<u>CHARACTERISTICS AND CAREER DECISIONS OF SECONDARY DUAL
LANGUAGE TEACHERS IN THE UNITED STATES</u>

by

Jeremy J. Aldrich
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of
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Abstract

CHARACTERISTICS AND CAREER DECISIONS OF SECONDARY DUAL
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The shortage of middle and high school Dual Language teachers is a major barrier to program sustainability. This study explores the demographic characteristics and factors in the career decisions of secondary Dual Language teachers. A national survey included items on teacher characteristics, factors in the initial decision to become a Dual Language teacher, and factors in ongoing career commitment. Results indicate that altruistic factors and a passion for the language they would teach are especially important for teachers choosing to join the field, and that positive and supportive work environments are key factors in career commitment. Four teacher typologies emerged based on social identity factors. Findings suggest teacher recruitment can be more effective by appealing to the desire to help students, improve society, and share a passion for the language they will teach. Similarly, teacher retention can be more effective by creating work environments supportive of teachers' values and by regularly reinforcing and celebrating the program elements and outcomes that teachers say are most important.

Chapter One

Across the United States, Dual Language programs at the middle and high school level face a critical shortage of qualified applicants for teaching positions. If Dual Language education is to continue, teacher recruitment and retention efforts must improve. This study seeks to fill a gap in the literature by surveying a national sample of secondary-level Dual Language teachers about the things that are most important to their own career decisions. It is hoped that new insights can help attract and retain teachers so that middle and high school Dual Language programs will continue to thrive around the United States.

Dual Language education is an approach for closing achievement gaps and enriching the education of all students, especially English Learners. The key distinction of the Dual Language approach is that students learn core content for part of the school day in two languages with a goal of full bilingualism and bi-literacy (U.S. Department of Education, 2015). In multiple studies, Dual Language education has demonstrated significant and long-lasting positive outcomes on students' achievement in English reading, partner language outcomes, and reclassification out of "English learner" status (Steele et al., 2017; Thomas & Collier, 2012; Umansky & Reardon, 2014). Further, these positive outcomes have been demonstrated among many student demographic profiles, including monolingual English speakers of all races and socioeconomic status, English

learners and language minority students, and special education students (Lindholm-Leary, 2016; Thomas & Collier, 2017). Because of its successful track record and appeal to a variety of educational stakeholders, Dual Language education is growing in popularity in the United States and the demand for teachers is high with many states reporting shortages (Kelly, 2018; Liebtag & Haugen, 2015; U.S. Department of Education, 2015). Yet without a pool of teacher applicants, programs have difficulty expanding to meet the levels of demand.

Within the context of an overall growing demand for Dual Language programs, there has also been an increase in the grade spans served. Traditionally, most Dual Language programs terminated at the end of elementary school, but an increasing number of programs are continuing into the middle and high school years (U.S. Department of Education, 2015). The rationale for extending Dual Language to higher grade levels is multifaceted. First and perhaps most obviously, extended time with the partner language leads to higher levels of proficiency than switching to a monolingual English-only education in middle school. A fifth grade Dual Language student with Intermediate Mid proficiency may be an acceptable program outcome for elementary school, but an eighth grader or twelfth grader who is still at that proficiency level will find it to be of limited use for higher education or employment purposes (ACTFL, 2012). Research has found that Dual Language programs extending into the middle school grades do indeed increase partner language proficiency outcomes, although no study has been done on high school Dual Language proficiency outcomes as of yet (Burkhauser et al., 2016; Center for Applied Language Studies, 2013). A second reason for extended years in Dual Language

stems from the first: higher levels of proficiency yield stronger cognitive benefits of bilingualism. A number of studies longer-term use of multiple languages to higher levels of cognitive benefit (Perani & Abutalebi, 2015; Zied et al., 2004). Third, extended Dual Language programs may benefit a positive sense of identity and cross-cultural competence by exposing students to a greater linguistic and cultural pluralism than is often found in monolingual English school settings (Feinauer & Howard, 2014; Pilotti et al., 2015). And finally, it is posited that all of these benefits of extended Dual Language programs combine to produce higher levels of school satisfaction and persistence to graduation as well as increased job prospects for graduates (de Jong & Bearse, 2014; Harmon-Martinez & Jurado, 2014; Lindholm-Leary, 2016).

A few studies have examined the stressors and joys that middle and high school Dual Language teachers experience (de Jong & Bearse, 2011; Fortune & Tedick, 2015; Howard & Lopez-Velasquez, 2019). However, additional research is needed on why teachers choose middle and high school Dual Language as a career field, and what influences or personal characteristics support them in remaining in this challenging work (American Councils for International Education, 2017; Parkes et al., 2009). This study seeks to ascertain the characteristics of secondary Dual Language teachers across the United States and to examine what teachers report as important factors in their decisions to join and remain in the field.

Statement of Problem

The teacher shortage in Dual Language education has been felt for decades (Camera, 2015; Coffman, 1992; Met & Lorenz, 1997; U.S. Department of Education,

2016). In recent years, though, the problem has become more widespread as the number

of programs has grown, particularly at the secondary level (U.S. Department of

Education, 2015). This phenomenon was described vividly in a blog post on the

Education Week website:

> With a nearly ten-fold increase in programs, a rising demand among states and
>
> individual districts, and evidence supporting the benefits of dual language
>
> learning programs, it is also no surprise that the demand for educators available to
>
> teach in these programs has skyrocketed. Considering the lack of language study
>
> among teachers, supply of these teachers is not keeping up with the growing
>
> demand...Thirty-two states and D.C. report shortages of bilingual teachers, and
>
> the Department of Education cites bilingual education as a high-need field.
>
> (Liebtag & Haugen, 2015)

It is important to understand why Dual Language teachers choose the field and

what causes them to stay or leave so that school leaders and policymakers can support the

most effective practices for confronting the teacher shortage (Ingersoll, 2002). Yet, the

voices of teachers have been underrepresented in Dual Language research to date and this

gap has been identified in several research agendas (American Councils for International

Education, 2017; Parkes et al., 2009). Although educational leaders consistently express

concern about the Dual Language teacher shortage (Liebtag & Haugen, 2015; U.S.

Department of Education, 2015), there has been little research on the factors that

contribute specifically to the career decisions of Dual Language secondary teachers in the

United States, and even less research has explored this issue from the self-report data of

teachers themselves. A search of the EBSCO and ERIC databases for the terms "teacher recruitment" or "teacher retention" combined with either "dual language", "immersion", or "TWI" (names for different types of Dual Language programs) revealed only one study of recruitment and retention perceptions among Dual Language teachers in Connecticut, which included some secondary teachers in the sample (Howard & López-Velásquez, 2019). Other studies have circled the issue in important ways, such as the perspectives of administrators in Dual Language schools (Lachance, 2017; Oberg De La Garza et al., 2015). By adding teachers' perspectives to this body of research, the present study addresses a gap by seeking to understand how current Dual Language teachers report their own experiences leading to their decision to join the field and to remain in it.

Background and Importance of the Topic

Dual Language education in U.S. public schools has expanded rapidly in recent decades. In 2000, there were estimated to be fewer than 300 programs around the United States, and by 2011 that number had exploded to around 2000 programs (Gross, 2016). Since then, growth has continued both in new programs and in programs extending to higher grades as the Kindergarten Dual Language students from a decade ago matriculate to high school. For example, Utah listed 97 middle and high school Dual Language programs in the 2018-19 school year (Utah State Board of Education, 2019). North Carolina listed 36 middle and high school Dual Language programs that same year, with eight of them marked as being new to the list (North Carolina Department of Public Instruction, 2018). And Delaware included 8 middle schools among its 44 schools with Dual Language programs in the 2019-20 school year (Delaware Department of

Education, 2020). Amidst the boom of school programs in which students learn for part of the day in a partner language, however, there has not been a marked increase of teacher applicants who studied those partner languages in college; in fact, the shortage of world language teachers in general (not only in Dual Language contexts) has been a problem since at least the 1950s (Swanson & Mason, 2018). Forty-four states and the District of Columbia report World Language teacher shortages (Commission on Language Learning, 2017). Teacher applicants with language skills are few and far between, and the available supply of teachers is clearly not meeting the high demand.

At the same time, effective teachers are essential to the success of Dual Language programs in middle and high schools (Baker & Wright, 2017; Freeman et al., 2005; Howard et al., 2018). A persistent nationwide shortage of Dual Language teachers who can teach in the other-than-English language is often cited as the primary barrier to program expansion (Oberg De La Garza et al., 2015; U.S. Department of Education, 2015). At the secondary school level, this problem is compounded when a program depends on finding teachers who are both proficient in the partner language and are qualified to teach in a specialized area such as science, math, or upper-level world language courses which are themselves teacher shortage areas (Cowan et al., 2016; Sutcher et al., 2016). Hence it is critical to the sustainability of Dual Language programs to understand what factors influence the career decisions of Dual Language teachers.

Although the teacher shortage is an issue for all levels of Dual Language education, this study focuses on the secondary school level due to the rapid, relatively recent growth of Dual Language programs that extend beyond elementary school into

middle and high school grades (de Jong & Bearse, 2011; U.S. Department of Education, 2015). Secondary school teachers typically experience different requirements for teacher licensure, have distinct demographic characteristics, and by definition serve students at a different development stage than do elementary teachers (Carver-Thomas & Darling-Hammond, 2017; Taie & Goldring, 2017). Thus, it makes sense to study secondary Dual Language teachers separately from elementary teachers.

Purpose of the Study

The purpose of this study is to explore the characteristics and beliefs that Dual Language secondary teachers report as influencing their decisions to join and remain in the field. Teachers' own indications of the reasons that led them to teach Dual Language at the secondary level, and what causes them to stay or consider leaving, could provide valuable information for further work in this area. It is possible that there are discernible patterns of characteristics and experiences that are more salient to some types of Dual Language teachers than others. As one example, immigration status may be a deciding factor in the career decisions of teachers on temporary work visas, while it is not a factor at all for US-born teachers (Bense, 2016). There are likely multiple demographic, educational, and contextual factors that should be considered for appropriately differentiating teacher outreach and support (Beeman & Urow, 2013). Having a better sense of the characteristics of secondary Dual Language teachers and how those relate to career decisions could allow for more targeted efforts to address the teacher shortage.

Researcher Positionality

In my professional life, one of my roles is supporting our school division's growing Dual Language program. Our first cohort that entered Kindergarten in 2010 matriculated to middle school in 2016 and then to high school in 2019. I have seen firsthand the challenges of recruiting Dual Language teachers at all levels and particularly at the secondary level where there must be a balance between content expertise and partner language proficiency. These challenges will continue to grow as our ever-larger cohorts of students from lower grades continue to move up into the next levels, requiring more staff who can teach specialized content in the partner language. My work history includes time spent teaching English as a Second Language, French, and Spanish at the middle and elementary school levels as well as work in our school division's central office supervising and supporting programs across a variety of levels and disciplines. Yet as I reflect on the challenges that face secondary Dual Language teachers I wonder how I would manage the competing pressures myself, if I were in their shoes. As a white male from a monolingual family, I also am aware of the sociopolitical dimensions of Dual Language education as a tool of equity and empowerment for language minority teachers and students, and confess that I am not merely a dispassionate observer but an advocate for greater availability of Dual Language programs, particularly for marginalized populations. The continued growth of these programs, including in my school division, requires a robust pool of teacher applicants who choose the field and stay in it. My professional identity opens up opportunities to tap into an existing network of contacts across the United States and to speak to program stakeholders with greater background

knowledge, but also creates potential limitations because of bringing preconceptions to the work about what patterns are likely to emerge.

Research Questions

Given the value of reaching a greater understanding of the characteristics associated with teachers' career decisions, the following research questions have emerged.

Research Question 1. What are the demographic features of Dual Language secondary teachers in the United States?

Research Question 2. What reasons do Dual Language secondary teachers report as factors in their career decisions (to enter and remain in the field)?

Research Question 3. What significant teacher typologies can be identified from the combination of demographic factors and career decision factors?

To address these questions, a survey was shared with a purposive sample of secondary Dual Language teachers from around the United States. Data analysis will help decision makers better understand the self-reported identities and career decision factors of Dual Language teachers.

Definition of Terms

The following terms are defined to help the reader understand the context of each as they are used in this study.

Dual Language Program

In a Dual Language program, students learn core academic content for part of the regular school day in two languages, for an extended sequence of years (Freeman et al.,

2005). Dual Language does not include traditional world language classes learning about the language rather than through it, nor does it include immersion experiences of limited duration such as study abroad (Howard et al., 2018). Variations of programs that meet this study's definition include one-way immersion (serving populations who at the beginning of the program speak only one of the two languages taught, such as serving only English speakers or serving only Spanish speakers), and two-way immersion programs (serving an intentional mix of student populations who speak one of the program languages initially). In the United States, the most common pairing of languages in Dual Language programs is English and Spanish (U.S. Department of Education, 2015).

Dual Language Teacher

A Dual Language teacher is someone who teaches in a Dual Language program. For the purposes of this study, a Dual Language teacher is someone who teaches either in English or in a partner language to classes that are formally identified as part of their school's Dual Language program. They may teach Dual Language-specific courses for all or only part of their course load.

Partner Language

In the United States, the language taught in addition to English is referred to as the partner language. A study by the U.S. Department of Education (2015) identified more than 30 partner languages in Dual Language programs across the country, with the most common being Spanish, Chinese, Native American languages, and French.

Secondary Schools

Secondary schools are the level of schooling between elementary school and college, generally teaching students from around ages 11 to 18. For the purposes of this study, it includes schools serving grades 6 through 12 or schools such as middle schools and junior high schools that serve a portion of those grade levels.

Teacher Recruitment

Teacher recruitment is the process of motivating applicants to apply for teaching positions (Stronge & Hindman, 2006). For the purposes of this study, it includes the initial process of choosing to teach within a Dual Language program, even if the person was already a teacher in another kind of program setting.

Teacher Retention

In various studies, retention has been defined as either staying in the same school district or as staying within the profession of teaching (Baker-Doyle, 2010; Borman & Dowling, 2008, Strong, 2005). Strong (2005) recommends clearly distinguishing between "movers" and "leavers". It is also important to note that people may leave for voluntary or involuntary reasons, such as a change in immigration status or being non-renewed after a probationary period. For the purposes of this study, teacher retention is narrowly defined as staying within the field of Dual Language teaching as opposed to changing to another kind of education career or leaving the education professional entirely.

Chapter Two

The focus of this study is on the characteristics and career decisions of secondary Dual Language teachers in the United States. Three main bodies of research and two theoretical approaches inform the conceptual framework of the study, as depicted in Figure 1. First, there is a robust body of research on the effectiveness and characteristics of Dual Language programs in the United States, and the characteristics of programs that continue into the secondary level. Second, it is important to unpack the literature around teacher identity and Dual Language teacher challenges in order to anticipate areas of inquiry. This piece of the conceptual framework includes at least two key elements: considerations for bilingual, immigrant, and racial minority teachers (many Dual Language teachers in the United States have one, two, or all three of those identities), and the available literature into common Dual Language teacher experiences such as balancing the demands of content and language teaching and incorporating critical pedagogy into their instruction. Serving as a bridge between this body of research and the research questions is the Social Identity Approach, which is a framework for exploring how self-categorization relates to decision-making (van Dick & Wagner, 2002). The third body of research relates to teacher recruitment and retention in the United States generally, which provides an important context for understanding the career decisions of teachers in specialized programs such as Dual Language. A potentially useful lens for

relating the national context to individual career decisions is the Expectancy-Value

Theory (Wigfield & Eccles, 2000), which offers an explanation for individual decision-

making based on that individual's beliefs about how likely they are to succeed and to

what extent the activity matches their personal values.
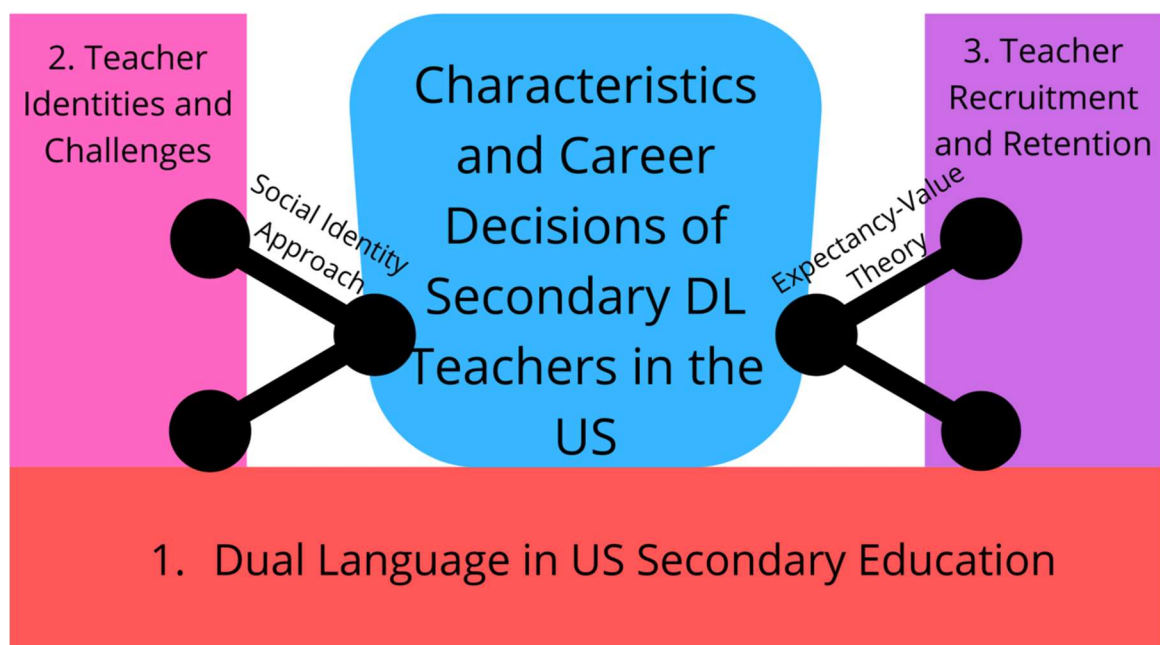
Figure 1

Conceptual framework.

Dual Language Programs in the United States

  The first key body of literature examines the underlying philosophy and stated purpose of Dual Language programs, and traces its development over time as well as its educational outcomes. This section then zeroes in on research related to Dual Language in secondary (middle and high) schools and some of the common features of such programs.

Dual Language Philosophy

  In Dual Language (DL) programs, students receive a significant percentage of their core academic instruction in a language other than English, which is often referred to as the partner language (Thomas & Collier, 2012). The overarching goal is that over the course of their time in school, all students in Dual Language programs become bilingual, bi-literate, achieve academic success appropriate to their grade level, and develop cross-cultural awareness and skills (Howard et al., 2018).

  There are a number of different configurations of DL programs in the United States and Canada, with different target audiences and distinct program goals. These include Two-Way Immersion (mixing heritage speakers of English and the partner language), One-Way Immersion focused on World Language Immersion (for heritage speakers of English to learn the partner language), One-Way Immersion focused on Developmental Bilingualism (for heritage speakers to preserve and reach high levels of proficiency in their mother tongue), and Indigenous Immersion programs (focused on language revitalization for Native American groups; Fortune & Tedick, 2008). Each of these configurations of Dual Language has specific associated practices and the field of

Dual Language research in the United States has coalesced around three main groups. One group, centered on Dual Language Education of New Mexico (DLENM) and its annual La Cosecha conference, focuses primarily on Two-Way Immersion. DLENM prefaces its mission by noting that "Four decades of research provide a road map for developing a multilingual, multicultural citizenry" (Dual Language Education of New Mexico, n.d.). A second group, centered around the Center for Advanced Research on Language Acquisition (CARLA, https://carla.umn.edu/) at the University of Minnesota and its biennial Conference on Immersion and Dual Language Education, tends to focus on One-Way World Language Immersion and Indigenous Immersion. This focus emerges from CARLA's role as a federally funded National Language Resource Center, "whose role is to improve the nation's capacity to teach and learn foreign languages effectively" (Center for Advanced Research on Language Acquisition, 2016). A third group, centered on the National Association for Bilingual Education (NABE) and its annual conference, has a special focus on One-Way Developmental Bilingual programs for language minority students. On their website, NABE highlights their role as supporting "education for English Language Learners" (National Association for Bilingual Education, n.d.). Although each of these three "camps" have articulated distinct areas of emphasis for the desired societal impact of Dual Language education, the borders between these groups are increasingly fluid; some conference presentations and journal articles within each camp address other configurations of Dual Language and recent efforts have been made to coalesce the camps around shared national teacher preparation standards and ongoing

dialogue and shared advocacy via the National Dual Language Forum (Guerrero & Lachance, 2018; National Dual Language Forum, 2018).

A Brief History of Dual Language Research

The first Dual Language school in modern U.S. history was Coral Way Elementary in Miami, where in 1963 a group of Cuban-American parents created a way for their children to maintain their home language (Spanish) while learning English (Freeman et al., 2005). The early success of Coral Way and other pioneering schools paved the way for the 1968 Bilingual Education Act, which provided support for a variety of bilingual approaches to education for English Learners (Baker, 2001; England, 2009). Flores and Garcia (2017) argue that the growth of bilingual programs in the aftermath of the Civil Rights movement was based largely on deficit models of framing the identities of language-minority students and note that the programs themselves were often relegated to "racialized basements" that served to perpetuate the existing power structures in which monolingual White people still made the rules. Some bilingual programs were more effective than others; in general, programs that emphasized subtractive bilingualism (that is, those programs which aimed to transition to English-only education as quickly as possible while subtracting the other language) were less successful than programs which emphasized additive bilingualism by maintaining both languages and valuing bilingualism as an asset (de Jong & Howard, 2009). However, "transitional bilingual" programs were more common and their poor results at achieving the stated goal of turning bilingual children into "successful" monolingual English speakers colored the national narrative both politically and in academia.

In a widely-cited meta-analysis by Baker and deKanter (1983), the authors found no evidence that bilingual education was worth adopting on a large scale, based on studies that had looked primarily at transitional bilingual programs. Although their conclusions were criticized by many as based on weak analysis, their definitive pronouncement added fuel to the growing political movement for "English-only" instruction, which explicitly forbade bilingual education in several states and dismantled existing programs across the United States (Gandara & Contreras, 2009). By the time of 2001's sweeping No Child Left Behind enactment, even the part of the United States Department of Education that had once been called the Office of Bilingual Education and Minority Language Affairs was renamed to become the Office of English Language Acquisition (Goldenberg & Wagner, 2015).

However, a countervailing wind was blowing in the early 2000s in favor of Two-Way Immersion. The movement found influential allies among state governors, legislators, and business leaders in places like Utah, Delaware, and Georgia who advocated for greater bilingual skill sets among their students in the name of economic competitiveness (Anderson, 2015). Bilingual education, particularly in the form of additive models like Dual Language, has experienced explosive growth over the past two decades, although some warn that there is an ongoing "gentrification" of bilingual education in which the needs of the affluent students from monolingual English families are given precedence over the needs of English Learners, who tend to come from less privileged households (Flores & Garcia, 2017; Varghese & Park, 2010). In their critical discourse analysis of Dual Language policy documents in Utah, for example, Valdez,

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Freire et al. (2016) found that concerns of equity, heritage, and language recovery/preservation for minority language groups were sidelined in favor of a focus on human capital development and the needs of privileged families.

