

**THE TIMING OF CAREER CHOICE FOR MINORITY STUDENTS IN
ARIZONA STATE UNIVERSITY'S 2+2+2
FUTURE TEACHER PROGRAM**

THESIS

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in Partial Fulfillment
of the Requirements**

For the Degree

Master of Arts

By

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2001

DEDICATION

This thesis is dedicated to my father, Hugh Gerald Jones; my wife, Katina Jones; my four children: Chantal, Avery, Ameil, and Ahmad; my unborn seeds; and to Apoch Kala Toure for keeping watch from the shadows.

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ABSTRACT

The Timing of Career Choice for Minority Students in Arizona State University's 2+2+2 Future Teacher Program

By

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The American K-12 public educational system is facing a major minority teacher shortage. Recent statements by the Department of Education indicate a need to hire two million teachers over the next decade (Bradley, 1999). As we began the millennium, one-third of K-12 enrollment were minority students and less than 10% of the teaching force were minorities. Teacher preparation programs and education policy makers must consider how new and existing teacher recruitment efforts can effectively address the minority teacher/student ratio disparity.

The purpose of this study was to examine data offering potential insight about when minority students begin to consider careers as teachers. The research questions for the study were designed to explore the relationship between gender, race, first-generation college attendance status, history of teachers in one's family, grade level desired to teach, and attendance at a majority-minority school and when one begins to consider teaching as a career choice. An 18-item telephone survey questionnaire was administered to 52 student participants in a collaborative teacher recruitment program sponsored by ten high schools, six community colleges and one Carnegie-classified Research I University. Results of this exploratory study indicated that students' thinking related to teaching

careers began much earlier than the time when students were targeted by the teacher recruitment program.

CHAPTER 1

INTRODUCTION TO THE STUDY

This chapter provides the background, purpose, significance, research questions, limitations, and key terms of the present study. As a backdrop, the chapter presents data regarding recent and projected demographic changes in K-12 minority enrollment at the national level and parallel data for the state of Arizona, the setting for the current study. Student demographic data are presented in comparison to teacher demographic data for the nation and for Arizona. Further, inferences are made as to the implications of low percentages of minority teachers compared to the growing percentages of minority K-12 student populations within the United States and Arizona, particularly with respect to the potential pool of future minority educators and teacher preparation programs. The national and local K-12 demographic profile appears to call for creative recruitment of minority students into the field of teaching. Given the demonstrated need, several colleges and universities already sponsor teacher recruitment programs targeting minority teacher candidates.

The intent of this research was to identify when minority students in an existing teacher recruitment program sponsored by Arizona State University began to consider teaching as a career choice. A potential outcome of this research is for teacher recruitment program administrators to identify critical periods in students' development when they are making life changing career choices and to introduce them to the teaching profession in a systematic, supportive, and timely way. With this end in mind, Chapter 1 begins by outlining the national and local minority teacher shortage indicating the need for more effective teacher recruitment programs targeting potential minority teacher candidates. The chapter then proceeds to discuss the significance, scope, limitations of the study, presents the research questions for the study, and defines relevant terms used throughout the proposal.

Demographic Projections for K-12 Minority Students: United States and Arizona

It is projected that by 2020 almost half of all American children will be minority group members (Rubin & Borgers, 1991). By the year 2000, it was estimated that minority enrollment would comprise 33 to 35% of the nation's school aged population (Hunter-Boykin, 1993; Yopp, H., Yopp, R. & Taylor, 1991). Indeed, as of 1999, 38% of students enrolled in public schools were minority (The Condition of Education, 2001), with African American students comprising 17.2%, Hispanics 15.6%, Asian American 4%, and American Indians 1.2% of total minority enrollment in public schools in 1999-2000. As early as 1995, minority enrollment percentages met these projections. According to the National Center for Educational Statistics (1998), in 1995, 35% of students enrolled in K-12 belonged to a minority group. This phenomenon represented

an 11% increase over the previous 20 years. In 1995, Hispanic students attending central city public schools comprised 25% of enrollment, up from 10% in 1972. African Americans experienced a 5% enrollment growth in metropolitan public schools from 6% in 1972 to 11% in 1995, while remaining constant at 33-35% in central city schools since the early 1970 period (NCES, 1998).

According to the Arizona Department of Education (ASE) (1998), during the 1989-90 school year, Arizona minority student percentages had already exceeded the national projections for the year 2000. Thus minority students comprised 37% of the state's K-12 enrollment with Hispanic students at 25% of the enrollment, African American at 4%, American Indians at 7%, and Asian/Pacific Islander student populations at 1.5% (ADE, 1998). From the 1989-90 to 1999-2000 school year, minority representation within Arizona's K-12 enrollment increased to 46%, almost meeting national minority projections for the year 2020 two decades earlier (NCES, 1999-2000). During this period, the greatest minority growth was actualized from the Hispanic population with a 7.7% increase from 25% in 1990 to 32.7% in 1999-2000. African American, American Indian, and Asian/Pacific Islander enrollment rates remained relatively constant at 4.6%, 6.8%, and 1.9% respectively (NCES, 1999-2000).

Demographic Projections for Minority Teachers: United States and Arizona

Throughout the United States the number of minority students in kindergarten through the senior year of high school continues to increase while the number of minority teachers continues to decline (Lankard, 1994). National demographic growth trends predicted an increased presence of African American and Hispanic students in America's

classrooms with minority representation in the teaching force standing at a critical low (Yopp et al., 1991). Several authors' research reveals a steep decline in the number of minority teachers since 1990 (Anglin, Mooradian, & Hamilton, 1993; Contreras & Nicklas, 1993; Fuller, 1992; Lankard, 1994; Yopp et al., 1991). In 1991, minorities comprised 12% of the teaching force. These percentages were anticipated to drop to 5-6% by the close of the 20th century (Yopp et al., 1991). The most recent information available, provided by the Digest of Education Statistics (1997), presents data for public elementary and secondary schools for 1993-94 indicating that 7% of the nation's teaching force was African American, 4.2 % Hispanic, 1% Asian American, and .8% American Indian. During this same period, African American and Hispanic students made up 15.8% and 12.7% of the public educational system respectively (Simpson, 1997). Moreover, by the year 2001 it was expected that one-third of the students in K-12 would be culturally and linguistically diverse while 95% of the teachers would be White (Hill, Carjuzaa, Aramburo, & Baca, 1993).

These trends suggest that minority teachers will increasingly represent a diminishing and eventually negligible presence in our nation's classrooms where by 2020 one of every two students will be a person of color (Rubin & Borgers, 1991). Already, it is possible to go through the K-12 academic experience and never have a minority teacher (Jacullo-Noto, 1991; Savelsbergh, 1994). According to Hill et al. (1993), on average a student will have 40 teachers over the course of his or her elementary and secondary educational experience. The authors indicate that during this time a student can be predicted to have only two teachers from a culturally or linguistically diverse background.

However, in Arizona from 1990 to 1995 percentages of minority teachers, though relatively small, had remained stable at 12.6% (ADE, 1995-2000). Contradictory to national trend predictions, there had been no substantial decrease in the distribution of the teaching population across racial/ethnic categories in Arizona during the first 5 years of the previous decade with 8.1% being Hispanic, 1.8% American Indian, 1.7% African American, and less than 1% being Asian American during 1995 (ADE, 1995-2000). The proportions have remained almost identical every year, with only slight increases favoring minority populations, particularly American Indian teaching percentages. Despite persistent numbers regarding teacher percentages, comparatively, the percentages of Arizona minority teachers is smaller when compared to the percentages of Arizona K-12 minority student enrollment.

By 1999 in Arizona, percentages for minority K-12 enrollment had increased to 44% from 37% in the previous decade (NCES, 1999-2000). In 1999, Arizona minority teachers made up only 13.1% of Arizona's teacher population (ADE, 1995-2000) with 9.3% being Hispanic, 2% American Indian, 1.8% African American, and less than 1% being Asian American. This is a slight increase from 1995 where minorities were 12.6% of Arizona's teaching population with 8.1% being Hispanic, 1.8% American Indian, 1.7% African American, and less than 1% being Asian American during 1995 (ADE, 1995-2000). The earliest Arizona teacher race/ethnicity data available was for the 1995 academic year. While Arizona's total minority teacher percentages of 12.6% in 1995 and 13.1% in 1999 are comparable to national minority teacher percentages of 13% in 1994, all figures are far lower than minority student percentages for K-12 during the same time span.

Scholars assert that the discrepancy between the percentages of minority teachers and minority students can have multiple negative implications for the academic and social development of students. For example, Savelsbergh (1994) suggests that the psychological development of minority students tends to be impaired at schools where the majority of teachers are white and the majority of students are minority. Others believe that this disparity between demographics for teachers and for students can contribute to the underachievement of minority students (Hunter-Boykin, 1993; Lankard, 1994). Several researchers suggest a relationship between students' self-esteem and the presence of role models from the same or similar cultural backgrounds (Fuller, 1992; Hill et al., 1993; Jacullo-Noto, 1991; Yopp et al., 1991). These authors believe it is critical for minority students to see persons from their culture in positions reflecting authority, intellect, and responsibility. The research of these scholars supports the need for minority role models and also points out that the benefits of a diverse teaching force are not exclusive to minority students.

Strong role models are needed for all students (Chapman, 1993). Many researchers and policy makers believe it is imperative that our school-aged children, including Whites, have exposure to the wealth and dynamics of America's culturally and linguistically diverse teaching force (Bainer, 1993; Fielder, 1996; Hill et al., 1993). Minority teacher's presence helps diverse students to understand "the power and competence that cut across racial boundaries" (Hunter-Boykin, 1993, p. 32). According to Fuller (1992) "teachers personify content" (p. 88). They stand as living models for students, providing examples of diversity and alternative vantagepoints and perspectives instead of representing only their respective ethnicities. Likewise, teachers serve as

necessary role models for all children to help shape the identities and perceptions of who can hold positions of “authority and influence” (Jacullo-Noto, 1991, p. 215).

Despite these identified benefits of a multicultural teaching force, schools across the U.S. are facing a shortage of minority educators (Anglin et al., 1993). The demand for new teachers was reported as growing annually by 200,000 between 1990 and 2000 (Savelsbergh, 1994). An MIT study in 1990 reported that "to achieve parity between the teaching force and the student population would require the licensing and certification of 450,000 minority teachers over the next five years" (Anglin et al., p. 8). The licensing and certification process most often occurs through college and university teacher preparation programs.

However, prior studies looking at the demographics of college and university teacher education programs reveal that the majority of students seeking teaching degrees are not minority, but are White and female. A survey conducted in 1987 by the American Association of Colleges for Teacher Education revealed that enrollment in elementary and secondary education programs was 90% White (Hunter-Boykin, 1993) and 75% female (Fuller, 1992). Troutman, Jones and Ramirez (1997) using 1995 data from the Digest of Educational Statistics (DES) further illustrate this point. According to their research, nationwide in 1993, 83% of students in teacher preparation programs were White, while 5% were African American and 6% Hispanic. At the same time, public school enrollment was 66% White, 17% Black, and 13% Hispanic (DES, 1997).

Despite higher percentages of minority populations in Arizona, the number of minority students seeking teacher certification through Arizona State University's undergraduate programs in 1993 remains relatively low, consistent with national teacher

preparation programs minority representation for that same year. In the Fall of 1993, 81.1% of ASU's College of Education students were white, while 2.7% were African American, 12.5% were Hispanic, and 1.8 % were American Indian students (ASU Main Facts, 1994). However, at ASU, using enrollment statistics from the Fall 2000 semester, data show an increase in the percentage of minority students enrolled in the college. By the Fall of 2000 the ASU College of Education's undergraduate minority enrollment had increased to 22% (ASU Main Facts, 2000-2001). African American enrollment percentages (2.5%) stayed constant from 1993 to 2000. Hispanic enrollment increased to 14%. The greatest increase was within the American Indian population. American Indians went from 1.8 % of the total ASU College of Education enrollment in 1993 to 3.8% in 2000 (ASU Main Facts, 2000-2001). This increase is most likely attributable to the introduction of the Dine' Program in 1996 for the specific purpose of increasing American Indian teacher recruitment. The Dine' Program is a site-based teacher training program at Dine' College on the Navajo Reservation in Tsaile, Arizona. Program participants are taught by resident ASU faculty and recognized as ASU graduates upon completion of state certification course requirements (R. Daniel, personal communication, April 2000). Even with relative growth of minority students seeking teaching degrees from institutions that serve populations with high numbers of minority persons like ASU, the increase is still insufficient to keep pace with the current and predicted trends for minority K-12 enrollment for the state.

The challenge of attracting minority students to teacher preparation programs has been attributed to several factors. Discussed more in-depth in the following chapter, some of these factors include but are not limited to student attrition from secondary

education, perception of low salaries upon entering the profession or increasing availability of alternative career paths historically not available to minority students, absence of role models, low retention rates, disproportionate failure rates on teaching standards certification tests, financial obstacles, and articulation difficulties between community college and bachelor degree granting institutions (Gordon, 1995; Hill et al., 1993; Yopp et al., 1991).

One of the current solutions to increase minority representation in teacher preparation programs is to implement various recruitment strategies targeting underrepresented populations at the high school and school district levels (Contreras & Nicklas, 1993; Fielder, 1996; Hunter-Boykin, 1993; Yopp et al., 1991). There are several teacher recruitment models to consider, as will be discussed in the following chapter. Most programs operate within a similar construct, emphasizing collaboration between universities and school districts, mentoring, academic skill development, college exposure, and scholarships. There is little consensus, however, about the optimal time to begin recruiting minority students into teacher preparation programs. It is the author's contention that when the recruitment process formally begins is critical to the program's ability to match students' interest in teaching careers with programs and services that will help students negotiate the multiple challenges affecting their ability to complete college graduation, teacher certification requirements, and hence move on to careers as K-12 classroom teachers.

Significance of the Study

The purpose of this study was to examine data offering potential insight about when students begin to consider careers as teachers. It is the researcher's hope that the findings will aid local and national teacher recruitment efforts to balance the percentages of minority students and of minority teachers. This research should help education policy makers, college recruiters, and teacher recruitment program administrators identify periods within students' K-12 academic experience during which it would seem important to engage students who are in the process of serious career exploration and contending with issues that may or may not support their career choices.

A review of the current literature yields limited information on when students begin to seriously consider teaching as a career. This study examined factors associated with the timing of the decision to prepare to become teachers among minority students participating in ASU's 2+2+2 Partnership Program, a teacher recruitment program sponsored by the College of Education. ASU, the College of Education, the 2+2+2 Partnership Program, and new as well as existing teacher recruitment models have the potential to benefit from the outcomes derived from this study. Using the information explored in the study, program administrators and school staff may want to revise current recruitment strategies based on identifiable student characteristics such as gender, race/ethnic background, first-generation status, and majority-minority school attendance status and, when appropriate, other factors not so obvious like family history of teachers and grade level desired to teach of prospective program participants.

Research Questions of the Study

Variables such as gender, race/ethnicity, first-generation college attendance status, history of teachers in one's family, grade level desired to teach, and attendance at a majority-minority school were explored in relation to when students began to consider teaching as a career. These variables play a significant part in the selection process for Arizona State University's 2+2+2 Partnership Program and served as the catalysts for the following research questions:

- RQ1: Is there a relationship between gender and when one begins to consider teaching as a career choice?
- RQ2: Is there a relationship between race/ethnicity and when one begins to consider teaching as a career choice?
- RQ3: Is there a relationship between those who are first-generation college students and when one begins to consider teaching as a career choice?
- RQ4: Is there a relationship between having family members who are teachers and when one begins to consider teaching as a career choice?
- RQ5: Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?
- RQ6: Is there a relationship between whether one attended a majority-minority school at the K-12 levels and when one begins to consider teaching as a career choice?

Scope of the Study

The study was limited to minority participants in ASU's 2+2+2 Future Teacher Recruitment and Partnership Program sponsored by the College of Education. The partnership program involves high school juniors and seniors, community college students, and ASU students. The first “2” represents the junior and senior year of high school. The second “2” represents the freshman and sophomore experience at either a community college or ASU. The last “2” reflects the final two years of the program in ASU’s Professional Teacher Preparation Program.

2+2+2 Program participants, once identified by a high school contact person, must initially express a desire to be future teachers and meet one of the following criteria: first-generation college attendance status, federal low income levels or identification as African American, Asian American, Hispanic, or Native American (see Appendix C for statement of criteria). To begin formal membership in the program, students must complete an application for admissions (See Appendix D) requiring: a letter of recommendation, a high school transcript, disclosure of household income, and responses to three essay questions asking students to 1) identify an influential teacher, 2) why they wish to become an educator, and 3) what experiences they have that lend themselves to future careers as a teacher. The application also asks the applicant to declare a major offered by ASU's College of Education and requires a parent’s signature.

As of the spring 2001 semester, there were 139 students involved in the program representing ten high schools, six community colleges and one Carnegie-classified Research I institution (ASU Bulletin, 1999). Following is a demographic overview of the program:

2+2+2 Partnership Program Demographic Overview

	#	%
<u>Gender</u>		
Females	119	86%
Males	20	14%
<u>School Levels</u>		
High School	101	73%
Community College	19	14%
ASU	19	14%
<u>Financially Needy</u>	40	30%
<u>First Generation</u>	105	76%
<u>Race/Ethnicity</u>		
White	63	45%
African American	10	7%
Hispanic	61	44%
American Indian	4	3%
Asian American	1	1%
Total Minority	76	55%
<u>Program Areas</u>		
Elementary Education	45	32%
Early Childhood	16	12%
Special Education	9	6%
Secondary Education	53	38%
Bilingual Education/ESL	13	9%
Undeclared	3	2%

2+2+2 participants are provided assistance with college admissions; financial aid and scholarship application processes; exposure and interaction with ASU students, staff, faculty and programs; a summer residential program at ASU; and several workshops on skill enhancement and personal development. Upon completion of 56 undergraduate credit hours, participants are guaranteed admission into ASU's Professional Teacher Preparation Program (PTPP) assuming they meet the minimum admissions criteria of a

2.5 GPA in college level coursework, an ACT score of 21, and C or better in required pre-requisite coursework (see checksheet Appendix E).

ASU's College of Education is the program's host institution and is located near Phoenix, Arizona, in Tempe. Founded in 1885, ASU's Main Campus Fall 2000 enrollment includes over 33,000 undergraduates and 10,000 graduate students representing every state within the U.S. plus more than 115 different nations. ASU offers bachelor's, master's, and doctoral degrees through nine academic colleges and one honors college (ASU Bulletin, 2000).

The College of Education is the oldest college at ASU. It currently offers certification in Elementary, Early Childhood, Special Education, Bilingual/English as a Second Language, and Secondary Education for over 2000 students. Additionally, the college sponsors several recruitment initiatives targeting underrepresented students interested in pursuing education degrees in high need areas, such as Early Childhood, Special Education, Bilingual/ESL, and Secondary Math and Science. These programs include the Urban and East Valley Teacher Corp Program (UTC), the Dynamic Learning Program (DL), and the 2+2+2 Partnership Program discussed earlier (R. Daniel, personal communication, April 2000).

