for communication, collaboration, and creative problem-solving will nurture and develop the next generation of Americans, endowing them with the skills, knowledge, and sensibilities to successfully engage and overcome the challenges of sustaining progress and creating peace in an interconnected global society. Such a citizenry will effectively contribute to a prosperous and secure nation, and by extension, to a harmonious and utopian world.
REFERENCES


Appendix A: Research Announcement

RESEARCH ANNOUNCEMENT

A study is currently being conducted on the perceptions of the impact of elementary foreign language programs in Mandarin on students’ academic, attitudinal, and cognitive development. The study is part of the researcher's doctoral coursework at the Eisner Graduate School of Education, California State University, Northridge. The study proposal has been approved by Baylis Unified School District’s Office of Research and by the University’s Office of Research and Sponsored Projects.

Who is eligible to participate?

- **Full-time teachers and administrators** working in elementary schools with a Mandarin instructional program (including K-6 and span schools with elementary grades) of the Baylis Unified School District
- **Parents** of students enrolled currently or formerly enrolled in a Mandarin instructional program

The study involves an interview no longer than 60 minutes, with possible follow-up via email or phone, as necessary. Interviews will be conducted after school hours starting April 2011.

In addition, teachers will be asked (with prior permission from their school administrator) for no more than four classroom observations limited to one period each. Teachers and administrators will be asked to share documents pertaining to the Mandarin instructional program to add to the documents review and study by the researcher.

PARTICIPATION IS VOLUNTARY and participants may withdraw at any point. There is no compensation for participating in this study.

To participate in this research study opportunity or for additional information, please contact:

William Chang, principal investigator, at william.chang1@my.csun.edu or 626-385-8259.
Appendix B: Informed Consent Form (1 of 3)

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
IMPACT OF K-5 MANDARIN FOREIGN LANGUAGE PROGRAMS PROJECT
STUDY PARTICIPANT INFORMED CONSENT FORM

Introduction

The Impact of K-5 Mandarin Foreign Language Programs Project, funded and conducted by William Chang, principal investigator, as part of the requirements for the doctoral degree (Ed.D.) in Educational Leadership and Policy Studies, and is designed to gain a better understanding of the implementation process of elementary foreign language programs as well the impact of Mandarin as a foreign language in elementary as perceived by administrators, teachers, and parents.

Description of Research

The research seeks to add to the limited literature we have about K-5 Mandarin foreign language programs. We are hopeful that this information will be of assistance to educators who are considering implementation of Mandarin programs at the elementary grades.

Subject Information & Risks

As a participant, you have been selected because of your involvement and/or participation in your school's Mandarin program. You will be interviewed, if you are an administrator in charge of your site's Mandarin program, a teacher involved with the Mandarin program, or a parent of a student receiving instruction in the Mandarin program. Questions for administrators will generally revolve around design of the program and the implementation process, among other pertinent information on the Mandarin program. Questions for teachers will generally deal with classroom instruction and student performance, as well as curriculum and assessment issues, among other points related to the Mandarin program. Questions for parents will generally ask about attitudes at home, student achievement and support, among other issues related to the Mandarin program. In addition, if you are a teacher, there will also be classroom observations to study classroom practice of K-5 Mandarin instruction. The focus of these observations will be on teacher practice. The research study proposes to conduct five classroom observations per teacher, each observation no longer than 60 minutes, with no more than one observation per any given week between December 2010 and April 2011. The researcher assumes a passive observer's role during these observations. The observations will be documented using a paper observation protocol and audiotaped/transcribed with identities of teachers and students in code (e.g., Teacher 1, Student 1, etc.).

The risks from participating in this study are minimal but may include loss of personal time, being associated with remarks or comments made during interviews, and risks of any possible retribution or differentiated treatment from having participated in the research study. You will not receive monetary compensation for participation in this study. To mitigate these risks, pseudonyms will be used to protect your identity (including but not limited to name, gender, work location), interviews and observations will be conducted only in blocks of no longer than 60 minutes, and any information and results will only be reported as aggregates and with the use of pseudonyms. The researcher will assume a passive observer's role and will not interfere with instruction or interact with students or teachers during the observation. In addition, information gathered will only be accessible to the researcher and the faculty advisory committee, and it will not be shared with other participants in the study.
Appendix B: Informed Consent Form (2 of 3)

Confidentiality & Final Disposition of Data

Pseudonyms will be used throughout the study to protect the identities of participants. Any information collected in this study that can be identified specifically with your school will remain confidential and will be disclosed only with your written permission or if required by law. The cumulative results of this study will be published, but your name and/or identity will not be made known. All data/documentation with identifiable information collected as part of this project will be destroyed upon completion of the study. All other coded documentation and collected information will be kept securely in a locked file cabinet in the office of the researcher's faculty advisor at the conclusion of the study for up to five years. Access to this information is restricted to the researcher, the faculty advisor, and the two additional members of the researcher's advisory committee.