Yet, Dual Language is one of the most promising scalable approaches for reducing educational inequalities, particularly (but not exclusively) for English Learners. In their landmark longitudinal study using millions of student records across sixteen states, Thomas and Collier (2012) demonstrated that English Learners in Two-Way Immersion programs completely closed the achievement gap in English reading by the end of sixth grade, attaining on average the 71st percentile on standardized English reading tests. In another recent study involving more than 1,100 students randomly assigned to Two-Way and One-Way Immersion programs in Portland (Oregon) Public Schools, Steele et al. (2017) found significant academic gains for students in Dual Language. The reading performance of eighth grade students who had been randomly assigned to the program was 7 to 9 months higher than a control group, and English Learner reclassification was also higher among students in Dual Language. There was no observable difference in math or science performance, but even that finding is notable since students had received some or all of their instruction in math and science in the partner language and yet student achievement on English-language tests of those areas was not negatively impacted (Steele et al., 2017). Another 12-year study of English learners in a California school district reconfirmed and honed in on the point that while English learners may appear to do better in English-only programs during the elementary grades, over the long term these learners fall behind their peers who experienced

bilingual education, both in terms of reclassification rates and English achievement (Umansky & Reardon, 2014). The effects of Dual Language are especially interesting given that there is not a large additional per-pupil cost to achieve these positive outcomes; one recent study comparing the costs of students randomly selected into a Dual Language program found only a $114/year difference compared to students from the same lottery pool who were not selected, which is less than 1% of the average per-pupil cost in that district (Steele et al., 2018).

A growing number of Dual Language programs in the United States are extending beyond the elementary school years into middle and high school grades. The Dual Language Schools Directory lists hundreds of such programs, with more added each year (http://duallanguageschools.org). These extended programs have been encouraged by educational arguments for the benefits of active bilingualism throughout the school years, as well as by economic and political arguments for well-educated bilingual graduates who can help their communities compete in a global economy (U.S. Department of Education, 2015). Students in extended Dual Language programs have the chance to reach higher proficiency levels in their partner language during the middle and high school grades than students who stop receiving partner language instruction at the end of elementary school. Recent studies have found that Dual Language students at the end of elementary school typically perform in the Intermediate Low range, while Dual Language students at the end of middle school typically perform in the Intermediate Mid or Intermediate High range (Burkhauser et al., 2016). However, a review of the literature

did not turn up any studies that looked specifically at proficiency levels of Dual

Language students in high school.

Defining Dual Language at the Secondary Level

Internationally, several education systems that have Dual Language-like programs

increase the amount of time in the partner language(s) throughout secondary school;

students learn in their home language first and then add other languages as time goes on

(Alidou et al., 2011). In some countries like Papua New Guinea and South Africa,

education eventually shifts to English-only in higher grades (England, 2009; Malone &

Paraide, 2011). In other countries like Singapore and most European countries, even

when education shifts primarily to one dominant international language (such as English)

there is still a stringent requirement for continued development in the students' home

language (England, 2009; Freeman et al., 2005). There are three basic international

models for dividing instructional time between languages during the school day: a time-

based model (with the same teacher using both languages at specified times), a

person/subject-based model (in which teachers share students and each teacher uses one

language exclusively), or a combination model (for example, Teacher A teaches in

language 1 during the first week, while Teacher B teaches in language 2; the following

week, the teachers switch which language they are using). The model used to decide how

to divide the time has implications for the status of each language and the number and

kind of bilingual role models available to students (Purkarthofer & Mossakowski, 2011).

In United States secondary-level Dual Language programs, the most common of the three

models by far is the subject-based model, meaning that there are a limited number of

teachers who offer courses in the partner language, often with no collaboration with the English-speaking teachers with whom they share students; this leads to a common perception among students and staff that only courses in the partner language count as part of the Dual Language program (Bearse & de Jong, 2008).

While international models tend to give an increasing emphasis to the partner language over time, this is not so in the United States, where Dual Language programs typically decrease the time allocated to the partner language in middle and high school, from approximately fifty percent of the instructional day in elementary school to twenty-five percent or less of the instructional day in later grades (de Jong & Bearse, 2011). In Utah, for example, students in grades 7-9 take upper-level honors coursework in their language and an optional "Culture and Media" course. In 9th or 10th grades, they take AP Language and Culture, and for the remainder of their high school years they take one "Bridge" course annually which confer both high school credit and college credit, through a collaboration with seven universities in the state (Landes-Lee, 2015). Similarly, Delaware outlines an expectation for Dual Language students to take honors-level language classes in grades 6-8, an AP Language and Culture course in 9th grade, and university-level courses in grades 10-12. Georgia's plan mirrors Delaware's, with the addition of an expected content course in the partner language during each year of middle school (U.S. Department of Education, 2015).

Where state-level departments of education have not created clear expectations, school districts and individual schools have created their own expectations for how much time in the partner language constitutes a Dual Language experience in secondary

schools. In Portland, middle school students take a language arts class and a social studies class in the partner language each year. In high school, they typically only take one advanced language class per year in the partner language (Steele et al., 2017). In San Diego's Nestor Language Academy, middle school students learn for half of the day in Spanish through the end of 8th grade, taking social studies, math, and Spanish language arts in the partner language. In high school, students have the option of continuing with Advanced Placement college-level courses in Spanish (U.S. Department of Education, 2015). Many of these efforts fall below the expected minimum availability of two classes annually in the partner language, including at least one core content course, which have been described as "non-negotiable" components of high school Dual Language programs (de Jong & Bearse, 2011; Sandy-Sánchez, 2008; U.S. Department of Education, 2015). Some schools are able to meet and exceed that minimum requirement, such as Omaha South High Magnet School. During their high school years, students who are part of the school's Dual Language program must take at least twelve academic courses taught in the partner language (out of 31 options) as well as taking a course in Spanish language or literature each year (Omaha Public Schools, 2016).

The choice of which courses to offer in the partner language has implications for program outcomes and for perceptions of who the program is designed to serve. Since most of the partner-language speaking students who started Dual Language programs in their early elementary years are no longer classified as English Learners by the time they are in secondary school, the focus on English Learner achievement and educational equity that are common in elementary programs often cedes way to a focus on college

readiness (Valdez, Delavan, et al., 2016). This trend is reflected in the state-defined Dual Language course pathways described previously in Utah, Delaware, and Georgia which emphasize Advanced Placement and Dual-Enrolled college course leading to college credits or even completing a Spanish minor while in high school (Landes-Lee, 2015; U.S. Department of Education, 2015). While such pathways serve the needs of students who are from English-speaking families and who report valuing the agentive outcomes of their Dual Language experiences in enhanced college and career prospects, they do not appear to reflect the goals of students from language-minority families, who place a stronger value on connection with their roots and the ability to connect with and serve their families and communities through bi-literacy skills (Bearse & de Jong, 2008). Programs that value critical cultural perspectives and authentic community engagement might include (for example) ethnic studies courses, project-based coursework using the partner language in the community to understand needs and advocate for improvements, and a strong focus on oral language development appropriate for spontaneous interactions with community members (Ramírez & Ross, 2019). Similarly, a focus on the needs and interests of current or former English Learners would also suggest advocacy for creating spaces within and beyond the school that are friendly for student and family bilingualism (Ramírez et al., 2016) rather than relegating the partner language as a subject to be studied rather than lived.

Logistical Challenges of Middle and High School Dual Language Programs

The logistical challenges of extending Dual Language education into secondary years include staffing, scheduling, and defining appropriate program goals and outcomes

(C. Sizemore, 2014). Staffing is often cited as the primary barrier to Dual Language program expansion, and many districts have turned to hiring international teachers on short-term cultural exchange visas, who serve as strong native-speaker language models but who sometimes struggle to adjust to the U.S. educational system (U.S. Department of Education, 2015). Hiring practices that focus solely on teacher endorsements or language proficiency may miss essential skills that are not always readily tested such as the ability to explain things clearly, to anticipate student mistakes, to engage student interest, and to understand how to plan and carry out instruction (Kissau & Algozzine, 2017). Scheduling is also a major challenge, both in choosing the types of courses to offer that students need or are drawn to (since secondary school programs tend to have a range of attractive offerings that may pull students in other directions and lead to significant attrition), and in developing or finding appropriate resources in the target language (Tedick & Wesely, 2015). Defining appropriate program outcomes is a significant and largely unstudied challenge for secondary Dual Language programs. At the elementary level, goals are often expressed holistically and include the student's desired growth across both languages and all content areas, but in the more segmented and departmentalized world of secondary education the Dual Language "program" is often understood as consisting only of the specific courses taught in the partner language (de Jong & Bearse, 2014). Teachers, then, are left to interpret their own goals and role primarily within the context of their specific course load and discipline (such as math, Spanish literature, or social studies) rather than feeling like part of a larger and more comprehensive mission. Understanding the context in which they work lays the groundwork for understanding

why certain characteristics and decision-making patterns might exist among secondary Dual Language teachers in the United States.

Dual Language Teacher Identities and Challenges

The second body of literature shaping the conceptual framework of the study zooms in from programmatic considerations to individual considerations for individual Dual Language teachers. Although this review did not uncover a great deal of research illuminating the perspectives of Dual Language secondary teachers specifically, there are clues in studies and articles focusing on groups that might include Dual Language teachers, such as teachers who are bilingual, or immigrants, or who identify as racial minorities. Further, there are strong hints in the literature about possible challenges that Dual Language teachers might face, such as navigating their students' identity development, balancing content and language instruction, and incorporating considerations for social justice and equity in their work.

A Gap in the Literature: Voices of Secondary Dual Language Teachers

The decisions and actions of teachers are critical to addressing the pressing challenges faced by secondary Dual Language programs. But what do we really know about Dual Language teachers at the middle and high school level? Teachers have rarely been the focus of Dual Language studies, although their perspectives have been incorporated directly and indirectly in a few notable studies.

Fortune and Tedick (2015) examined teacher perceptions of student language proficiency for 248 students in four Spanish One-Way Immersion programs. They found that although teachers reported the students' Spanish proficiency grew between

Kindergarten and Grade 2, as well as between Grade 2 and Grade 5, growth was stagnant between Grade 5 and Grade 8 in the areas of oral fluency, grammar, vocabulary, and listening comprehension (Fortune & Tedick, 2015). However, the study's reliance on the perceptions of different teachers rating the same students may have led to significant inter-rater reliability problems; the middle school teachers may well have been scoring students more harshly than the elementary school teachers even though the students' skills had actually grown. Additionally, there were only a small number of students (24) in the oldest cohort in grade 8. The study focused on the ratings themselves and did not report on the demographics or opinions of the teachers doing the rating; we can only guess why the grade 8 teachers might have scored the students the way they did.

In a study of secondary Dual Language student experiences, de Jong and Bearse (2011) surveyed 48 high school students and conducted focus groups. They concluded that Anglo and Latino students in the high school program had different motivations for remaining in the program and did not share the same beliefs about their own intercultural skills. Anglo students were motivated by their increased status and career possibilities as competent bilinguals, but didn't see themselves as bicultural. Latino students emphasized the importance of the Spanish language in their bicultural identities and connections with family members. Both groups reported that their teachers' focus at the secondary level was primarily Spanish literature and grammar rather than productive language skills such as writing and speaking. Again, this study did not offer a direct teacher perspective but indicated that the students who were part of the study believed their secondary school

Dual Language teachers had a different approach than their elementary teachers in integrating language and content.

In another study, the same researchers combined student survey data with teacher interviews of nine middle and high school Dual Language teachers (de Jong & Bearse, 2014). A common theme was that partner-language teachers felt they were left to their own devices organizationally and in terms of instructional resources, and wished to have greater partnerships with the English-side teachers of the students they shared. In this particular study, most participating teachers were native Spanish speakers who had grown up in the United States, and all taught within one school division.

Researchers from the RAND Corporation, as part of an ongoing study of Dual Language implementation in Portland (Oregon) schools, observed 131 periods of instruction in Two-Way Immersion classes across grades K-12 (Li et al., 2016). They found that while teachers across the grade levels stayed in the target language of their classroom, students often reverted to English especially when speaking to peers. Additionally, they found that partner-language teachers tended to use district-recommended SIOP strategies appropriate for language learners at high levels (Echevarría et al., 2013) and elicited student speech and writing of greater length and complexity as students moved up the grades.

Although not specific to Dual Language teachers, a few studies have amplified the voices of preservice and in-service teachers of color who are bilingual. In their examination of teacher preparation programs in three geographic regions, Fránquiz et al. (2011) shared examples of students given tools and prompts for critical reflection of the

"majoritarian" narratives about bilingual students and teachers of color. These experiences allowed them to build upon their personal narratives to challenge common myths and misconceptions and to affirm the strengths, positive elements, and diverse experiences of their families and communities. In their case study of three Latino teacher candidates in the Midwest, Gomez, Rodriguez, and Agosto (2008) reported that a deep cultural mismatch between the students and their peers, professors, and cooperating teachers (who were mostly white females) led to the students feeling angry and marginalized even though they knew they had a lot to offer students. In a mixed-methods study of 23 bilingual Asian-American and Hispanic teacher candidates, Athanases et al. (2015) described three common themes in perspective: that there was a strong link between language and identity, an awareness of the diversity of student and staff linguistic repertoires, and a shared sentiment of the need for positive language ideologies that support all kinds of language diversity. In another narrative study of six Mexican-American teachers in Texas, Viloria (2019) described common lenses and experiences such as racialized upbringings, ethnic pride, and an acute awareness of socioeconomic class status. Viloria concluded that despite the commonalities in experience it should not be assumed that teachers of color will naturally gravitate towards culturally relevant pedagogy; differences in generational experiences and current class status may lead some bilingual teachers towards deficit-based philosophies of teaching.

From a search of existing published work, there appears to be a paucity of research that directly examines the perspectives and needs of Dual Language teachers, particularly at the secondary level. The need for additional research in this area has been

addressed in several articles and symposia proposing research agendas for the field. At the Dual Language Researcher Convocation of 2008, teacher perspectives were indirectly addressed in many of the "urgent research questions" on their list, and directly addressed in two of the questions: "What are the impacts of teacher beliefs, preparation, and levels of bi-literacy (proficiency) on their practice and on the levels of bi-literacy attained by the students they teach?" and "What knowledge and skills do effective dual language teachers have?" (Parkes et al., 2009, p. 10) In summarizing the main emergent themes of the symposium, Parkes identified a needed focus on practitioners among five key takeaways: "Teachers, administrators and other practitioners need to be partners with researchers. They also need to be the focus of research. For example, what are the necessary skills and dispositions for dual language teachers?" (Parkes et al., 2009, p. 39)

Similarly, the National Dual Language Immersion Research Alliance identified teacher profiles as a critical research area in two of the questions on its research agenda: "How does the effect of DLI programs on student outcomes vary by student characteristics, teacher profiles, DLI program types, and instructional environments?" and "What are the best approaches to teacher credentialing and professional development and how do teacher practices in DLI impact student performance?" (American Councils for International Education, 2017, p. 2). Within the research literature, even when data collection involves Dual Language teacher interviews or surveys, these tend to be collecting data about students and not about the teachers themselves. However, there are some hints at the things that cause them frustration, such as working with a wide range of student proficiency levels (de Jong & Bearse, 2014) and struggling to effectively balance

language and content instruction (Lachance, 2017; Tedick & Wesely, 2015). Understanding more about the experiences, perspectives, and needs of different types of Dual Language teachers allows decision makers to support teachers more effectively and would support more targeted future research.

Teacher Identity

Dual Language teachers might self-categorize by language taught, discipline they work in, ethnic/racial identity, or any number of other categories that could inform their perceived goals and boundaries for behavioral choices. According to Lave and Wenger's (1991) theory of Situated Learning, it is important to understand the communities of practice where teachers find shared identity. At the secondary level, a teacher might perceive or be assigned a community of practice based on the grade level of their students (more common in middle school), department (more common in high school), or in a binary of whether they are a core or elective course teacher (de Jong & Bearse, 2014). The sense of shared Dual Language program identity is also likely to have an impact on the teacher's perceived community of practice. In overlaying and comparing several theories of world language teacher identity Varghese et al. (2009) noted, "While in isolation each theory has its limitations, an openness to multiple theoretical approaches allows a richer and more useful understanding of the processes and contexts of teacher identity." (p. 21)

One framework for understanding how teacher identities might impact decision-making is the Social Identity Approach, which examines group behavior and the cognitive processes that lead an individual to self-categorize as a member of group and to

behave accordingly (van Dick & Wagner, 2002). A sense of identity can be distinguished

along four dimensions: a cognitive component, an evaluative component of perceived

view of the identity from the outside, an affective component of value attached to the

identity, and a behavioral component of participation in group-defining behaviors (van

Dick & Wagner, 2002). The affective component appears to be an especially strong

component as it relates to job satisfaction, motivation, and retention (Meyer & Allen,

1997). Yet, the evaluative component also plays a strong role in teacher job satisfaction.

In a study of male Latino teachers, Lara and Fránquiz (2015) describes the limiting

identities of male men of color in elementary settings; they are expected to conform to

hegemonic ideas of masculinity in a profession dominated by females and are viewed

alternately as potential pedophiles in a profession that requires appropriately nurturing

children, disciplinarians due to their stereotyped identities as opposed to their real

personalities, or as primarily serving as role models or father figures for boys of color.

The authors described how teachers worked to diversify students' understandings of

acceptable gender identities by using children's literature in which characters acted

against their stereotypes. Galindo (1996) posits that the multiple identities of bilingual

teachers of color can serve as a bridge between the divided worlds of school institutions

and communities of color, although he notes that bridging those worlds is not without

tension and conflict that work against job satisfaction.

    Bilingual Identity. Among Dual Language teachers, as among the larger

population, there are many pathways to becoming bilingual (Beeman & Urow, 2013).

Some teachers were born into families speaking languages other than English but were

never formally educated in that language. Others were born into families that spoke only the majority language (in the case of the United States, English) but learned another language through formal study in school or college. A third group were formally educated outside the United States in a non-English language throughout their youth and moved to the United States as an adolescent or adult, adding English somewhere along the way. Yet others developed their bilingualism through non-school experiences as an adolescent or adult, such as living abroad for an extended period of time. These different pathways and their overlap with other identities held by the teachers result in a range of assigned and claimed identities related to their bilingualism. Some of the issues around these identities include feelings of professional and personal marginalization, scrutiny of "nonnative" teachers, and the status of language teaching as a profession (Varghese et al., 2005).

Immigrant Identity. Given that many Dual Language teachers are not U.S. citizens, the experiences of migrant teachers around the world may also inform greater understanding in this area. In her literature review, Bense (2015) found that commonly reported issues for teachers crossing national borders to work in another country included lack of recognition of their existing professional credentials, immigration status limiting their ability to seek or keep employment, racism and discrimination, and mismatches between their subject-level expertise and the courses they were assigned to teach. In one qualitative study of foreign-educated Dual Language teachers in an urban school district, participants described personal obstacles like homesickness and navigating new and confusing daily routines, professional obstacles like difficulty forging collaboration

between bilingual and monolingual colleagues as well as adjustments to the U.S. education system, and academic obstacles such as licensure requirements (Fee, 2010). The study suggested several ways that school districts can supports their newly-arrived immigrant teachers such as greeting them at the airport, providing an advance of their first month's salary, and assistance with moving into the new community.

      Racial Identity. A discussion of career decisions for Dual Language teachers is also necessarily intertwined with the issues around recruiting teachers of color, since most native speakers of the most common Dual Language partner languages (such as Spanish and Chinese) identify as racial or ethnic minorities, unlike more than 80% of the current public school teachers in the United States who are non-Hispanic White (U.S. Department of Education, 2016). Although research indicates that students perform better when they are taught by same-race teachers (Egalite & Kisada, 2016; Wright et al., 2017), and the student population in U.S. public schools has been "majority minority" since 2014 (Maxwell, 2014), schools still struggle to recruit teachers of color.

      Simon (2015) describes several stages at which the pool of potential teacher candidates of color becomes smaller, including enrollment in teacher preparation programs, successful graduation from college, passing teacher licensure tests, and (dis)satisfaction with teacher working conditions. She described some of the efforts of urban districts to recruit teachers of color by cultivating relationships with historically Black colleges and universities, making sure teacher applicants connected with staff members of color in school visits and interviews, and fast-tracking promising applicants through the hiring system (Simon, 2015). However, even when teachers of color are

effectively convinced and supported to choose a career in teaching, many are dissatisfied

with the conditions in which they are placed and leave the career at higher turnover rates

than White teachers, citing dissatisfaction with administration, testing, and student

discipline as major factors (Ingersoll, 2015).

Teacher Challenges

Experiences of support and frustration both need to be further examined among

Dual Language teachers. Some of the challenges faced by Dual Language secondary

teachers are common to all secondary teachers (such as navigating the developing

identities of their adolescent students and incorporating social justice into their work),

while others may be more specific to the demands of Dual Language programs

specifically (such as balancing content and language). This section explores three major

challenges identified in the literature.

Challenge 1: Navigating Adolescent Identity Development. One of the

defining characteristics of adolescence (the age of most middle and high school students)

is developing a sense of one's own identity as a person (Feinauer & Howard, 2014). The

normal trajectory for heritage speakers of minority languages in the United States,

unfortunately, is to lose contact with their family's language and culture over time

(Geerlings et al., 2015). At the same time, adolescents struggle to figure out just what

their ethnic identity is and what it implies for their range of possibilities in life. The

negative impact of "stereotype threat" has been well documented for many types of

identities and many types of tasks (Spencer et al., 2016). Essentially, stereotype threat is

the idea that when you feel you are part of a group that is not expected to do well on a

particular kind of task, your performance on that task is disrupted (Steele & Aronson, 1995). In school, the cultural habits of students from the dominant culture and the English language itself are privileged in many subtle and not-so-subtle ways (Tedick & Wesely, 2015). Dual Language programs at the middle and high school level have the potential to foster a positive sense of identity and fight against harmful stereotypes (Feinauer & Howard, 2014; Tedick & Wesely, 2015).

Zarate et al. (2005) posited that a strong bicultural identity leads to higher academic achievement among minority students. They conducted individual interviews with a large group of Latino students (who had not been in Dual Language programs) in the Los Angeles area and asked them to choose which identities they felt best described themselves from a long list of possibilities. Then, they interviewed students about why they selected or rejected each label. The adolescents on average selected three different ethnic labels. Although 75% of the participants were born in the United States, only 35% chose the label "American". Students often described their choices based on their parents' nationality or their own place of birth. The label "Latino" was more associated with speaking Spanish, while "Chicano" was described as implying limited Spanish skills. Half of the students in the study rejected the label "Hispanic" as an imposed term. When students self-identified with a label indicating a sense of bicultural identity that included the dominant culture (such as Mexican American, Chicano, and American) researchers found a moderate correlation with academic achievement as measured by future college plans and prior middle school scores and teacher ratings (Zarate et al., 2005).