UTC targets teacher aides within school districts serving lower socio-economic populations and areas with high concentrations of minority students (Z. Neagle, personal communication, September 1999). DL works collaboratively with program administrators and students attending a local community college offering articulated transfer agreements, transition support between the community college and ASU, and

admissions, financial aid, and ACT workshops (P. L. Estrada, personal communication, November 1998).

Terminology

Throughout this research, several terms are used for which it is necessary to have a clear understanding for purposes of the present study. Following are definitions for such terms to facilitate better understanding of remaining parts of the delineation of this study.

Certification Standards Tests - tests vary from state to state, but generally a student upon graduation from a teacher preparation program must successfully pass a standards test to demonstrate proficiency in professional knowledge and subject knowledge matching the endorsement area being sought prior to receiving state certification to teach (Arizona Teacher Proficiency Assessment Study Guide, 1999).

Culturally and Linguistically Diverse – this term appears to be used synonymously with the reference to Asian/Pacific Islanders, African Americans, Hispanics, and American Indians, and other ethnic/racial groups, particularly when they comprise part of larger groups made up of two or more of the respective language or cultural groups (Hill, Carjuzaa, Aramburo, & Baca, 1993).

Status Drop out Rate – Status drop-out rates provide cumulative data on dropouts among all young adults within a specified age range. The age range used throughout this research is 16-24. The data includes all dropouts regardless of when they last attended school (U.S. Department of Commerce, Population Survey, 1995).

Ethnicity - affiliation with a group of people according to common racial, national, tribal, religious, linguistic, or cultural origin or background (taken in part from Merriam Webster's Collegiate Dictionary, 10th Edition, 1994).

First-generation College Student - 1. An individual neither of whose parents received a Baccalaureate degree; or 2. An individual who regularly resided with and received support from only one parent and whose supporting parent did not receive a baccalaureate degree (U.S. Department of Education, Application for Grants, 1997, p. 11).

Income Levels – low income is defined as the bottom 20 percent of all family incomes, middle income is the range between 20 and 80 percent, and high income is the top 20

percent of all family incomes (U.S. Department of Commerce, Current Population Survey, 1995).

Majority-minority School - a school with over half of the student enrollment being composed of a group of students, usually from two or more minority groups.

Minority - a student whose race or ethnic heritage is at least in part from one of the following groups: African American, Asian American, Hispanic, or Native American (taken in part from Varnum, 1992).

Poverty Level – The data presented as part of this research reflecting poverty rates among minority students and families were based on 1997 information. A family is determined to be below the poverty level if their total income is less than that family's threshold as determined by the Office of Management and Budget (U.S. Census Bureau, Current Population Reports, 2000). For example, a family of four in 1997 poverty threshold was \$16,400. Hence, any family making less than this amount would be considered living below the poverty level.

Race - The concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock. The data for race represent self-classification by people according to the race with which they most closely identify (taken in part from U.S. Census Bureau, Glossary of Terms, 1999). Furthermore, it is recognized that the categories of the race item include both racial and national origin or socio-cultural groups. For purposes of this study race/ethnic background was used in its socio-cultural sense. Respondents in the study were asked to choose either African American, American Indian, Asian American, Mexican American/Hispanic, or other with regards to their race/ethnic backgrounds.

Limitations

The study was limited by the number of minority participants in the 2+2+2 Partnership Program. As of the Spring 2001 semester there were 76 minority students in the program. The study was further limited by the inherent recall aspect of the research questions. Subjects were asked to recall information and thought processes from earlier parts of their academic or other experiences. As a result, the integrity of the research was only as good as students' memories. To address this issue, every effort was made to

ensure that students were administered the telephone survey in a professional manner and free of time constraints.

Additionally, the reader will note the occasional use of national statistics representing educational trends for African American, Hispanic and White students without mention of American Indian or Asian American students. This is in part consistent with the race/ethnic categories selected for analysis after examining other author's research. In these instances, African American, Hispanic and White cohorts are compared exclusively. The researcher, however, when presenting Arizona data, included numbers and percentages on African American, Hispanic, White, American Indian and Asian/Pacific Islander populations for a more complete and relevant analysis of the study's population and for broader application of its potential findings and outcomes.

Summary

Chapter 1 introduced the disparity between minority growth in K-12 enrollment and the low percentages of available minority teachers. Additional information was provided regarding the lack of diversity in current teacher preparation programs and the need for research offering insight as to when students begin to consider teaching and how teacher recruitment programs can make use of this information. In addition, this chapter provided an introduction and discussed the significance of the study, research questions for the study, scope of the study, terminology, and limitations of the study.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review the literature which (a) examines factors influencing the pool of potential minority teacher candidates, (b) examines existing teacher recruitment programs, comparing similar components within an array of models, and (c) discusses the potential ideal time to begin targeting students for teacher recruitment programs.

The first part of this chapter reviews why African American and Hispanic students experience higher attrition rates from secondary education than do White students at the national levels. Comparative information is shared for Arizona including data for American Indian and Asian American populations. This section also examines various influences that may discourage minority students from choosing a major in education. Further, the section looks at obstacles affecting degree completion for all students, but particularly minority students.

The second part of this chapter provides a synopsis of four representative teacher recruitment programs targeting minority students who are high school students,

community college students, and K-12 instructional aides. The final section discusses the issue of when to begin selecting students for teacher recruitment programs. An exploration of timing factors related to choosing teaching as a career is the primary purpose of this study and provides the foundation for the creation of the survey instrument used to gather data for this research project.

Factors Affecting the Pool of Potential Minority Teacher Candidates

Factors having significant impact on the pool of minority teacher candidates begin with circumstances that reduce the number and proportion of minority students who enter the college going pipeline (Hill et al., 1993). The issues addressed in this section include the effects of poverty, perceptions surrounding the teaching profession, national and Arizona post-secondary persistence and graduation rates, articulation between two and four-year universities, and testing required for certification. These factors significantly impact the low and diminishing number of minority teachers entering the teaching force.

Socioeconomic circumstances affect the size of the minority teacher candidate pool. According to the U.S. Census, in 1990 29.5% of African Americans and 25.5% of Hispanics lived below the poverty line (Hill et al., 1993). In 1997, 11% of Whites, 26.5% of African Americans, and 27.1% of Hispanics lived below the poverty line (Dalakar, Joseph, & Nafeh, 1998). According to these data, African Americans experienced a slight decrease while Hispanics experienced a slight increase in poverty rates over the seven-year period indicating that both African American and Hispanic populations are considerably overrepresented below the poverty line, particularly compared to their

White counterparts. This economic disparity is important because of its relationship to dropout rates that correlate with income levels.

1995 correlations between income and dropout rates for persons between the ages of 16 and 24 indicate that 23.2% of students identified as low income dropped out of high school compared to 11.5 % of middle income students and 2.9% of high income students. Of the total students identified as low income (23.2 %), 18.6 % of the total were White, 20.1% were African American, and 38.9% were Hispanic (U.S. Department of Commerce [DOC], Current Population Survey, 1995). Even within drop out rates associated with income levels, the research demonstrates higher attrition rates among African Americans and even greater rates for Hispanic students.

Research looking strictly at national drop out rates continues to reflect these same patterns. In 1999, the national status drop out rate for individuals ages 16-24 was 11.2%. Status drop out rates provide cumulative data for all persons within a specified age range. Compared to the 11.2% national drop out rate for 1999, White students were well below the average at 7.3%, African Americans were slightly above the national average at 12.6% and Hispanic students were significantly overrepresented at 28.6%. Furthermore, Whites made up 42.7%, African Americans 16.2%, and Hispanics 37.7% of all dropouts aged 16-24 (U.S. DOC, 1999).

Arizona high school drop out rates for the 1998-99 school year slightly exceed 1999 national data with an average 12.2% total drop out rate (Arizona Department of Education [ADE], 1998-1999). During 1998-99 academic year 260,126 Arizona students were enrolled in high school. Of this total, 31, 844 or 12% dropped out. Within this 12%, White students comprised 8.5%, African Americans 15.4%, Hispanics 17.6%,

American Indians 19.1 %, and Asian students 8.2% of those who dropped out over the 9-12 grade levels. African American, Hispanic, and American Indian students were dropping out at higher percentages than the state average drop out rate of 12.2%. These statistics reveal a pattern of high school attrition that greatly impacts minority communities and ultimately has negative implications for the secondary completion rate.

The conditions of poverty and high attrition from secondary education help to explain the relatively low college enrollment rates for African American, American Indian and Hispanic students. In 1996, African Americans made up 12.6% of the United States population but only 10% of total post-secondary enrollment. In Arizona for 1997, African Americans made up 4.3% of the total state K-12 enrollment but only 3.4% of the state's college enrollment (Almanac – Chronicle of Higher Education, 1999). National Hispanic postsecondary enrollment percentages have compared similarly to national African American data, in that in 1998 Hispanics comprised 10.6% of the U.S. population but only 8% of college enrollment (Almanac – Chronicle of Higher Education, 1999). Further, Hispanics constituted 31% of the K-12 enrollment of Arizona in 1997 but only 11.4% of the college enrollment. American Indian students comprised 7% of K-12 enrollment but only 4% of the states' college enrollment while Asian American students comprised 1.8% of K-12 enrollment but over 3% of college enrollment (Almanac – Chronicle of Higher Education, 1999). As a result, African Americans, Hispanics, and American Indians underrepresented in the potential teaching pool of teachers long before they reach college age.

Once in college, potential minority teacher candidates appear to be influenced by several factors with regard to becoming future educators. These factors include, but are

not limited to, exploring education as a career choice and successfully negotiating coursework, campus culture, and degree requirements for teacher certification. Greatly impacting career choices for minority students are peers' choices, personal observations, counselors, family members, and teachers themselves (Gordon, 1995). In a semi-structured interview with 140 students and teachers, Gordon (1995) inquired as to why minority students tend not to choose teaching as a profession. The following section discusses her findings along with other authors' research addressing students' perceptions about the teaching profession.

Perceptions about the Teaching Profession

Minority students who do successfully matriculate to universities from either high school or community college are often discouraged from pursuing education as a major (Gordon, 1995). Opportunities in fields other than education have expanded for minority students, creating career options not readily available 20 years ago (Hunter-Boykin, 1993). Increased access for minorities in areas with higher pay attracts minorities away from the teaching profession (Jacullo-Noto, 1991). Further, students are often encouraged to pursue other potentially more lucrative careers by parents and counselors (Gordon, 1995; Hill et al., 1993; Lankard, 1994; Yopp et al., 1991). In addition, fewer minorities are entering the teaching profession due to relatively low salaries and a lack of prestige associated with the profession (Grier, 1993; Hunter-Boykin, 1993). The public shares a negative perception about the teaching profession (Contreras & Nicklas, 1993). Teachers are often looked upon as non-professionals (Hunter-Boykin, 1993) with an increasing general lack of respect from students and the public alike (Gordon, 1995).

According to Gordon (1995), these public perceptions about the profession are often coupled with students' negative reactions to and assessment of their experiences while in school. Minority men are often discouraged from pursuing the teaching profession by a perceived feminization of the field. In 1993, women comprised 73% of the public elementary and secondary education teaching force (DES, 1997). In Arizona, data for 1999 indicates that 74% of Arizona's teachers were female and 26% were male (ADE, 1995-2000). As a result of the "feminization" image, teaching is often viewed stereotypically as women's work (Gordon, 1995, p. 51). Without exposure to minority teachers, for minority students the profession can take on an aura or perspective of being better "suited for non-minorities" (Jacullo-Noto, 1991, p. 215). As a result of these various conditions, many minority students choose alternative majors to education. Those who do remain as education majors are confronted with the greatest problem affecting minority students enrolled in colleges and universities - low retention rates (Gordon, 1995; Lankard, 1994; Yopp et al., 1991).

College and University Persistence and Graduation Rates

As of spring 1994, 54.3% of all students beginning their postsecondary education in 1989-90 had completed their bachelor's degrees, 17.5% were still enrolled, and 28.3% were no longer enrolled and had no degree (NCES, 1998). Of the 28.3 % of students who were no longer enrolled in postsecondary education, 27 % were White, 36.8% African American, and 36.6% Hispanic. Thus, African American and Hispanic students were disproportionately represented in national college drop out rates.

Arizona data mirror the national figures. Based on ASU's 1999 Persistence and Graduation summary report, 50.5% of freshmen students entering in the Fall of 1992 had graduated after seven years (Persistence and Graduation, 1999). Forty-four percent of minority students beginning in the fall semester of 1992 had graduated after seven years. A look by race categories indicates that 36.6% of African Americans, 21.1% of American Indian students, 55.6% of Asian Americans, and 46.7% of Hispanic students who began in the Fall of 1992 had graduated within seven years (Persistence and Graduation, 1999).

First to second year persistence rates at ASU offer another look comparing all students with all minority students. In 1998, 75.2% of all students and 74.6% of minority students returned to ASU after one year (Persistence and Graduation, 1999). Based on the report, not until the fourth year at ASU did the researcher identify significant graduation differences between the groups. Fifteen and one half percent of all students and 11.5% of minority students beginning in 1992 graduated after four years. After the fifth and sixth year, the graduation rate was 38.2% and 47.1% for all students but only 30.8% and 40.5% for minorities. The report does not offer an explanation for these differences. However, Jacullo-Noto (1991) offers a general explanation for retention rate differences.

According to Jacullo-Noto (1991), lower persistence and graduation rates for minorities are often the result of culture shock and academic difficulties experienced by minority students on predominantly white campuses. Historically, academic failure and attrition have been attributed to deficits in the students. Research suggests, however, that multiple factors such as prior educational background and achievements, K-12 academic environment, family support, levels of student motivation, and institutional environment

affect student retention and academic success (Bainer, 1993). Minority students often feel they have to give up their culture to succeed in institutions of higher education (Bainer, 1993). For many minority students, showing interest and attaining success in school are associated with "acting white" and an adoption of the dominant culture's values (Gordon, 1995). Minority students often spend "significant energy maintaining a bi-cultural orientation throughout their programs in order to succeed that may undermine their abilities to achieve academically" (Bainer, 1993, p. 22).

Articulation between Two-year and Four-year Colleges and Universities

According to several researchers, approximately half of minority students begin their higher education careers at community colleges (Anglin et al., 1993; Hill et al., 1993). In 1991, 43% of community colleges' enrollment was minority (Anglin et al., 1993). Lankard (1994) indicates that community colleges enroll 43% of African American and 55% of Hispanic undergraduates in the United States. Consistent with Lankard's research, in 1995, 42.7% of African Americans and 45.9% of Hispanic students began their post-secondary careers at public two-year institutions (NCES, 1998).

Further, there are disproportionate numbers of minority students who begin their college careers at community colleges and in turn disproportionately fail to matriculate to four-year universities (Lankard, 1994; Yopp et al., 1991). This pattern contributes to the paucity of potential minority teachers. According to Hill et al. (1993) only 10% of minority students transition from two-year community colleges to four-year universities. Hill et al. (1993) attribute this to experiences of campus and institutional racism, lack of college preparatory content at the secondary and community college levels, cultural and

social isolation, and minimal academic integration from the two-year college into tutorial support, supplemental instruction programs and/or other academic related services available at the four-year university. Rendon and Nora (1989) suggest that community colleges' primary focus over the years shifted from college preparatory or preparation to transfer into the senior colleges and universities, to a more broad "people's" college supporting the multiple needs of the surrounding community. While causes may vary, a critical effect of minority student enrollment and articulation patterns described above is to reduce the number and percentage of potential minority teacher candidates.

Competency Exams

In addition to issues and concerns for minority teacher candidates transferring from community colleges, both two-year and four-year college and university students face another significant hurdle for teacher certification. Most states require that students take and pass some form of a state standards test or competency exam to become certified teachers. Arizona has recently incorporated a state standards test for teacher certification. As of August 2000, students graduating from Arizona's postsecondary institutions must pass the Arizona Teacher Proficiency Assessment (ATPA) test demonstrating subject and professional knowledge (ATPA Study Guide, 1999). Students must pass the ATPA with a score of 70% in order to meet teacher certification requirements (R. Daniel, personal communication, October 1999). At the time of this research review, data were not available for pass and failure rates, but if competency exam results from other states are any indicator, one can predict higher failure rates among African American and Hispanic students than among other groups.

According to Hunter-Boykin (1993), in Florida Blacks' pass rate for the National Teacher Examination (Florida's basic teacher skills test) for prospective teachers was 35 to 40%. In North Carolina, African Americans experienced an 87% failure rate on its national test while Whites only 17%. In 1993 only 42% of the 6,644 minority students who took the California California's Basic Educational Skills Test to determine teacher competency passed. Within the five year period of the study, more than 35,000 minority students were eliminated from the profession due to admissions and certification testing (Hunter-Boykin, 1993). Further data (Anderson, 2000) on California's Basic Educational Skills Test indicated that 80% of Whites compared to 47% of Hispanics, and 37% of African Americans passed the test upon taking it the first time. Unfortunately, the researcher could not find any data on the pass rates for American Indian test takers.

The foregoing trends reflect a pattern shown in earlier research. In 1980, the failure rates on minimum competency tests for teachers disproportionately reflected minorities (Jacullo-Noto, 1991). As a result, institutions with standardized competency test requirements as part of enrollment in teacher training programs often discourage or eliminate significant numbers of minority applicants from continuing in the process (Hill et al., 1993). Hill et al. maintain that due to heavy dependence on standardized competency tests there has been an overall 25% reduction in applicants and a 90% drop in minority applicants for the teaching profession in recent decades.

In short, the decline of minority teacher candidates is associated with student attrition during secondary education, greater availability of alternative career paths, negative perceptions about the profession, low articulation rates between community colleges and universities, and disproportionately high failure rates on state competency

exams among minority test takers. These factors have significant collective impact on African American, Hispanic, and American Indian students and result in low numbers of college going minority students for all major academic areas and particularly for teacher preparation programs.

Selected Teacher Recruitment Models

In 1987, only six states had specific programs to encourage minority students to enter teacher education (Jacullo-Noto, 1991). Since then, the number of minority teacher recruitment programs has grown significantly. This next section will highlight four programs representing a cross section of several models. The programs presented at length here are the Coolidge High School Teacher Professional Teacher Preparation Program, the University of North Texas Collaborative Model, the California State Fullerton Teacher Track Project, and the Minority Student-to-Teacher Recruitment and Training Program.

Among the four programs, similar components can be identified. Minority teacher recruitment programs tend to target schools with high concentrations of minority students. Target schools have an identified contact person, usually a school counselor with program responsibilities including helping to identify potential candidates, track participants, and provide transportation and school release time for campus visits and activities. The majority of programs attempt to pair university students from the program with upper-division students in a teacher preparation program or with education staff or faculty members. Each program seeks to bring students to campus to provide exposure to university life and to connect them with institutional services and programs. Potential

applicants are admitted considering grade point average (GPA), letters of recommendations, intent to teach, and in most cases, the outcomes of an oral interview process. All programs recognize a need for collaboration between high schools and two and four-year colleges and universities, a need for financial support to help defray educational costs, and when possible, the implementation of a teaching/tutoring experience with the population targeted to become teachers. The first program overviewed is the Coolidge High School Teaching Professional Program.