Benefits of Participation

While there is no monetary compensation for your participation in this research study, there may be specific benefits which may expect as a result of your participation, including intrinsic motivation by contributing your knowledge and experiences regarding pilot K-5 Mandarin programs. The study will add to the body of knowledge of what is known about K-5 Mandarin and foreign language programs in general, and may help to inform practice in other school districts across the state and possibly in the nation.

Concerns

If you wish to voice a concern about the research, you may direct your question(s) to Research and Sponsored Projects, 18111 Nordhoff Street, California State University, Northridge, CA 91330-8232, and by phone at 818-677-2901. If you have specific questions about the study you may contact Dr. John M. Reveles, faculty advisor, 18111 Nordhoff Street, Northridge, CA 91330-8265 and by phone at 818-677-7409.

Voluntary Participation

You should understand that your participation in this study is completely voluntary, and you may decline to participate or withdraw from the study at any time without jeopardy. Likewise, the researcher may cancel this study at any time.

Consent to be Audio-taped

During the course of the project you may be audio taped. Your initials here _____signify your consent to allow yourself to be digitally audio recorded. Digitally recording audio from the interviews will help document said interviews more accurately and facilitate the transcription process so that the data reported in this qualitative study. Only pseudonyms and codes will be used in audio recordings. All audio recordings collected as part of this project will be kept in a locked file cabinet in the researcher's faculty advisor's office at the conclusion of the study for up to five years.

I have read the above and understand the conditions outlined for participation in the described study. I have been provided with a copy of this consent form to keep and I give informed consent for my participation in the study.
Appendix B: Informed Consent Form (3 of 3)

Printed Name (Last, First, MI): ________________________________

Signature ________________________________ Date: _____________

Witness/P.I. signature _____________________________ Date: _____________

If you have signed this form, please return one copy in an envelope by mail to:

Dr. John M. Reveles
Michael D. Eisner College of Education
California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330-8265

or give this form to William Chang, principal investigator.

Keep one copy of this consent form for your records.
Appendix C: Interview Protocol for School Administrators

Instrument: Interview Protocol for School Administrators

1. Tell me a little about your school’s Mandarin program.
   a. Where did the interest originate?
   b. Why Mandarin?

2. Once there was an interest, how did you move from concept to execution?
   a. What was the timeline?
   b. What steps did you take?
   c. Who was involved, and what were their roles?
   d. What were some challenges?
   e. What were some considerations?

3. What might you tell a fellow principal who might be interested in starting a Mandarin program?
   a. What are some non-negotiables?
   b. What must they avoid? What can they do proactively to avoid these?

4. Please describe a typical day in the Mandarin classroom.
   a. How is Mandarin scheduled within the instructional day?
   b. What are some success stories?
   c. What are some challenges?

5. How do you support instruction in the Mandarin program?
   a. How often? For how long?
   b. What do you find most rewarding?
   c. What do you find most challenging?
   d. What are some strengths and areas of need?

6. What has been the impact of Mandarin instruction on the students?
   a. Current impact
   b. Long-term impact?

7. What has been the impact of Mandarin instruction on the school?
   a. Current impact
   b. Long-term impact?

8. What has been the impact of Mandarin instruction on the community?
   a. Current impact
   b. Long-term impact?

9. What is the level of commitment to the Mandarin program?
   a. Administrator
   b. Teachers
   c. Community

10. What else might you want to add to this interview?
Appendix D: Interview Protocol for Teachers of Mandarin (1 of 2)

Instrument: Interview Protocol for Teachers of Mandarin

1. Tell me a little about your school’s Mandarin program.
   a. What are the program’s goals and expectations?
   b. How did you get involved as a teacher in the program?
   c. What are your experiences with Mandarin teaching?

2. Tell me what a typical day in your classroom is like.
   a. Who are the students?
   b. What are their proficiency levels?

3. Please describe a Mandarin language lesson that went particularly well for you.
   a. What made it successful?
   b. What is the evidence?
   c. What next steps did you take?

4. What would you say are the challenges you face as a teacher in the program?
   a. Please describe these challenges.
   b. Why do you think these challenges exist?

5. What strategies do you find most valuable to promote language learning with your students?
   a. In what ways do you differentiate Mandarin instruction with your students?
   b. In which aspects of your Mandarin instructional practices would you like more support?

6. How do you determine what content to teach and when to teach it?
   a. How do you monitor student progress?
   b. What resources do you use?
   c. How do you assess student success in Mandarin?