A sense of positive ethnic identity appears to be a buffer against the negative effects of low school connectedness, such as in Santos and Collins' (2016) study looking at reading test results. An adolescent's language proficiency in their heritage language also plays a role in ethnic identity. A meta-analysis of research across many different ethnic groups indicates that there is a small to medium positive correlation between ethnic identity and heritage language proficiency (Mu, 2015). But the natural trend in an English-dominant school setting is for adolescents to grow to prefer English over their heritage language (Geerlings et al., 2015). This contributes to a decline in ethnic self-identity, as language barriers harm family connections and make it more difficult for parents and other family members to transmit their ethnic values (Mu, 2015). The development of positive ethnic self-identity is an ongoing and complicated process (Zarate et al., 2005). Dual Language programs seeking to cultivate a positive sense of ethnic identity must attend to language proficiency and other factors that impact this important variable. Through affirming the value of ethnic identities, providing positive role models in the curriculum, opening new opportunities for family engagement, and cultivating a sense of school connectedness (feeling safe, included, and cared for), Dual Language teachers at the middle and high school level can make significant contributions to students' positive sense of identity.

Challenge 2: Teaching for Social Justice. Educational equity includes factors like resource distribution among schools and students, bias and disproportionality in disciplinary practices, and access to high-level curriculum (Center for Public Education, 2016). It also includes bias and disproportionality in the written and taught curriculum,

leading some to argue for "culturally relevant" (Ladson-Billings, 1995) or "culturally sustaining" (Paris, 2012) pedagogies that embrace cultural pluralism and the identities of specific students and school communities. In her book *Foundations for Multilingualism in Education: From Principles to Practice*, Ester de Jong (2011) lays out several principles for decision-making in schools with multilingual students, arguing for well-articulated language policies that impact local practices on a daily basis. Two of those principles, "striving for educational equity" and "structuring for integration", relate closely to the role of teachers in advancing or inhibiting social justice in their local contexts.

Yet, Dual Language teachers struggle to turn what feel like admirable goals into classroom realities, citing challenges such as lack of time to plan for incorporating strong practices into their lessons, lack of culturally relevant materials for the standards they teach, and a lack of knowledge about what exactly to do to change the status quo in their classrooms (Freire & Valdez, 2017). Alfaro (2019) argues that it is necessary for teacher educators to help preservice and in-service Dual Language teachers develop ideological clarity about the nature of their work and to become confident advocates for their students' well-being so that educational equity can be actualized.

"Structuring for integration" means building equal-status relationships among students and teachers while avoiding the twin dangers of monocultural assimilation and imposed segregations (de Jong, 2011). In Dual Language contexts, it means attending to the needs of diverse stakeholders and giving special attention to the needs of marginalized groups. As interest in Dual Language education continues to rise around the

country, who gets access to sought-after programs and whose needs are centered in decision-making? There is an ongoing concern about the "gentrification" of Dual Language programs as new programs are disproportionately opened in schools that serve students who are already privileged as White, affluent, English speakers while schools serving students of color have only seen marginal growth in Dual Language offerings (Valdez, Freire et al., 2016). Even in established programs serving diverse populations, there are important considerations about which texts, images, and metaphors are used in instruction and what explicit or implicit messages are sent about the value of language varieties and diverse cultural practices (Fránquiz et al., 2019).

Challenge 3: Balancing Content and Language. Because Dual Language is by its nature focused on learning through a language rather than learning about a language, Dual Language teachers may view themselves primarily as teachers of their content area rather than as language teachers. This is particularly true at the secondary level, where students in Dual Language programs are typically no longer novice language learners and where the demands of state-mandated standards or college-preparatory coursework can be high (Cammarata & Tedick, 2012). Even in advanced-level courses about the target language, such as AP Spanish, students report that their teachers' focus at the secondary level is primarily Spanish literature and grammar rather than productive language skills (de Jong & Bearse, 2011). Indeed, for school administrators hiring secondary Dual Language teachers their expertise in teaching content is usually a higher consideration than their ability to teach the target language (Lachance, 2017).

Nonetheless, middle and high school students need to continue developing as competent bilinguals and school may be the only place where they interact with the partner language. So, secondary teachers who do not wish to be continually frustrated by substandard language use in their students' speaking and writing must attend to their language development as well as their content knowledge (Cammarata & Tedick, 2012). Yet, Dual Language teachers rarely experience professional development or preservice education on how to balance these domains (Cammarata & Ó Ceallaigh, 2018; Tedick & Wesely, 2015). So, teachers in Dual Language settings are often left to their own devices on how to assess their students' language needs and to teach them how to use social and academic language well (Ó Ceallaigh et al., 2017).

Social Identity Approach

A bridge linking teacher identities and challenges with their career decisions is the Social Identity Approach. This theoretical approach seeks to understand an individual's sense of personal and professional identity and has been used as a framework for understanding group behavior and the cognitive processes that lead to individual and group decision-making as well as self-categorization as a member of groups (van Dick & Wagner, 2002). In the context of this study, Social Identify Theory is a framework for processing how aspects of Dual Language teacher identity (such as their native speaker status, their citizenship status, and their race/ethnicity) intersect with their career decisions as Dual Language teachers. Building this bridge between Dual Language teacher identities and their career decisions is important to understanding the behaviors of not just individual teachers but also of groups that might act according to similar patterns.

Together with a greater understanding of effective teacher recruitment and retention as discussed in the next section, these identifiable patterns of teacher self-categorizations may help explain why some people choose to become Dual Language teachers and why they remain in the field.

Dual Language Teacher Recruitment and Retention

If there were plenty of qualified applicants for every Dual Language secondary job opening, these research questions might not be very compelling. However, fortunately for this study and unfortunately for schools around the country, this is decidedly not the case. A third body of research that informs the study relates to the ongoing need to attract new teachers and to convince them to stay in the profession.

Teacher Shortage in Secondary Dual Language Programs

There is a persistent shortage of qualified teachers for Dual Language programs. This is not a new phenomenon. Nearly thirty years ago, one principal at a Dual Language school wrote that finding teachers was his most difficult challenge, yet was also the single most important part of his job (Coffman, 1992). The teacher shortage was also noted that same decade by Met and Lorenz (1997) as one of the common challenges faced by Dual Language programs at the time. In more recent years, 32 states have identified bilingual education, the wider banner under which Dual Language education is often included, as a critical shortage area (Liebtag & Haugen, 2015). Schools have dealt with chronic shortages by hiring short-term unlicensed teachers, recruiting abroad, and inviting short-term (three to five year) staff on international exchange visas (Camera, 2015). To help address the gap, many states and districts have also set relatively low

required levels of language proficiency for teacher certification, often settling at "Advanced Low" on speaking and writing skills according to the ACTFL proficiency scale (U.S. Department of Education, 2015). A description of some of the features of Advanced Low speech/writing is offered by the ACTFL Proficiency Guidelines (ACTFL, 2012):

> Responses produced by Advanced Low speakers are typically not longer than a single paragraph....At times their discourse may be minimal for the level, marked by an irregular flow, and containing noticeable self-correction…They rely on patterns of oral discourse and the writing style of their first language. These writers demonstrate minimal control of common structures and vocabulary associated with the Advanced level…When attempting to perform functions at the Superior level, their writing will deteriorate significantly. (pp. 6-12)

The relatively low language levels of many non-native teachers in Dual Language (including heritage speakers who grew up in the United States) has been described as a "vicious linguistic cycle" producing students whose proficiency ceilings are artificially low due to their available role models for academic language (Guerrero & Guerrero, 2008).

The shortage of Dual Language teachers can be placed within the context of a shortage of world language teachers generally. In a recent national report, the field of world languages was listed as a teacher shortage area in 44 states plus the District of Columbia, more than any other subject area (Commission on Language Learning, 2017). Scholars have pointed to many factors leading to the world language teacher shortage,

including working conditions and salary, professional isolation, difficulty with classroom management, perceptions of the profession, and legislation that makes it expensive and cumbersome to achieve teacher licensure (Swanson & Mason, 2018). Many of these factors were also cited in a recent qualitative study of preservice teachers from around the United States, while "love of the language" was a powerful draw for many would-be world language teachers (Kissau et al., 2019). In that same study, there was also validation of a previously identified relationship for preservice teachers generally between perceived teaching ability, a desire to influence the future of their students, and a commitment to the teaching profession (Watt et al., 2014).

Teacher Recruitment and Retention

Those entering the field of secondary Dual Language choose it from among other career possibilities within and beyond education. What motivates a person to choose to teach in this area? Expectancy-Value Theory, described in more detail in a later section, suggests that one's belief about whether to expect success in an endeavor, along with the extent to which succeeding would match one's personal values, help predict an individual's choice to start and persist in a difficult activity (Wigfield & Eccles, 2000). The relationship between perceived self-efficacy and commitment to teaching as a career may be even stronger for secondary teachers than for elementary teachers (Chesnut, 2017). As it relates to this study, understanding which types of personal values and self-efficacy factors relate to Dual Language teacher motivation is important to framing questions about career decisions.

Once a person has entered the field of secondary Dual Language education, what causes them to remain in the field instead of pursuing other careers? In their widely-cited meta-analysis of teacher retention and attrition, Borman and Dowling (2008) identified several salient factors: teacher demographics, teacher qualifications, school organizational culture, school resources, and student demographic characteristics. They found that the factors related to work conditions were stronger moderators than had been previously noted. Borman and Dowling noted that although it is useful to consider traditional labor market considerations such as teacher supply and demand at particular compensation levels, the perceived non-financial rewards and costs of teaching are also major considerations that change across an individual teacher's career trajectory. They identified some of the most salient factors in teacher retention as competitive salaries, opportunities for teacher collaboration and networking, and perceived administrative support (Borman & Dowling, 2008). In a study of Dual Language teachers in Connecticut, Howard and Lopez-Velasquez (2019) confirmed the complex web of factors related to teacher retention and recommended flexible pathways for certification and a focus on positive working conditions as recommendations emerging from their data.

Some have argued that teacher recruitment and retention efforts often focus too much on extrinsic motivators like financial incentives, easing the path to teacher licensure, and developing credentials and should instead focus on social network factors like administrative and peer support and creating a positive work environment (Baker-Doyle, 2010). This perspective points out that:

Social networks play a considerable role in shaping teachers' lives and choices

throughout their careers, from identifying schools in which they want to work, to

seeking out support and information, to becoming effective teachers, and,

ultimately these networks affect teachers' commitment to the profession. (p. 8)

One effort that builds on a social network approach has been strategic mentoring

for novice STEM teachers in the southwest United States including multiple peer

observations, targeted professional development opportunities, and opportunities to

collaboratively plan instruction with others (Hutchison, 2012). By intentionally fostering

teacher social networks, rather than simply hoping they will spontaneously emerge,

school leaders can support the conditions that lead to higher retention.

Career commitment factors, including those described above, can be grouped into

larger categories. Building upon his previous work to explore major factors of career

commitment, Blau (2003) proposed a four-dimensional definition. The first dimension,

affective, refers to a person's emotional attachment to their job. The second dimension,

normative commitment, is a sense of obligation to continue in a chosen career.

Accumulated costs comprise a third dimension, related to the effort and time spent on

acquiring and settling in to one's career and work environment. Blau's fourth dimension

is limited alternatives, or the perceived inability to change to a more satisfying or

rewarding career.

Expectancy-Value Theory

Expectancy-Value Theory posits that motivation to choose an activity, persist in

it, and achieve high levels of performance is related to an individual's expectations for

how well they will do on the activity and how closely doing it well matches their personal

values (Wigfield & Eccles, 2000). This framework has been used in a variety of research studies on teacher recruitment (Richardson & Watt, 2016). Understanding what teachers expected and currently expect from their career choice, compared to their sense of self-efficacy and their personal values, informs the identification of salient contributors to teacher career decisions. Some values that seem to be particularly important to world language teachers, and worth examination for Dual Language teachers, include love of the language taught and a desire to enhance social equity (Kissau et al., 2019). Therefore, the study includes an examination of teacher personal values within the context of their career choices.

Summary

The conceptual framework outlined here provides a rich context for situating the two research questions of this study. First, there is a rich body of work describing the positive educational outcomes and the logistical challenges of Dual Language programs, and an expanding body of work around those issues at the secondary school level. These provide a "why" for the significance of ensuring a growing pool of teacher applicants for Dual Language programs. Next, the body of literature about the identities and intersecting identities of teachers suggests important considerations for the "who" of understanding Dual Language teachers; this is likely to be a population that doesn't match the mostly-white, mostly-US born, mostly-monolingual overall population of secondary teachers in the United States and therefore essential aspects of these teachers' identities must be considered. The third body of informative research situates Dual Language secondary teachers' career decisions within a wider and persistent teacher shortage and ongoing

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efforts at teacher recruitment and retention. Undergirding these contextual understandings are two theoretical approaches to understanding behavior: the Expectancy-Value Theory which posits that our decisions align with our beliefs about what is both possible and valuable, and the Social Identity Approach which suggests that our decisions are bounded by what people "like us" should do.

Taken together, the elements of the conceptual framework suggest that there are likely to be a number of influences and beliefs to examine in regard to teacher career decisions. Some factors may have to do with the perceived costs and benefits of teaching in this field, other factors may stem from teacher beliefs about their capacity for effectiveness, and yet other factors deal with how teachers perceive their core identities and their mission in life. The interwoven identities, influences, and beliefs held by Dual Language secondary teachers impact their choices to join the field and to remain in it. The questions in this study aim to arrive at a greater understanding of how teachers understand and report these factors from their own perspectives.

Chapter Three

There is a persistent and nationwide teacher shortage in the field of Dual Language education (Liebtag & Haugen, 2015). Yet, the number of Dual Language programs continues to grow, with many programs extending into middle and high school grade levels (U.S. Department of Education, 2015). The purpose of this study is to better understand the career decisions of secondary-level Dual Language teachers in the United States from their own perspectives so that school leaders and policymakers can provide more targeted approaches to addressing the teacher shortage. Understanding teachers' career decisions requires attention to many aspects of identity, influences, and beliefs (Borman & Dowling, 2008; Howard & Lopez-Velesquez, 2019; Richardson & Watt, 2016). The study collected and examined survey data from a wide geographical range of United States Dual Language secondary teachers to identify those factors which are most salient to career decisions.

Research Questions

Research Question 1. What are the demographic features of Dual Language secondary teachers in the United States?

Research Question 2. What reasons do Dual Language teachers in secondary schools report as factors in their career decisions (to enter and remain in the field)?

Research Question 3. What significant teacher typologies can be identified from the combination of demographic factors and career decision factors?

Methodology

This non-experimental study used a survey to gather data on secondary Dual Language teacher identities, influences, and beliefs from a purposive sample across geographic regions of the United States. In a non-experimental design, observations are made without attempting to manipulate the experiences of participants (Privitera & Ahlgrim-Delzell, 2018). Although non-experimental research cannot determine causality, it can be used to uncover relationships between variables (Dannels, 2010). Survey research, a quantitative form of non-experimental design, is particularly useful for measuring behaviors, attitudes, and perceptions to establish the strength and direction of relationships between variables (Cook & Cook, 2008).

The purpose of this study is to examine factors that influence teachers to join and remain in the field of secondary Dual Language education so that more targeted approaches can be developed for teacher recruitment and ongoing support. In addition, this study explores what meaningful clusters of teacher identities exist within the teach population and how membership in a cluster relates to career decision factors. The method of identifying possible cluster grouping is typological analysis, which is described in greater detail in the next section.

Typological Analysis

Typological analysis is used in both qualitative and quantitative approaches to understand and describe categories across a particular phenomenon in a series of non-

hierarchical relationships (Given, 2008). This type of analysis allows both creative concept grouping and rigorous measurement (Collier et al., 2012). There have been a number of studies that have used survey data to conduct typological analysis in order to understand the experiences and behaviors of teachers and pre-service teachers (Eickelmann & Vennemann, 2017; Fisher et al., 2011; Holmes & Schumacker, 2020; Thomson et al., 2012). These studies have employed various techniques to arrive at distinct teacher groupings, including cluster analysis (Fisher et al., 2011; Thomson et al., 2012) and latent class analysis (Eickelmann & Vennemann, 2017; Holmes & Schumacker, 2020).

Cluster analysis is a technique that is often employed in quantitative typological studies, and which maps the multivariate similarities and dissimilarities between cases in a dataset (in the case of this study, teacher self-reported survey data) to arrive at groupings, or clusters, of cases which maximize homogeneity within each cluster while also maximizing the heterogeneous differences between clusters (Bahr et al., 2011). Two examples of cluster analysis used in the typological analysis of teachers (or pre-service teachers) will illustrate how this methodology is employed. In the first example, Thomson et al. (2012) explored the motivations and beliefs of prospective teachers in a large American university program. They surveyed 215 undergraduates with questions about demographics, items from the Reasons for Teaching Scale (Kyriacou et al., 1999), and items from the Career Statement Scale (Saban, 2003). The researchers used Ward's Minimum Variance Clustering Method (Milligan & Cooper, 1987) to investigate possible solutions with three, four, or five clusters, and determined that the three-cluster solution

was the best fit for their data. Their sample, like teacher preparation programs in general, skewed towards white females, but they reported that the three typologies identified through cluster analysis were not highly correlated to demographic characteristics. They followed their initial clustering with semi-structured interviews with several participants from each cluster to better understand the characteristics of people within each cluster. This study provides an interesting methodological roadmap for other typological research, but suffers from the limitation of being based on participants from one geographical location under the cultural influence of one preservice teacher program. Nonetheless, it provides a fairly straightforward model of using cluster analysis with survey data. A second illustrative study conducted by Fisher et al. (2011) focused on teacher practices as perceived by students in Australia. The researchers surveyed 2,178 students in upper primary grades about their teachers' interpersonal behavior during science lessons. Previous studies among secondary-grade students in the US, Netherlands, and Australia (Wubbels et al., 2006) had identified eight distinct teacher interpersonal styles along two intersecting dimensions of Influence (Dominance to Submission) and Proximity (Cooperation to Opposition). These styles appeared to be sensitive to national cultural differences within education systems in their frequency distribution. The novel study among primary-grade students in Australia employed the complete linkage method to test solutions between three and ten clusters, and researchers settled on a six cluster solution. Four of their typologies were similar to those identified in previous research in other countries (Supportive, Tolerant-Authoritative, Drudging, and Repressive) with two new typologies specific to the data from their Australian

primary student perceptions: Directive-Authoritative and Supportive-Demanding. The researchers note that having a more complete understanding of teacher interpersonal styles with students could lead to better feedback and targeted professional development. In both studies, as with all cluster analysis, there is still significant room for interpretation and researcher decision-making on which potential models represent the best fit for the data. Although conclusions are based on mathematical calculations of similarities and distances between possible clusters it is important to ensure support from theory and literature when using cluster analysis techniques (Bahr et al., 2011).

Another technique used in typological analysis is latent class analysis, which like cluster analysis seeks to classify similar cases into mutually exclusive groups but unlike cluster analysis calculates statistical probability of membership in an underlying latent structure based on data patterns rather than simply measuring the numerical distance between cases (Samuelsen & Dayton, 2013). One study that used this technique was Eickelmann and Vennemann's (2017) investigation of teacher beliefs about technology in schools. The researchers conducted a secondary analysis of part of an available dataset using survey data from more than 4,600 teachers from three European countries. The authors explain that they selected latent class analysis instead of cluster analysis because latent class analysis requires no pre-experimental hypothesis, because it can be used in exploratory studies, and because it allows possible solutions to be compared by measures of model fit. They identified a five-group solution as the best fit, and described these groups as enthusiasts, partial enthusiasts, information-focused (believing technology helps students to access information efficiently but is limited in other positive benefits),

partial doubters, and absolute doubters. When comparing these teacher belief typologies with frequency of using technology for instruction, they did not find expected relationships between beliefs about the benefits/drawbacks of technology and how often technology was actually used by the teachers. This insight suggests it may be important to triangulate typologies of belief systems with information about teacher practices to inform further decision making or research directions. A second study that employed latent class analysis examined the latent classes of effective Algebra 1 teachers using secondary data collected from 152 teachers in the Measures of Effective Teaching Project (Holmes & Schumacker, 2020). The results indicated a two-class solution (labeled "ineffective" and "effective" groups) based on seven variables collected from a mix of observational measures, student surveys, and principal surveys. Researchers used the Lo, Mendell, Rubin test (Dziak et al., 2012) to determine model fit, which calculated a significant difference between a two-class solution and a three-class solution. Despite the relatively small sample size, power analysis indicated sufficient power to conduct the data analysis. There was no significant difference between the standardized test scores of students who had Algebra 1 teachers in either class.

Considerations for Dual Language Teacher Typologies. In some of the professional literature for in-service Dual Language teachers, attempts have been offered to define salient teacher profiles. In their popular book Teaching for Bi-literacy, for example, Beeman and Urow (2013) suggest that teachers who learned Spanish as a child growing up in the United States, but with little academic instruction in Spanish, might use the language and think about their work very differently from teachers who learned

Spanish primarily through a college major and might have better grammar but less expressive ability. Similarly, teachers who come to the United States as educated adults from a country that speak the other-than-English language will likely have different perspectives and needs from those who grew up experiencing schools in the United States in communities where English is the dominant language.

However, individual teachers do not exist in a vacuum, and teachers with a similar profile of demographics and personal values at the start of their careers may work in very different school environments, which could result in different levels of teacher satisfaction. In turn, this would have an impact on career commitment. Schmidt (1996) suggested that attempts at developing teacher typologies may reveal more about school culture, informed by state/national curricula, than about the individual teachers if they were making their own choices absent of the prescribed curriculum. Pushing back on that idea, Andrews (2007) offered a comparative study of middle-grade mathematics teachers in four European countries and found that although there was evidence of the influence of national curriculum on teaching practice, there was still significant variation between the practices of teachers in the same country such that several "global scripts" could be ascertained which represented a variety of approaches to teaching. The impacts of school culture, prescribed curriculum, and individual teacher style may all intersect with the behaviors and beliefs under consideration in this study.

Synthesizing these threads of thought, then, it is likely that there are a number of factors which shape the typologies of secondary-level Dual Language teachers, particularly related to the question of why they chose to teach in the field and why they

stay. The first major group of factors is teacher identity (de Jong & Bearse, 2014; van Dick & Wagner, 2002; Varghese et al., 2009): age, gender, race and ethnicity, years teaching, language proficiency, and professional preparation for teaching careers (for a few examples). A second major category of factors is personal values (Wigfield & Eccles, 2000) such as what outcomes of Dual Language education they believe are likely and desirable, and what they believe about their career options. A third major category of factors is teacher satisfaction (Borman & Dowling, 2008; Howard & Lopez-Valesquez, 2019): what about the work is appealing and unappealing, do they imagine themselves continuing to teach in the future, and satisfaction with their compensation and work environment. These three "buckets" of information, gathered in survey form, provide a rich set of data from which to identify clusters of experiences and perspectives.