- **Coolidge High School Teaching Professional Program**

In response to the declining number of African American teachers in the Washington, D.C., area, public school educators and administrators along with representatives from the private business sector partnered to create the Teaching Professions Program (TPP). The TPP is a four-year college preparatory program established in 1988 targeting students attending Coolidge High School in Washington, D.C., for the purpose of exposing them to the teaching profession (Hunter-Boykin, 1993).

The goals of the program are to assist students with acquiring necessary skills to become potential teachers; clarifying values; cultivating awareness of social, political and economic activities; stimulating personal growth and lifelong learning; identifying and acknowledging cultural, ethnic, and racial differences/similarities; and preparing students to progress through college and subsequently a self-directed career path (Hunter-Boykin, 1993).

Potential students are targeted as early as the middle/junior high school years for formal admission into the TPP program during their freshmen or sophomore year at

Coolidge High School. Prospective students must submit a letter of interest, two teacher recommendations, and a one-page essay; possess a minimum 2.5 GPA; and attend, along with at least one parent, an interview with the program coordinator. Once accepted, students and parents sign a contractual agreement addressing behavior and academic expectations. Program expectations include completion of high school, enrollment in high school subject competency areas for college and university admission, and participation in a mentoring program and field based learning experience.

During the junior and senior years of high school, participants are involved in a mentoring program with undergraduates enrolled in Howard University's teacher preparation program. TPP senior high school participants are required to visit elementary schools to tutor and assist teachers in various roles one day a week. Additionally, TPP senior students demonstrating outstanding involvement in the program and a 3.5 high school GPA are provided the opportunity to take educational courses through the University of the District of Columbia.

At the time of the report on the program (Hunter-Boykin, 1993), four (4) Coolidge High school seniors in the TPP program were provided the opportunity to take college freshmen level courses. These students were enrolled in two college level education courses a semester concurrently with their high school courses. Tuition waivers were provided to cover all enrollment costs. In addition to concurrent enrollment, the students were invited to attend a monthly educational lecture series sponsored by Howard University's chapter of the education honor society, Phi Delta Kappa. Upon graduation, these four students were extended full scholarships to attend the University of the District of Columbia.

Hunter-Boykin (1993) reviewed four years of the program from 1988-91. During this period, 201 new African American students entered the program. As of 1991, 130 students remained dispersed throughout grades 9-12. While the TPP program may serve as a model for teacher recruitment programs targeting middle/junior high school students, the author (Hunter-Boykin, 1993) points out that additional criteria must be met. Hunter-Boykin recommended to other program administrators and or policy makers, that in order to effectively address the issue of teacher recruitment, especially African American and Hispanic teachers, a number of other factors must be included. These factors should include financial incentives, such as scholarships and grants for students to attend college; an aggressive campaign among high school counselors, teachers and career center personnel to publicize the benefits and advantages of the teaching profession; a commitment from colleges and universities to provide necessary academic and social support for entering students through graduation; and lastly an earnest effort by the school districts and systems to create a classroom atmosphere that makes an "indelible psychological impression on the students...the classrooms should be bright, clean, filled with state of the art equipment and the latest technology, and staffed by energetic and highly motivated teachers, (p. 40)."

- **University of North Texas Collaborative Model**

The University of North Texas (UNT) program is a summer residential and transitional experience designed to immerse high school and community college minority students in university life and prepare them for teacher preparation programs. The UNT program is modeled after federally funded, pre-college preparatory TRIO programs

(Student Support Services, Talent Search, Upward Bound) and the Youth Opportunity Unlimited program targeting minority students. The program's objectives include recruitment of high school and community college students into teaching; an assessment of the impact of the UNT summer bridge program on undergraduate degree completion and teacher certification; and dissemination of the model to other Texas institutions of higher learning. To this end, the program includes four major components: 1) an on-campus experience prior to attending UNT; 2) three to six credit hours of summer course work; 3) tutoring, study skills, and test taking strategies; and 4) social activities for the students (Contreras & Nicklas, 1993).

Prior to the summer residential experience students are recruited from high school and community colleges with high concentrations of minority students throughout the state of Texas. The 1992 academic year recruitment effort yielded 51 potential applicants of whom 48 applied and were selected. The authors do not mention the race/ethnic minority breakdown of the applicants or selected participants. Student selection was based on the potential to meet UNT freshman and transfer admission criteria. Both high school and community college transfer applications were reviewed considering GPA, ACT/SAT scores, a statement of interest in teaching, personal references, and personal interviews with program staff (Contreras & Nicklas, 1993).

Initially, to begin the summer residential experience, 36 of the 48 students were encouraged to enroll in six hours of UNT coursework. The remaining participants, based on the recommendation of program staff, were registered for three hours. Of the initial 36, 23 withdrew from a class (dropping down to three hours). Through an end-evaluation, many students commented that they "found the rigorous reading and outside

assignments to be overwhelming, (Contreras & Nicklas, 1993, p. 5).” As a result, these comments, coupled with the majority of students dropping one class, prompted program administrators to recommend that only participants with "exceptional academic aptitude" enroll in six hours in future summer residential experiences (Contreras & Nicklas, 1993).

At the program's end, the average GPA of all participants was 2.53. High school participants fared less well with an average 2.17 GPA while community college students did significantly better with a 2.75 GPA collectively. Contreras & Nicklas (1993) do not mention the program start year, but as of the summer of 1992, student-tracking information offered positive results about the successful completion of undergraduate degrees and teacher certification. During the summer of 1992 it was determined that 35 (73%) of the initial 48 participants had graduated with a bachelor's degree, were enrolled in a five-year program offering a master's degree, or were still in the process of completing requirements for their undergraduate degree. The remaining students (27%) were either unaccounted for or had dropped out (Contreras & Nicklas, 1993).

Contreras and Nicklas (1993) observed that schools, colleges, and departments of education "recruit students in a casual, unsystematic, and unplanned fashion, (p. 2)." The authors go on to imply that traditional recruitment efforts fail to attract significant numbers of minority students into higher education. Through their research, Contreras and Nicklas (1993) suggest forming partnerships between community college and universities as "short term and long range means for recruiting minorities into the teaching profession," (Contreras & Nicklas, 1993, p. 5) such as the University of North Texas (UNT) program. Recommendations from Contreras and Nicklas (1993), like those from Hunter-Boykin (1993), encourage collaboration between K-12 public school

districts and institutions of higher education to increase the pool of minority teacher candidates. Hunter-Boykin (1993) suggests that community colleges and universities work with public schools to provide tutorial services providing both remediation and enrichment for students.

Additionally, Contreras and Nicklas (1993) recommend that community colleges and universities make every effort to improve the low transfer rates of minority students between two-year and four-year colleges and universities. According to Contreras and Nicklas' research, in Texas, 40% to 87% of minority students attending community colleges have aspirations to transfer to a four-year university. Of this number, only 15% successfully matriculate to a four-year university (Contreras & Nicklas, 1993).

Contreras and Nicklas (1993) conclude their recommendations by emphasizing that institutional collaboration, efforts to improve transfer rates between two and four-year colleges, and summer residential programs to provide experiences related to university life can help address the critical shortage of minority students entering the teaching profession (Contreras & Nicklas, 1993).

- **California State Fullerton Teacher Track Project**

The Teacher Track Project (TTP) is a collaborative effort between CSU Fullerton, two community colleges (the specific institutions were not mentioned in report) and three local school districts (Anaheim, Fullerton, and Santa Ana Unified School Districts). The program provides services to instructional aides and high school students surrounding four major goals: recruitment, academic guidance, basic skills enhancement, and peer and faculty support (Yopp et al., 1991). In 1988, as part of an effort to diversify faculties

in California schools from the elementary through the university levels, the California State University (CSU) Chancellor's Office implemented a lottery funding initiative to provide financial support for programs addressing the public school imbalance between minority teachers and students (Yopp et al., 1991). Through this initiative sprang the CSU Fullerton's Teacher Track Project.

Recruitment targets for the TTP include instructional aides from Anaheim, Fullerton, and Santa Ana Unified School Districts. The districts were selected due to their large minority populations of students and instructional aides. Prior to becoming participants, potential candidates must indicate an interest in becoming teachers, plan to enroll in minimally one college course per term, and attend monthly mandatory TTP meetings. During the first year of recruitment, 57 instructional aides were admitted into the program. By year two, this number had grown to 70. At the time of the article, 90% of instructional aides remained a part of the TTP project as active participants (Yopp et al., 1991). The authors do not provide a breakdown of race/ethnicity of the program's instructional aides or high school participants.

High school students are recruited exclusively within the Santa Ana Unified School District from four high schools consisting of 92% minority students. Students are identified within their junior and senior years of high school and must meet CSU admissions criteria to be eligible for the TTP high school component. CSU admissions requirements are a 3.0 grade point average in high school or if below a 3.0, an acceptable high school grade point average in combination with an ACT or SAT Score. At the time of the article, over 250 students from the four high schools had participated in the TTP project (Yopp et al., 1991).

Both the instructional aide and high school component include academic guidance from either a Project Associate or Project Advisor. Project Associates help instructional aides narrow and identify academic interests, enroll in appropriate college coursework, and become familiar with campus facilities, services, protocol, culture, and norms. In addition, Project Associates are responsible for the coordination of the "Teacher Track Day at CSU Fullerton" program offered at the start of each school year. During this program, instructional aides are invited to campus to participate in a campus tour, meet with faculty from various departments, receive information about financial aid, and listen to speakers discuss topics related to teaching. Participants who complete the required one course and attend all TTP meetings receive a \$250 stipend at the end of the semester (Yopp et al., 1991).

Project Advisors provide the same types of support for high school students as Project Associates do for instructional aides. In addition, Project Advisors provide teaching related instruction for high school students. High school participants are given the opportunity to enroll in "Secondary Education 100: The Teaching Experience: Exploration," a two unit college credit course offered weekly at the high school providing instruction in pedagogy and learning concepts. The Project Advisor is responsible for three-fourths of this instruction while a university professor provides the remaining one-fourth. In addition to taking the Secondary Education 100 course, high school participants are required to tutor elementary, junior high, and senior high school students 40 hours per semester. The Project Advisor identifies students requiring tutoring, tracks tutor hours, and provides the necessary coordination between the school district and TTP project personnel. The Project Advisor is paid at a rate equivalent to a university

lecturer, in addition to a \$300 stipend per semester for services provided to the TTP project (Yopp et al., 1991).

According to Yopp et al., the success of the TTP has spread to other school districts. The researchers (Yopp et al., 1991) attribute much of the program's initial success to the support and collaboration of the school districts in the form of work release time, bus transportation, attendance at CSU Fullerton visits and monthly meetings, and the designation of the Project Associate and Project Advisor staff persons.

- **Minority Student-to-Teacher Recruitment and Training Program**

The Minority Student-to-Teacher Recruitment and Training Program (MSTRTP) is a collaborative venture between Kennesaw State College and Marietta City School District in Georgia (Fielder, 1996). It differs from the previous three programs outlined. This program is strictly a financial support program providing full tuition and fees and employment for two new entering freshmen education majors attending Kennesaw State College through graduation each year. Most teacher recruitment programs include academic support, exposure to the teaching profession, and ongoing developmental contact with participants. The MSTRTP program identifies potential recipients and provides financial support and a para-professional employment assignment within a surrounding school district (Fielder, 1996). Exposure and interaction with teachers appears to be an indirect result of the employment experience rather than an identified part of the program design.

Initially, Marietta City teachers, counselors, and administrators help to identify high school junior and senior students from Marietta High School (MHS) (Fielder, 1996).

If no students express an interest or meet the qualification requirements, the scholarships may then be awarded to minority persons who are MHS graduates, instructional aides, from other high schools, or MHS alumni who already have bachelor degrees but wish to return to college for teacher certification.

To be considered for the MSTRTP program, MHS junior and/or senior minority applicants must have at least a 2.7 GPA in college-preparatory coursework, be recommended by the MHS principal and two faculty members, provide a writing sample, and submit to an oral interview. Selection occurs during the spring semester and is based on academic potential rather than financial need. At any given time, the program can provide scholarship support for two students at each college level from the freshman to senior year. Financial support for the scholarships is provided in part by the Marietta City School District general and endowed fund and the Kennesaw State College endowed fund (Fielder, 1996).

In addition to scholarship support, the district funds full and part-time para-professional positions for each recipient. When possible, MSTRTP recipients' placements are varied year to year by job sites, grade levels, and subject areas. This variety of experiences allows participants to experience different styles and approaches to teaching (Fielder, 1996).

At the time of this article, seven students had received the MSTRTP scholarship. Of the seven students, three were employed with the Marietta City School District. Two continued to take courses at Kennesaw State College and work in a para-professional capacity within the district. The remaining two dropped out of the program. The author

does not mention any recommendations made by the program administrator or the specific race/ethnicity of the participants.

Ideal Time to Begin to Target Students for Teacher Recruitment Programs

Upon reviewing the literature, the researcher did not identify a point of consensus on when it is ideal to begin targeting students for teacher recruitment programs. Programs targeting instructional aides consider an applicant's intent to teach and commitment to continue post-secondary education without any consideration of age and/or narrowed academic levels. Opinions regarding recruitment timing range from elementary school levels to the senior year of high school for programs targeting high school students. According to Contreras and Nicklas (1993), "socialization into the teaching profession as early as the elementary or middle school levels should be the long-term goal..., (p. 6)." Jacullo-Noto (1991) discovered through her research that "several models recommend that recruitment efforts begin at the junior and high school levels," (p. 219). Of the four programs profiled in this chapter, only one, the Coolidge High School TPP program began to focus on students during the middle and junior high school years (Hunter-Boykin, 1993). The remaining three program (UNT, CSU Fullerton TTP and MSTRTP) target students towards the latter part of their high school careers when they are juniors and seniors.

Those authors who do articulate an ideal period in which to begin recruitment do not mention why or how such considerations as school collaboration, teacher preparation programs' enrollment goals, and budgets may affect the decision of when to begin targeting students.

Looking at data and studies related to career decision-making and development, one can make some general comparisons between theoretical career development and the timing outcomes reported by participants in this study. According to a report sponsored by New Jersey State Department of Education, Division of Vocational Education (1980) students at grade level K-3 are capable of naming people and things that influence decisions. By grades 4-6 students can plan long-range educational and personal goals and by grades 7-9 are able to explore career options. During grades 10-12, students can assess and apply their own values and needs to determine compatibility with career choice.

Kerka (1994) reported that career orientation programs providing students multiple looks at various professions as they consider future career options should begin at the junior high and middle school levels. This is important because it acknowledges that students are beginning the process of career decision making prior to starting high school. Phipps (1995) reported that younger students ages 8-11 are “clearly able to state what they want to be,” (p. 23). In a study examining career aspirations of preadolescent students, Phipps (1995) indicated that one-fifth of students in grades 4 and 5 were able to simplistically state what they would have to do in order to achieve their stated career goals. Similarly, a 1993 study examining decision to teach by a cohort of African American teachers revealed that one-fourth of survey participants reported making their decision to while in elementary school (King, 1993).

The results of this literature review did not yield insight as to when students, through their own discovery process, begin to think seriously about careers in education. The literature speaks primarily from the perspective of the host undergraduate institution

of teacher recruitment programs. The research generally begins by discussing program criteria and desired outcomes for a population of students that have already demonstrated a desire to teach. This researcher could not identify any specific literature, other than that related broadly to career development, presented from students' perspectives addressing when they began to personally narrow their career choices or when, ideally, programs should begin to recruit students to explore careers in teaching.

Summary

Chapter 2 discussed factors contributing to the decline of minority teacher candidates including compounding effects of poverty leading to increased drop-out rates, narrowing academic major choices while simultaneously engaging and negotiating campus services and protocol, and for some, overcoming increasingly negative perceptions about the teaching profession.

This chapter also addressed the significantly low articulation rate between community colleges and universities for minority students and its negative effect on the number of eligible post-secondary minority candidates.

The final section of this chapter included an overview and comparison of four representative teacher recruitment programs, presenting their recruitment targets, objectives, and outcomes. The chapter ended by discussing the lack of consensus on ideal times to begin recruiting future minority teachers through targeted programs.

CHAPTER 3

METHODS

The purpose of this study was to explore times in minority students' K-12 academic experience associated with when they began to consider teaching as a career choice. This chapter includes a description of subjects and their selection, a presentation of the telephone survey instrument, process for the pilot survey, procedure for data collection, participants' rights section, and a description of the method employed in the analysis of data.

Subjects

Seventy-six minority student participants in the 2+2+2 Partnership Program of Arizona State University (ASU) served as subjects for the study. The 2+2+2 Partnership Program is a collaborative program sponsored by the Union High School Districts of Mesa, Phoenix, Tempe, and Tolleson; the Maricopa Community College School District; and Arizona State University's (ASU) College of Education. Participants attend any one

of the participating ten high schools, four community colleges, or ASU in the Phoenix Metropolitan area.

The partnership is designed to recruit minority, first-generation and/or lower-socioeconomic status students to the field of teaching. Participants in the 2+2+2 Program are targeted at the beginning of their junior year of high school and provided with college admissions, financial aid, and scholarship application assistance; exposure to and interaction with ASU students, staff, faculty and programs; a summer residential program at ASU; and several workshops on skill enhancement and personal development over the course of an academic year. Upon completion of 56 credit hours at the university level, participants are guaranteed admission into ASU's Professional Teacher Preparation Program assuming they meet the minimum admissions criteria of a 2.5 GPA in college level coursework, an ACT composite score of 21, and C or better in required pre-requisite coursework. Students must complete an application for admission into the 2+2+2 Program requiring a letter of recommendation, high school transcripts, disclosure of household income, response to three essay questions, declaration of a major offered by ASU's College of Education, and parental consent to participate in the program.

As of spring 2001, the partnership had a total of 139 students consisting of 101 high school students, 19 community college students, and 19 ASU students. Sixty-three or 45% of the students were White and 76 or 55% minority. Of the 55% who were minority, 10 or 7% were African American, 61 or 44% Hispanic, 4 or 3% American Indian and 1 or 1% Asian American. Given the purpose of the study, only the 76 minority (African American, Hispanic, American Indian and Asian American) students in the 2+2+2 Partnership Program served as potential subjects for this study.

Instrument

The method of data collection used for this research was an 18-item telephone survey questionnaire (see Appendix A). The survey was divided into two sections:

1) Personal Data and Background Information, and 2) Decision to Teach.

Question Topics and Derivation

Section I of the telephone survey instrument, Personal Data and Background Information consisted of questions 1 through 13. These demographic questions provided the researcher with background information about the students' gender, age, race/ethnicity, year in school, grade point average, family educational attainment levels, family members who are teachers, and types of schools attended.

Section II of the telephone survey instrument, Decision to Teach, comprised questions 14 through 18. These questions addressed when students begin to consider education as a career option and to what degree students were committed to their decision.

Questions 1 through 7 were taken verbatim from Varnum's 1992 Ohio State University study including the race/ethnic category designations as part of question 3. Questions 8 through 18 were developed by the researcher. Question 8 identified the subject area in which participants eventually planned to teach. Questions 9 through 13 identified the type of school students attended through the course of their K-12 academic experience and questions 14-18 corresponded to the study's core questions of when students are making decisions about becoming teachers. A matrix of the above information is provided in Appendix B.