7. Describe how you typically plan instruction and assessment:
   a. Short-term
   b. Long-term
   c. Formative
   d. Summative

8. What has been the impact of Mandarin instruction on the students' academic, attitudinal, and cognitive development?
   a. Current impact
   b. Long-term impact?
   c. Other impact?
   d. What are some causes for the impact you describe?
   e. What are some obstacles for achieving the desired impact?
9. How might you describe the impact of Mandarin instruction on the school?
   a. Current impact
   b. Long-term impact?
   c. Other impact?

10. How would you describe the impact of Mandarin instruction on the community at large?
    a. Current impact
    b. Long-term impact?
    c. Other impact?

11. What is the level of commitment and support to the Mandarin program?
    a. From administrators
    b. From other teachers in the school
    c. From members of the community

12. What else might you want to add to this interview?
Appendix E: Interview Protocol for Parents of Students in the Mandarin Program (1 of 2)

Instrument: Interview Protocol for Parents of Students in the Mandarin Program

1. Tell me a little bit about the Mandarin program at your child's school.
   a. How did you first hear about it?
   b. Did you actively pursue participation for your child?

2. Please describe how you feel or what you think about the Mandarin program.
   a. What would you say are its strengths?
   b. What would you say are its weaknesses?

3. What would you say are the goals of the Mandarin program?
   a. How do you know? How are/were these communicated to you?
   b. How would you describe the program's effectiveness in reaching these goals?

4. Describe your interactions with the teachers in the Mandarin program.
   a. How often do you see them?
   b. How often do you talk with them?
   c. When?

5. What would you say are the successes and challenges of this school?
   a. Why?

6. What would you say are the successes and challenges of your child as a student in the Mandarin program?
   a. Why?

7. How might you describe the impact of Mandarin instruction on the students?
   a. Current impact
   b. Long-term impact?
   c. What do your students say about the Mandarin program?

8. How might you describe the impact of Mandarin instruction on your child?
   a. Academic/education
   b. Attitudinal/emotional/social
   c. Cognitive/learning/thinking

9. How might you describe the impact of Mandarin instruction on the community?
   a. Current impact
   b. Long-term impact?
   c. How might other parents describe their attitudes and feelings about the Mandarin program?

10. Please describe a typical day of instruction in the Mandarin program.
Appendix E: Interview Protocol for Parents of Students in the Mandarin Program (2 of 2)

11. What is the level of commitment and support to the Mandarin program?
   a. From administrators?
   b. From teachers?
   c. From parents with children in the program?
   d. From other parents (whose children are not in the program)?

12. What do you see that is working well and is worth continuing in the way the program is being run and implemented?
   a. Instructional practices, homework, etc. (teachers)
   b. Implementation (school or district administrators)
   c. Other

13. What do you see that needs to change?
   a. Instructional practices, homework, etc. (teachers)
   b. Implementation (school or district administrators)
   c. Other

14. What do you see that needs to stop?
   a. Instructional practices, homework, etc. (teachers)
   b. Implementation (school or district administrators)
   c. Other

15. What else might you want to add to this interview?
Appendix F: Classroom Observation Protocol for Mandarin Classrooms (1 of 3)

Instrument: Observation Protocol for Mandarin Classrooms

Fieldnotes by __________________________ Date written ________
Event, activity, class, situation observed: __________________________
Date, time observed ______________________ Location ___________

(Format for Field Notes: Single spaced; numbered pages; notes OK, need not be in full sentences. Use [ ] for Observer Comments: your reactions, explanations, and questions, as opposed to description.)

BACKGROUND: (Any information on the context of the visit. For example: students had just returned from cultural field trip the day before, or teacher had been ill and just returned two days ago, etc.)

SETTING: (Description of the learning environment. For example: classroom layout, posters and other visuals displayed, teacher/student movement patterns., etc.)
Appendix F: Classroom Observation Protocol for Mandarin Classrooms (2 of 3)

PEOPLE: (Describe the participants being observed: who they are. For example: teacher, students, teacher assistants, parent volunteers, administrators, etc.)

TALK & ACTIVITY: (Describe what the participants are doing, how they interact among themselves [teacher to student, student to student], how they interact with their environment/materials, who initiates the interaction, the language of the interaction, the length of processing time, are students working on their own or in groups, what are some routines, who is the teacher calling on, what activities does the teacher structure or provide, script any questions, responses, or actions that are of particular interest, etc.)

SUMMARY OF EVIDENCE ON RESEARCH QUESTIONS, SUB-QUESTIONS, or THEMES OF INTEREST: (Summarize connections and insights from observation for later recall and analysis).

QUESTIONS & FOLLOW UP: (List any additional questions that may need further clarification or additional observation, etc.)
Appendix F: Classroom Observation Protocol for Mandarin Classrooms (3 of 3)

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