Participants

Participants include Dual Language teachers at the secondary (middle and high school) level across the United States. For the purposes of this study, a Dual Language teacher is someone who teaches either in English or in a partner language to classes that are formally identified as part of their school's Dual Language program and who self-identify as Dual Language teachers. They may teach Dual Language-specific courses for all or only part of their course load. Because some elementary schools continue into typical middle school years, teachers in grade levels six through 12 were included regardless of the designation of the school where they work.

Work conditions and teacher licensure requirements for Dual Language teachers vary between states (U.S. Department of Education, 2015), so the study collected a

purposive sample from states in different geographic regions. An effort was made to collect at least 50 surveys from each of the following regions within the United States: Northeast, Southeast, Midwest, Southwest, and West (Figure 1). This provides a stronger approximation of the overall variation in Dual Language teacher experiences across the country than if the sample focused on one state or region.
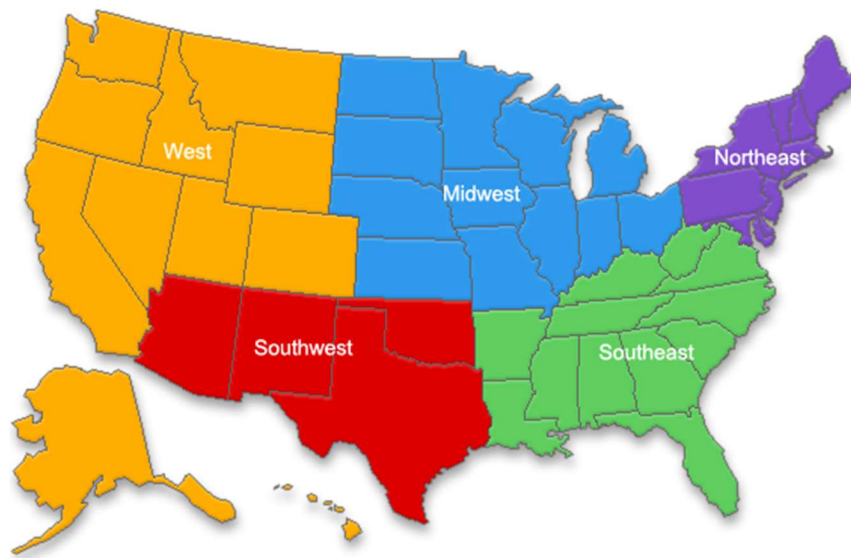
Figure 2

Regions of the United States.

After removing responses that were ineligible due to either not being a teacher of the target grades levels or not teaching as part of a Dual Language program, as well as responses missing large amounts of data or considered to have been falsified (see the

Recruitment section below), 251 responses remained. Of these, 50 were from respondents who teach in the Midwest, 39 from the Northeast, 52 from the Southeast, 31 from the Southwest, and 79 from the West. Participants were divided evenly between male and female respondents, with one nonbinary respondent. 63.7% of the respondents were White, 17.1% were African-American, 16.3% were American Indian or Alaska Natives, 8% were Asian, and 2.8% were Hawaiian/Pacific Islander. Participants were between the ages of 20 to 62, with an average age of 35.7 years old. Additional descriptive statistics are in Table 1.

Recruitment

The researcher used his professional network and a national database of Dual Language school programs provided by DualLanguageSchools.org to seek support from state, division, and school leaders in sharing the survey link with possible participants through email and social media. After clicking the link to the Qualtrics survey, candidates indicated their informed consent and then answered preliminary eligibility questions to determine whether they fit within the desired population. Eligible participants were teachers in a secondary school in the US with at least one class taught designated as part of a Dual Language program. After completing the online survey, participants were invited to a separate Google survey to indicate whether they would like to receive a small $5 Amazon gift card for participation or whether they would prefer to enter a raffle for a larger $50 Amazon gift card. The information gathered on where to send their gift occurred in a separate form from the survey with no connecting data trail to ensure participant anonymity. Following the recommendations of the Tailored Design Method

Table 1

Participant Demographics

Demographic Characteristic	*N*	*%*
Region		
Midwest	50	19.9
Northeast	39	15.5
Southeast	52	20.7
Southwest	31	12.4
West	79	31.5
Gender		
Male	125	49.8
Female	125	49.8
Nonbinary	1	0.4
Ethnicity		
Hispanic	98	39.0
Non-Hispanic	153	61.0
Race[a]		
Black/African-American	43	17.1
American Indian/Alaska Native	41	16.3
Asian	20	8.0
Hawaiian/Pacific Islander	7	2.8
White	160	63.7
Age		
20-29	39	15.5
30-39	136	54.2
40-49	42	16.7
50-59	9	3.6
60-69	3	1.2
Not provided	22	8.8

[a] Participants could select more than one race.

(Dillman et al., 2014), contacts who were asked to distribute the survey received three reminder notices with links to the survey at one-week, three-week, and seven-week intervals.

An issue during the recruitment phase was a large number of suspect responses that seem to have emanated from sharing information about the survey on Twitter. This has become an issue with research surveys made available online in recent years, particularly in public links (Perkel, 2020). After receiving a suspiciously large number of responses ($n = 589$) in a short amount of time, the researcher closed the first survey link and opened a new one, reaching out to several closed groups on Facebook and through solicitation during text chats during the La Cosecha conference, yielding an additional 91 responses. These 680 responses were then reduced to 251 using the following criteria for elimination:

- Responses indicating the person was not eligible;

- Responses completed in less than 180 seconds;

- Narrative responses to the final question unrelated to Dual Language;

- Narrative responses to the final question that were identical for multiple cases;

- Listing a school that does not have a Dual Language program or does not serve students in grades 6-12. Many of the fake responses listed universities or well-known high schools that do not have a Dual Language program; or

- Indicating that they personally taught classes in three or more non-English languages in a Dual Language program. This was a pattern observed in the fictitious responses. For example, it is extremely unlikely that an individual teacher offers Dual Language courses in Arabic and Chinese and a Native American language.

Instrument

The survey (see Appendix C) included several items on possible factors related to career decisions in as compact a form as possible. Items for the survey were selected and adapted from several existing surveys about teacher career decisions. The survey was examined for content validity in consultation with six experts including teachers, school and state administrators, and published researchers through email and phone conversations after they examined the survey instrument. After this consultation, several items were removed to shorten the overall length of the survey and the wording of other items was modified for clarity. Because Dual Language education involves some teachers who are not fully proficient in English, the instrument was evaluated for readability in "plain English" according to the Flesch reading ease test of text complexity (Flesch, 1979), in which it scored at a grade level of 6.5.

Survey items for teacher characteristics have been adopted or adapted primarily from the National Teacher and Principal Survey 2017-18 (NTPS), which is published by the United States Department of Education's research arm, the Institute of Education Science. The NTPS is a redesigned version of the Schools and Staffing Survey (SASS) which was conducted from 1987 to 2011, and is administered every other year to a large

sample of public schools in the United States (NCES, 2019). Because the current SASS and NTPS datasets do not specifically delineate a category for Dual Language teachers, the available data does not provide answers to the research question.

Survey items related to the initial decision to enter the field were adapted from the Reasons for Teaching Scale or RTS (Kyriacou et al., 1999; Thomson et al., 2012). The original RTS was developed for a cross-national sample of secondary school teacher candidates in England and Norway with twenty Likert-type items (Kyriacou et al., 1999). Thomson et al. (2012) examined and validated the psychometric properties of the RTS using survey results from prospective teachers in an undergraduate program in the United States and identified six latent factors for motivation: intrinsic value, job benefits, meaningful relationships, altruistic views, ability, and opportunities.

Items for career commitment come from both the NTPS and the Career Commitment Scale or CCS (Blau, 1985). The Career Commitment Scale includes seven Likert-type items and has been used internationally with teacher populations as well as other professional populations (Ching & Kee, 2012; Nesje, 2016; Salami, 2007). In further work, Blau (2003) defined occupational commitment in four dimensions: affective, normative, accumulated costs, and limited alternatives.

Based on the literature review, items on teacher language proficiency, teacher immigration status and identity, passion for language teaching, and beliefs about Dual Language programs were added to the survey. An open-ended question was added to the end of the survey to support triangulation of results from the latent class analysis. Respondents were invited to submit their text responses in any language they wished,

with 196 narrative responses in English, five in Spanish, two in Chinese, and one in French. The researcher speaks English, Spanish, and French and was able to use Google Translate to understand the Chinese responses. Forty-seven participants did not provide narrative responses. Narrative responses ranged from one word to 506 words, with an average length of 56 words.

Data Analysis

Research questions one and two are addressed through an analysis of the descriptive statistics from respondents, with the understanding that it will not be a perfectly representative sample of the overall secondary Dual Language teacher population. Twenty-one items from the section of the survey on demographic characteristics provide insight into the first research question, and 36 items from the sections on initial career decision factors and career commitment will inform the second research question.

For the third research question, the selected approach to analysis and identification of typologies is latent class analysis, which allows for nonhierarchical categorization of data into clusters using statistical probabilities of group membership based on patterns in the data (Samuelsen & Dayton, 2013). Traditionally, latent class analysis was used only with dichotomous variables, but recent developments have allowed for the mixed use of continuous and categorical variables as well (Lewis-Beck et al., 2004). Thus, latent class analysis allows for survey data with different types of response options to be examined together. Latent class analysis does not make any assumptions about linearity, normal distribution, or homogeneity. However, it does

assume conditional independence; that the membership in the latent class fully explains

any shared variance observed (Nylund-Gibson & Choi, 2018).

Table 2

Survey Questions Mapped to Research Questions and Analysis

RQ1. What are the demographic features of Dual Language secondary teachers in the United States? (Social Identity Theory indicators from the Teacher Characteristics section of the survey)	RQ 2. What reasons do Dual Language secondary teachers report as factors in their career decisions (to enter and remain in the field)? (Expectancy-Value Theory indicators from the Factors in Initial Decision and Career Commitment sections of the survey)
Descriptive statistics for: Citizenship/work status Coursework prior to teaching (7 items) Alternative licensure Native speaker of language taught Hispanic/Latino Geographic region Years teaching (2 items) Subjects taught Gender Race Age Target language of program Type of Dual Language program Language proficiency	Descriptive statistics for: Intrinsic value (2 items) Altruistic views (3 items) Job benefits (4 items) Opportunities (2 items) Meaningful relationships (1 items) Ability (2 items) Normative factors (6 items) Affective factors (5 items) Accumulated costs factors (6 items) Limited opportunities factors (3 items) Dissatisfaction factors (2 items)
RQ 3. What significant teacher typologies can be identified from the combination of demographic factors and career decision factors?	
Exploratory Latent Class Analysis of identity indicators and career decision factors with one open-ended question for triangulation: "Why are you a Dual Language teacher? Please write for three or four minutes about your own story (in English or your native language)."	

For this study, several possible models were explored to determine latent classes using indicators from the survey instrument. Survey items were selected based on the conceptual framework of the study, as described in Table 2. Following Nylund-Gibson and Choi (2018), modeling began by estimating a one-class solution and then increasing the number of classes by one until there is overparameterization or error messages due to convergence issues. Multiple fit indices for each solution were compared to find the most satisfactory solution including Log Likelihood, the Bayesian Information Criterion (BIC), the Akaike Information Criterion (AIC), Akaike Information Criterion 3 (AIC3), and the sample size adjusted BIC (SABIC). Additionally, latent class proportions were examined to help judge model viability; residuals between the indicators higher than 1.96 indicate a possible problem with the indicators selected in the model (Formann, 2003; Nylund-Gibson & Choi, 2018). Although there are no well-established guidelines on an appropriate sample size for a Latent Class Analysis, previous research suggests that a sample size between 150-1000 is a range within which fit indices can be expected to adequately function (Holmes & Schumacker, 2020; Nylund-Gibson & Choi, 2018). The sample of 251 respondents falls within that range. Among the 251 survey responses, data was missing for two respondents who did not indicate their age and 47 respondents who did not complete the final open-ended item.

The best fit for latent classes was determined using three demographic indicators (native speaker status, immigration status, and race/ethnicity), with the four most commonly taught languages as covariates to partially account for the interplay between race/ethnicity and native speaker status across languages. Once the latent classes were

identified, posthoc analysis was conducted comparing the career commitment factors for each class. Finally, the latent class analysis was followed by analysis of the open-ended item on the survey. Open-ended responses from each class were compared and contrasted to provide additional insights. All statistical analyses were conducted using SPSS v27 and Latent Gold 5.1 software.

Validity

For this study, content validity is addressed through the extensive review of related literature and checking the instrument with a content evaluation panel of experts in the field of secondary Dual Language education for their perceptions of sufficient content coverage. Face validity is also addressed through asking the panel if each item is reasonably clear and unambiguous for the likely participants. As changes were made, the survey instrument was re-evaluated to achieve a Flesch reading ease score at the "plain English" level or better (Flesch, 1979) using a calculation tool within Microsoft Word so that the instrument remains accessible to participants who may not have high levels of English proficiency.

Construct validity is supported by the published literature on the source surveys comprising the survey instrument. In their validation of the Reasons for Teaching Scale, Thompson, Turner, and Nietfeld (2012) reported the results of an exploratory factor analysis yielding six factors of motivations with the following Cronbach's alpha internal reliability ratings: intrinsic value (.82), job benefits (.71), meaningful relationships (.67), altruistic views (.63), ability (.62), and opportunities (.60), as well as an overall Cronbach's alpha of .79 for the total questionnaire. Four of the factors in that study fell

below the typical satisfactory value threshold of .70, but Nunally and Bertnstein (1994) have noted that Cronbach's alpha is sensitive to the number of items and thus tends to underestimate internal reliability of individual sections in an instrument, so greater weight should be given to the composite value which in this case is well within the acceptable range. In an analysis of the Career Commitment Scale, Blau (1988) reported evidence of discriminant validity of the instrument from measures of job involvement and organization commitment, and in examining convergent validity found that the instrument showed a stronger relationship with likelihood of withdrawing from a career than simply leaving a job for another in a similar career. Because the instrument includes a combination of existing and new items, a principal components analysis of career decision items and a check for internal consistency evidence (Cronbach's alpha) for the study sample were conducted.

There exist numerous threats to validity. Threats to internal validity of the study include history and sample selection. At the time of this study, a worldwide pandemic has closed schools and rattled the global economy; a survey conducted during this unusual event may yield different results, particularly related to career commitment, than one conducted during a more "typical" school year. Additionally, the survey data captures a snapshot in time and thus may capture *intent* for career commitment but not *actual* career commitment behaviors. The threat from sample selection, which could impact both internal and external validity, is a function of the purposive sampling methods which could cause certain groups to be over- or under-represented. In a finite mixture model such as Latent Class Analysis, it is assumed that random sampling produces a more

accurate identification of underlying classes (Samuelsen & Dayton, 2018). This threat was addressed by maximizing the geographic spread of the purposeful sample and using multiple methods of recruitment including email, conferences, and direct invitations. Further, the analysis methods do not rely on capturing large numbers of cases within each latent class so even under-represented groups should still be discernible.

Ethical Considerations

Within the data collection process, ethical commitments include providing clear opportunities for informed consent and minimizing any possible emotional harm from survey questions or data collection methods (Nardi, 2018). The researcher sought approval from the institution's Institutional Review Board prior to data collection (IRBNet 1653597-1). Following the informed consent guidelines from this institution's Institutional Review Board, the informed consent documentation included (in plain English) a clear description of the research and any foreseeable risks and benefits to participation. Because personal information and factors related to career decisions can be emotionally loaded topics, the research sought to protect confidentiality and to write items with a tone as emotionally neutral as possible. The overall population of the survey is not a "vulnerable population". However, some of the topics raised within the survey instrument (such as immigration status and minority status) may present emotional harm or confidentiality concerns to some participants. It was made clear to participants that they could withdraw their consent at any time during the survey process.

Because the study involves nominal monetary incentives as an inducement for higher response rates, ethical considerations also demand that the invitation to participate

must be on a voluntary basis and presented without coercion to participate (Singer & Bossarte, 2006). Data were collected online without any identifying information which ensured participants anonymity; contact information for incentives were collected using a separate link not connected to the survey responses and made available to participants at the end of the survey. Data privacy is always an important ethical consideration and institutional requirements were followed for data storage and maintaining participant information.

Assumptions and Limitations

There are two basic assumptions to the study. First, that participants provide honest answers to the survey questions. This assumption is based on their voluntary and confidential participation and a lack of likely incentive to deceive or undermine the study by providing false responses. As previously discussed, suspect responses were removed. The second basic assumption is that the inclusion criteria for participation are appropriate and understood by respondents. Middle and high-school level teachers working in any subject area and teaching in any language are invited to participate, so long as they teach at least one class intended primarily for students in a Dual Language program.

The study has numerous limitations. First, the timeframe of the study precludes a more longitudinal look at factors impacting career decisions. Instead, the study relies on cross-sectional data that represents a snapshot of a teacher's recollections of why they originally entered the career field and their current perspectives of factors that would entice them to remain in the field. Such recollections and perspectives may be sensitive to events in the respondent's life unrelated to the survey questions and/or survey fatigue. A

second limitation is the generalizability of the survey results. The total population of secondary Dual Language teachers in the United States is not known and their geographic spread is uneven within the United States, so the methodology in the study is not sufficient for ensuring a representative sample. Further, this study relies on purposive sampling which could skew the results based on who does and does not receive the survey instrument. However, it should be noted that this study is not an attempt to provide an accurate census of overall demographic features of secondary Dual Language teachers but rather to identify clusters of teacher identities that are related to career decisions from a sample of Dual Language teachers in the United States.

Summary

The purpose of this chapter was to outline the research methods used to address the research questions. A discussion of the procedure, recruitment of study participants, data collection, and survey instrument outlined the specifics of how the study was conducted. In addition to descriptive results from the survey, this study also used latent class analysis which is one type of typological analysis. Study participants added their personal demographic information and reflected on which career decision factors are most important to them, as well as offering narrative insights into what motivates the career decisions of secondary Dual Language teachers. The goal of Chapter Four is to provide the study results and demonstrate that the methodology described in Chapter Three was followed.

Chapter Four

The need for middle and high school Dual Language teachers continues to grow, yet there is a persistent shortage of available teachers (Liebtag & Haugen, 2015; U.S. Department of Education, 2015). Efforts to recruit and retain teachers should take into account how teachers' identities intersect with their career decisions (Borman & Dowling, 2008; Howard & Lopez-Velesquez, 2019; Richardson & Watt, 2016). This chapter presents the results of a survey conducted with a nationwide sample of secondary Dual Language teachers to better understand major teacher identity groups and explore factors in teacher career decisions.

Two hundred fifty-one respondents from 34 states submitted eligible survey responses. These included teachers of middle grades 6-8 ($n = 123$), teachers of high school grades 9-12 ($n = 105$), and teachers whose students spanned multiple school levels including combinations of teachers of elementary grades plus middle grades plus high school grades, elementary plus middle grades, and middle school plus high school grades ($n = 23$). Additional descriptive information on the sample is provided in Table 1 (Chapter 3, page 55). Presentation of the findings are organized according to the three research questions.

Research Question One Findings

RQ1: What are the demographic features of Dual Language secondary teachers in the United States?

The first research question explores the demographic features of Dual Language middle and high school teachers. Findings were drawn from the 21 items in the "Teacher Characteristics" component of the survey. One respondent reported a nonbinary gender, and the remaining teachers were evenly split between male (49.8%) and female (49.8%). The majority of teachers were White (63.7%), non-Hispanic (61.0%), and in their 30s (54.2%). Other key findings are described in each of the sections below.

Immigration Status

The overwhelming majority of participants were U.S. citizens or green card holders. The item about immigration status showed that the vast majority of respondents (84.1%) were U.S. Citizens, although it is possible some may have started their work as Dual Language teachers while they held another status. Of the remaining teachers, 6.4% were Green Card holders (permanent residents) while the rest were non-U.S. citizen respondents held nonimmigrant visas such as J1 or H1B. Many states such as Utah and North Carolina rely heavily on non-immigrant visa holders to staff their Dual Language programs (U.S. Department of Education, 2015) but these results suggest there is still a significant population of Dual Language teachers around the country who are citizens or permanent residents.

Table 3

Immigration Status

Status	N	%
US Citizen	211	84.1
Green Card	16	6.4
H1B Visa	5	2.0
J1 Visa	10	4.0
DACA Work Permit	6	2.4
Other	3	1.4

Teaching Experience

The sample was composed of mid-career teachers who were early in their Dual Language program experience. While the majority of participants (64.5%) had been a professional teacher for more than six years, work as a Dual Language teacher was more recent with a majority (57.4%) working in the field for fewer than six years (see Table 4). This is indicative of the relatively recent growth of Dual Language secondary programs around the country. It also suggests that secondary Dual Language programs rely on teachers from other specialties who were not necessarily specifically prepared to teach Dual Language (U.S. Department of Education, 2015).

Table 4

Years as a Teacher and Years as a Dual Language Teacher

Feature	N	%
Years Teaching Total		
First Year	4	1.6
2-5 Years	85	33.9
6-10 Years	94	37.5
11-15 Years	42	16.7
16-20 Years	15	6.0
21-25 Years	7	2.8
26-30 Years	2	0.8
31+ Years	2	0.8
Years Teaching in Dual Language		
First Year	10	4.0
2-5 Years	134	53.4
6-10 Years	78	31.1
11-15 Years	24	9.6
16-20 Years	2	0.8
21-25 Years	3	1.2

Teacher Preparation

Most of the teachers surveyed (59.4%) were licensed via an "alternative route to teaching", which means they had not completed a traditional teacher education program in the states where they taught. Alternative routes to teaching, such as career switcher programs, are designed to lead to state teacher licensure without participating in a full-time teacher education program. Alternative routes to licensure are heavily used in hard-to-staff programs such as STEM and Special Education (Dee & Goldhaber, 2017); these results suggest heavy use in Dual Language programs as well.

However, most Dual Language secondary teachers reported taking college courses in essential skills before they began teaching, such as lesson planning (84.5%) and classroom management (78.1%). They less frequently had taken courses on working with English Learners (68.1%) and Students with Disabilities (63.3%). Table 5 outlines what percent of teachers in the sample completed the seven key courses identified from the National Teacher and Principal Survey (NCES, 2019).

Table 5

Preparation for Teaching

Category	*N*	*%*
Took a College Course In…		
Classroom Management Techniques	196	78.1
Lesson Planning	212	84.5
Assessing Learning	188	74.9
Using Data for Instruction	171	68.1
Serving Diverse Students	165	65.7
Serving Students with Disabilities	159	63.3
Serving English Learners	171	68.1

Program Models and Languages

There are several program models under the umbrella of Dual Language education. *One-Way Heritage* programs serve primarily students whose families speak the non-English target language. In a *One-Way World Language* model, students are primarily learning the target language for the first time and do not speak it at home. *Two-Way* programs intentionally mix students who speak the target language at home with

those who do not in the same classes, generally striving for about half of the students to be heritage speakers and half to be non-heritage learners (Fortune & Tedick, 2008). The majority of participants (54.2%) taught in Two-Way programs, as illustrated in Figure 3.