Correspondence of Research Questions and Telephone Survey Items

The telephone survey items were formulated to address the following research questions addressing factors associated with when minority students in ASU's 2+2+2 future teacher recruitment program begin to consider teaching as a career choice:

- RQ1: Is there a relationship between gender and when one begins to consider teaching as a career choice?

Survey questions 1 and 14 through 18 correspond to research question 1. Survey question 1 introduced subjects' gender. Fourteen through 18 assessed the varied degrees of commitment, i.e., when students first realized that teaching was a career, and when they began to think about becoming teachers, first seriously thought about becoming teachers, absolutely knew they wanted to become teachers and when they took steps towards the profession.

- RQ2: Is there a relationship between race and when one begins to consider teaching as a career choice?

Survey questions 3 and 14 through 18 correspond to research question 2. Survey question 3 asked about subjects' race/ethnic background. Fourteen through 18 covered the timing factors mentioned in the previous paragraph.

- RQ3: Is there a relationship between those who are first-generation students and when one begins to consider teaching as a career choice?

Survey question 6 and 14 through 18 correspond to research question 3. Survey question 6 asked about the highest level of education completed by subjects' family members.

- RQ4: Is there a relationship between family members who are teachers and when one begins to consider teaching as a career choice?

Survey questions 7 and 14 through 18 correspond to research question 4. Survey question 7 asks for history of teachers in subjects' families.

- RQ5: Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?

Survey questions 8 and 14 through 18 correspond to research question 5. Survey question 8 asked subjects' to indicate which grade level they were most interested in teaching.

- RQ6: Is there a relationship between whether one attended a majority-minority school at the K-12 levels and when one begins to consider teaching as a career choice?

Survey questions 9 through 13 and 14 through 18 correspond to research question 6. Survey questions 9 through 13 asked about subjects' history of minority-majority school attendance.

Survey questions 2, 4, and 5 sought additional demographic information from subjects' regarding age, current grade level and GPA respectively.

Pilot Survey

A pilot of the telephone survey instrument was conducted with two minority graduate research assistants and a sampling of 10 then current minority education majors attending ASU. The pilot survey sample population included one African American and one Hispanic graduate assistant, and three African American, five Hispanic and two

American Indian education majors attending ASU. Upon completing the administration of the pilot survey instrument, the researcher briefly interviewed each of the respondents to determine if the survey questions were clear to the reader and what the respondent believed the questions were asking. These perceptions were evaluated with the researcher's intent when creating the questions to determine if the questions resulted in responses consistent with the purpose of the question design. All feedback was incorporated into the final version of the survey instrument.

Procedure

Subjects were identified through membership in the 2+2+2 Partnership Program. The researcher, who is also the former director for the 2+2+2 Partnership Program, conducted telephone surveys with 52 (68%) out of a potential 76 subjects. According to Fowler (1988) a telephone survey response rate over 65% is sufficient.

Respondents were contacted over the period of June 1 through June 10, 2001. Respondents were called at their homes from the researcher's office on the campus of Arizona State University. The calls were made between the times of 9:00 am and 8:30 PM. Prior to the start of each telephone interview, the researcher identified the intent of the call, reiterated the purpose of the study, and requested permission to tape record the conversation. Following approval to tape record the conversation, the researcher began the recording process and read an initial paragraph restating the voluntary and confidential nature of participants' responses and again, on tape, requested permission to tape record the interview. After reading the initial paragraph, the researcher proceeded with the telephone interview process. Once the telephone survey was completed,

respondents were given an opportunity to ask any further questions. The telephone survey process concluded with the interviewer verifying respondents' mailing and email addresses, if available, and thanking them for their involvement.

Participants' Rights

A the beginning of each telephone interview, respondents were read an initial paragraph outlining the intent and purpose of the questionnaire along with a statement informing students that by completing the survey they were also agreeing to participate in the study. Participants were ensured that their involvement was completely voluntary and had no effect on their continued involvement in the 2+2+2 Program and its related activities and guarantees. Students were assured that all information was confidential and that their identity would not be disclosed or implied in any publication or presentation concerning this study.

Design and Analysis

Responses from the telephone survey instrument were compiled and referenced using basic descriptive statistics including frequencies and percentages. The data were used to provide an initial overview of personal data and background information giving the reader a general profile of the respondents followed by a presentation of the research findings organized according to the six research questions guiding the study. Tables are used throughout the next chapter to present descriptive statistics highlighted throughout the narrative.

Summary

Chapter 3 provided the reader with an overview of the subjects that participated in the study along with a section that presented the subject's rights as participants and future involvement in the 2+2+2 Partnership Program. An extensive overview of the survey instrument was provided, outlining the survey questions, their derivation, and correspondence to the six research questions. Additionally, the author presented the plan used to test the clarity and interpretability of the survey in the pilot survey section, the procedure for administering the instrument, protection of participant rights, and a description of the data presentation and analysis.

CHAPTER 4

PRESENTATION OF THE DATA

Introduction

This chapter reports the data collected in this study and provides analysis of those data in relationship to the six research questions, which were as follows:

- RQ1: Is there a relationship between gender and when one begins to consider teaching as a career choice?
- RQ2: Is there a relationship between race/ethnicity and when one begins to consider teaching as a career choice?
- RQ3: Is there a relationship between those who are first-generation college students and when one begins to consider teaching as a career choice?
- RQ4: Is there a relationship between having family members who are teachers and when one begins to consider teaching as a career choice?
- RQ5: Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?

- RQ6: Is there a relationship between whether one attended a majority-minority school at the K-12 levels and when one begins to consider teaching as a career choice?

The chapter is divided into two major sections reporting (1) the aggregated results of questions regarding demographic information, additional respondent characteristics, and timing of career choice and (2) the findings related to the six research questions.

The first major section of this chapter presents an overview of demographics reflected in personal data and background information provided by respondents. The second component within this first section outlines additional characteristics of participants in the study. The last portion of the section deals with the timing of respondents' decision to teach. The second major section presents the research findings organized according to the six research questions guiding the study. The study examines the variables of gender, race, first-generation status, history of teachers in the family, desired grade level to teach and attendance at a minority-majority school and the relation of these variables to the timing of students' decision to teach.

Results Regarding Personal Data and Background Information

Of a possible sample of 76, telephone surveys were completed with 52 participants for a response rate of 68 percent. All 52 surveys were determined to be viable and included as part of this data presentation.

Demographics

Part I of the telephone survey instrument, Personal Data and Background Information, asked questions regarding students' gender, age, race/ethnic background, grade level, grade point average (GPA), and parents' highest level of education.

Predominant respondent demographics for the entire sample were as follows.

In terms of basic demographics, 85% (44) of the 52 respondents were female. Sixty-five percent (34) of participants were in the 19-24 age category while the remaining 35 % (18) of students were 18 or under. Seventy-nine percent (41) of the students reported a racial/ethnic background of Hispanic. Table 1 gives the racial/ethnic background of the respondents.

Table 1
Respondents' Race/Ethnic Background

Variable	N = 52	Frequency	Percentage
Mexican American/Hispanic		41	79%
African American/Black		7	13%
American Indian/Native-American		3	6%
Asian American/Asian		1	2%
White		0	0%
Other. Please specify:		0	0%

Seventy-two percent (37) of respondents were enrolled in postsecondary institutions while the remaining 29% (15) were in grades 9 through 12. Over 60% (32) of respondents reported a GPA above a 3.01. Based on the highest level of parents' education, 65% (34) of the students were first-generation college students. First-generation status was determined using the definition provided by the U.S. Department of Education. It states that a first-generation college student is an individual neither of whose parents received a baccalaureate degree. Therefore, first-generation students in

this study included some whose parents may have attended, but had not graduated, from college.

In summary, participants in this study tended to be female, between the ages of 19-24, Hispanic, and first-generation college students, and to have GPAs above a 3.01.

Additional Participant Characteristics

Besides basic demographic data, additional information related to school and family factors was collected. These factors include majority-minority school attendance, family history of teachers, and grade level desired to teach. Predominant participant characteristics for the entire sample were as follows.

Table 2 examines the majority-minority school enrollment of respondents throughout their K-12 academic experience by grade level. A majority-minority school is one with over half of its enrollment being composed of minority groups so that in the aggregate minority group students outnumber others. Looking at the results broken down by grade level, approximately two-thirds of students attended a majority-minority school during one or more of the five grade level categories of K-3, 4-5, 6-8, 9-10, and 11-12. When one considers if students attended a majority-minority school at anytime during their K-12 experience which is the criterion for whether or not one attended a majority-minority school posed as part of research question 6, the data reveal that 83% (43) of respondents reported doing so.

Table 2
Majority-minority School Attendance

Grade	^a N = 52	Yes	No
K-3		32 (62%)	20 (38%)
4-5		33 (63%)	19 (37%)
6-8		38 (73%)	14 (27%)
9-10		36 (69%)	16 (31%)
11-12		35 (67%)	16 (31%)

Note One respondent still remained in grades 9-10.

Looking at the career history of participants' family members, over half (52% or 27) of respondents did not have anyone in the family who is a teacher at the K-12 level. Of those having family members who are teachers, 40% (10) of these teachers worked at the elementary level, 28% (7) at the early childhood level, and 28% (7) at the secondary level. Two respondents who reported having family members who were teachers did not know at what grade level they taught.

Table 3 reflects the grade levels at which respondents are interested in teaching. Most students (42%) selected secondary education followed by early childhood (33%) and elementary education (21%).

Table 3
Grade Level Desired to Teach

Academic Level	N = 52	Frequency	Percentage
Secondary		22	42%
Early Childhood		17	33%
Elementary		11	21%
Pre-school		1	2%
Undecided		1	2%

In summary, regarding additional participant characteristics sampled, respondents tended to a) have attended majority-minority schools, b) not have family members who were teachers, and c) express interest in teaching at the secondary level.

Timing of Decision to Teach

In addition to providing basic demographic information and respondent characteristics, respondents were asked to identify at what point in their academic experience they made decisions about teaching as a profession. Respondents were asked about the timing of these decisions in relation to a) when they discovered teaching is a career, b) when they thought about teaching as a possible career, c) when they began to think seriously about teaching, and d) when they knew with certainty that they wanted to become teachers. Table 4 presents a summary of participants' aggregated responses to telephone survey items 14 through 17.

Table 4
Decision to Teach

N = 52	Q14		Q15		Q16		Q17	
	Discovered the profession		Began to think about as a career		Seriously thought about as career		Absolutely knew it was your career	
Grade	#	%	#	%	#	%	#	%
Pre-school	2	4%	1	2%	0	0%	0	0%
K-3	15	29%	5	10%	1	2%	0	0%
4-5	10	19%	6	12%	0	0%	1	2%
6-8	20	38%	14	27%	7	13%	2	4%
9-10	4	8%	16	31%	12	23%	7	13%
11-12	1	2%	9	17%	25	48%	20	38%
Fr/So in Coll	0	0%	1	2%	2	4%	7	13%
Jr/Sr in Coll	0	0%	0	0%	0	0%	1	2%
N/A	0	0%	0	0%	5	10%	14	27%

Survey item 14 asked students in what grades they first realized that teaching was actually a profession. Slightly more than half of the students reported discovering the profession prior to 6th grade; however, the most common response (38% or 27) reported by students was grades 6-8. Only 10% (5) reported realizing beyond the 9th grade that teaching was a profession (see Table 4).

Survey item 15 asked respondents in what grades they first began to think about education as a possible career choice. Over half of respondents chose either grades 6-8 or 9-10. Thirty-one percent (16) began to think about education as a possible career choice in grades 9-10 and 27% (14) of respondents in grades 6-8. About one-fourth of students first began to think about becoming teachers prior to the 6th grade. Nineteen percent (10) of students did not begin to think becoming teachers until sometime after the 10th grade (see Table 4).

Survey item 16 asked respondents in what grades they first thought seriously about education as a career choice for themselves. Almost three-fourths of respondents reported thinking seriously about teaching during high school with almost half (48% or 25) beginning to think seriously about it in grades 11-12. Ten percent (5) of students responded with Not Applicable as the option indicating that they have yet to seriously think about education as a career choice (see Table 4).

Survey item 17 asked students in what grades they knew with certainty that they wanted to become teachers. Over half of the students indicated absolutely knowing during high school. Fifteen percent (8) of respondents did not absolutely know until finishing high school and going off to college. One-fourth of the sample marked Not Applicable indicating that they had yet to know with certainty if they want to become teachers (see Table 4).

The first part of telephone survey item 18 asked students in what grades they first took steps to prepare for careers as teachers. Over four-fifths of the respondents reported taking steps in grades 10, 11 or 12. The most common response (16 or 31%) reported by students was the 11th grade as the time when they took initial teacher preparation steps.

Twenty-seven percent (14) of students reported their senior year in high school. Table 5 provides the frequency of all the responses to question 18.

Table 5
Respondents' First Steps to Becoming Teachers

Grade	N = 52	Frequency	Percentage
6		1	2%
9		4	8%
10		12	23%
11		16	31%
12		14	27%
Freshman in College		4	8%
Sophomore in College		1	2%

The second part of survey item 18 asked students to please explain their first steps taken to prepare for a career as a teacher. The responses varied in length, detail, and content. Likewise, respondents often indicated several steps. The majority of respondents (31 or 60%) reported joining the Arizona State University 2+2+2 Partnership Program as their first step. Other commonly shared responses reported by 10-15 percent of the sample included volunteering at a school or community center, taking college track courses during high school, and taking education courses at the college level. Steps like tutoring, talking with teachers and counselors, and membership in a high school future teachers club were reported by 5-10 percent of respondents. Table 6 provides a synopsis of respondents' answers to the second part of telephone survey item 18.

Table 6
Open-ended Responses to First Steps to Becoming Teachers

*Steps	N = 52	Frequency	Percentage
Joined the 2+2+2 Program		31	60%
Volunteered (School or Community)		8	15%
Took College Preparatory Classes		8	15%
Took Education Classes		7	13%
Talked with School Counselor		5	10%
Tutored		5	10%
Talked with Teacher		4	8%
Joined Future Teachers' Club		4	8%
Worked in Child Care Center		3	6%
Visited Career Center/Career Assessment		3	6%
Worked as a Teachers' Aide		2	4%

Note. Items mentioned once were not included in this table. Several respondents reported more than one response.

In summary, regarding the timing of students' decision to teach, more than half of the respondents discovered that teaching was a profession prior to the 6th grade. One-fourth of the students began to think about becoming teacher prior to grade 6 with the majority of respondents beginning to think about it between grades 6 and 10. Over half of the students indicated seriously or absolutely knowing they wanted to become teachers during high school, with 4 out of 5 respondents reporting taking their first steps towards becoming teachers during this same time period. The most commonly reported first step was joining the 2+2+2 Partnership Program.

Findings Regarding the Research Questions

This section addresses the findings related to each of the six research questions developed for the study. The six research questions were as follows:

- RQ1: Is there a relationship between gender and when one begins to consider teaching as a career choice?

- RQ2: Is there a relationship between race/ethnicity and when one begins to consider teaching as a career choice?
- RQ3: Is there a relationship between those who are first-generation college students and when one begins to consider teaching as a career choice?
- RQ4: Is there a relationship between having family members who are teachers and when one begins to consider teaching as a career choice?
- RQ5: Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?
- RQ6: Is there a relationship between whether one attended a majority-minority school at the K-12 levels and when one begins to consider teaching as a career choice?

Telephone survey items 1, 3, and 6 through 13 from Part I, Personal Data and Background Information are presented in relation to survey items 14-18 from Part II, Decision to Teach. Survey items 1 and 3 asked about students' gender and race/ethnic background. Survey item 6 asked about parents' highest level of education. Survey items 7 and 8 asked about history of teachers in the family and grade level students' are interested in teaching. Survey items 9 through 13 asked students about attendance at majority-minority schools. Survey items 14 through 18 asked about when students discovered that teaching was a profession, first considered teaching as a career choice, seriously thought about being a teacher, absolutely knew they wanted to teach and lastly, took first steps to become a teacher, respectively. These findings will be presented in relation to the six research questions developed for this study.

RQ1: Gender and Decision to Teach

To explore research question 1 regarding the relation between gender and when one begins to consider teaching as a career, respondents were asked to answer survey items 1 and 14 through 18. Survey item 1 asked students to indicate their gender. Females were compared to the males on responses to questions about timing of their decision to prepare to teach. The first analysis of research question 1 examines female (85% or 44) and male (15% or 8) responses in relation to when students first realized teaching was a profession presented as survey item 14.

An inspection of Table 7 reveals that over half of females reported realizing that teaching was a profession prior to grade 6 while three-fourths of males reported discovering the profession after 6th grade. The most common point of discovery for females and males was in grades 6-8, each group reporting 35% (16) and 50% (4), respectively.

Table 7
When Respondents First Discovered That Teaching Was a Profession, by Gender

Discovered	Gender			
	Female (n = 44)		Male (n = 8)	
Grades	#	%	#	%
Pre-School	2	5%	0	0%
K-3	13	30%	2	25%
4-5	10	23%	0	0%
6-8	16	36%	4	50%
9-10	2	5%	2	25%
11-12	1	2%	0	0%

Table 8 presents male and female responses in relation to when students began to think about teaching as a possible career. The majority of females and males reported beginning to think about teaching as a career between grades 6 and 12. Over a quarter of females but no males reported thinking about becoming teachers prior to the 6th grade.

Table 8
When Respondents First Began to Think about Teaching as a Career, by Gender

Thought About	Gender			
	Female (n = 44)		Male (n = 8)	
Grades	#	%	#	%
Pre-School	1	2%	0	0%
K-3	5	11%	0	0%
4-5	6	14%	0	0%
6-8	12	27%	2	25%
9-10	13	30%	3	38%
11-12	6	14%	3	38%
Fresh/Soph in College	1	2%	0	0%

Table 9 presents male and female responses in relation to when students began to think seriously about teaching as a possible career. Over four-fifths of males and three-fifths of females seriously considered becoming teachers while still in high school. About half of females (48% or 21) and males (50% or 4) began thinking seriously about becoming teachers in grades 11-12. Eighteen percent (8) of females compared to zero males thought seriously about teaching as a career prior to entering high school.

Table 9
When Respondents Seriously Thought about Teaching as a Career, by Gender

Seriously Thought About	Gender			
	Female (n = 44)		Male (n = 8)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	1	2%	0	0%
4-5	0	0%	0	0%
6-8	7	16%	0	0%
9-10	9	20%	3	38%
11-12	21	48%	4	50%
Fresh/Soph in College	2	5%	0	0%
Not Applicable	4	9%	1	13%

Table 10 presents male and female responses in relation to when students absolutely knew they wanted to become teachers. A small percentage of females, less than 10% compared to no males, reported absolutely knowing they wanted to teach prior

to entering high school. Half of the males indicated absolutely knowing they wanted to become teachers in grades 11-12 and the other half responded Not Applicable. Almost 1 out of 4 females, at the time of the interview, did not absolutely know if they wanted to teach, but like their male counterparts, reported absolutely knowing they wanted to teach during grades 11-12 more than at any other grade levels.