Number of teachers by language and program model
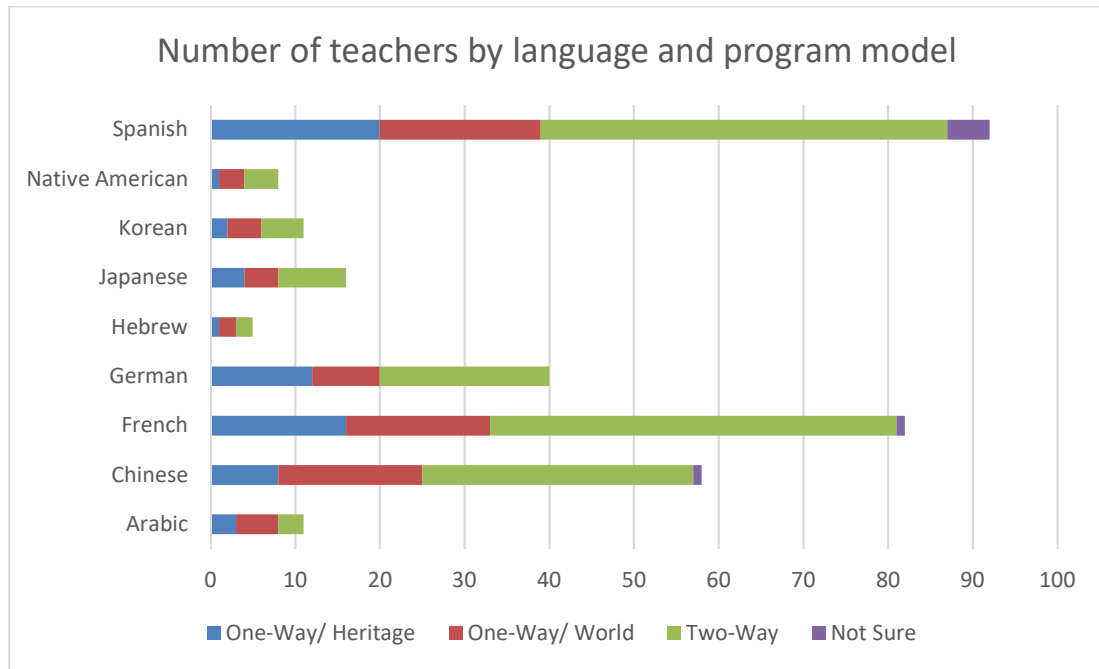
Figure 3

Number of teachers by language and program model.

Native speakers were more commonly found teaching courses in English, Spanish, and Native American languages while teachers of other languages were more commonly non-native speakers. The most commonly taught languages were Spanish (27.9%), French (25.6%), Chinese (14.5%), and German (15.9%). Additional information is in Table 6.

Table 6

Language Taught and Native Speaker Status

Language Taught	Native/Heritage Speaker		Not Native/Heritage Speaker		Total[a]	
	N	*%*	*N*	*%*	*N*	*%*
English Only	21	80.8	5	19.2	26	9.9
Arabic[b]	--	--	--	--	--	--
Chinese	14	36.8	24	63.2	38	14.5
French	24	35.8	43	64.2	67	25.6
German	11	39.3	17	60.7	28	10.7
Hebrew	0	0.0	1	100.0	1	0.4
Japanese	1	6.3	15	93.8	16	6.1
Korean	4	40.0	6	60.0	10	3.8
Native American	2	66.7	1	33.3	3	1.2
Spanish	44	60.3	29	39.7	73	27.9

[a]Respondents could teach in more than one language
[b]Due to an error in the online survey, several respondents erroneously marked teaching Arabic leading to inaccuracies and so these numbers are excluded.

Subjects Taught

Language Arts (40.2%) and World Language (40.2%) were the most commonly taught subjects, with 101 (40.2%) respondents indicating these disciplines were a focus of their work. Social Studies (*N* = 61, 24.3%) edged out Mathematics (*N* = 53, 21.1%) and Science (*N* = 51, 20.3%) as commonly taught subjects among Dual Language teachers. Other subjects taught by Dual Language teachers included Visual and Performing Arts (*N* = 11, 4.4%), Career and Technical Education (*N* = 8, 3.2%), and Physical Education (*N* = 7, 2.8%).

These findings reveal great diversity among secondary Dual Language teachers, which reinforces the need for a more nuanced approach to teacher recruitment and

retention. The factors teachers report as most important in their career decisions are presented in the next section.

Research Question Two Findings

RQ2: What reasons do Dual Language secondary teachers report as factors in their career decisions (to enter and remain in the field)?

Teachers, like other people, make career decisions because of their expectations for how the career matches their abilities and the tangible and intangible things they value (Richardson & Watt, 2016; Wigfield & Eccles, 2000). This study examined the individual factors in career decisions with 36 survey items. Items for initial reasons for becoming a teacher, adapted from the Reasons for Teaching Scale (Kyriacou et al., 1999; Thomson et al., 2012), were captured with a three point Likert-type response (Not important, Somewhat Important, Very Important). Items for career commitment factors, adapted from the Career Commitment Scale (Blau, 1985) were captured with a four point Likert-type response (Strongly disagree, Disagree, Agree, Strongly agree). A number of items were modified from both instruments to be specific to Dual Language teaching. For example, the original item "If I could do it all over, I would choose nursing" (Blau, 1985; Lunz et al., 1996) was reworded as "If I could do it all over again, I would choose to work in the Dual Language program." Also, new items were added based on the literature review, and some items were removed to reduce the overall length of the survey based on expert feedback from pilot testing.

Initial Reasons for Becoming a Dual Language Teacher

The majority of respondents reported all of the survey items in the initial reasons section as "somewhat important" or "very important" (Table 7), which suggests that the factors leading to an initial decision to teach in Dual Language are widely varied. However, three items elicited responses of being "very important" to more than half the participants: (a) passion for the target language (59%), (b) desire to help children succeed (59%), and (c) belief that Dual Language education can create a more equitable society (50.2%). On the other hand, the factors most frequently selected as "not at all important" in the initial decision to become a Dual Language teacher included: (a) desire to come work in the U.S. (32.3%), (b) desire to work in another country in the future (29.9%), (c) the influence of others to become a Dual Language teacher (28.7%), (d) belief that Dual Language teacher pay was "quite good" (21.9%), and (e) belief that Dual Language teachers have a "respectable social status" (20.7%).

Table 7 offers additional details about the 14 items in the section on initial reasons for teaching. In general, the items that teachers considered most important related to the intrinsic value of what they were teaching (language and subject) and altruistic factors that led them to want to make a difference for children and society. The implications of these results are further explored in Chapter 5.

Table 7

Survey Items about Initial Reasons for Becoming a Dual Language Teacher

Item	Not at all important		Somewhat important		Very important	
	N	*%*	*N*	*%*	*N*	*%*
The subject I was going to teach was important to me.	16	6.4	114	45.4	121	48.2
I felt passionate about the target (or partner) language I was going to teach in.	17	6.8	86	34.3	148	59.0
Teaching in DL offers good job security.	46	18.3	112	44.6	93	37.1
DL teachers have a respectable social status.	52	20.7	112	44.6	87	34.7
There are good benefits (such as health insurance and vacation) for Dual Language teachers.	50	19.9	110	43.8	91	36.3
Other people influenced me to become a DL teacher (such as previous teachers, friends, or coworkers).	72	28.7	104	41.4	75	29.9
Teaching DL in the US can help me get a job teaching in another country.	75	29.9	108	43.0	68	27.1
I believed DL education can close achievement gaps.	28	11.2	123	49.0	100	39.8
I believed DL education can create a more equitable society.	28	11.2	97	38.6	126	50.2
I thought I had a personality that is suited for this job.	39	15.5	104	41.4	108	43.0
I thought I would like the activity of classroom teaching.	22	8.8	117	46.6	112	44.6
I wanted to help children succeed.	14	5.6	89	35.5	148	59.0
I thought the level of pay for DL teachers is quite good.	55	21.9	120	47.8	76	30.3
I lived outside the U.S. and wanted to work here, so becoming a DL teacher was a good opportunity for me.	81	32.3	102	40.6	68	27.1

Career Commitment Items

The survey included 22 items about possible influences on career commitment. Teachers in the sample disagreed or strongly disagreed with only three of the items: (a) having an immigration status that means they might need to end their career earlier than desired (63%), (b) wanting to stay home from work sometimes (58.5%), and (c) having less enthusiasm than when they began (54.5%). Disagreement with these items may indicate the majority of teachers remain enthusiastic about their jobs and do not feel their immigration status makes them vulnerable to leaving the career.

Among the remaining items, a few elicited especially high levels of agreement from teachers. Mirroring altruistic reasons for joining the field, teachers reported agreeing or strongly agreeing with a belief in the importance of their work to society (88.4%) and belief in the importance of their work to their students' future (86.4%). The expressed overall high levels of satisfaction, agreeing or strongly agreeing with items about enjoying their work (88.4%), a willingness to repeat their career choice if they could go back in time (82.1%), and that they recommended a career in Dual Language teaching to others (82.5%). They reported feeling supported by their Dual Language colleagues (80.9%) and by their students' parents (83.3%). The single item with the strongest agreement was a belief that Dual Language colleagues enjoy their work (88.8%), which speaks to a positive work environment.

Responses related to teacher benefits and working conditions raise some alarm bells. One item of strong agreement is the pervasive sense that Dual Language teachers work harder than other types of teachers (80.9%). This sentiment is a warning sign for school

leaders to closely monitor the workloads of Dual Language teachers in order to avoid

burnout. Additionally, there was only tepid agreement with items about being satisfied

with their salary (66.9%), feeling they can have a good work-life balance (68.5%), and

receiving extra financial incentives for being a Dual Language teacher (58.6%).

All of these items and more are described in Table 8. As with the factors related to initial

reasons for becoming a Dual Language teacher, the factors related to career commitment

reveal wide variation among practicing teachers.

Table 8

Survey Items about Career Commitment Factors

Survey Item	Strongly Disagree		Disagree		Agree		Strongly Agree	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
The DL teachers at my school like being there.	5	2.0	23	9.2	160	63.7	63	25.1
If I could get a higher paying job I'd leave DL teaching as soon as possible.	23	9.2	92	36.7	87	34.7	49	19.5
I don't seem to have as much enthusiasm now as I did when I began teaching in DL.	34	13.5	103	41.0	84	33.5	30	12.0
I think about staying home from school because I'm just too tired to go.	48	19.1	99	39.4	70	27.9	34	13.5
I have sufficient resources available for my professional development as a DL teacher.	24	9.6	60	23.9	120	47.8	47	18.7
If I could do it all over again, I would choose to work in the DL program.	13	5.2	32	12.7	134	53.4	72	28.7
I would recommend a career in DL teaching to others.	7	2.8	37	14.7	132	52.6	75	29.9
I picture myself teaching in a DL program for many years.	14	5.6	43	17.1	132	52.6	62	24.7

Survey Item	Strongly Disagree		Disagree		Agree		Strongly Agree	
	N	%	N	%	N	%	N	%
My immigration status means I might need to leave DL teaching before I want to.	85	33.9	73	29.1	66	26.3	27	10.8
I enjoy the work of being a DL teacher.	1	0.4	28	11.2	125	49.8	97	38.6
DL teachers at my school get bonus pay or extra financial incentives for teaching in the program.	46	18.3	58	23.1	119	47.4	28	11.2
I can have a good work/life balance as a DL teacher.	26	10.4	53	21.1	129	51.4	43	17.1
I think my work is important for my students' future.	6	2.4	28	11.2	113	45.0	104	41.4
I think my work is important for society's future.	3	1.2	26	10.4	122	48.6	100	39.8
I am content with the salary I receive as a DL teacher.	26	10.4	57	22.7	127	50.6	41	16.3
I don't have other job options right now.	36	14.3	80	31.9	104	41.1	31	12.4
I have more freedom than other teachers at my school because I teach in the DL program.	16	6.4	74	29.5	113	45.0	48	19.1
I work harder than other teachers at my school because I work in the DL program.	2	0.8	46	18.3	128	51.0	75	29.9
I feel supported by administrators in my school.	10	4.0	41	16.3	137	54.6	63	25.1
I feel supported by the parents of my students.	4	1.6	38	15.1	130	51.8	79	31.5
I feel supported by other teachers in the DL program.	9	3.6	39	15.5	130	51.8	73	29.1
I feel supported by other teachers not in the DL program in my school.	6	2.4	51	20.3	135	53.8	59	23.5

Immigration-Related Items

Some items were specific to the immigrant experience and the responses of

participants who reported not currently being US citizens ($N = 39$) can be examined

separately from the responses of those who are US citizens ($N = 210$). However, current citizenship status is not indicative of past immigration status; some teachers may have been visa or green card holders when they began teaching but have since become naturalized citizens. Perhaps because of this, but surprising nonetheless, there was no significant difference on independent samples t-tests between current citizens and current non-citizens on items related to immigration status.

In summary, the findings for research question two reveal that although many factors are at play when Dual Language teachers make career decisions, reasons related to altruism and personal enjoyment rank especially high. In the next section, additional data analysis will explore how teacher identities relate to patterns in career factor decisions.

Research Question Three Findings

RQ3: What significant teacher typologies emerge from the combination of demographic factors and career decision factors?

In order to address the third research question, a latent class analysis was conducted. The process included several steps: (a) examining career decision items for possible dimension reduction, (b) exploring possible latent class analysis models for fit and for meaning, (c) selecting a model that best fit the data and theory, (d) examining how the classes were similar or different for career decision factors, and (e) illustrating those findings with narrative data from the survey.

Data Reduction of Career Decision Items

Because some of the survey items were modified from their original forms, a principal components analysis was conducted for the career decision items (see Appendix D). During the process, five of the 26 survey items were removed from further analysis either because they were specific to the immigrant experience (and thus not relevant for most of the respondents) or because they cross loaded with more than one factor. Overall, the principal components analysis indicated that the new items along with previous items from the Reasons for Teaching Scale (Kyriacou et al., 1999) and the Career Commitment Scale (Blau, 1985) could be grouped together in a way that is consistent with the literature about career decision factors.

The identified components for initial reasons for becoming a Dual Language teacher matched the six identified by Thomson et al. (2012) with some combinations:

- Intrinsic/Altruistic (5 items) relates to the value of the work in and of itself as well as its value to society (Cronbach alpha = .70).

- Opportunity/Benefits (5 items) refers to the perceived tangible benefits of the work and the opportunities it will open up for one's future career goals (Cronbach alpha = .72).

- Influence of Meaningful Relationships (1 item) is the extent to which powerful influences in your life, such as friends, family members, or professors, encouraged you to join the career.

- Ability (2 items) relates to a person's perceived fit for the career in personality and skills (Cronbach alpha = .57). The low Cronbach alpha for

this component can likely be attributed to the fact that it only includes two items.

The items for career commitment matched the four dimensions identified by Blau (2003):

- Affective Factors (5 items) are those related to a person's emotional attachment to their career (Cronbach alpha = .78).

- Accumulated Costs Factors (6 items) relate to the effort and time spent on acquiring and settling in to one's career and work environment, and thus the accumulated costs of making a career change (Cronbach alpha = .70).

- Limited Opportunities Factors (3 items) were conceptualized by Blau as the perceived inability to change to a better career, and items about general career dissatisfaction also factored into this group giving it the novel label Limited Opportunities/Dissatisfaction Factors (Cronbach alpha = .65).

- Normative Factors (4 items) refer to a sense of obligation to continue in a chosen career because of its importance or because of pressure from others (Cronbach alpha = .68).

The reliability coefficients below .7 are a limitation, but are generally acceptable in exploratory research (Nunnally & Bernstein, 1994). Thus, with evidence of internal consistency for each of the four factors in initial reasons for teaching and for each of the four factors in career commitment, analysis could proceed to exploring combinations of these career commitment factors with demographic items through latent class analysis.

Exploring Latent Class Analysis Models

The goal of a Latent Class Analysis (LCA) is to identify meaningful groups based on a set of observed indicators (Nylund-Gibson & Choi, 2018). There were many possible combinations to explore. Might age, or gender, or preparation prior to teaching, or any of the other 21 survey items on teacher characteristics, present as especially significant? What about the eight reduced career commitment factors? I conducted latent class analysis using the software package Latent Gold Version 5.1 (Vermunt & Magidson, 2016) to examine many possible combinations.

An important consideration in Latent Class Analysis is whether the results reflect local maxima or global maxima (Samuelsen & Dayton, 2018). In other words, do the results describe only the section of the data randomly selected for inclusion, or do the results hold for all possible combinations of data within the set? The software used for this analysis, Latent Gold version 5.1, defaults to stringent criteria for convergence with a Tolerance of 1.0×10^8 to determine when the program stops iterating (Vermunt & Magidson, 2005). It defaults to sixteen start sets and a pseudorandom generator determines the start seed (Vermunt & Magidson, 2005; Vermut & Magidson, 2013), which helps prevent randomly pulling a non-representative subset of the data. I also tested several different start seeds and numbers of iterations requested, and all solutions produced the same outputs indicating that they reflected global, rather than local, maxima. Satisfied that the outputs reflected the total dataset, I then moved on to model identification.

Model Identification. The Social Identity Approach (van Dick & Wagner, 2002) suggests that career decisions are influenced by perceptions of identity; that is, what someone "like me" would choose to do. To identify the most salient items related to Dual Language teacher identities, I explored several combinations of indicators including age, race/ethnicity, gender, years teaching, years teaching Dual Language, program models, languages taught, immigration status, native speaker status, alternative licensure, and preparation prior to teaching. I also included indicators that the Expectancy-Value Theory (Wigfield & Eccles, 2000) would suggest are most important for career decisions including the four identified initial reasons for teaching factors (intrinsic/altruistic, opportunity/benefits, influence of others, and ability) and the four identified career commitment factors (affective factors, accumulated costs factors, normative factors, and limited opportunities/dissatisfaction factors). For each combination, analysis included estimates from one cluster to six clusters, with some analyses estimating solutions up to twelve clusters when the data trends suggested that higher numbers of clusters might produce viable outcomes. However, when there were more than four or five clusters the group sizes became so small that the models were untenable.

After exploring many possible models, the selected model was based on three key factors which had been uncovered in the literature review and which conformed to the Social Identity Approach (van Dick & Wagner, 2002): immigrant identity, racial/ethnic identity, and bilingual identity. Immigrant identity was operationalized as *vulnerable* immigrant identity, with US citizens and green card holders in one group and those holding nonimmigrant visas or in DACA status in the other group. Race and ethnicity

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was operationalized as a three-level variable: Hispanic, Non-Hispanic White, and Non-Hispanic Non-White or Multiracial. Given the racial/ethnic composition of the sample compared to the US teacher workforce, as well as the salience of Hispanic identity to the predominant partner language in the United States (Spanish) these groups were deemed to be appropriate general markers of racial/ethnic identity. Bilingual identity was operationalized as native speaker status in the language taught. Because the interplay of those three key indicators would be different for teachers of different languages, the four most commonly taught languages of survey respondents (Chinese, French, German, and Spanish) were used as active covariates. The rationale for including these covariates was to reduce within-group error variance by accounting for the most frequent combinations of native speaker race/ethnicity data among these languages. Career decision factors were treated as distal outcomes of the latent classes and compared after latent classes had been identified (see Figure 4).
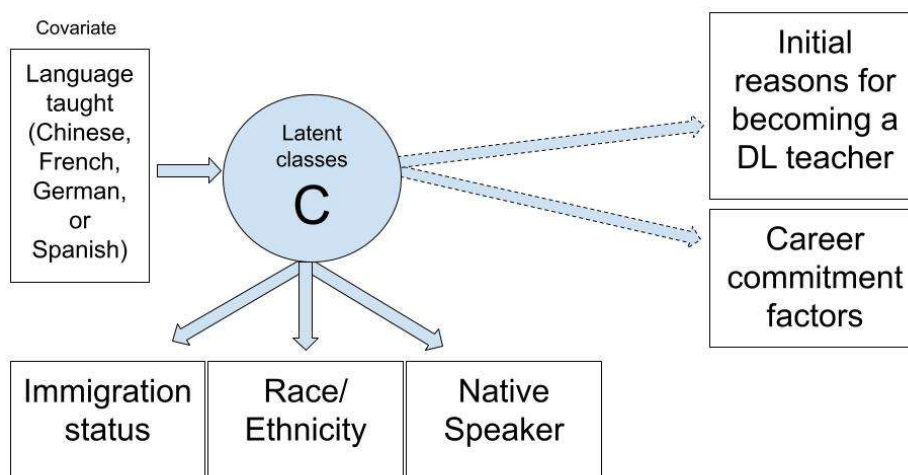

Figure 4

Latent class model.

Classification Quality. To determine the quality of cluster solutions, I looked at several key outputs based on recommendations from the literature (Nylund-Gibson & Choi, 2018; Vermunt & Magidson, 2005). First, I wanted to find solutions that had chi-squared values with a *p*-value greater than .05. The null hypothesis of the underlying test is that the model holds true in the larger population without a great deal of unexplained variance, and so *p*-values lower than .05 would indicate a poor model fit (Vermunt & Magidson, 2005).

Next, I examined fit indices including the Bayesian Information Criterion (BIC), the Akaike Information Criterion (AIC), Akaike Information Criterion 3 (AIC3), the Consistent Akaike Information Criterion (CAIC), and the sample size adjusted BIC (SABIC). For each fit index, the lowest value is generally considered the superior solution for that index, but the solution with the lowest value on one index may not have the lowest value on the other indices (Nylund-Gibson & Choi, 2018).

Table 9

Bivariate Residuals for the Four-Cluster Solution

Indicators	Citizen/ Permanent Resident	Race/Ethnicity	Native Speaker
Race/Ethnicity	0.0780		
Native Speaker	1.2199	0.5844	
Covariates	Citizen/ Permanent Resident	Race/ Ethnicity	Native Speaker
Teach Chinese	0.3452	0.3087	0.2572
Teach French	0.9504	0.3793	0.0019
Teach German	1.3802	0.8243	0.2649
Teach Spanish	0.3821	0.0539	0.0002

Third, I examined the bivariate residuals for each solution. Maximum BVR outputs indicate the highest amount of correlation between variables in the model; if one or more bivariate residuals have a value higher than 3.84, it indicates the model does not adequately account for that correlation (Vermunt & Magidson, 2005). None of the pairs exceeded that threshold for the four-cluster solution (Table 9).

Fourth and finally, I examined the trends between solutions on three other key outputs. The Numbers of Parameters (NPar) indicates the parsimony of the model and for models with a *p*-value greater than .05 the lowest number of parameters is preferred. Classification Errors indicates the proportion of cases misclassified in the model and should be as low as possible. And Entropy R-squared indicates how well the model correctly predicts class membership based on the observed indicators and for which values closest to 1 are preferred (Vermunt & Magidson, 2005). Fit statistics for the latent class analysis are provided in Table 10. Based on its satisfactory *p*-value, its Maximum BVR below 3.84, the low values for the AIC and SABIC indices, and the high value for Entropy R-squared, the four-cluster solution was determined to be the best fit.

Table 10

Model Fit Information

	LL	BIC (LL)	AIC (LL)	AIC3 (LL)	CAIC (LL)	SABIC (LL)	Npar	*p*-value	Max. BVR	Entropy R^2
1-cluster	-517.27	1056.64	1042.53	1046.53	1060.64	1043.96	4	1.9e-6	11.35	1.0000
2-cluster	-489.44	1050.71	1004.88	1017.88	1063.71	1009.50	13	0.014	6.80	0.6912
3-cluster	-466.46	1054.48	976.92	998.92	1076.48	984.73	22	0.67	3.97	0.6949
4-cluster	-454.21	1079.70	970.42	1001.42	1110.70	981.43	31	0.98	1.38	0.7474
5-cluster	-447.37	1115.75	974.73	1014.73	1155.75	988.95	40	1.00	1.27	0.7362
6-cluster	-442.00	1154.75	982.00	1030.52	1203.27	999.41	49	1.00	1.11	0.7656

Figure 5 presents a profile plot of each of the clusters in the four-cluster solution. It is a helpful tool for examining the divergent characteristics of each of the clusters by looking at how cluster membership differs across the indicators. A description of each class follows.
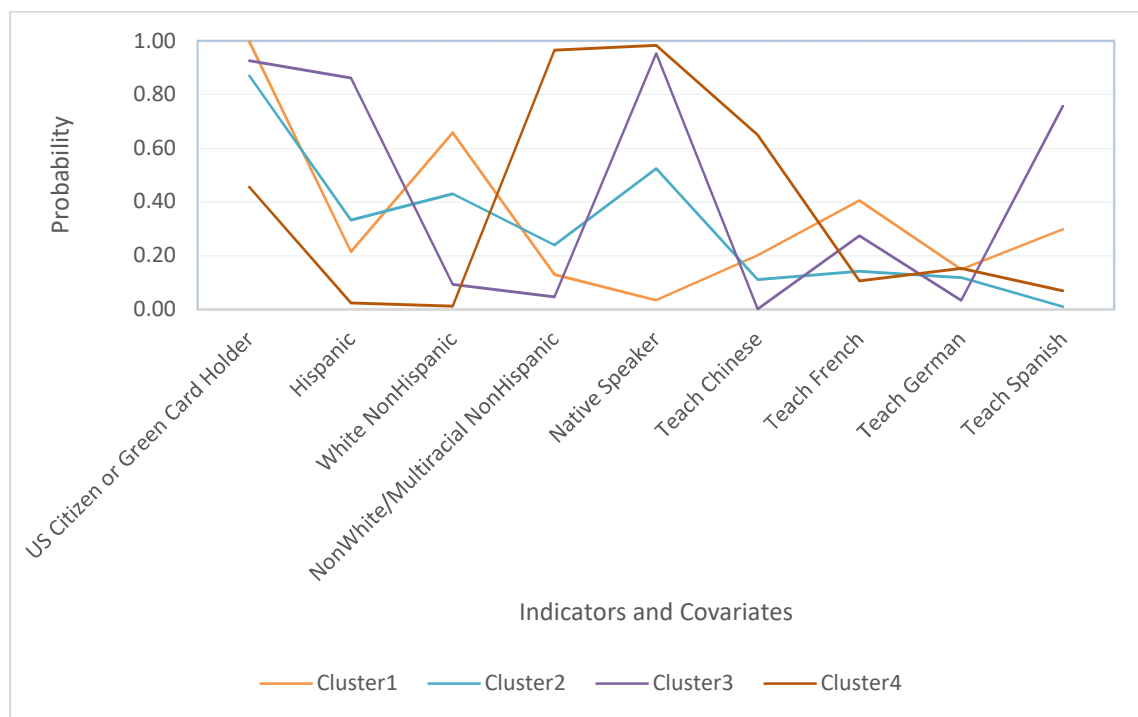

Figure 5

Statistical profile plot.

The largest cluster is Cluster 1 (36.9% of sample). It can be described as citizens/green card holders (99.8%) who are not native speakers of the language they

teach (96.7%), predominantly White Non-Hispanic (65.8%), and were most likely of any group to teach French. This group will be referred to as **Non-Native Speakers**.

The second largest cluster is Cluster 2 (33.9% of sample). It is comprised primarily of citizens/green card holders (87%). This group was racially reflective of the sample and included roughly half native speakers (52.4%). Spanish teachers were least likely to be part of this group. This group will be referred to as the **Microcosm** group since it reflects each of the indicators and covariates of the overall sample within 5 percentage points except for having a lower proportion of teachers of French and Spanish.

The next largest group is Cluster 3 (23% of sample). Like the first two clusters, it included mostly citizens/green card holders (92.7%). Unlike the others, it was also mostly Hispanic teachers (86.2%) teaching Spanish (75.7%) and/or French (27.3%) and who were very likely to be native speakers (95.4%). This group will be referred to as **Hispanic Native Speakers**.

The smallest group was Cluster 4 (6.2% of sample). This cluster was comprised largely of teachers holding visas (54.5%) and included mostly Chinese teachers (65.0%). It was made up of Non-Hispanic teachers (97.7%) who were native speakers (98.4%) and will be referred to as **Non-Hispanic Native Speakers**.

Conditional probabilities for each indicator and covariate in the four-cluster solution are presented in Table 11. Conditional probability is another way of looking at the data, not in terms of actual cluster membership but in terms of how likely a person with a specific characteristic is to end up in each cluster. It is especially useful to examine

clusters that have very low likelihood of including people with specific characteristics, as well as examining clusters where more than half of the people in the overall sample with that characteristic were placed. For example, non-native speakers were very likely to end up in Cluster 1, were somewhat likely to end up in Cluster 2, and were not at all likely to be in Clusters 3 or 4.

Table 11

Conditional Probabilities of Class Membership

		Cluster 1	Cluster 2	Cluster 3	Cluster 4
	Overall	0.3691	0.3388	0.2295	0.0626
Indicators					
Citizenship	Nonimmigrant Visa	0.0073	0.4586	0.1740	0.3600
	US Citizen or Green Card	0.4076	0.3260	0.2354	0.0310
Race/Ethnicity	Hispanic	0.2012	0.2879	0.5081	0.0028
	White NonHispanic	0.5933	0.3553	0.0508	0.0006
	NonWhite/Multiracial NonHispanic	0.2373	0.4042	0.0518	0.3066
Native Speaker	No	0.6753	0.3046	0.0192	0.0009
	Yes	0.0251	0.3772	0.4658	0.1319
Covariates					
	Teach Chinese	0.4873	0.2439	0.0007	0.2681
	Teach French	0.5607	0.1794	0.2352	0.0246
	Teach German	0.4914	0.3562	0.0675	0.0850
	Teach Spanish	0.3770	0.0101	0.5982	0.0147

Examining Career Decision Factor Differences Between Identified Classes

After identifying and naming the four clusters, analysis then proceeded to examine the differences between them on career decision factors. Because Cluster 4

(Non-Hispanic Native Speakers) included fourteen people and thus fell below the recommended threshold of fifteen per group to conduct an ANOVA, a non-parametric analysis was conducted using SPSS version 27.0. In five of the eight Independent Samples Median Tests, differences between the clusters were not significant and the null hypothesis was retained (see Table 12). The significance test for Intrinsic/Altruistic factors could not be computed because the median score of all four clusters was the same, 2.0. However, three factors did show significant differences between classes in which the null hypothesis was rejected: Ability, Affective Factors, and Normative Factors.

In pairwise comparisons, the significant differences between clusters all involved Cluster 3, Hispanic Native Speakers. This group reported higher perception of their own ability to teach as a factor in their initial decision for joining the career ($M = 2.44$, $SD = .57$) when compared to the Microcosm group ($M = 2.29$, $SD = .55$), $F(3) = 7.38$, $p = .04$. The Hispanic Native Speakers group also reported higher influence of affective factors in their career commitment decisions ($M = 3.15$, $SD = .63$) when compared to the Non-Native Speakers group ($M = 3.01$, $SD = .51$), $F(3) = 10.28$, $p = .008$. And the Hispanic Native Speakers group was also more impacted by normative factors in career commitment ($M = 3.34$, $SD = .56$) than any of the other three groups, as shown in Table 12.

Table 12

Test Statistics of Cluster and Pairwise Differences

Career Decision Factor	Across clusters			Pairwise comparisons					
	Test statistic	df	Sig.	1-2	1-3	1-4	2-3	2-4	3-4
Ability	7.923	3	.048	1.118	4.025	.054	**7.380***	.677	.701
Affective Factors	13.872	3	.003	.395	**10.279***	1.242	5.377	1.840	6.124
Normative Factors	13.186	3	.004	.000	**9.321***	1.008	**7.708***	.946	**7.138***

*=Significant *p*-value < .05
Cluster names: (1) Non-Native Speakers, (2) Microcosm, (3) Hispanic Native Speakers, (4) Non-Hispanic Native Speakers

Illustrations With Narrative Responses

To further examine the characteristics that set the Hispanic Native Speakers group apart from the other groups, I reviewed the narrative responses to the open-ended survey question, "Why are you a Dual Language teacher? Please write for three or four minutes about your own story (in English or your native language)." To conduct this step, I first read over all narrative responses from each group. Then, I looked for key words or phrases that reflected specific career decision factors. I compared the use of the key word with the participant's median score for the related career decision factor. I especially honed in on responses from the Hispanic Native Speakers group, since it was significantly different from the other groups, as described in the previous section. Quotes in the following paragraphs were selected for how clearly they articulated the career decision factors, not necessarily how frequently they were expressed by other respondents.

On the theme of Ability as an initial reason for becoming a Dual Language teacher, Hispanic Native Speakers expressed high confidence in their fit for the career. Here is a response of one Hispanic Native Speaker (Cluster 3), who had a median score of 3.0 (or "Very Important") for Ability: "I chose to participate in the immersion program of [state] because I think I have a lot to bring from my 19 years in education, as well as a lot to learn." (Case 252). Another member of the group who also had a median score of 3.0 (or "Very Important) on Ability items wrote: "I decided to apply. Firstly, because I knew it was going to be hard for the school to find someone, and also because I really think I was ready for the job and I wanted to give it a try." (Case 012) Compare those sentiments to the response of someone in the Microcosm group who had a median score of 1.5 (between "Not Important" and "Somewhat Important") for items about Ability: "I'm mostly a Dual Language teacher by circumstance; there was an opening in the program when I was looking to become a Social Studies teacher." (Case 001)

Affective factors in career commitment relate to emotional attachment to the career. Specific items from the survey that were included in the Affective factors category were whether they enjoyed the job and their perceptions of whether Dual Language teachers at their school liked working there. One person in the Hispanic Native Speakers group with a median rating of 4.0, or "Strongly Agree", on Affective factors wrote: "In my school I feel fine, I am respected and I feel that people like the work I do" (Case 039). Another member of the group with the same median wrote: "I like the two languages I teach very much and pass them on to others through my own love. Such a life makes me feel very satisfied and happy" (Case 102).

Normative factors in career commitment include believing that the work is important for students and society's future. These themes also emerged in the narrative responses from the Hispanic Native Speakers group. One teacher with a median score of 4.0, or "Strongly Agree", on Normative factors wrote:

… I decided that students needed to learn science for the future of the planet. When I discovered I could teach in my own native language, I was very excited. I truly believe that we can inspire Latinxs to participate and engage in STEM … I truly enjoy developing resources that are culturally appropriate and relevant for my students and experience their academic growth. (Case 035)

Another key element of normative career commitment factors is the belief that Dual Language teachers work harder than other teachers, which is both a badge of pride and a point of concern as in these three responses:

… I am not impressed at the pay, teachers are overworked especially DLI teachers. We do the work for the greater good but we can only do it for so long before we all get burned out and we do not enjoy it any more…My experience as a DLI teacher was great in my classroom but NOT overall. The benefits were not good at all! We are expected to work double than anybody else and have the double of certifications as well. (Case 031, Normative median score of 4.0)

… Though I still have a lot of flexibility, I have to make almost all of my own curriculum. Even with extra pay during the summers to write curriculum, assessments, etc. it is always more work than time available. I am also part social worker and sometimes a translator. I get so frustrated when I hear other teachers say

that they have nothing left to do to prepare. I get paid the same, but have to find my own straw to make bricks. When we ask for more resources we are given paid time to create materials, but again, time. Precious lacking time. (Case 032, Normative median score of 3.5)

… The program is fantastic but I have felt discrimination from my administrators sometimes because I couldn't be as rigorous in my assignments as I would have liked… my groups are really large and they don't understand that in addition to science we are teaching them to use a second language as well. (Case 246, Normative median score of 4.0)

The narrative responses from teachers in the Hispanic Native Speakers cluster articulate and support the themes from the quantitative findings: affective and normative career commitment factors loom especially large for teachers in this group.

Summary

The purpose of this chapter was to share the findings from this study. It demonstrated that secondary Dual Language teacher characteristics and career decision factors vary widely. However, most teachers were moderately well-prepared before becoming teachers and many had years of experience in some other field before becoming Dual Language teachers. Secondary Dual Language teachers were motivated by a passion for the target languages of their classrooms, a desire to help children, and a desire to improve society. The majority of teachers reported enjoying their work and most would recommend the career to others. No significant differences were found between immigration-related items for those who held nonimmigrant visas versus those who were

US citizens or green card holders, although the number of nonimmigrant visa holders in the sample was small.

In the latent class analysis, four classes of demographic profiles emerged: Non-Native Speakers, Microcosm (reflective of the broad diversity in the larger sample), Hispanic Native Speakers, and Non-Hispanic Native Speakers. The only significant differences between the four groups on career decision factors were with the Hispanic Native Speakers group, who reported that perceptions of their Ability were especially high when deciding to become Dual Language teachers, and who reported that Affective and Normative factors were especially important in their career commitment decisions. Further interpretation and implications from these findings, as well as recommendations for future research, are described in Chapter 5.

Chapter Five

The purpose of this survey study was to examine factors that influence teachers to join and remain in the field of secondary Dual Language education so that more targeted approaches can be developed for teacher recruitment and retention. It is an examination both of initial reasons for becoming a Dual Language teacher and factors in a continued commitment to the field. This chapter includes a discussion of major findings as they relate to the literature on the career decisions of secondary Dual Language teachers. The chapter concludes with a discussion of the limitations of the study, areas for future research, and a brief summary.

This chapter contains discussion and future research possibilities to help answer the research questions:

RQ1: What are the demographic features of Dual Language secondary teachers in the United States?

RQ2: What reasons do Dual Language secondary teachers report as factors in their career decisions (to enter and remain in the field)?

RQ3: What significant teacher typologies emerge from the combination of demographic factors and career decision factors?

The theoretical basis for exploring these questions comes from two main sources. First, the Social Identity Approach (van Dick & Wagner, 2002) suggests that our

decisions are bounded by what people "like us" should do. As applied to this study, the theory would suggest that middle and high school Dual Language teachers develop their own conceptions of which group they belong to and what career decisions they should make as a consequence of salient aspects of group identity including their race/ethnicity, their status as vulnerable immigrants (or not), and their identity as bilinguals. Second, the Expectancy-Value Theory (Wigfield & Eccles, 2000) posits that our decisions align with our beliefs about what is both possible and valuable. Therefore, as applied to this study, the theory would suggest that Dual Language teachers make career decisions based on whether it is worth beginning and persisting in the field according to their personal values.

The research literature offers some tools for operationalizing these theoretical frameworks. A useful frame of reference for categorizing which beliefs and values are most important to Dual Language teachers at the beginning of their careers is through the lens of the six primary career choice factors identified by Thomson et al. (2012): (a) the intrinsic value of the work, (b) job benefits, (c) the influence of meaningful relationships to considering a career, (d) altruistic views, (e) sense of personal ability to do the job well, and (f) what opportunities are afforded by the career. Similarly, the literature suggests a framework for exploring which beliefs and values most influence career commitment. Blau (2003) identified career commitment factors as existing in four dimensions: (a) affective factors, (b) normative factors, (c) factors related to the accumulated costs of changing an established career path, and (d) limited career alternatives. Results of this study provide evidence that suggests that each of these career

decision factors are important for secondary Dual Language teachers to varying degrees. A deeper understanding of which career decision factors are most important can be used to develop a more refined approach to teacher recruitment and retention efforts.

Interpretation of the Findings

While teachers who participated in the survey were by no means monolithic in their identities or perspectives, a number of themes emerged from the findings. First, Dual Language teachers at the middle and high school level are often non-native speakers of the languages they teach, are primarily citizens or permanent residents, and often have experience as teachers before they join the Dual Language field. Second, the data indicated that the strongest factors in the participants' initial reasons for teaching were altruism and the perceived intrinsic value of the work. Third, normative and affective factors emerged from the data as being especially salient among the reasons for career commitment. And fourth, Hispanic Native Speaker teachers are quite different from other teacher profiles in several respects. Each of these themes is explored in detail in the following sections, along with further discussion of their connections to existing research literature.

Many Are Experienced, Alternatively Licensed, and Non-Native Speakers

Most of the teachers surveyed (57.4%) reported that they had been a Dual Language teacher for between zero to five years, but most of the teachers (64.5%) had been in the overall teaching field for six or more years. The response patterns, illustrated in Figure 6, indicate that a large proportion of secondary Dual Language teachers had previously taught in some other non-Dual Language setting. There are benefits to having

teaching experience in other areas; previous research has shown that teachers with some experience outperform brand new teachers on student outcomes (King, 2010). The benefit to students from teacher experience could be due to an improved ability to manage classrooms, to match instruction to student needs, and to navigate the rhythms of the school year. However, an experienced teacher starting a career in Dual Language teaching may also bring some preconceptions to the work and might find it difficult to take a holistic view of the goals of Dual Language education beyond the scope of specific content or language proficiency goals, as high school Dual Language students reported was often the case in a previous study (de Jong & Bearse, 2014). Additionally, most of the teachers surveyed (59.4%) were licensed via an "alternative route to teaching", which are designed to lead to state teacher licensure without participating in a full-time teacher education program. This indicates that teachers were either provisionally licensed for particular subjects they were currently teaching or had been a career switcher from a non-education career.
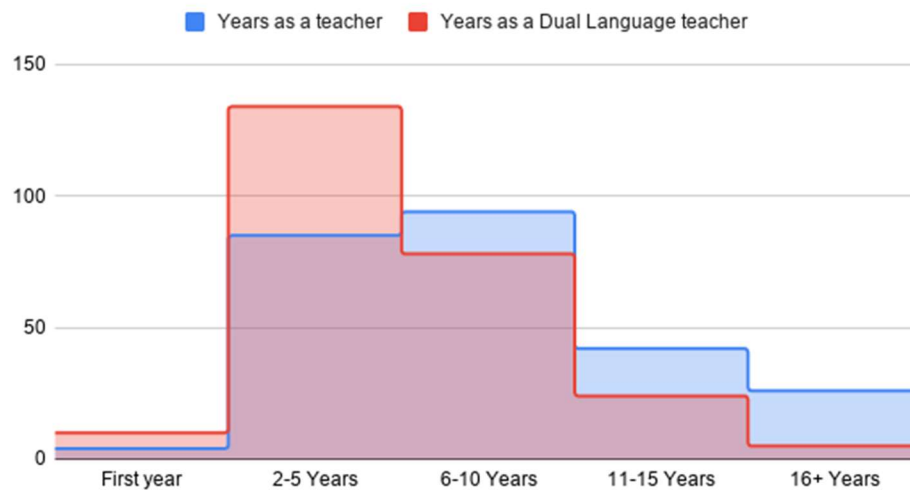
Figure 6

Experience teaching overall and in Dual Language.

The majority of teachers in this study reported not being native speakers of the languages they taught (see Figure 7). There are benefits and drawbacks to being a non-native speaking teacher in a Dual Language program. On one hand, seeing non-native speaking teachers in the classroom helps students understand that bilingual identity is not restricted only to those born into bilingual families. Non-native speaking teachers may also be able to better relate to and anticipate the challenges for students in second language acquisition (Kissau & Algozzine, 2017). On the other hand, the literature reports that many non-native speaking teachers struggle with a sense of increased scrutiny from native-speaking peers and families of their students (Varghese et al., 2005). They may also struggle to provide appropriate academic language models for their

students, especially if they work and live in largely monolingual contexts (Guerrero & Guerrero, 2008). Although this study did not directly examine the differences between native and non-native speaking teachers, the prevalence of non-native speaking teachers warrants additional future research.

Surprisingly few teachers (9.5%) were not US citizens or green card holders at the time of the survey. This could be partly because of the barriers to hiring foreign nationals for teaching jobs in many states, such as stringent state teacher licensure requirements and the lack of available work visas (US Department of Education, 2015). It could also be reflective of the changed immigration status of individual teachers over time, who may have started their careers on a visa and later became US citizens. Nonetheless, such a large contingent of teachers with permanent legal status in the United States suggests that Dual Language teachers do not reflect the families of students in US public schools, of whom 8% are estimated to include at least one undocumented parent (Passel & Cohn, 2018). In a prior study of teacher perceptions of undocumented immigration, early experiences with diversity and positive teacher preparation experiences in diverse environments were found to be important factors in developing a sense of allyship with undocumented students and families, and that even teachers who were immigrants themselves sometimes harbored negative views about undocumented immigrants (Connery & Weiner, 2020). Thus, Dual Language programs that serve undocumented students or families should not assume that teachers who are immigrants naturally relate to and create supportive environments for their immigrant students, nor assume that Dual Language teachers are not prone to the same kinds of deficit-based thinking about

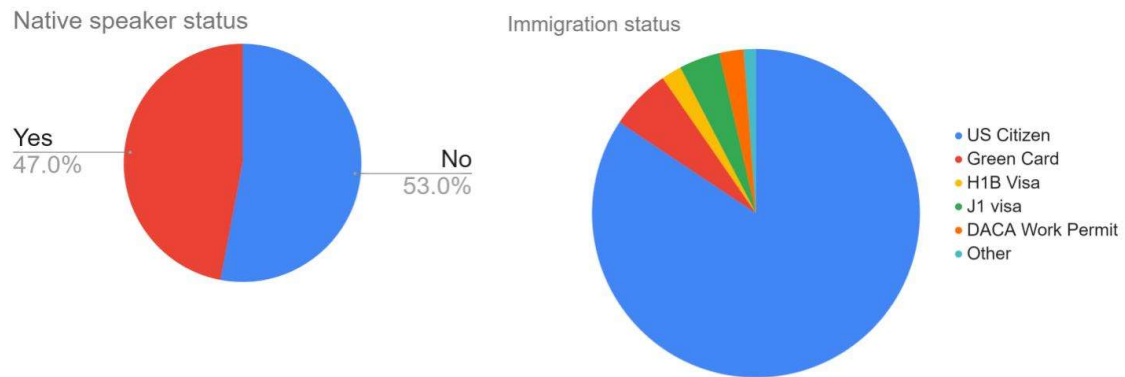students even if they share the same race or ethnicity (Viloria, 2019).

Figure 7

Native speaker and immigration status.