Table 10
When Respondents Absolutely Knew They Wanted to Teach, by Gender

Absolutely Knew	Gender			
	Female (n = 44)		Male (n = 8)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	1	2%	0	0%
6-8	2	5%	0	0%
9-10	7	16%	0	0%
11-12	16	36%	4	50%
Fresh/Soph in College	7	16%	0	0%
Jr/Sr in College	1	2%	0	0%
Not Applicable	10	23%	4	50%

Table 11 compares males and females according to when they first took steps to become teachers. One hundred percent of the male and over four-fifths of female respondents reported taking their first steps within high school. Even so, over two-fifths of females took their steps later during their academic careers after grade 11, while over four-fifths of the males in the sample took first steps earlier in grades 10 and 11.

Table 11
When Respondents Took First Steps to Becoming Teachers, by Gender

First Steps	Gender			
	Female (n = 44)		Male (n = 8)	
Grade	#	%	#	%
6	1	2%	0	0%
9	4	9%	0	0%
10	9	20%	3	38%
11	12	27%	4	50%
12	13	30%	1	13%
Freshman in College	4	9%	0	0%
Sophomore in College	1	2%	0	0%

In summary, regarding males and females and when they begin to consider teaching as a career, females tended to discover and think about being teachers earlier than males, even though the most common time reported for thinking about becoming a teacher was high school for both. Over three-fourths of males and females reported thinking seriously about teaching while in high school. Three-fifths of females said they knew they wanted to teach by 12th grade compared to one half of males reporting such certainty by the 12th grade. The majority of both groups first took steps to becoming teachers during their junior and senior years of high school.

RQ2: Race/Ethnic Background and Decision to Teach

To explore research question 2 regarding the relation between race/ethnic background and when one begins to consider teaching as a career, respondents were asked to answer survey items 3 and 14 through 18. Survey item 3 asked students to indicate their race/ethnic background. The identified groups, which were African American, American Indian, Asian American and Hispanic, were compared respectively on responses to questions about timing of their decision to prepare to teach. The first

analysis of research question 2 examines the responses of Hispanic (79% or 41), African American (13% or 7), American Indian (6% or 3), and Asian American (2% or 1) respondents in relation to when students first realized teaching was a profession. It is important to note that only 1 Asian American and 3 American Indian subjects participated in the study and are too small of a number to allow for meaningful comparison. Therefore, much of the following discussion will focus on African American and Hispanic participants.

An inspection of the data reveals that more than half of African American and Hispanic students reported discovering the profession of teaching prior to the 6th grade (see Table 12).

Table 12
When Respondents First Discovered That Teaching Was a Profession, by Race

Discovered	Race/Ethnicity							
	H (n=41)		AA (n=7)		AI (n=3)		AsA (n=1)	
Grades	#	%	#	%	#	%	#	%
Pre-School	2	5%	0	0%	0	0%	0	0%
K-3	14	34%	1	14%	0	0%	0	0%
4-5	7	17%	3	43%	0	0%	0	0%
6-8	14	34%	2	29%	3	100%	1	100%
9-10	3	7%	1	14%	0	0%	0	0%
11-12	1	2%	0	0%	0	0%	0	0%

Note: AA = African American, AI = American Indian, AsA = Asian American, H = Hispanic

Table 13 presents the responses of students grouped by race/ethnic background in relation to when students began to think about teaching as a possible career. Three-fourths of African American students compared to four-fifths of Hispanics reported thinking about teaching prior to the start of their junior year in high school. The majority of African American respondents (57% or 4) reported beginning to think about teaching in grades 9-10. One-fourth of Hispanic students and no African American students

reported discovering the profession from preschool to grades 4-5. For Hispanic students, 29% (12) most commonly reported thinking about teaching as a career in grades 6-8.

Table 13
When Respondents First Began to Think about Teaching as a Career, by Race

Thought About	Race/Ethnicity							
	H (n=41)		AA (n=7)		AI (n=3)		AsA (n=1)	
Grades	#	%	#	%	#	%	#	%
Pre-School	1	2%	0	0%	0	0%	0	0%
K-3	4	10%	0	0%	1	33%	0	0%
4-5	6	15%	0	0%	0	0%	0	0%
6-8	12	29%	1	14%	0	0%	1	100%
9-10	10	24%	4	57%	2	67%	0	0%
11-12	7	17%	2	29%	0	0%	0	0%
Fresh/Soph in College	1	2%	0	0%	0	0%	0	0%

Note: AA = African American, AI = American Indian, AsA = Asian American, H = Hispanic

Table 14 presents the responses of students grouped by race/ethnic background responses in relation to when participants seriously began to think about teaching as a possible career. The majority of students began to think seriously about teaching at the high school level. Over four-fifths of African American and three-fourths of Hispanic students reported thinking seriously about becoming teachers during high school or the freshman year in college. Seventeen percent (7) of Hispanic students and no African Americans reported thinking seriously about it prior to the 9th grade.

Table 14
When Respondents Seriously Thought about Teaching as a Career, by Race

Seriously Thought About	Race/Ethnicity							
	H (n=41)		AA (n=7)		AI (n=3)		AsA (n=1)	
Grades	#	%	#	%	#	%	#	%
Pre-School	0	0%	0	0%	0	0%	0	0%
K-3	1	2%	0	0%	0	0%	0	0%
4-5	0	0%	0	0%	0	0%	0	0%
6-8	6	15%	0	0%	0	0%	1	100%
9-10	10	24%	2	29%	0	0%	0	0%
11-12	19	46%	4	57%	2	67%	0	0%
Fresh/Soph in College	2	5%	0	0%	0	0%	0	0%
Not Applicable	3	7%	1	14%	1	33%	0	0%

Note: AA = African American, AI = American Indian, AsA = Asian American, H = Hispanic

Table 15 presents the responses of students grouped by race/ethnic background responses in relation to when students absolutely knew they wanted to become teachers. Over half of the Hispanic and almost half of the African American students reported absolutely knowing they wanted to teach in high school. At the time of the survey, over one quarter of the respondents still did not absolutely know if they wanted to teach. Almost one-fifth of the Hispanic respondents absolutely knew they wanted to teach after their high school careers.

Table 15
When Respondents Absolutely Knew They Wanted to Teach, by Race

Absolutely Knew	Race/Ethnicity							
	H (n=41)		AA (n=7)		AI (n=3)		AsA (n=1)	
Grades	#	%	#	%	#	%	#	%
Pre-School	0	0%	0	0%	0	0%	0	0%
K-3	0	0%	0	0%	0	0%	0	0%
4-5	1	2%	0	0%	0	0%	0	0%
6-8	2	5%	0	0%	0	0%	0	0%
9-10	4	10%	2	29%	0	0%	1	100%
11-12	16	39%	2	29%	2	67%	0	0%
Fresh/Soph in College	6	15%	1	14%	0	0%	0	0%
Jr/Sr in College	1	2%	0	0%	0	0%	0	0%
Not Applicable	11	27%	2	29%	1	33%	0	0%

Note: AA = African American, AI = American Indian, AsA = Asian American, H = Hispanic

Table 16 presents the responses of students grouped by race/ethnic background responses in relation to the grade respondents first took steps to become a teacher. First steps for all African American students in the sample occurred within the high school years with the 11th grade being the most reported response among this community. Over three quarters of Hispanic students reported taking their first steps in grades 10, 11 or 12. Only Hispanic students, 5 or 12%, reported taking steps at any point after the senior year of high school.

Table 16
When Respondents Took First Steps to Becoming Teachers, by Race

First Steps	Race/Ethnicity							
	H (n=41)		AA (n=7)		AI (n=3)		AsA (n=1)	
Grades	#	%	#	%	#	%	#	%
6	1	2%	0	0%	0	0%	0	0%
9	3	7%	1	14%	0	0%	0	0%
10	10	24%	1	14%	0	0%	1	100%
11	12	29%	3	43%	1	33%	0	0%
12	10	24%	2	29%	2	67%	0	0%
Freshmen in College	4	10%	0	0%	0	0%	0	0%
Sophomore in College	1	2%	0	0%	0	0%	0	0%

Note: AA = African American, AI = American Indian, AsA = Asian American, H = Hispanic

In summary, the relation between one's race/ethnic background and when one begins to consider teaching as a career in this study was such that more than half of African American and Hispanic students discovered the profession prior to entering the 6th grade. Hispanic students tended to think about and seriously think about being teachers earlier than their African American counterparts. However, African American students reported absolutely knowing they wanted to teach at earlier grade levels than did Hispanic students. Likewise, African American students took first steps towards teaching earlier than did Hispanic students.

RQ3: First-generation Status and Decision to Teach

To explore research question 3 regarding the relation between first-generation status and when one begins to consider teaching as a career, respondents were asked to answer survey items 6 and 14 through 18. Survey item 6 asked students to indicate their parents' highest level of educational attainment. First-generation college students were compared to non-first-generation college students on responses to questions about timing of their decision to prepare to teach. The first analysis of research question 6 examines the responses of first-generation students (65% or 34) and those who were not first-generation (35% or 18) in relation to when students first realized teaching was a profession.

Two-fifths of students who were not first-generation college students, compared to over half of students who were reported realizing that teaching was a profession prior to starting middle school. The majority of students who were not first-generation (56% or 10) reported discovering the profession in grades 6-8. The most common response reported by first-generation students (35% or 12) was grades K-3 (see Table 17).

Table 17
When Respondents First Discovered That Teaching Was a Profession, by First-generation Status

Discovered	First-generation Status			
	No (n = 18)		Yes (n = 34)	
Grades	#	%	#	%
Pre-School	2	11%	0	0%
K-3	3	17%	12	35%
4-5	2	11%	8	24%
6-8	10	56%	10	29%
9-10	1	6%	3	9%
11-12	0	0%	1	3%

Table 18 compares first-generation and non-first-generation students according to when respondents began to think about teaching as a possible career. Almost three-fifths of students who were not first-generation, compared to slightly less than half that were, reported thinking about becoming teachers prior to starting high school.

Table 18
When Respondents First Began to Think about Teaching as a Career, by First-generation Status

Think About	First-generation Status			
	No (n = 18)		Yes (n = 34)	
Grades	#	%	#	%
Pre-School	1	6%	0	0%
K-3	1	6%	4	12%
4-5	1	6%	5	15%
6-8	7	39%	7	21%
9-10	4	22%	12	35%
11-12	4	22%	5	15%
Fresh/Soph in College	0	0%	1	3%

Table 19 compares first-generation and non-first-generation students according to when respondents began to think seriously about teaching as a career. Three-fifths of students who were not first-generation college students, compared to three-fourths of respondents who were, reported thinking seriously about teaching while still in high school. Fifty percent (9) of students without a family history of teachers and 47% (16) of students with a history most commonly reported seriously thinking about teaching as a career in grades 11-12.

Table 19
When Respondents Seriously Thought about Teaching as a Career, by First-generation Status

Seriously Thought About	First-generation Status			
	No (n = 18)		Yes (n = 34)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	1	6%	0	0%
4-5	0	0%	0	0%
6-8	3	17%	4	12%
9-10	2	11%	10	29%
11-12	9	50%	16	47%
Fresh/Soph in College	1	6%	1	3%
Not Applicable	2	11%	3	9%

Table 20 compares first-generation and non-first-generation students according to when respondents absolutely knew they wanted to become teachers. Over half of the respondents in both categories absolutely knew they wanted to teach by the end of high school. The most common response among students who are not first-generation (33% or 6) and first-generation respondents (41% or 14) was grades 11-12. Twenty-eight percent (5) of the non-first-generation and 26% (9) of the first-generation respondents responded Not Applicable indicating that they have yet to absolutely know that they want to become teachers. No respondents absolutely knew prior to the 4th and 5th grades.

Table 20
When Respondents Absolutely Knew They Wanted to Teach, by First-generation Status

Absolutely Knew	First-generation Status			
	No (n = 18)		Yes (n = 34)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	1	6%	0	0%
6-8	1	6%	1	3%
9-10	3	17%	4	12%
11-12	6	33%	14	41%
Fresh/Soph in College	2	11%	5	15%
Jr/Sr in College	0	0%	1	3%
Not Applicable	5	28%	9	26%

Table 21 compares first-generation and non-first-generation students according to the grade respondents first took steps to become a teacher. Based on the findings, non-first-generation students began to take steps primarily over a four-year period between the freshman year in high school and the freshman year in college. First-generation students are spread fairly even over all categories with over half of the respondents reporting taking their first steps in grades 11 or 12. For both groups, responses suggest that most of the first steps occur after the 10th grade of high school.

Table 21
When Respondents Took First Steps to Becoming Teachers, by First-generation Status

First Steps	First-generation Status			
	No (n =18)		Yes (n =34)	
Grades	#	%	#	%
6	0	0%	1	3%
9	3	17%	1	3%
10	3	17%	9	26%
11	5	28%	11	32%
12	6	33%	8	24%
Freshman in College	1	6%	3	9%
Sophomore in College	0	0%	1	3%

In summary, first-generation and non-first-generation college students differed as to when they considered becoming teachers with more first-generation college students reporting discovering the profession and beginning to think about being teachers earlier than students who were not first-generation. Students who are first-generation began to think seriously about teaching and developed certainty about their decision to teach later than students who were not first-generation college students. Lastly, non-first-generation college students reported taking first steps earlier than their first-generation counterparts.

RQ4: Family History of Teachers and Decision to Teach

To explore research question 4 regarding the relation between family history of teachers and when one begins to consider teaching as a career, respondents were asked to answer survey items 7 and 14 through 18. Survey item 7 asked students to indicate if anyone in their family was a teacher at the early childhood, elementary or secondary levels. The groups with a family history of teachers was compared to the group which did not have a family history of teachers on responses to questions about timing of their decision to prepare to teach. The first analysis of survey question 7 examines the responses of students who did have family members who are teachers (48% or 25) and those who did not have a history of family members who are teachers (52% or 27) in relation to when students first realized teaching was a profession.

An inspection of Table 22 reveals that the responses reported of students with a history of teachers in the family and those without closely mirror each other. Over half of the respondents without a family history of teachers compared to slightly less than half of those with a family history of teachers reported first realizing that teaching was a

profession prior to starting middle school. At the 6-8 grade level, 33% (9) of students without teachers in the family and 44% (11) of students with the history reported discovering the profession.

Table 22
When Respondents First Discovered That Teaching Was a Profession, by Family History of Teachers

Discovered	Family History of Teachers			
	No (n = 27)		Yes (n = 25)	
Grades	#	%	#	%
Pre-School	1	4%	1	4%
K-3	8	30%	7	28%
4-5	6	22%	4	16%
6-8	9	33%	11	44%
9-10	2	7%	2	8%
11-12	1	4%	0	0%

Table 23 compares students without teachers in the family to those with them on the basis of when respondents began to think about teaching as a possible career. Over half of students who did not have a history of teachers in the family compared to slightly less than half of those who did reported first thinking about becoming teachers during their high school careers. Sixteen percent (4) students who have a history of teachers in their family reported first thinking about becoming a teacher prior to grades 4-5 compared to 8% (2) of respondents without a history.

Table 23
When Respondents First Began to Think about Teaching as a Career, by Family History of Teachers

Thought About Grades	Family History of Teachers			
	No (n = 27)		Yes (n = 25)	
	#	%	#	%
Pre-School	1	4%	0	0%
K-3	1	4%	4	16%
4-5	3	11%	3	12%
6-8	7	26%	7	28%
9-10	10	37%	6	24%
11-12	4	15%	5	20%
Fresh/Soph in College	1	4%	0	0%

Table 24 compares students without teachers in the family to those with them on the basis of when respondents began to think seriously about teaching as a career. The most common period reported was grades 11-12. Fifty-two percent (13) of students with a history and 44% (12) of students without reported thinking seriously about teaching as a career in grades 11-12. Two-fifths of students without a family history of teachers compared to one-third of respondents with a family history of teachers reported thinking seriously about becoming teachers by the end of 10th grade.

Table 24
When Respondents Seriously Thought about Teaching as a Career, by Family History of Teachers

Thought Seriously About	Family History of Teachers			
	No (n = 27)		Yes (n = 25)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	1	4%	0	0%
4-5	0	0%	0	0%
6-8	4	15%	3	12%
9-10	7	26%	5	20%
11-12	12	44%	13	52%
Fresh/Soph in College	1	4%	1	4%
Not Applicable	2	7%	3	12%

Table 25 compares students without teachers in the family to those with them on the basis of when respondents absolutely knew they wanted to become teachers. Over half of respondents without a family history of teachers compared to slightly less than half of those with teachers in the family reported absolutely knowing they wanted to become teachers between grades 9 and 12. Grade 11-2 was the most commonly reported time period among respondents with family history of teachers (41% or 11) and (36% or 9) for those without the history. Over one-fourth of the students reported Not Applicable indicating that they had yet to absolutely know that they want to teach.

Table 25
When Respondents Absolutely Knew They Wanted to Teach, by Family History of Teachers

Absolutely Knew	Family History of Teachers			
	No (n = 27)		Yes (n = 25)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	1	4%	0	0%
6-8	1	4%	1	4%
9-10	4	15%	3	12%
11-12	11	41%	9	36%
Fresh/Soph in College	3	11%	4	16%
Jr/Sr in College	1	4%	0	0%
Not Applicable	6	22%	8	32%

Table 26 compares students without teachers in the family to those with them on the basis of when respondents first took steps to become teachers. Over four-fifths of students reported taking their first steps towards becoming teachers in grades 10, 11, or 12. Grade 11 was the most frequently reported grade among students without a family history (37% or 10) and grade 12 was most frequently reported among respondents (32% or 8) with a family history of teachers.

Table 26
When Respondents Took First Steps to Becoming Teachers, by Family History of Teachers

First Steps	Family History of Teachers			
	No (n = 27)		Yes (n = 25)	
Grades	#	%	#	%
6	0	0%	1	4%
9	2	7%	2	8%
10	7	26%	5	20%
11	10	37%	6	24%
12	6	22%	8	32%
Freshman in College	1	4%	3	12%
Sophomore in College	1	4%	0	0%

In summary, when students with and without a family history of teachers were compared on the basis of when they begin to consider teaching as career their differences appeared to be minimal. Slightly more students without a family history of teachers reported discovering the profession before middle school. Conversely, slightly more students with a family history of teachers reported beginning to think about becoming teachers prior to starting the 6th grade. Over two-thirds of both groups reported thinking seriously about becoming teachers during the high school years with slightly more of the students without a family history of teachers cohort stating that they absolutely knew they wanted to teach during this same time. The most popular period reported for taking first steps by both cohorts was grades 10, 11, and 12 with more students without a history of teachers in the family reporting 11th grade and those with a family history of teachers stating the 12th grade.

RQ5: Grade Level Desired to Teach and Decision to Teach

To explore research question 5 regarding the relation between grade levels desired to teach and when one begins to consider teaching as a career, respondents were asked to

answer survey items 8 and 14 through 18. Survey item 8 asked students to indicate which grade level they were most interested in teaching. Respondents interested in teaching at the early childhood, elementary, or secondary levels were compared on responses to questions about timing of their decision to prepare to teach. The first analysis of research question 8 examines the responses of students who reported a desire to teach early childhood (33% or 17), elementary (21% or 11), or secondary (42% or 22) in relation to when students first realized teaching was a profession. Only two students indicated responses other than the three listed, one of whom reported Preschool and the other Undecided. For purposes of this analysis, the researcher will examine the relation between survey item 4 through 18 and interest in early childhood, elementary or secondary teaching levels.

All eleven students desiring to teach at the elementary level, nine-tenths of students wanting to teach secondary, and three-fourths of students interested in teaching early childhood reported discovering the profession between kindergarten and 8th grade. Only students interested in teaching early childhood and secondary reported discovering the profession any time after middle school (see Table 27).

Table 27
When Respondents First Discovered That Teaching Was a Profession, by Desired Grade Level to Teach

Discovered	Grade Level					
	EC (n = 17)		Elem (n = 11)		Sec (n = 22)	
Grades	#	%	#	%	#	%
Pre-School	2	12%	0	0%	0	0%
K-3	5	29%	4	36%	6	27%
4-5	4	24%	4	36%	2	9%
6-8	4	24%	3	27%	12	55%
9-10	1	6%	0	0%	2	9%
11-12	1	6%	0	0%	0	0%

Note: EC = Early Childhood (exclusively kindergarten through third grades), Elem = Elementary (kindergarten through 8th grade), Sec = Secondary (grades 9 through 12)

Table 28 compared students wanting to teach at the early childhood, elementary, or secondary levels according to when respondents began to think about teaching as a possible career. Over 90% of students interested in teaching elementary in contrast to less than half of the students interested in teaching early childhood and secondary reported thinking about being teachers prior to starting high school. About a fourth of students interested in teaching early childhood compared to only one student each from the other two groups reported realizing that teaching was a profession from pre-school to the 3rd grade.

Table 28
When Respondents First Began to Think about Teaching as a Career, by Desired Grade Level to Teach

Think About	Grade Level					
	EC (n = 17)		Elem (n = 11)		Sec (n = 22)	
Grades	#	%	#	%	#	%
Pre-School	1	6%	0	0%	0	0%
K-3	3	18%	1	9%	1	5%
4-5	1	6%	2	18%	3	14%
6-8	3	18%	7	64%	4	18%
9-10	6	35%	1	9%	7	32%
11-12	2	12%	0	0%	7	32%
Fresh/Soph in College	1	6%	0	0%	0	0%

Note: EC = Early Childhood (exclusively kindergarten through third grades), Elem = Elementary (kindergarten through 8th grade), Sec = Secondary (grades 9 through 12)

Table 29 compared students wanting to teach at the early childhood, elementary, or secondary levels according to when respondents began to think seriously about teaching as a possible career. Nine-tenths of students indicating that they wanted to teach at the secondary level, in contrast to about three-fifths of students interested in teaching either early childhood or elementary, reported seriously thinking about becoming teachers during their high school careers.

Table 29
When Respondents Seriously Thought about Teaching as a Career, by Desired Grade Level to Teach

Seriously Think About	Grade Level					
	EC (n = 17)		Elem (n = 11)		Sec (n = 22)	
Grades	#	%	#	%	#	%
Pre-School	0	0%	0	0%	0	0%
K-3	1	6%	0	0%	0	0%
4-5	0	0%	0	0%	0	0%
6-8	3	18%	3	27%	1	5%
9-10	2	12%	3	27%	6	27%
11-12	8	47%	3	27%	14	64%
Fresh/Soph in College	2	12%	0	0%	0	0%
Not Applicable	1	6%	2	18%	1	5%

Note: EC = Early Childhood (exclusively kindergarten through third grades), Elem = Elementary (kindergarten through 8th grade), Sec = Secondary (grades 9 through 12)

Table 30 compared students wanting to teach at the early childhood, elementary, or secondary levels according to when respondents absolutely knew they wanted to become a teacher. More than half of students that indicated an interest in teaching early childhood or elementary, compared to less than half of students interested in secondary, reported absolutely knowing they wanted to teach in grades 9-10 or 11-12. Two-fifths of students interested in teaching secondary reported Not Applicable indicating that they had yet to absolutely know that they want to teach.

Table 30
When Respondents Absolutely Knew They Wanted to Teach, by Desired Grade Level to Teach

Grades	EC (n = 17)		Grade Level		Sec (n = 22)	
	#	%	#	%	#	%
Pre-School	0	0%	0	0%	0	0%
K-3	0	0%	0	0%	0	0%
4-5	1	6%	0	0%	0	0%
6-8	0	0%	2	18%	0	0%
9-10	5	29%	1	9%	1	5%
11-12	5	29%	5	45%	9	41%
Fresh/Soph in College	4	24%	0	0%	3	14%
Jr/Sr in College	0	0%	1	9%	0	0%
Not Applicable	2	12%	2	18%	9	41%

Note: EC = Early Childhood (exclusively kindergarten through third grades), Elem = Elementary (kindergarten through 8th grade), Sec = Secondary (grades 9 through 12)

Table 31 compared students wanting to teach at the early childhood, elementary, or secondary levels according to when respondents first took steps to becoming a teacher. Over four-fifths of students interested in teaching elementary and secondary reported taking their first steps in grades 10, 11, and 12 compared to two-thirds of students interested in early childhood. Over one-fourth of students wanting to teach early childhood, no elementary, and only one secondary respondent reported taking their first steps to becoming teachers after high school.

Table 31
When Respondents Took First Steps to Becoming Teachers, by Desired Grade Level to Teach

First Steps	Grade Level					
	EC (n = 17)		Elem (n = 11)		Sec (n = 22)	
Grades	#	%	#	%	#	%
6	1	6%	0	0%	0	0%
9	1	6%	2	18%	1	5%
10	4	24%	1	9%	6	27%
11	5	29%	4	36%	6	27%
12	2	12%	4	36%	8	36%
Freshmen in College	3	18%	0	0%	1	5%
Sophomore in College	1	6%	0	0%	0	0%

Note: EC = Early Childhood (exclusively kindergarten through third grades), Elem = Elementary (kindergarten through 8th grade), Sec = Secondary (grades 9 through 12)

In summary, when students grouped according to grade levels desired to teach are compared on the basis of when they begin to think about teaching as a career, students expressing a desire to teach at the elementary level realized that teaching was a profession and began to think about being teachers much earlier than any other group. Students indicating an interest in teaching at the secondary level were much more coalesced than any other group in their responses, reporting the high school years as the time they most seriously thought about being teachers. Over half of students wanting to teach early childhood or elementary absolutely knew they wanted to be teachers during high school compared to a high reporting of uncertainty by students wanting to teach secondary. Students interested in teaching early childhood tended to report taking steps earlier than the other two groups.

RQ6: Attendance at a Majority-minority School and Decision to Teach

To explore Research Question 6, regarding the relation between attendance at a majority-minority school and when one begins to consider teaching as a career,

respondents were asked to answer survey items 9 through 13 and 14 through 18. Survey items 9 to 13 asked students to indicate if they attended a majority-minority school in grades K-3, 4-5, 6-8, 9-10 and/or 11-12, respectively. A majority-minority school is one with 50% or more of the enrollment consisting of students who are minority. In order to more succinctly present the results from the survey question on majority-minority school attendance, response categories were collapsed. Thus, respondents who answered Yes to attending a majority-minority school (MMS) at any of the listed grade levels were aggregated into one group while students who reported never having attended a majority-minority school were aggregated into another (see Appendix F for tables presenting majority-minority school attendance status by each grade level and when students began to consider teaching as a career).

The aggregated group which attended majority-minority schools was compared to the group which did not attend majority-minority schools on responses to questions about timing of their decision to prepare to teach. Table 32 reveals that two-thirds of respondents who did not attend a majority-minority school, compared to slightly less than half who did, reported discovering that teaching was a profession prior to starting middle school.

Table 32
When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance

Discovered	Attended Majority-minority School			
	N (n = 9)		Y (n= 43)	
Grades	#	%	#	%
Pre-School	1	11%	1	2%
K-3	2	22%	13	30%
4-5	3	33%	7	16%
6-8	3	33%	17	40%
9-10	0	0%	4	9%
11-12	0	0%	1	2%

Table 33 compares MMS and non-MMS students on the basis of when they began to think about teaching as a career. Interestingly, one-half of students who did attend an MMS began to think about teaching prior to high school while two-thirds of students who did not attend an MMS did not think about teaching until high school. Most of the respondents (56% or 5) who did not attend an MMS reported beginning to think about being teachers later during grade levels 9-10.

Table 33
When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance

Thought About	Attended Majority-minority School			
	N (n = 9)		Y (n= 43)	
Grades	#	%	#	%
Pre-School	0	0%	1	2%
K-3	2	22%	3	7%
4-5	0	0%	6	14%
6-8	1	11%	13	30%
9-10	5	56%	11	26%
11-12	1	11%	8	19%
Fresh/Soph in Coll	0	0%	1	2%

Table 34 compares MMS and non-MMS students on the basis of when respondents began to think seriously about teaching as a career. Three-fourths of students who did attend an MMS, compared to about half of those who did not, reported

beginning to seriously think about teaching as a career later during their high school grades, with grades 11-12 being the most commonly stated category for both.

Table 34
When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance

Seriously Thought About	Attended Majority-minority School			
	<u>N (n = 9)</u>		<u>Y (n= 43)</u>	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	1	2%
4-5	0	0%	0	0%
6-8	2	22%	5	12%
9-10	1	11%	11	25%
11-12	4	44%	21	49%
Fresh/Soph in Coll	1	11%	1	2%
Not Applicable	1	11%	4	9%

Table 35 compares MMS and non-MMS students on the basis of when respondents absolutely knew they wanted to become teachers. More than half of the students in each group, MMS and non-MMS attendees, reported knowing with certainty that they wanted to become teachers while in high school. Similarly, about one-fourth of students in each group, MMS and non-MMS attendees, responded Not Applicable indicating that they had yet to decide if they absolutely wanted to teach.

Table 35
When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance

Absolutely Knew	Attended Majority-minority School			
	N (n = 9)		Y (n= 43)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	0	0%	1	2%
6-8	0	0%	2	5%
9-10	2	22%	5	12%
11-12	3	33%	17	40%
Fresh/Soph in Coll	1	11%	6	14%
Jr/Sr in Coll	1	11%	0	0%
Not Applicable	2	22%	12	28%

Table 36 compares MMS and non-MMS students in relation to the grade in which respondents first took steps to becoming teachers. Nine out of ten students who did not attend an MMS, compared to three-fourths of students that did, reported taking their first steps towards becoming teacher in grades 10, 11, or 12.

Table 36
When Respondents Took First Steps to Becoming Teachers, by Majority-minority School Attendance

First Steps	Attended Majority-minority School			
	N (n = 9)		Y (n= 43)	
Grades	#	%	#	%
6	0	0%	1	3%
9	0	0%	4	13%
10	6	30%	6	19%
11	6	30%	10	31%
12	6	30%	8	25%
Freshmen in College	2	10%	2	6%
Sophomore in College	0	0%	1	3%

In summary, when students having attended majority-minority schools at some point during the K-3, 4-5, 6-8, 9-10 and/or 11-12 were compared with those who had not according to when students make decisions about being teachers, the following results

emerged. Respondents that did not attend majority-minority schools reported discovering that teaching was a profession earlier and with greater frequency than their counterparts prior to starting middle school. However, students who did attend an MMS reported thinking about becoming teachers earlier than students who did not attend an MMS. Most respondents, regardless of MMS attendance status gave serious thought to teaching as a career and reached certainty about teaching as a career during high school, particularly during the junior and senior years. Students who attended majority-minority high schools tended to seriously think about and/or absolutely know slightly earlier and often took steps sooner and over more grade levels than those who did not attend majority-minority schools.

Summary

Fifty-two telephone surveys were completed for this study. Data were reported regarding demographic information, additional respondent characteristics, and timing of career choice for the entire sample followed by the findings related to the six research questions. Following are selected highlights from the survey results.

The majority of participants in this study tended to be female, between the ages of 19-24, Hispanic, first-generation college students, to have GPAs above a 3.01, have attended majority-minority schools, not have family members who were teachers, and have expressed an interest in teaching at the secondary level. Respondents generally reported discovering the profession and beginning to think about being teachers prior to completing middle school and tended not to think seriously or become convinced that they wanted to be teachers until high school regardless of gender, race/ethnic

background, first-generation status, history of teachers in the family, desired grade level to teach or attendance at a minority-majority school variables.

CHAPTER 5

CONCLUSIONS AND IMPLICATIONS

Introduction

The purpose of this study was to gather and examine data offering potential insight about when students begin to consider careers as teachers. The findings have the potential to aid in local and national teacher recruitment efforts to balance the relative percentages of minority students and teachers. This research may help education policy makers, college recruiters, and teacher recruitment program administrators identify periods within students' K-12 academic experience during which it would seem important to engage students who are in the process of serious career exploration and contending with issues that may or may not support their career choices.

Summary of Results

The present study looked at the relation of the variables of gender, race/ethnic background, first-generation college student status, family history of teachers, grade level desired to teach, and majority-minority school attendance status with indicators of timing

of the decision to become a teacher. Comparison by gender and when students begin to consider teaching as a career showed that females in this study tended to discover that teaching is a profession and think about being teachers earlier than males, even though the most common time reported for thinking about becoming teachers is high school for both females and males. Over three-fourths of males and females reported first thinking seriously about teaching while in high school. Three-fifths of females said they knew they wanted to teach by 12th grade compared to only one half of males reporting such certainty by the 12th grade. The majority of both groups first took steps to becoming teachers during their junior and senior years of high school.

Comparisons by race/ethnic background and when one begins to consider teaching revealed that more than half of Hispanic and African American students in this study discovered the profession prior to entering the 6th grade. On the other hand, Hispanic students tended to begin to think about and seriously consider becoming teachers earlier than their African American counterparts. However, African American students reported absolutely knowing they wanted to teach at earlier grade levels than Hispanic students. Finally, African American students took first steps towards teaching earlier than Hispanic students.

Looking at data for first-generation status and when students consider being teachers, first-generation college students reported discovering the profession and beginning to think about being teachers earlier than students who are not first-generation. However, students who are first-generation begin to think seriously about teaching and develop certainty about their decision to teach later than students who are not first-

generation college students. Lastly, first-generation students reported taking first steps later than their non-first-generation counterparts.

Students with and without a family history of teachers were compared as to the timing of student choices regarding teaching. Many differences were small. The findings suggested that only slightly more than half of students without a family history of teachers reported discovering the profession before middle school. In terms of beginning to think about becoming teachers, a little over half of students with a family history of teachers reported doing so prior to starting the 8th grade. Over two-thirds of both groups reported thinking seriously about becoming teachers during the high school years, with slightly more of the students without a family history of teachers stating that they absolutely knew they wanted to teach during this same time. The most popular period reported for taking first steps by both cohorts was grades 10, 11, and 12, with more students without a history of teachers in the family reporting 11th grade and those with a family history of teachers stating the 12th grade.

Survey participants interested in teaching either early childhood, elementary, or secondary levels were compared as to when they began to think about teaching as a career. Comparisons revealed that students expressing a desire to teach at the elementary level realized that teaching was a profession and began to think about being teachers much earlier than any other group. Students indicating an interest in teaching at the secondary level were much more clustered than the early childhood and elementary cohorts in their responses, reporting the high school years as the time they most seriously thought about being teachers. Over half of students wanting to teach early childhood or elementary levels absolutely knew they wanted to be teachers during high school

compared to a high reporting of uncertainty by students wanting to teach secondary education. Students interested in teaching early childhood tended to report taking steps earlier than students expressing interest in teaching at the elementary and secondary grade levels.

Finally, majority-minority school attendance status at some point during the K-3, 4-5, 6-8, 9-10 and/or 11-12 levels in relation to when students make decisions about being teachers provided the following insights. Respondents that did not attend majority-minority schools reported discovering that teaching was a profession earlier and with greater frequency than their counterparts prior to starting middle school. However, students that did not attend an MMS reported thinking about becoming teachers in later grades than students who did attend an MMS. Most respondents thought seriously and/or absolutely knew they want to be teachers during high school, particularly sometime during the junior and senior years. Students that attended majority-minority high schools tended to seriously and/or absolutely know slightly earlier and often took steps sooner and over more grade levels than those who did not attend majority-minority schools.

Discussion of Results

Most teacher recruitment programs targeting pre-college populations begin recruiting students at the 11th and 12th grades of high school (Contreras & Nicklas, 1993; Fielder, 1996; Yopp et al., 1991). The literature suggests the recruitment of potential teachers should begin as early as the elementary grades (Contreras & Nicklas, 1993). Jacullo-Noto (1991) suggests that teacher recruitment efforts should begin at the middle school levels and extend into high schools. The results of the present study support the

earlier focus on students. Regardless of gender, race/ethnic background, first-generation status, family history of teachers, grade level desired to teach, and majority-minority school attendance status, students in this study reported realizing that teaching was a profession prior to the 6th grade and had begun thinking about being teachers sometime before completing junior high school. This accords with the findings of a report sponsored by New Jersey's State Department of Education, Division of Vocational Education (1984) stating that students as early as grades 4 through 6 are capable of planning some long-range educational and personal goals.

RQ1: Is there a relationship between gender and when one begins to consider teaching as a career choice?

According to Gordon's (1995) research, there is a public perception that teaching is primarily a profession for women. This perception is borne out by 1993 data outlining the demographics of the teaching force whereby three fourths of the elementary teaching force was female (DES, 1997). Thus, the perceived feminization of the field is a reality. Given this, it seems reasonable that men would make career choices to teach at later periods in their decision making process or at times when they are more mature and capable of negotiating barriers created by the perception and reality of teaching as a feminized field. Conversely, women might not interpret the feminization of the profession as a negative barrier and quite possibly see it as inviting. The results of the present study show that twice as many females compared to males reported beginning to realize that teaching was a career among many between pre-school and 5th grade. Only female respondents reported thinking about being teachers prior to grade 6. Over half of the females reported having already thought about being teachers by the start of high

school, while over three-fourths of male participants reported not starting to think about being teachers until high school.

Interestingly, over three-fourths of male respondents reported thinking seriously about being teachers during high school. Half of male students reported being certain about wanting to be teachers in grades 11-12. This suggests that males in this study are beginning to think about, seriously contemplating, and becoming certain about wanting to become teachers all within the high school years. Female respondents indicated making similar decisions about teaching earlier. One quarter of female respondents reported thinking seriously about teaching prior to high school. Female respondents in this study, perhaps more than males, would have tended to benefit from earlier outreach efforts proposed by Contreras & Nicklas (1993) and Jacullo-Noto (1991).

RQ2: Is there a relationship between race/ethnicity and when one begins to consider teaching as a career choice?

As discussed in the previous chapter, 79% (41) of the respondents were Hispanic, 13% (7) African American, 6% (3) American Indian, and one respondent was Asian American. Telephone survey participants came from the Phoenix metropolitan area wherein Hispanics make up the largest percentage (21.9%) of minority people living in the area (Chronicle of Higher Education, Almanac Ed., 2000). This fact accounts for the higher percentage of Hispanic participants in the 2+2+2 Partnership Program and thus in the survey sample.