Altruism and Intrinsic Value of the Work Influence Initial Career Decisions

Teachers reported that their initial reasons for becoming a Dual Language teacher were largely driven by their love of the language and subject they would teach (its intrinsic value) as well as their desire to make a difference for students and society (altruistic reasons). On a rating scale of one to three with one being "Not important at all" and three being "Very important", two individual survey items stick out as having mean scores above 2.5 (see Figure 8).
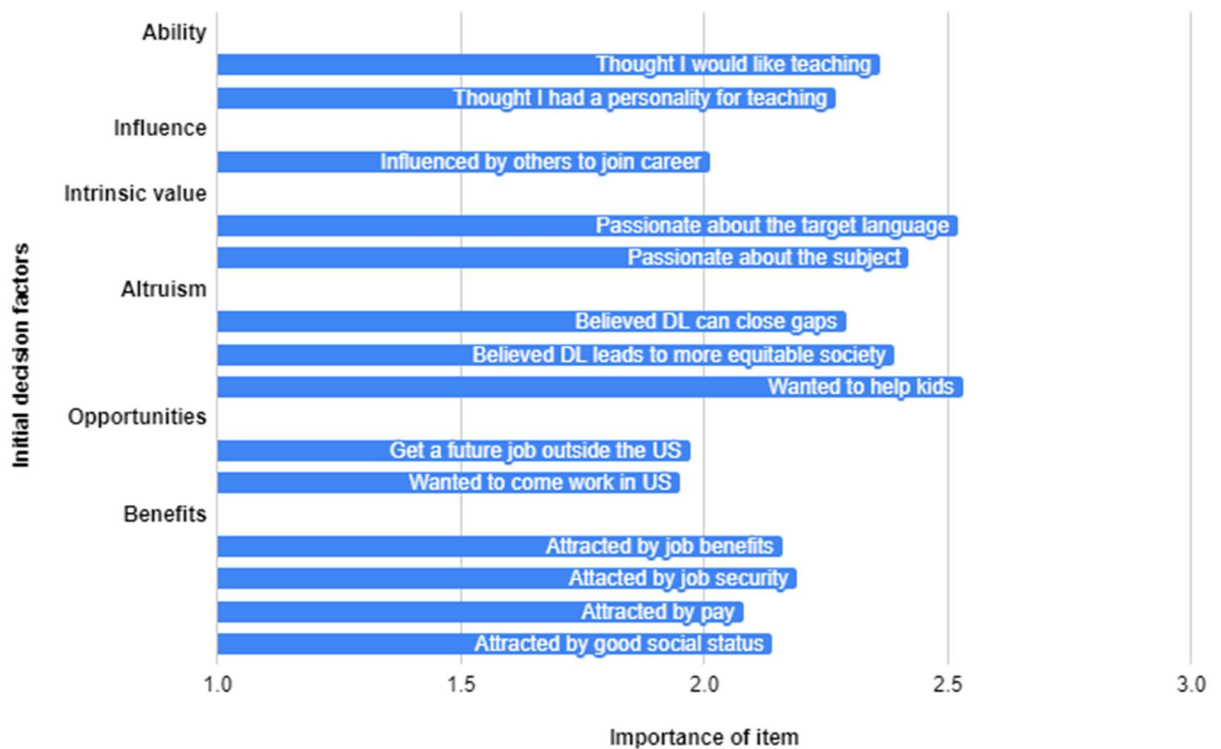
Figure 8

Mean ratings of factors in initial decision.

A desire to help kids was rated as the single most important reason to become a Dual Language teacher. This sentiment came out in a number of narrative responses to the final open-ended question. One participant wrote, "I want to help students become proficient in two languages...they will be at a much higher advantage entering the workforce and have more options for their future." Others spoke of a desire to "help minority students grow and feel proud of their culture" and to "help them rise above racism and socioeconomic differences to be successful." Clearly, these teachers believe

that Dual Language education offers unique ways to help students compared to a typical monolingual and often mono-cultural education. This perspective echoes the literature on the correlation between ethnic identity and heritage language proficiency (Mu, 2015), the role of Dual Language education in fighting against harmful racial stereotypes (Tedick & Wesely, 2015), and its role in fostering educational equity (de Jong, 2011). Supporting student bilingualism and cultural competence, as well as developing cultural pride for language minority students, are key drivers of what it means to "help kids" as a secondary Dual Language teacher. The strong desire of new Dual Language teachers to help kids must be understood in this broader context.

The second highest-rated item influencing the initial reason to become a Dual Language teacher was passion for the target language they would be teaching (see Figure 8). This echoes the finding from Kissau et al. (2019) that "love of the language" was a compelling factor for many would-be world language teachers, of whom Dual Language teachers may be considered a subset. Considering that middle school Dual Language students typically have proficiency levels of Intermediate Mid or higher (Burkhauser et al., 2016), teachers with a passion for the language might find they can go further with Dual Language students than with traditional world language students. More advanced language functions such as analyzing literature, enjoying nuanced humor, and debating the intricacies of various topics require students to have higher proficiency levels and so teachers who greatly enjoy doing those things in the target language may seek out opportunities to work with students at higher proficiency levels, such as Dual Language students. This sentiment was captured in a narrative response from one participant: "I

fully enjoy sharing my language and culture with my students. It's fun to see them learn

and starting to understand the quirkiness in the German Language." (Case 043)

Normative and Affective Factors in Career Commitment Predominate

Items for career commitment were rated on a four point scale ranging from

"Strongly Disagree" (1.0) to "Strongly Agree" (4.0). Two of Blau's (2003) career

commitment factors had mean ratings above 3.0 (see Figure 9). Normative factors

describe the pressures of continuing in a career because it is what others need and expect.

Affective factors relate to the individual's emotional attachment to their work. Not all the

survey items fit neatly into just one of the four factors, and so the previously described

factor analysis was used to inform which items to include in each factor.
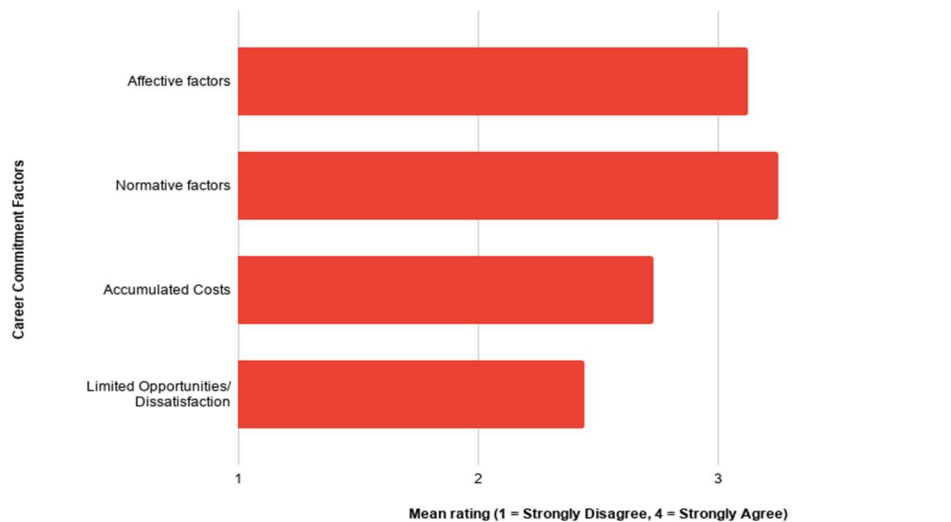

Figure 9

Mean ratings of factors in career commitment.

There were several common threads among the individual items that teachers agreed with the most (see Figure 10). One thread is the importance of their work for students and society, which was previously examined in this chapter. A second thread is personal enjoyment of the work of being a Dual Language teacher and the perceived enjoyment of other Dual Language colleagues. And a third thread is the support they felt from others; teachers reported feeling most supported by the parents of their students, then from other Dual Language colleagues, then from their school administrators, and least from other non-Dual Language colleagues. The gap between perceived support from parents and Dual Language colleagues compared to administrators and non-Dual Language colleagues echoes the literature indicating there is sometimes a cultural and organizational distance between Dual Language teachers, particularly those who are racial minorities, and their school colleagues (de Jong & Bearse, 2014; Gomez, Rodriguez, & Agosto, 2008).
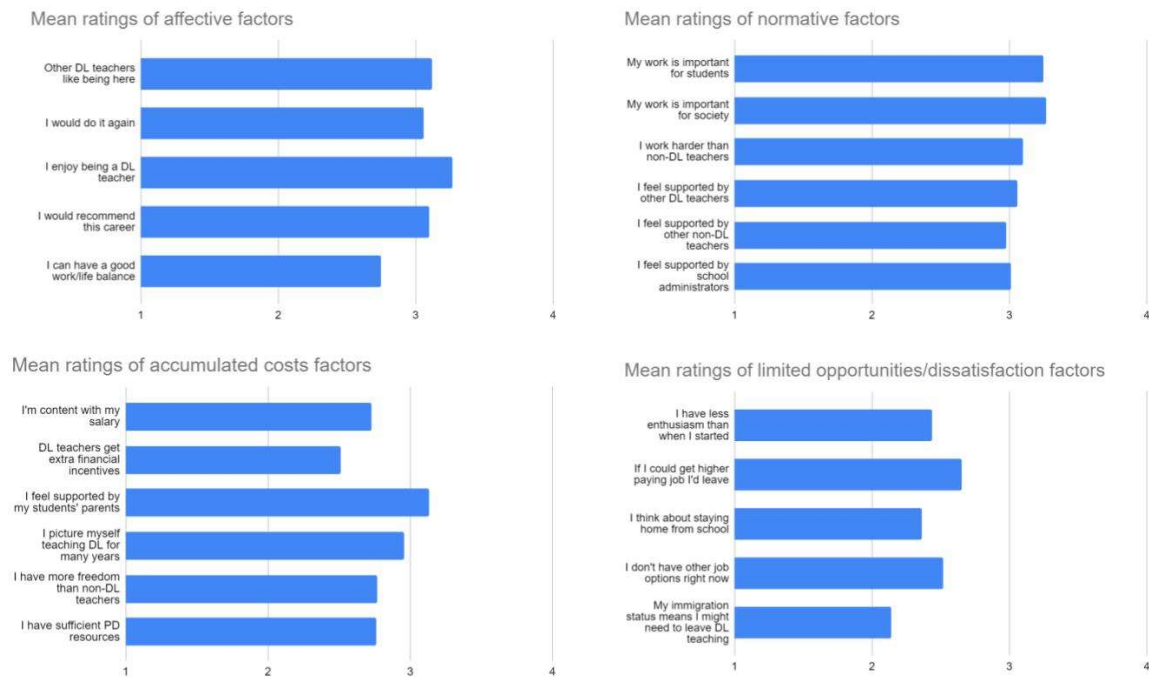
Figure 10

Mean ratings of individual items for career commitment.

Hispanic Native Speakers Are Different From Other Groups of Teachers

Four demographic clusters of secondary Dual Language teachers were identified

in this study: (a) Non-Native Speakers (of the languages they teach), predominantly

White, (b) Microcosm, reflective of the total sample in almost all characteristics, (c)

Hispanic Native Speakers, predominantly US citizens or green card holders, and (d) Non-

Hispanic Native Speakers, predominantly non-White and with a large concentration of

teachers holding visas. The Hispanic Native Speakers group was significantly different

from other groups on three of the four career decision factors. As described in Chapter

Four, this group reported higher perception of their own ability to teach as a factor in

their initial decision for joining the career ($M = 2.44$, $SD = .57$) when compared to the Microcosm group ($M = 2.29$, $SD = .55$), $F(3) = 7.38$, $p = .04$. They also reported stronger agreement with affective factors ($M = 3.15$, $SD = .63$) when compared to the Non-Native Speakers group ($M = 3.01$, $SD = .51$), $F(3) = 10.28$, $p = .008$. Additionally, they reported higher agreement with normative factors ($M = 3.34$, $SD = .56$) than any of the other three groups.

Previous literature had not explicitly compared Hispanic native-speaking teachers to other types of Dual Language teachers, but a good deal of previous research has been done in contexts where Hispanic native speakers made up the largest group of study participants (Athanases et al., 2015; Galindo, 1996; Gomez et al., 2008; Lara & Fránquiz, 2015; Viloria, 2019). Those studies identified the important role of ethnic identity and a sense of having something special to offer to students. The findings from this study build on those themes and suggest that recruitment and retention efforts for Hispanic Native Speakers should tap into teachers' perceptions of their own ability, the enjoyment of teaching, and the role of teachers as change agents as especially powerful career decision factors for teachers in this group.

Moving on from interpretation of the findings, discussion will move next to implications for practice.

Implications for Practice

There is a persistent and pervasive shortage of Dual Language teachers in the United States, including at the secondary level. In 32 states, bilingual education is listed as a critical shortage area (Commission on Language Learning, 2017; Liebtag & Haugen,

2015). State departments of education and individual school districts have dealt with these chronic shortages by recruiting abroad, inviting teachers on short-term international exchange visas (Camera, 2015), and adjusting requirements for teacher certification and language proficiency (U.S. Department of Education, 2015). The findings of this study support matching recruitment and retention efforts with the factors that Dual Language teachers themselves report as being most influential in their career decisions. Major elements for emphasis are explored in each of the following subsections.

Recruitment Efforts Should Emphasize Intrinsic and Altruistic Factors

The results of this study show that when first considering whether to become a secondary Dual Language teacher, candidates were swayed by the importance of the work for students and for society (altruistic factors), along with the intrinsic value inherent in teaching the languages and subjects they are passionate to share with students. These beliefs in the altruistic and intrinsic value of Dual Language teaching should be fostered and appealed to in teacher recruitment. As Alfaro (2019) pointed out, helping Dual Language teachers develop ideological clarity about the nature of their work supports their confidence and impact as teachers. These findings suggest that developing ideological clarity may also inspire new teachers to join the field.

There are several possible approaches to incorporating these findings in teacher recruitment efforts. First, recruitment efforts should emphasize Dual Language student outcomes and societal benefits such as increased academic achievement, increased language proficiency, and greater sociocultural competence. Given the strongly articulated desire to help kids discussed previously, it may be persuasive to provide

testimonials from current or former students about what their Dual Language teachers mean to them as a way to tap into altruistic motivations. And, recruiters can overtly appeal to potential teachers' love of the target language that they would teach (Kissau et al., 2019) and offer examples of the kinds of rich language activities they could do with students. These types of recruitment activities could not only be used with preservice teachers or at recruitment events, but also shared with inservice teachers who might join Dual Language programs from other kinds of teaching assignments. Providing accurate and compelling research and information about Dual Language programs (Lindholm-Leary, 2016; Steele et al., 2017; Thomas & Collier, 2012; Umansky & Reardon, 2014) is a way to appeal to altruistic and intrinsic reasons to join the field.

Supportive and Positive Environments Are Key for Retention

Solving the Dual Language teacher shortage requires not only recruiting more new teachers, but also retaining those who are currently in the field. These findings indicate that Dual Language teachers rate normative and affective factors as highly important in their continued career commitment. Normative commitment is a sense of obligation to continue in the career because it is important for others, while affective commitment refers to a person's emotional attachment and personal enjoyment of their work. Survey results indicated a high level of perceived support from colleagues as an element of normative commitment, and a strong sense of both personal and peer enjoyment of the work as an element of affective commitment. Hence, this study further affirms previous qualitative studies (de Jong & Bearse, 2014; Howard & Lopez-Velasquez, 2019) in which teachers shared their desire for robust collaboration and

support.

A logical support network for teachers includes those with whom they share similar teaching challenges (Dual Language teachers in their own or other schools who teach the same grades or subjects) as well as those with whom they share student relationships (that is, other teachers who teach the same students at another time in the day). The segmented model of secondary education tends to create departments based on teaching within the same subject area; such an approach often defines the Dual Language "program" as only including specific courses in the partner language and allows little room for collaborative relationships between teachers (de Jong & Bearse, 2014). Yet, teachers of partner languages and those who teach in English have much to offer one another and intentionally creating an interlinked web of relationships across schools and school divisions can increase teacher feelings of support (Baker-Doyle, 2010). Strategic and intentional collegial relationships might include time for peer observations, shared professional development opportunities, and opportunities to collaboratively plan instruction with others (Hutchison, 2012).

This study also highlighted a high level of perceived support from the parents of Dual Language students as an element of accumulated costs commitment. In fact, it was the highest rated individual item in that category, which includes items related to tangible benefits of the work as well as the time and effort spent settling into a career. How might schools expand on the supportive role of parents to enhance teacher retention? Parents have frequently been some of the most vocal and successful advocates in sustaining Dual Language programs (Cortina et al., 2015); their voices can also advocate for excellent

working conditions and benefits for Dual Language teachers. Although less common in secondary schools than in elementary schools, parents can provide tangible supports such as volunteering and fundraising to support teacher needs, if given the chance to do so. And providing opportunities for parents to celebrate their children's teachers is yet another way to build on parent enthusiasm for the work of secondary Dual Language teachers, in an effort to increase teachers' affective connection to their work and as a way affirm the importance of their continued commitment to the field.

Creating a sense of support from school administrators is another dimension of creating supportive environments. This study found that teacher perception of administrator support was high but somewhat muted in comparison to support from parents and Dual Language colleagues. Building administrators, even if they find themselves inheriting an existing program from their feeder schools, need to be deeply engaged in their school's Dual Language program and need to develop their professional knowledge to be successful advocates and leaders of those programs (González Ornelas & Ornelas, 2014; Rocque et al., 2016). School administrators must take the time to understand and celebrate the work of Dual Language teachers. Better yet, school and district administrators can listen to and respond to the needs of their teachers in areas such as professional development, protecting teacher time, and securing resources to implement a successful program (Grant, 2014). Such efforts, and the relationships that come from shared goals and shared work with secondary Dual Language teachers, can further enhance the supportive environment that encourages teacher retention.

As shown through participant data in this study, supportive and positive

environments are essential to ongoing career commitment, and the approaches described above can create a virtuous cycle of increased normative and affective commitment for teachers.

Social Identities Are Important for Secondary Dual Language Teachers

The latent class analysis conducted in this study found four meaningful groups of teacher demographic identity, supporting the notion that social identity can be a useful framework for understanding the career decisions of Dual Language teachers. The third principal implication of this study is that a multifaceted approach to teacher recruitment and retention should include attention to issues of race/ethnicity, bilingual identity, and immigration status.

The four identified clusters of teacher identity were Non-Native Speakers (the largest group in this sample), Microcosm (a diverse group that reflected the demographic trends in the overall sample), Hispanic Native Speakers, and Non-Hispanic Native Speakers. One way to employ a social identity approach with these four groups is to ensure that teacher candidates - and those who have already been hired - have opportunities to connect with staff members with whom they share salient aspects of identity. These connections can be especially important during the times when the teacher pipeline is most likely to "leak" candidates such as when college students make the decision on whether to enroll in teacher preparation programs, when they begin their job search, and when they work on passing teacher licensure tests (Simon, 2015). However, the literature suggests that even when teachers of color are effectively convinced to begin careers as teachers, many are dissatisfied with the conditions in which they are placed

and leave the career at higher turnover rates than White teachers (Ingersoll, 2015). Support efforts building on a social identity approach can be employed with Dual Language teachers who are at career pivot points, affirming how their identity connects with their reasons for career commitment and creating positive normative pressure for persevering despite challenges.

These findings also suggest that a social identity approach may be especially important for Dual Language programs that include Hispanic Native Speaker teachers, who are especially clear about the importance of affective and normative factors in career commitment. Beeman and Urow (2013) have argued for a differentiated approach to teacher professional development based on how teachers developed their Spanish bilingualism (at home or in formal education) as well as what gaps might exist in their language proficiency in various social and academic contexts. Providing opportunities for Spanish-speaking Hispanic teachers to be with others who share similar social identities, further developing their own language proficiency in new contexts, is one way to acknowledge the power of group norms and positive feelings as a tool for teacher retention.

Employing social identity should not be used as a tool for manipulating the emotions of teachers and teacher candidates. Decision makers can also do more intentional work to understand and respond to the perspectives of their teachers. Schools that profess to want greater staff diversity, and which in fact need greater staff language diversity to sustain Dual Language programs, must invite the opinions and ideas of teachers who are like those they want to recruit and retain. It requires a willingness to

interrogate current school culture from the perspective of teachers with various social identities, examining practices that make different kinds of teachers feel empowered or marginalized, successful or deflated. And it further implies a need for openness for changing power structures so that the cultural perspectives and practices of teacher social identities are incorporated into the ways decisions are made.

In summary, then, the practical implications of this study include focusing on altruistic values and the intrinsic pleasure of the work when recruiting, focusing on supportive and positive environments to support career commitment, and attending to teacher social identities throughout the life cycle of their careers.

Implications for Policy

At the policy level, there is work to be done to ease the pathway into becoming a Dual Language teacher. Because there are a large number of secondary Dual Language teachers who currently hold an alternative teacher license, states should consider adjusting current licensure requirements or creating new categories of teacher licensure appropriate to the skills and needs of teachers in the field. For example, states can make sure that assessment requirements associated with teacher licensure reflect the skills needed by Dual Language teachers.

States and school districts can also support the specific needs of Dual Language teachers in at least two important ways. First, they can create pathways to higher levels of academic proficiency in the partner languages by expanding the concept of teacher professional development to include experiences and courses focused on a teacher's language growth. Second, Dual Language teachers should be provided the same types of

curriculum and assessment resources (in the target language of their classrooms) that those teaching in English receive from state departments of education and district offices. This support could go a long way to alleviating the additional perceived workload of creating and translating materials which were reported by participants in this study.

Further, there should be more intentional support for prospective teachers. For teacher educators, this could mean adapting teacher preparation courses to include the knowledge and skills needed for Dual Language educators, as well as actively promoting the opportunities available in Dual Language. One way to do this is making sure that pre-service teachers have practicum and student teaching experiences in Dual Language programs. Acknowledging that many Dual Language teachers did not participate in traditional teacher preparation programs, supporting the pipeline of prospective teachers could also mean working with workforce development efforts to identify potential candidates with appropriate language proficiency and supporting their readiness to teach through non-traditional pathways and flexible licensure opportunities.

Limitations

Despite the promising findings, there are several limitations that accompany this study. Four limitations that merit special attention are the composition of the sample, the time period in which the survey was conducted, measurement and methodological challenges, and the limited perspective of the researcher.

Although this study cast a wide net by reaching out to school contacts from a national database as well as through professional organizations and social media, there is no guarantee that the sample accurately reflects the population of middle and high school

Dual Language teachers. For example, the proportion who were not US citizens or green card holders was very small (9.5%) and may not have been a fair representation of the larger population of visa holders, who represent an especially large and important group of Dual Language teachers in many states like Utah and North Carolina (US Department of Education, 2015). Further, since the overall population of secondary Dual Language teachers is unknown at this time there may exist other important clusters of teacher identities that were not captured in these results. Therefore, the overall generalizability of the findings remains unknown.

A second major limitation is that this survey took place in the fall of 2020, when the COVID-19 pandemic had closed schools across the United States and the working conditions of teachers were quite different from typical school years. The impact of these temporary working conditions and of the overall stress of an international crisis on the responses that teachers provided cannot be fully known. It could be that the same teachers answering the same questions during a more typical school year would have indicated different perspectives, especially in regards to career commitment factors. Further, there were noticeably few responses from public schools in New York City, which has hundreds of schools in the contact database used for outreach. Perhaps this was because New York City schools had experienced an on-again, off-again schedule of school closures (Zimmer, 2021) which may have led to a reluctance to voluntarily participate in a study during a stressful time.