King (1993) found that one-fourth of participants in her study of African American teachers reported making the decision to become teachers during elementary school. The present study found that African American participants in this study thought

about being teachers between kindergarten and 8th grade, but that none had thought seriously or absolutely knew they wanted to be teachers prior to starting high school. However, consistent with King's (1993) findings, although with a different population, in the present study about one-fourth of Hispanic students reported seriously thinking about being teachers during elementary school.

King's also found that over 50% of African American teachers in her study reported making the decision to become teachers during their undergraduate years. The present study does not reveal a similar reporting pattern among African American respondents. However, almost one-fourth of Hispanic students indicated wanting to become teachers with certainty while in college while another one-fourth of Hispanic students, at the time of the survey, had yet to decide with certainty that they wanted to teach.

The great majority of respondents were Hispanic and female, thus as one of these "subdivisions" goes, so goes the other. They are virtually isomorphic. Only Hispanic respondents reported beginning to think about or seriously think about being teachers at the elementary and junior high school levels. Based on the survey results examining gender and then race/ethnic background in relation to when students begin to think about being teachers, of those students within this survey, Hispanic female students appear most ready in their career development to benefit from pre-college teacher recruitment program efforts to begin targeting students in elementary and or junior high school as recommended by Contreras and Nicklas (1993) and Jacullo-Noto (1991).

A Combined Analysis of RQ3 – RQ6

At the time of this writing, no literature was found examining the implications of the variables first-generation college student status, family history of teachers, grade level desired to teach, and majority-minority school attendance status with when students make decisions about being teachers or a professional in any other career. This study may help reduce this gap in the literature and provide relevant insights to pre-college teacher recruitment personnel. Therefore, this researcher looked at the literature related to career decision-making and development to extrapolate general comparisons to timing outcomes reported by participants in this study as they relate to each of the four remaining research questions:

- **RQ3: Is there a relationship between those who are first-generation college students and when one begins to consider teaching as a career choice?**
- **RQ4: Is there a relationship between having family members who are teachers and when one begins to consider teaching as a career choice?**
- **RQ5: Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?**
- **RQ6: Is there a relationship between whether one attended a majority-minority school at the K-12 levels and when one begins to consider teaching as a career choice?**

A report by Phipps (1995) looking at career dreams of adolescents indicated that one-fifth of students in grades 4-5 were clearly able to state their career ambitions. One may assume some equivalence between the present study's survey category of "when students began to seriously think about careers as teachers" and early ability to state

ambitions and plan career goals. If so, the findings from the present study were inconsistent with what Phipps' (1995) reported. Far less than one-fifth of respondents in the current study reported beginning to think seriously about teaching in grades 4-5.

However, if one uses the survey category of when students began to think about becoming teachers then an analysis of the results from this present study support Phipps' (1995) conclusions based on similar responses. The results from the present study showed that at least one-fifth of students across all the variables of first-generation status, family history of teachers, grade level desired to teach, and majority-minority school status reported beginning to think about teaching as a profession in grades 4-5 which are consistent findings with those of Phipps.

A look at a study conducted by Page and Page (1984) examining high school senior students' perceptions of teaching as a career opportunity revealed that two-fifths of participants in their study reported becoming interested in teaching prior to age 15 and between the ages of 15 and 16. The remaining one-fifth of respondents surveyed reported becoming interested in the profession between ages 17 and 18 (Page & Page, 1984). Respondents from the present survey that did not have family members who were teachers or who did not attend a majority-minority school mirrored Page and Page's (1984) results. However, a higher percentage (over half) of students from the present study compared to two-fifths from Page and Page's study tended to think about being teachers between grades kindergarten through 8th grade. Thus, the findings of the current study indicated that the majority of students reported beginning to think about being teachers prior to middle school, followed in frequency by middle school, with the

smallest number or proportion of students reporting thinking about becoming teachers in high school.

Conclusions

Based on the findings of this study we can conclude that:

- Female respondents in the present study tended to discover that teaching is a profession, think about being teachers, and know with certainty they wanted to teach earlier than males.
- Hispanic respondents tended to think about and seriously think about being teachers earlier than their African American counterparts; however, African American participants in the study knew with certainty that they wanted to teach at earlier grade levels than Hispanic respondents.
- First-generation college students reported discovering the profession and beginning to think about being teachers earlier than students who are not. Consistent with what we would expect, students that are not first-generation begin to think seriously about teaching and with certainty about their decision to teach earlier than students who were.
- Students with and without a family history of teachers evidenced primarily small differences in the timing of the thinking leading them to become teachers.
- Students interested in teaching early childhood and elementary education tended to make their decisions about teaching during the early grade levels

and students wanting to teach at the secondary level tended to make their decisions during later grades.

- Respondents who did not attend majority-minority schools reported discovering that teaching was a profession earlier and with greater frequency than their counterparts prior to starting middle school.
- The majority of students reported taking their first steps towards teaching during grades 10, 11 or 12, which coincides with the large percentage (60%) of all respondents reporting that their first steps were joining the 2+2+2 Partnership Program. The 2+2+2 Partnership Program begins its recruitment of potential members during grades 10, 11 and 12.

Limitations of the Study

Sample

Fowler (1988) provides some insight on a good return rate for telephone surveys and minimum numbers of times to call a subject. He suggests that response rates less than 65% generally require follow up with several strategies outlined within his text. In the present study, 52 out of 76, or 68%, of 2+2+2 Partnership Program members participated in the telephone survey. Though Fowler considers a 68% response rate adequate, ideally, for the fullest and most complete reflection of participants' views, all students should have been contacted. The researcher was not able to successfully contact the remaining members due to disconnected phone numbers, relocation with no forwarding address, or unsuccessful attempts to speak directly with subjects. For example, the interviewer attempted to contact subjects by leaving voice messages,

sending emails, using bilingual translators for Spanish speaking households to leave messages, and/or leaving a return number for subjects with roommates. Fowler (1988) recommends that an interviewer attempt to contact subjects in urban areas at least six times. The interviewer for this present study attempted to contact potential subjects at least 8 times before counting them as unavailable for the study.

The pool of 76 potential subjects lacked variance within certain categories. The sample pool consisted primarily of Hispanic females and small numbers of males, African Americans, American Indians, and Asian Americans. One reason that may account for the low percentages of American Indians in the sample pool is the low numbers of American Indians in the program. At the time of this survey, the 2+2+2 Partnership Program only had 4 (3%) American Indians in the program. The researcher can speculate that this is likely a result of where significant numbers of American Indians attend school within Arizona. The majority of American Indians within the state of Arizona seem to reside and attend schools on reservations. As a result, 2+2+2 partner high schools, which do not include any on a reservation, have lower percentages of American Indian student enrollment from which to recruit aspiring teachers.

Because the 2+2+2 Partnership Program recruits White students who are first-generation college students it might have been insightful to have them as a comparison group.

Telephone Survey Instrument

Questions 14 through 18 were sometimes perceived by subjects as vague and occasionally required further explanation. For example, question 14 asked students “In what grades did you first realize that teaching was a profession?” Some subjects were

uncertain if the question meant when did they first realize teaching was a profession for themselves or as a career choice in general. Question 15 asked students “In what grades did you begin to think seriously about education as a career choice?” The subjects responded from their own definition of “serious” versus a set definition provided through the telephone survey instrument.

Procedural Issues

The procedure for this study included telephone surveys with subjects. At the start of the telephone interview, participants were asked for permission to tape record the interview. All subjects in this sample verbally provided their permission and were taped recorded. According to Seidman (1991), in-depth interviews should be tape-recorded. He views tape recording as the most reliable method to accurately recapture the words of respondents (Seidman, 1991). However, he also acknowledges the potential caution one may initially have when one knows one is being taped. Seidman (1991) does remind us that shortly into the interview, the subject tends to forget they are being recorded; however, there is no certainty and, thus, respondents may be hesitant and scripted or less candid in their response throughout a taped interview.

Implications for Future Research

Following are recommendations for future research intended to build upon the study’s findings:

Questions for Future Studies

- Who or what was most instrumental in students’ decision to teach and why?

- When do students begin to make decisions about career choices in professions other than teaching and does type of career aspiration affect timing in any way?
- Why do students want to become teachers?
- Why do students not want to become teachers?
- What factors lead to the under representation of male students in pre-college teacher preparation programs and as well as the teaching profession?

Future Research Strategies and Methods

- Add White students to the comparison group.
- Re-think and reword the questions assessing when students begin to make decisions about teaching for clearer and more distinctive timing categories.
- Incorporate focus groups and open-ended individual interviews to allow for a more extensive, richer, and more detailed conversation with subjects about their decisions to teach and the steps they took to becoming teachers.
- Conduct a longitudinal study looking at the relationship between various decision-making phases and actual transition to becoming teachers by tracking survey participants until they begin their eventual careers.
- Add a more extensive analysis of the stated research questions beyond descriptive statistics.
- Add a control group of similar students, demographically, that are not members of the 2+2+2 Partnership Program to compare timing of teaching as a career choice with career aspirations of students outside such programs.

- Increase the sample size and representativeness by adding members from other programs or from geographic regions with persons sharing similar demographic characteristics as students in the 2+2+2 Partnership Program.

Implications for Policy and Practice

Several authors recommend that the recruitment of potential teachers begin at the elementary (Contreras and Nicklas, 1993) and junior high levels in addition to high school (Hunter-Boykin, 1993; Jacullo-Noto, 1991). The results of this study indicate that some students began to think about teaching during the elementary and junior high school grade levels. Findings from the study indicate that in Arizona, Hispanic female students interested in teaching early childhood or elementary education are most ready in their career development to benefit from pre-college teacher recruitment program's efforts which begin targeting students in elementary and or junior high school.

Nevertheless, because middle school is a time where students are showing interest (Page & Page, 1984) or beginning to think about future careers, policy makers and practitioners might consider centralizing services among multiple early outreach recruitment efforts, rather than conducting programs that focus exclusively on one career path. Colleges and universities might want to consider providing a variety of career information at the elementary and junior high levels. Targeted programs offering very career specific information and exposure should consider beginning at the high school level where the findings from this study show that students are generally more serious about their career choices.

Given that the teaching profession is overwhelmingly female (Gordon, 1995), a fact consistent with the gender differences within this study's sample pool, policy makers should look at the overall status of teaching as a profession for clues offering insight to why significant percentages of males do not consider teaching a viable career choice. Colleges and Universities might want to consider collaborating with traditional programs that primarily target males like the Boy Scouts, fraternity little brother programs, and informal and organized sports programs.

Looking at racial/ethnic background responses from the data one notices an earlier decision making about becoming teachers on the part of Hispanic students when compared to African American respondents. Collaboration with traditionally African American organizations and initiatives targeting elementary level African American students might assist in providing earlier exposure and commitment to the teaching profession. Local youth clubs, sports leagues, church organizations, and public assistance services are ideal programs to promote career awareness and teaching, specifically.

Students who are first-generation college students reported thinking about the profession earlier than their counterparts but thought about becoming teachers seriously and knew with certainty later than students who were not first-generation. Further research is required to determine if this finding is in anyway related to the college attendance and graduation requirements for teacher certification. Although not a part of this present study, it is not certain if respondents who are first-generation alter career aspirations based on the requirements of college. If so, this might account for the later commitment to the profession on behalf of first-generation students. It would also

suggest to policy makers that increased efforts to demystify college campuses, processes and resources to overcome college attendance and persistence barriers are necessary at the middle and certainly high school levels.

Respondents from this study reported thinking about becoming teachers earlier if they wanted to teach the lower grade levels of early childhood or elementary education than students wanting to teach secondary. This cautions recruitment program staff to not limit their recruitment to the elementary levels but to offer points of entry into teacher recruitment programs at the junior high school levels (Jacullo-Noto, 1991) and high school levels.

Looking at the findings from majority-minority school attendance status one finds that students that did not attend a majority-minority school reported discovering that teaching was a profession earlier than students who did attend majority-minority schools. This preliminary finding could serve as the basis for a larger more comprehensive comparison between career awareness among students at majority-minority schools compared to majority-majority schools.

Summary

This study examined the relationship between the variables of gender, race/ethnic background, first generation college student status, family history of teachers, grade level desired to teach and majority-minority school attendance status and indicators of timing of the decision to become a teacher. This chapter presented the conclusions and implications of the study by including a summary of the results, a discussion of the

results, limitations of the study, and implications for future research and policy and practice.

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APPENDIX A

A SURVEY OF WHEN FUTURE TEACHERS FIRST CONSIDER BECOMING EDUCATORS

Telephone Script

This survey is designed to gather information as part of a research project identifying when students begin to consider teaching as a career choice. Participation in this study is completely voluntary. You are under no obligation to participate. Your responses to this questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for the purpose of this study. Your responses to this survey have no impact on your membership or participation in the 2+2+2 Partnership Program. Your responses and identity will be kept confidential and will not be disclosed or implied in any publication or presentation concerning this study. As part of this data collection do you give me permission to tape record this interview for accurate and exact transcribing of your responses? ☐ Yes ☐ No? If no, may I still conduct the interview without tape recording your responses? ☐ Yes ☐ No. Thank You.

Part I Personal Data and Background Information

1. What is your gender?
 - a. Male _____ b. Female _____
2. What is your age?
 - a. _____ 14 or under b. _____ 15-16 c. _____ 17-18
 - d. _____ 19-24 e. _____ 25 or older
3. What is your race/ethnic background?
 - a. _____ African American/Black
 - b. _____ Asian American/Asian
 - c. _____ Mexican American/Hispanic
 - d. _____ American Indian/Native-American
 - e. _____ White
 - f. _____ Other. Please specify: _____
4. What is your grade level?
 - a. _____ Freshman in High School
 - b. _____ Sophomore in High School
 - c. _____ Junior in High School
 - d. _____ Senior in High School
 - e. _____ Freshman in College
 - f. _____ Sophomore in College
 - g. _____ Junior in College
 - h. _____ Senior in College
5. What is your current GPA (Grade Point Average)?
 - a. _____ Below 2.0 b. _____ 2.00-2.50 c. _____ 2.51-3.0
 - d. _____ 3.01-3.5 e. _____ Above 3.5

Note: If also enrolled in another institution please indicate how many hours you have completed and the GPA for the second school:

Hours Completed _____ GPA _____

- Type of Institution: (Please circle) Community College University
6. What is the highest level of education of the following family members?

#	Level	Father		Mother		Legal Guardian		Step-Father		Step-Mother	
	A = Attended C = Completed →	A	C	A	C	A	C	A	C	A	C
a.	Graduate/Professional School										
b.	University/ 4-yr College										
c.	Community College										
d.	Technical/Vocational										
e.	High School										
f.	Middle School										
g.	Elementary School										
h.	No School										

- i. Other. Please specify: _____
7. Do you have anyone in your family who is a teacher at the early childhood, elementary and/or secondary levels?
- a. Yes _____ b. No _____
- If yes, what grade _____, subject _____?
8. Which grade level are you most interested in teaching?
- a. _____ Early Childhood (K-3) b. _____ Elementary (K-8) c. _____ Secondary (9-12)
- If Secondary, in what academic area would you like to teach? (For example, biology, art, English..) _____

Note: For the following questions, majority-minority means a school with over half of the student enrollment being minority e.g., over half were Hispanic or over half when you combine Asian Americans and African Americans. If you are not absolutely sure, please respond from your own opinion of whether or not your school now is or earlier was over 50% minority.

(Please circle one)

- | | | | |
|-----|--|-----|----|
| 9. | Did you attend a majority-minority school in grades K-3: | Yes | No |
| 10. | In grades 4-5: | Yes | No |
| 11. | In grades 6-8: | Yes | No |
| 12. | In grades 9-10: | Yes | No |
| 13. | In grades 11-12: | Yes | No |

Part II Decision to Teach

14. In what grades did you first realize that teaching was actually a profession/career?

Pre-School _____ K-3 _____ 4-5 _____ 6-8 _____ 9-10 _____ 11-12 _____

15. In what grades did you first begin to think about education as a possible career choice?

Pre-School _____ K-3 _____ 4-5 _____ 6-8 _____ 9-10 _____ 11-12 _____

16. In what grades did you begin to think seriously about education as a career choice?

Note: If you have not thought seriously about education as a career and only thought about it, please mark the "Not Applicable" line

Pre-School _____ K-3 _____ 4-5 _____ 6-8 _____ 9-10 _____ 11-12 _____

Freshman/Sophomore in College _____ Junior/Senior in College _____

Not Applicable _____

17. In what grades did you absolutely know you wanted to become a teacher?

Note: If you do not absolutely know you want to become a teacher and only thought about it or seriously thought about it, please mark the "Not Applicable" line.

Pre-School _____ K-3 _____ 4-5 _____ 6-8 _____ 9-10 _____ 11-12 _____

Freshman/Sophomore in College _____ Junior/Senior in College _____

Not Applicable _____

18. In what grade did you first take steps to prepare for a career as a teacher? _____

(Please explain) _____

Thank you!

APPENDIX B

MATRIX

for survey instrument

“A Survey of When Teachers First Consider Becoming Educators”

Research Questions

Survey Questions

1. Is there a relationship between gender and when one begins to consider teaching as a career choice?	1. What is your gender? 14. In what grades did you first realize that teaching was actually a profession/career? 15. In what grades did you begin to preliminarily think about education as a career choice? 16. In what grades did you begin to think seriously about education as a career choice? 17. In what grades did you absolutely know you wanted to become a teacher? 18. In what grade did you first take steps to prepare for a career as a teacher.
2. Is there a relationship between race and when one begins to consider teaching as a career choice?	3. What is your race/ethnic background? 14-18. See Above
3. Is there a relationship between those who are first-generation students and when one begins to consider teaching as a career choice?	6. What is the highest level of education completed by any family members? 14-18. See Above
4. Is there a relationship between family members who are teachers and when one begins to consider teaching as a career choice?	7. Do you have anyone in your family who is a teacher at the early childhood, elementary and/or secondary levels? 14-18. See Above
5. Is there a relationship between grade level desired to teach and when one begins to consider teaching as a career choice?	8. Which grade level are you most interested in teaching? 14-18. See Above
6. Is there a relationship between whether one attended a majority-minority school and when one begins to consider teaching as a career choice?	9. Did you attend a majority-minority school in grades K-3: 10. 4-5: 11. 6-8: 12. 9-10: 13. 11-12: 14-18. See Above
Demographic Information	2. What is your age? 4. What is your grade level? 5. What is your current GPA?

APPENDIX C



Program Purpose and Design

Eligibility Requirements

Benefits of the program

Application



For additional Information please contact your high school guidance counselor or the Office of Student Services at (480) 965-5555 or osa@asu.edu.

Program Purpose and Design

The 2+2+2 partnership introduces high school students to the dynamic field of teaching. As a participant you will be involved in workshops designed to strengthen academic skills, provide exposure to teaching as a profession and prepare you for admissions into a Maricopa Community College or Arizona State University (ASU). The final phase of the partnership is admission into ASU's Initial Teacher Certification Program and moving towards becoming a certified teacher in the state of Arizona.