Third, adequate measurement of the constructs in the study posed a challenge along with methodological issues of interpreting available measures. The low internal

reliability of three of the eight factors (Ability, Limited Opportunities Commitment, and Normative Commitment) suggests that the measurement of these factors should be improved for future research that is not exploratory in nature. At the time the survey instrument was developed there was a greater emphasis on which individual items to include than on what larger factors they might load onto; in retrospect it would have been incredibly helpful to interpretation to know those loadings in advance and to flesh out factors with weak internal reliability by adding and revising items.

Finally, a fourth significant limitation is the identity of the researcher. Although I approached this study as both an insider (in the sense of having worked with Dual Language programs in my own school division and having many professional links across the country) and an outsider (in the sense of not having worked directly in many of the contexts studied), it is quite likely that my own preconceptions about what I expected to find colored my interpretation of the data. This is especially true when interpreting narrative responses, which often left room for filling in implications that went unspoken. As a school division administrator some years removed from teaching, it is sometimes easier to identify with an etic perspective of thinking about teacher shortage as a large scale phenomenon than with the emic perspective of individual teachers balancing myriad forces pushing them into or pulling them out of their own individual careers.

Recommendations for Future Research

The scope of this study was fairly narrow, but the findings suggest several possible future directions for additional research. Four specific recommendations are to adjust survey items for a clear and univariate match with study constructs, to conduct

additional research on teacher language proficiency, to explore specific clusters identified by this study, and to further examine specific aspects of teacher identity that may overpower even social identity as factors in career decisions.

Future studies of the topic of career decisions of secondary Dual Language teachers would benefit from refining the survey questions to better match specific career decision factors, and should also better account for the past immigration status of teachers than this study did. Although this survey used items from existing instruments as well as novel items based on the literature review, the process of reducing the number of items after pilot testing and later, removing items from posthoc analysis based on factor reduction may have created some gaps in important aspects of each career decision factor. The low internal reliability for Ability, Limited Opportunities Commitment, and Normative Commitment suggests this was likely the case for these factors especially. Rewording items for clarity and cohesion with one and only one career decision factor would also support better analysis. As was noted in previous chapters, the possible mismatch between a teacher's current immigration status and their status when they began teaching in Dual Language created a confounding situation for interpreting questions about immigration issues as a career decision factor.

Initially, I had hoped to discover more about the language proficiency of Dual Language teachers, especially for non-native speakers of the languages they teach. Previous research suggests that the relatively low language levels of many non-native teachers in Dual Language (including heritage speakers who grew up in the United States) creates a "vicious linguistic cycle" producing students whose proficiency ceilings

are artificially low due to their available role models for academic language (Guerrero & Guerrero, 2008). The challenge of teaching high-level secondary school concepts when the teacher has limited proficiency in the target language has also been identified as a stressor for many non-native speaker Dual Language teachers (Beeman & Urow, 2003). Further, since the challenge of balancing language instruction and content-focused instruction has been identified as a major challenge for Dual Language teachers generally (Cammarata & Ó Ceallaigh, 2018; Cammarata & Tedick, 2012; Tedick & Wesely, 2015), there may be important links between teacher language proficiency and their ability to conceptualize and balance these domains. The connection between language proficiency and perceived career performance and satisfaction could provide insights into how to better support teachers who are not yet fully proficient in the languages they teach. However, this study was not able to examine these possible connections. This was largely due to the difficulty teachers had in specifying their own language proficiency level, and the variety of tests they had taken to meet state requirements which do not always offer compatible scales for interpreting results. Future research might include a priori proficiency testing of teacher participants, and then examine how teacher proficiency levels interact with career decision factors and with student outcomes.

A third suggestion for future research is to focus on one of the four clusters of teacher identity uncovered in this study: Non-Native Speakers, Microcosm, Hispanic Native Speakers, and Non-Hispanic Native Speakers. Other methodologies could be employed to better understand each cluster, such as case studies or examining longitudinal data on actual teacher career patterns (not just intent). There may also be

specific state or regional trends for particular clusters. Although this study benefited from a wide lens and a sample from across the nation, future research can explore how state-specific and school-specific factors impact teachers in different clusters. For example, how do teachers in the Non-Native Speakers cluster (predominantly White) interpret and react to school-level efforts to increase teacher diversity? Or how do Hispanic Native Speakers experience state licensure requirements, such as Virginia requiring that even teachers who teach only in Spanish and do not teach math must pass a test of English grammar and must also pass a math skills test (Virginia Department of Education, 2018)? Using the identified classes as a starting point for additional research could add great value to understanding the needs and perspectives of teachers.

Finally, future research should hone in on ways to support especially vulnerable teacher populations facing career decisions. For example, there was a small percentage of respondents (2.4%) in this survey who reported holding DACA work permits; this population of teachers may be especially worthy of further study since there are an estimated 20,000 teachers in the US with this status, predominantly Latinx, and who have spent years in a state of suspense while their long-term status and eligibility to work are resolved (Griffin, 2018). Or, research could examine the experience of Dual Language teachers who are strongly considering leaving the field within a year to explore what factors dissuade or accelerate their departure from teaching. As Dual Language programs continue to expand, further research is needed to understand and respond to the career experiences of Dual Language teachers.

Conclusion

Dual Language education is one of the most powerful tools for educational equity and academic achievement to be achieved at large scale in public schools (Lindholm-Leary, 2016; Thomas & Collier, 2017). Yet, the demand for teachers is a major barrier to making Dual Language education accessible to more students (Kelly, 2018; Liebtag & Haugen, 2015; U.S. Department of Education, 2015). To understand the career decisions of secondary Dual Language teachers, this study sought to directly capture their perspectives in order to amplify their voices. It helps fill a gap in the literature by surveying teachers across the United States about the career decision factors that are most important for middle and high school Dual Language teachers. The main findings for each of the three research questions, along with the primary implications, are described below.

First, who are Dual Language teachers at the middle and high school level in the United States? Participants had a range of demographic characteristics but the majority were not native speakers of the languages they taught. Most were US citizens or permanent residents and had entered teaching through a pathway other than a traditional teacher education program. Generally speaking, the teachers who participated in this study expressed enthusiasm about their work and believed that they are making a difference for students and society. However, they also reported that Dual Language teachers work harder than other types of secondary teachers, which several mentioned in their narrative comments as leading to frustration, fatigue, and burnout. Teachers reported spending large amounts of time on developing and translating materials for their classes,

and said they spent more time working than their non-Dual Language colleagues. These findings suggest that recruitment and retention efforts should be more nuanced to match the identities and experiences of teachers with different characteristics.

Second, what reasons are most important in career decisions for this group of teachers? The study affirmed previous findings that positive and supportive work environments are important to support career commitment (de Jong & Bearse, 2014; Howard & Lopez-Velasquez, 2019), and provided evidence that altruistic factors and a passion for the language they would teach are especially salient consideration for teachers choosing to join the field. Therefore, recruitment and retention efforts should make reference to and build upon the things that Dual Language teachers value.

Third, are there identifiable clusters of teacher identities that can help refine teacher recruitment and retention efforts? This study uncovered four typologies of secondary Dual Language teachers informed by their racial/ethnic, bilingual, and immigrant identities. The first group includes predominantly White and non-Hispanic teachers who are not native speakers of the languages they teach. The second group is comprised of a diverse mix that was largely a reflection of the overall sample, except that it includes very few Spanish teachers. The third group includes mostly Hispanic teachers who are citizens or green card holders and who are native speakers of the languages they teach. And the fourth group is composed of non-Hispanic native speakers of the languages they teach, primarily Chinese, and is the only group that is majority visa holders. The Hispanic Native Speakers group stood out from at least one other group on several career decision factors, rating their perceptions of their own ability as especially

important when they decided to become teachers and rating normative and affective factors in career commitment even higher than the other groups. Therefore, school leaders should apply differentiated approaches to affirming teacher social identities and to nuancing their recruitment and retention efforts for different groups. The better that school leaders can affirm the specific identities and values of teachers, the more likely they are to succeed in attracting and keeping those teachers.

Dual Language education continues to positively impact students and communities, and the extension of programs to the middle and high school grades helps fulfill the promise of fully bi-literate graduates who have strong intercultural skills. Good teachers are the most important resource needed to grow and sustain Dual Language programs at the secondary level, and so the recruitment and retention of teachers is one of the most pressing issues for Dual Language advocates and leaders. The findings of this study suggest specific ways that different types of Dual Language advocates can help. Teacher educators can refine their coursework to better match the demands their preservice teachers will face. Policymakers can ease the pathway to teacher licensure. School and district leaders can create positive and collaborative work environments. Parents of Dual Language students can affirm the impact of their child's teachers and advocate for the kinds of improvements that would attract and keep more teachers. And, although many survey participants reported that no meaningful people in their lives had encouraged them to become Dual Language teachers, everyone can work to counter this trend by encouraging and supporting the potential Dual Language teachers in their lives to consider this meaningful career option.

There is a clear shortage of Dual Language teachers, embedded within a shortage of world language teachers, embedded in a general teacher shortage in the United States. Unfortunately, there is no magic formula for solving that shortage. Teacher recruitment can be more effective by appealing to teachers' stated values: helping students, improving society, and sharing their love of the language they will teach. Similarly, teacher retention efforts can be more effective by creating teacher-friendly work environments and by regularly reinforcing and celebrating the things that teachers value. Teachers and teacher recruits must be treated as treasured partners in the work so that Dual Language programs can continue to thrive.

IRB Approval Form

Office of Research Integrity and Assurance

Research Hall, 4400 University Drive, MS 6D5, Fairfax,
Virginia 22030 Phone: 703-993-5445; Fax: 703-993-9590

DATE: September 17, 2020

TO: Rebecca Fox

FROM: George Mason University IRB

Project Title: [1653597-1] Characteristics and Career Decisions of Secondary

Dual Language Teachers in the United States

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: September 17, 2020

REVIEW TYPE: Expedited Review

REVIEW TYPE: Expedited review category #7

Thank you for your submission of New Project materials for this project. The George Mason University IRB has APPROVED your submission. This submission has received Expedited Review based on applicable federal regulations.

You are required to follow the George Mason University Covid-19 research continuity of operations guidance. You may not begin or resume any face-to-face interactions with human subjects until (i) Mason has generally authorized the types of activities you will conduct, or (ii) you have received advance written authorization to do so from Mason's Research Review Committee. In all cases, all safeguards for face-to-face contact that are required by Mason's COVID policies and procedures must be followed.

Please remember that all research must be conducted as described in the submitted materials.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form unless the IRB has waived the requirement for a signature on the consent form or has waived the requirement for a consent process.

Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by the IRB prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to the IRB office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed (if applicable).

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This study does not have an expiration date but you will receive an annual reminder regarding future requirements.

Please note that all research records must be retained for a minimum of five years, or as described in your submission, after the completion of the project.

Please note that department or other approvals may be required to conduct your research in addition to IRB approval.

If you have any questions, please contact Katie Brooks at (703) 993-4121 or kbrook14@gmu.edu. Please include your project title and reference number in all correspondence with this committee.

GMU IRB Standard Operating Procedures can be found here:
https://oria.gmu.edu/topics-of-interest/ human-subjects/

Appendix B

Informed Consent Form

RESEARCH PROCEDURES
This research is being conducted to understand more about Dual Language teachers in middle and high schools in the United States, including why they chose to become Dual Language teachers and what factors encourage them to remain in the field. If you agree to participate, you will be asked to take a 15 minute survey. This survey asks questions about your demographic characteristics and your beliefs and opinions now and when you first decided to become a Dual Language teacher.

RISKS
The foreseeable risks or discomforts include questions that may be personal or could recall something upsetting to you. The survey includes questions about your immigration status and job satisfaction. If you do not wish to answer any question, you may skip it or quit the survey at any time.

BENEFITS
There are no benefits to you as a participant other than to further research in this important area.

CONFIDENTIALITY
The data in this study will be confidential. Your name and contact information is not captured in the survey data itself. Because there is a chance your data could be seen by someone who shouldn't have access to it, we will keep your identifying information separate from your research data, so your responses are anonymous. While it is understood that no computer transmission can be perfectly secure, reasonable efforts will be made to protect the confidentiality of your transmission. The de-identified data from this study could be used for future research without additional consent from participants. The Institutional Review Board (IRB) committee that monitors research on human subjects may inspect study records during internal auditing procedures and are required to keep all information confidential.

PARTICIPATION
Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no

penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party. If you are eligible and complete the survey, you will have the opportunity to go to a separate link where you can sign up for a guaranteed $5 Amazon gift card or enter a drawing for a $50 Amazon gift card. Under the U.S. federal tax law you may have individual responsibilities for disclosing the dollar value of the incentive received on this study.

CONTACT
This research is being conducted Jeremy Aldrich, a doctoral candidate in the College of Education and Human Development at George Mason University. He may be reached at xxx or xxx for questions or to report a research-related problem. The faculty chairperson for this dissertation research is Dr. Rebecca Fox, who can be reached at xxx or xxx. You may contact the George Mason University Institutional Review Board office at 703-993-4121 or IRB@gmu.edu if you have questions or comments regarding your rights as a participant in the research. This research has been reviewed according to George Mason University procedures governing your participation in this research and can be referenced as IRBNet 1653597-1.

CONSENT
By clicking the NEXT button below, I confirm that I have read this form, all of my questions have been answered by the research staff, and I agree to participate in this study.

Appendix C

Survey Items and Sources

* = novel question based on literature review

+ = question from the National Teacher and Principal Survey 2017-2018 (NCES, n.d.)

= question from the Reasons for Teaching Scale (Kyriacou et al., 1999)

! = question from the Career Commitment Scale (Blau, 1985)

Section A: Eligibility questions

*Are you a teacher in a public, private, or charter school in the United States? *Yes/No*

* In this school year, are you teaching at least one course designated for students in a

Dual language program? *Yes/No*

*Which grade levels do you teach this school year? (select all that apply) *K-5, 6-8, 9-12,*

Other

Section B: Teacher Characteristics (From NTPS Teacher Questionnaire)

* Which US state/territory do you work in? *Dropdown list*

+ How many years (including this school year) have you worked, either full-time or part-

time, as a teacher? *Dropdown list*

* How many years (including this school year) have you been teaching as part of a Dual

Language program? *Dropdown list*

+ This school year, what subject(s) do you teach in the Dual Language program?

Language Arts, Math, Science, Social Studies, World Languages, Fine Arts, Physical Education, Career and Technical Education, Other

* Are you a: *US citizen, green card holder, on an H1B visa, on a J2 visa, Other*

+ Have you taken any college courses in the following areas? *Yes/No options for all*

      a. Classroom management techniques?

      b. Lesson planning?

      c. How to assess learning?

      d. How to use student performance data to inform instruction?

      e. How to serve students from diverse economic backgrounds?

      f. How to serve students with special needs?

      g. How to teach students who are limited-English proficient (LEP) or English-language learners (ELLs)?

+ Did you enter teaching through an alternative route to certification program? (An alternative route to certification program is a program that was designed to support the transition of nonteachers to a teaching career, for example, a state, district, or university alternative route to certification program.) *Yes/No*

+ Are you male or female, *other, or prefer not to say? *Male/Female/Other/Prefer Not to Say*

+ Are you of Hispanic or Latino origin? *Yes/No*

+ What is your race? You may select more than one. *White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander*

*What is your age in years? *Numeric response*

* What is the target language, other than English, of your school's Dual Language program(s)? Select all that apply. *Arabic, Chinese, English, French, German, Hebrew, Indigenous/Native American Language, Japanese, Korean, Spanish, Other*

* How would you describe your school's Dual Language program? *One-Way Immersion designed for native/heritage speakers of the target language, One-Way Immersion designed for native English speakers to learn the target language, Two-Way Immersion designed for an intentional mix of native speakers of English and the target language, Other/Not Sure*

* In which language do **you** teach your classes in the Dual Language program (in other words, what is the target language of your Dual Language classroom)? *Arabic, Chinese, English, French, German, Hebrew, Indigenous/Native American Language, Japanese, Korean, Spanish, Other*

* How did you learn the language in which you teach your Dual Language classes? *I am a native/heritage speaker, I learned it in school/university (including study abroad), I learned it by living abroad, Other*

* If you have ever had an official proficiency test for the language you use in your Dual Language classroom, what was your rating? *I have never had an official proficiency test, I had an OPI/WPT from ACTFL and my rating was ___, I have been rated on the CEFR scale and my rating was ___, I have been rated using the ILR scale and my rating was ___, I took a different proficiency test (please describe the name of the test and the rating you received)__*

Section C: Factors in Initial Decision

* People becoming Dual Language teachers have many beliefs and ideas about teaching. For this section, think back to your original decision to become a teacher in a Dual Language program. How important was each of these beliefs for you personally when you decided to become a Dual Language teacher? *This was not at all important to me at that time, This was somewhat important to me at that time, This was very important to me at that time*

The subject I was going to teach was important to me.

* I felt passionate about the language I was going to teach in.

Teaching in Dual Language offers good job security.

Dual Language teachers have a respectable social status.

There are good benefits (such as health insurance and vacations) for Dual Language teachers.

Other people influenced me to become a Dual Language teacher (e.g., previous teachers, friends).

Teaching *Dual Language in the US can help me to get a job teaching in another country.

* I believed Dual Language education can close achievement gaps.

* I believed Dual Language education can create a more equitable society.

I thought I had a personality that is suited for this job.

I thought I would like the activity of classroom teaching.

I wanted to help children succeed.

I thought the level of pay for *Dual Language teachers is quite good.

* I lived outside the US and wanted to work here, so becoming a Dual Language was a good opportunity for me.

Section D: Career Commitment

+ To what extent do you agree or disagree with the following statements about your work *in the Dual Language program? *Strongly Disagree, Disagree, Agree, Strongly Agree*

+ The *Dual Language* teachers at *my* school like being here.

+ If I could get a higher paying job I'd leave Dual Language teaching as soon as possible.

+ I don't seem to have as much enthusiasm now as I did when I began teaching in Dual Language.

+ I think about staying home from school because I'm just too tired to go.

+ I have sufficient resources available for my professional development as a Dual Language teacher.

! If I could do it all over again, I would choose to work in the Dual Language program.

! I would recommend a career in Dual Language teaching to others.

* I picture myself teaching in a Dual Language program for many years.

* My immigration status means I might need to leave Dual Language teaching before I want to.

* I enjoy the work of being a Dual Language teacher.

* Dual Language teachers at my school get bonus pay or extra financial incentives

for teaching in the program.

* I can have a good work/life balance as a Dual Language teacher.

* I think the work is important for my students' future.

* I think the work is important for society's future.

* I am content with the salary I receive as a Dual Language teacher.

* I don't have other job options right now.

* I have more freedom than other teachers at my school because I teach in the Dual Language program.

* I work harder than other teachers at my school because I teach in the Dual Language program.

* I feel supported by administrators in my school.

* I feel supported by the parents of my students.

* I feel supported by other teachers in the Dual Language program.

* I feel supported by other teachers not in the Dual Language program in my school.

Open-ended: Why are you a Dual Language teacher? Please write for three or four minutes about your own story (in English or your native language).

Appendix D

Exploratory Factor Analysis of Career Decision Items

First, items specific to immigrant experiences were removed since most participants were US citizens at the time of data collection. The data was screened for univariate outliers, and none were found.

Then, the factorability of the 13 items related to initial reasons for becoming a Dual Language teacher were examined. Firstly, it was observed that all items correlated at least .3 with at least one other item, suggesting reasonable factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .76, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant ($\chi 2$ (78) = 615.53, $p < .05$). Finally, the communalities were all above .3 (see Table 13), further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was deemed to be suitable with all 13 items.

A Principal Component Analysis with Oblimin rotation revealed that the 13 items could be reduced to four key components which each had eigenvalues greater than one and cumulatively accounted for 58% of the observed variance.

Table 13

Factor Loadings and Communalities Based on a Principal Components Analysis with Oblimin Rotation for 13 Items on Initial Reasons for Becoming a Dual Language Teacher

	Component				
	Intrinsic/ Altruistic	Opportunity / Benefits	Influence	Ability	Commun-ality
Equitable society	.737				.572
Close gaps	.702				.655
Target language is important	.701				.573
Wanted to help kids	.593				.463
The subject is important	.494				.603
Pay is good		.735			.597
Teachers have good social status		.693			.496
Job benefits		.678			.467
Wanted to work outside the US in the future		.656			.438
Good job security		.556			.626
Influenced by meaningful relationships			.817		.775
Thought I would like activity of teaching				.785	.642
Thought I had a personality that fit				.746	.641

Note. Factor loadings < .45 are suppressed.

Next, the factorability of the 21 items related to career commitment were examined. First, it was observed that 18 items correlated at least .3 with at least one other item, suggesting reasonable factorability. The items that were below that threshold were about picturing oneself in the career for many years, perceiving no career options, and

feeling supported by teachers not in the Dual Language program. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .79, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant ($\chi2$ (210) = 1411.16, $p < .05$). Finally, the communalities were all above .3 (see Table 14), further supporting that each item shared some common variance with other items. Given these overall indicators, factor analysis was deemed to be suitable with all 21 items.

Table 14

Factor Loadings and Communalities Based on a Principal Components Analysis with Oblimin Rotation for 18 Items on Career Commitment Factors

	Component				Commun-ality
	Affective	Accumulat-ed Costs	Limited Opportunities/ Dissatisfaction	Norm-ative	
Other DL teachers like it	.708				.531
I enjoy the work	.654				.564
I would do this career again	.625				.563
Would recommend this career	.605				.490
Can have work/life balance	.551				.588
Salary is good		.786			.617
Financial incentives beyond salary for working in DL		.693			.578
Sufficient professional development resources		.658			.494
Supported by students' parents		.553			.410
Picture self in this career for many years		.484			.342
Have more freedom than non-DL teachers		.457			.298
Have less enthusiasm than when I started			.813		.656
Would leave for higher paying job if given chance			.738		.593
Sometimes think about staying home from work			.579		.396
My work is important for students				-.693	.622
I work harder than non-DL teachers				-.691	.463
What I do is important for society				-.587	.474
Supported by DL colleagues				-.470	.433

Note. Factor loadings > .45 are suppressed.

A Principal Component Analysis was used because the primary purpose was to identify and compute composite scores. Initial eigenvalues indicated that the first three factors explained 22%, 13%, and 8% of the variance respectively. The fourth and fifth factors each explained less than 6% of the variance. Solutions for three, four, and five factors were each examined using Oblimin rotations of the factor loading matrix. The four factor solution, which explained 49% of the variance, was preferred because of its theoretical alignment with Blau's (2003) four-dimensional model of career commitment and the difficulty of interpreting the five factor solution. Two items (AdminSupport and NonDLTchrSupport) were eliminated because they did not contribute to a simple factor structure and failed to meet a minimum criteria of having a primary factor loading of .45 or above. Additionally, a third item (NoOptions) was eliminated for cross-loading onto two of the factors well above the .3 threshold.

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Biography

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