To be considered for the program you must:

- ❖ be a High School student in good standing
- ❖ be an Arizona Resident
- ❖ plan to enroll at one of the Maricopa Community Colleges or at Arizona State University

- ❖ be a first-generation college student or be able to demonstrate financial need or be American Indian, Hispanic, Asian American or African American

Benefits of the program:

- ❖ Guaranteed admission into ASU's Initial Teacher Certification Program (must meet minimum criteria)
- ❖ Assistance with College Admissions
- ❖ Assistance with Financial Aid and Scholarships Application Process
- ❖ Several workshops on academic skill enhancement and personal development
- ❖ Summer Residential Program at ASU
- ❖ Exposure and interaction with ASU students, staff, faculty and programs

Application Procedure

1. Complete the attached program application.
2. Provide two letters of recommendation (one letter must be from a school official and one from a community member).
3. Attach a current high school transcript.
4. Complete essay questions.

RETURN APPLICATION TO:

College of Education
Office of Student Services
PO Box 871211
Tempe, AZ 85287-1211



Application (MS Word)

[degree programs](#) | [partnerships](#) | [admission](#) |
[professional field experience](#) | [academic resource center](#)
[scholarships](#) | [forms](#) | [registration](#) | [staff](#)

APPENDIX D



College of Education
Initial Teacher Certification (ITC) Program

Spring 2002

Elementary Certificate Programs

Apprentice Teacher Program (ATP)
Diné Teacher Education
Early Childhood Education
Elementary Education Partnership Program
INtegrated Certification in Teacher Education (INCITE)*
Multicultural/Multilingual Education
Teaching for a Diverse Future

Secondary Certificate Programs

Secondary Education
INtegrated Certification in Teacher Education (INCITE)*
Teacher Education for Arizona Mathematics and Science (TEAMS)*

Special Education Certification



Arizona State University

**Post-Baccalaureate Students Only*



ARIZONA STATE UNIVERSITY - MAIN

INITIAL TEACHER CERTIFICATION (ITC) PROGRAM

Application for Admission



The following criteria must be satisfied to be considered for admission:

Thank you for your interest in the ASU College of Education's Initial Teacher Certification (ITC) Programs. Please read through this packet carefully. To ensure your eligibility for your program of choice, we suggest meeting with your academic advisor or attending a Post-Bac information session available through the Office of Student Services. Please call the Office of Student Services (OSS) at (480) 965-5555, to schedule an advising appointment or to sign up for a Post-Bac information session.

On behalf of the entire OSS staff, we wish you luck in your academic and professional endeavors.

Admission to the ITC is highly competitive. Therefore, eligibility for the program in no way guarantees admission.

Many methodology courses will be offered off-site. Students will be responsible for providing their own transportation arrangements for these course offerings.

DEADLINES FOR APPLICATIONS*:

*February 1st for Fall
September 1st for Spring*

**INCITE and ATP offer additional admission deadlines – please consult the Office of Student Services*

Applications will not be eligible unless they meet the minimum criteria and are fully completed.

Please retain personal copies of all application materials submitted.

UNDERGRADUATE STUDENTS

- ☐ Admission to ASU Main as a degree seeking student.
- ☐ Minimum 2.5 cumulative GPA (ASU GPA + Transfer GPA).
- ☐ **Passing ACT, SAT or PPST test score.** Passing scores include: ACT ☐ 21, SAT ☐ 990, or PPST scores of 172 in math, 173 in reading, and 174 in writing. Students who do not meet regular admission standards can still be considered for provisional admission if their test scores fall within these ranges: ACT 18-20, SAT 870-980, or PPST 170-173. **Test scores must be on the ASU records system or attached to the application.**
- ☐ **Completion of the following pre-requisites with grades of "C" or better prior to applying:** ENG 101, ENG 102, General Studies MA, and L **OR** SQ or SG. Refer to the General Catalog for designated courses qualifying as general studies MA (Math), L (Literacy and Critical Inquiry) or SQ or SG (Natural Science) or contact an Office of Student Services advisor. Students from out of state institutions or students from outside of the Arizona Public Community College and University System need to have course equivalency approval prior to submitting an application.
- ☐ Completion of a minimum of 56 credit hours by starting date of program.
- ☐ Demonstrated experience with the population you plan to teach.
- ☐ **Secondary Education Majors only:** Depending on your area of specialization, your application may require a pre-determined number of completed courses within that specialization area. Please consult your advisor for specific requirements.

POST-BACCALAUREATE STUDENTS

- ☐ Completion of a Bachelor's Degree from an accredited institution.
- ☐ Minimum of 2.5 cumulative GPA in last 60 credit hours.
- ☐ Admitted to ASU as a non-degree or degree seeking* graduate student.
- ☐ **INCITE Applicants ONLY:** If you are choosing INCITE-Secondary, you must have a bachelor's degree/major in your proposed area of teaching specialization. A "major" is defined as 24+ credit hours from a bachelor's degree, that are a combination of lower and upper division credits.

***NOTE:** Special Education is offered as a Master of Education degree only. Therefore, prospective students must concurrently apply for admission to the Graduate College as a degree-seeking student (not a non-degree seeking) in the M.Ed in special education. To complete the admission process, Special Education applicants must follow the ITC application procedures as well as these additional steps:

- A. Submit a copy of the Special Education checklist signed by the Special Education program coordinator. Forms are available in Special Education department, Farmer Building 316, (480) 965-6156 or in the Office of Student Services, Payne Hall L1-13.
- B. Request an application and apply to the Graduate College, Office of Admissions, Box 871003 Arizona State University, Tempe, AZ 85287-1003 www.asu.edu/graduate.

ALL students must submit a complete application packet including:

- ☐ Signed and **typed** application for admission
- ☐ Unofficial transcripts (from all institutions attended)
- ☐ Resume (1 page min./2 page max.)
- ☐ **Undergraduates Only:** Copy of ACT, SAT or PPST scores
- ☐ 3 Reference letters. Use Form 1 as a template for all three.
- ☐ Typed responses to two essay questions (Form 2)
- ☐ Signed "Statement of Freedom from Conviction of Crimes" (Form 3)
- ☐ **Secondary Post-Bac Only:** Signed and approved copy of Secondary Education Academic Specialization Faculty Review Form (Form 4).

**INITIAL TEACHER CERTIFICATION (ITC) PROGRAM**

Application for Admission

124

Application **MUST** be typed and complete:

Name (Last, First, Middle):

ASU ID Number (or SSN):

Current E-mail Address:

Local Mailing Address: Apt. #

City, State

Zip Code

Telephone # (Incl. Area Code)

Type of Application: <input type="checkbox"/> First Application to ITC <input type="checkbox"/> Reapplication to ITC (Applications are kept on file for 6 mos)	Requested Semester: <input type="checkbox"/> Fall _____ (Yr) <input type="checkbox"/> Spring _____ (Yr)	Student Status: <input type="checkbox"/> Undergraduate <input type="checkbox"/> Post-Baccalaureate – student who already has completed a bachelor's degree
--	--	---

Program Area Selection:

Due to the competitive nature of each of our ITC programs, please indicate your top **three** choices, in order of preference, #1 being your first choice, #2 your second choice, etc. Your application will be reviewed first by your top choice. If you are not chosen by the department of your first choice, your application will be filtered to your second choice, etc. If you are not willing to consider more than one program choice, please only mark one option.

1=First Choice

2=Second Choice

3=Third Choice

Elementary Certificate Programs

- _____ **Apprentice Teacher Program (ATP)**
- _____ **Diné Teacher Education**
- _____ **Early Childhood Education**
- _____ **Elementary Education Partnership Program**
- _____ **INtegrated Certification in Teacher Education (INCITE)* - East Valley**
- _____ **INtegrated Certification in Teacher Education (INCITE)* - Northeast Valley**
- _____ **Multicultural (ESL)**
- _____ **Multilingual Education (BLE)**
- _____ **-NA- Teaching for a Diverse Future**

Secondary Certificate Programs

- _____ **Secondary Education: Area of Specialization (first choice) _____**
- _____ **Secondary Education: Area of Specialization (second choice): _____**
- _____ **INtegrated Certification in Teacher Education (INCITE)* - Chandler**
Area of Specialization (first choice): _____
Area of Specialization (second choice): _____
- _____ **-NA- Teacher Education for Arizona Mathematics and Science (TEAMS)***

Special Education Certification

- _____ **Special Education – undergraduate**
- _____ **Special Education – Master's/Post-Bac**

* Indicates an ITC program for Post-Baccalaureate students only

Are you a participant in any of the following programs?

- ☐ Dynamic Learning ☐ Urban Teacher Corps ☐ East Valley Teacher Corps ☐ 2 + 2 + 2 Partnership Program

I attest that I have read and understood all of the application material and that to the best of my knowledge, all information stated on this application is true and correct. I understand that any misrepresentation will result in my ineligibility for admission and/or suspension from the program and that random checks may be completed to verify my information. I also understand that all documents submitted for admission consideration become property of Arizona State University and will not be returned to me, nor duplicated for me, for any reason.

Applicant Signature _____

Date _____

Return Complete Application Packet to:
Arizona State University
College of Education/Office of Student Services
Box 871211 • Tempe, AZ 85287-1211

FORM 1: REFERENCE LETTER ATTACHMENT

Three reference letters should come from individuals who can attest to your work with children/adolescents.

Applicant's Name: _____
SS#: _____

Thank you for agreeing to write a letter of recommendation for this candidate's consideration for admission into the Professional Teacher Preparation Program in the College of Education at Arizona State University Main Campus. Admission to this program is highly competitive. Therefore, we ask you to respond to the following questions. (Answer the questions on this sheet or in the body of the letter.)

1. How long have you known the applicant?
2. In what capacity/position have you known the applicant?
3. Describe the applicant's strengths relative to working/interacting with children/adolescents?
Be as specific as possible.

Print Name

Title

Phone

Date

Signature

*As a reference, you may be contacted for further information. Reference information will be part of the student's file.

Arizona State University ♦ College of Education

FORM 2: GENERAL INFORMATION AND ESSAY FORMAT ATTACHMENT

Use this form as a guideline to answer the essay questions.

This form is not to be returned with the application packet.

General Information

All applicants must have sustained documented instructional experiences with children/adolescents. Students who do not meet these requirements are encouraged to speak with their academic advisor.

- ♦ **Why?** We believe individuals who wish to become teachers need to have demonstrated a commitment to working with children. This experience better prepares the individual to comprehend the formal preparation they will receive.
- ♦ **What qualifies as sustained experiences with children/adolescents?** Any experience that is consistent (weekly/daily) for a minimum of 3 hours a week for a duration of at least ten weeks.
- ♦ **What type of activities would be considered as instructional?** Any activity that helps children/adolescents learn a new skill, acquire knowledge, reinforce concepts, or expand their talents.
- ♦ **How would I have an opportunity to engage in sustained instructional activities with children/adolescents?** There are a number of ways; for example, many required general studies courses have companion Service Learning courses. These courses also help you plan interesting content-related learning activities to teach elementary-age students on a weekly basis.
- ♦ Volunteer or employment options could include, but are not limited to: coaching a sport, dance group, band, choir, or art activities; serving as a leader for Boy Scouts, Girl Scouts, Campfire Girls, Sunday school teacher, or summer camp counselor; working at after-school programs such as YMCA, Kids Club, Kids Zone, pre-school or day care centers, tutorial programs, or as a classroom aide.
- **What does "documented" mean?** Your interactions with children/adolescents need to be observed by the site supervisor and referred to in one of your letters of recommendation. For example, if you are coaching a team, you will need to ask the head coach to complete a letter of recommendation and Form 1 (included herein) for you.

Essay Format

Two essays are required with your application materials. It is increasingly important that all teachers be able to work with children and families with varied backgrounds, and in one of these essays you are to respond to a question about diversity in our schools. In the other question, you will describe in detail who you are and tell us about your experiences with children. Previous experience with children/adolescents is one of the requirements for admission.

Essays will be read first for content and your ability to write clearly. Mechanics such as punctuation, spelling, and grammar are also important and you are encouraged to proofread and use spell check. Your essay should be double spaced.

➤ **Essay 1 (Provide 1.5 – 2 typed pages):**

What are the multiple issues related to working with a linguistically, culturally, and economically diverse student population? Be sure the issues you discuss are clear. Describe your experiences in various diverse settings.

➤ **Essay 2 (Provide 3 – 4 typed pages):**

There are four parts in this essay. They can be described individually or woven together. (1) Describe those special traits and characteristics that you will bring to your role as a teacher. (2) What factors contributed to your decision to be a teacher? (3) Describe why you would like to teach the age population you have chosen as your first/second/third choice. (4) Describe how long you have worked with children and in what setting. What was your responsibility in this situation and what did you learn?

FORM 3: Statement of Freedom From Convictions of Crimes Information

Arizona State University □ College of Education
Office of Student Services – Main Campus

Please read the following information and sign below indicating that you understand and have read the information regarding the law affecting certification in the State of Arizona. Students who may be affected by this law should contact the Arizona Department of Education regarding certification.

Effective January 1, 1990, individuals who have completed a teacher preparation program and are applying for teacher certification in the State of Arizona must be fingerprinted. An additional law passed on June 13, 1990 (Chapter 291, House Bill 2050), a portion of which states "that the Department of Education shall not issue or renew and may revoke certification of a person who has been convicted of any of certain criminal offenses..."

Applicants shall certify on forms that are provided by the Department of Education and notarized, as well as on the application for the ITC included herein, whether they are awaiting trial on or have been convicted of or have admitted in open court or pursuant to a plea agreement committing any of the following criminal offenses in the state or similar offenses in another jurisdiction:

1. Sexual abuse of a minor
2. Incest
3. First or second degree murder
4. Sexual Assault
5. Sexual Exploitation of a minor
6. Commercial Sexual Exploitation of a minor
7. Robbery
8. A dangerous crime against children as defined in section 13-604.01
9. Sexual conduct with a minor
10. Molestation of a child
11. Exploitation of minors involving a drug offense
12. Kidnapping
13. Arson
14. Felony offenses involving contributing to the delinquency of a minor
15. Felony offenses involving sale, distribution or transportation of, offer to sell, transport, or distribute or conspiracy to sell, transport or distribute marijuana or dangerous or narcotic drugs
16. Felony offenses involving the possession or use of marijuana, dangerous drugs or narcotic drugs.
17. Misdemeanor offenses involving the possession or use of marijuana or dangerous or narcotic drugs
18. Burglary in the first degree
19. Burglary in the second or third degree
20. Aggravated or armed robbery
21. Child abuse
22. Voluntary manslaughter
23. Aggravated assault
24. Assault
25. Driving under the influence of intoxicating liquor or drugs, or aggravated driving under the influence of intoxicating liquor or drugs
26. Offenses involving domestic violence

The state board may revoke, not issue or not renew the certificate of a person who has been convicted of or admitted in open court or pursuant to a plea agreement committing any of the criminal offenses prescribed in the above subsection of this section or of a similar offense in another jurisdiction. The board shall prescribe guidelines for the review process including a list of offenses that are not subject to review.

I have read the information listed above and understand that if I am affected by this law, I should contact the Arizona Department of Education regarding certification.

Print your name

Signature

Date

FORM 4: Secondary Education Academic Specialization Faculty Review Form***Submit this completed form with your application for admission. Must be typed.*****Directions:**

- 1) List courses below to be used for the academic specialization. The course number, title, hours, grade and institution for each course must be listed.
- 2) Take this form and transcripts reflecting these courses to the academic specialization advisor (See list of advisors at <http://coe.asu.edu/osa/advising/sedadv.html>) **NOTE:** INCITE Secondary students must meet with Kevin O'Rourke, in the Office of Student Services to complete this form
- 3) The advisor must approve the courses completed, indicate courses to be completed and sign form.
- 4) Sign form, attach to application and submit by deadline.

Name: _____ I.D. #: _____

Academic Specialization: _____

Completed Courses	Title	Hours	Grade	Institution
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Deficiencies in academic specialization: (Must be completed prior to student teaching)

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Academic Specialization Advisor Signature
(Must be signed within the academic year of desired admission)_____
Date

I understand that completion of this advisement sheet is required for application to the Post-Baccalaureate Initial Teacher Certification (ITC) Program for Secondary Education and does not constitute admission. Education courses taken prior to admission may not apply to satisfaction of program requirements.

Student's Signature_____
Date

APPENDIX E

Arizona State University
College of Education
2+2+2 Partnership Program
Application



“Teaching is a Learning Experience”



2+2+2 PARTNERSHIP PROGRAM

Student Information

Please complete and answer all questions thoroughly. This application must be typed.

1. NAME _____ DATE _____
2. HOME ADDRESS _____ CITY _____ STATE _____ ZIP _____
3. MAILING ADDRESS _____ CITY _____ STATE _____ ZIP _____
4. SOCIAL SECURITY NO. _____ STUDENT I.D. _____
5. HOME PHONE _____ WORK PHONE _____
6. EMAIL ADDRESS _____
7. SCHOOL YOU CURRENTLY ATTEND _____ GRADE _____
8. NAME OF COUNSELOR OR ADVISOR _____
9. CLASS RANK _____ CUMULATIVE GRADE POINT AVERAGE _____
10. PREDOMINANT CULTURAL/ETHNIC BACKGROUND

☐ Hispanic
☐ African American not Hispanic
☐ Asian American or Pacific Islander
☐ White not Hispanic
☐ American Indian or Alaskan Native
11. WILL YOU PARTICIPATE IN A SUMMER PROGRAM? ☐ Yes ☐ No
 (For example: Summer program may consist of a combination week long residential/commuter experience at ASU and the local community college.)
11. WHAT AGE GROUP/SUBJECT AREA ARE YOU INTERESTED IN TEACHING? _____
13. PLEASE WRITE YOUR RESPONSES TO THE QUESTIONS BELOW ON A SEPARATE SHEET OF PAPER:

Responses should be carefully thought out and expressed, but not to exceed 100 words per question.

- A. Why do you want to be a teacher?
- B. Identify the teacher who has been the most influential in your life, explain how and why.
- C. Discuss past experiences you find relevant to your future goals as a teacher.



2+2+2 PARTNERSHIP PROGRAM

Parent Information

1. FATHER/GUARDIAN'S NAME _____
2. ADDRESS _____ CITY _____ STATE _____ ZIP _____
3. OCCUPATION _____
4. HIGH SCHOOL GRADUATE? ☐ Yes ☐ No COLLEGE GRADUATE? ☐ Yes ☐ No
5. MOTHER/GUARDIAN'S NAME _____
6. ADDRESS _____ CITY _____ STATE _____ ZIP _____
7. OCCUPATION _____
8. HIGH SCHOOL GRADUATE? ☐ Yes ☐ No COLLEGE GRADUATE? ☐ Yes ☐ No

NOTE: If you do not live with your parent(s), please describe your household. Include any information you feel may be relevant to your application.

I support my child's application to the 2+2+2 Partnership Program and understand that I will be expected to attend information sessions and other activities connected to the program. My child has my support to take community college and university courses. I understand that I may be asked to disclose financial information for my student's eligibility to the program.

Signature of Parent/Legal Guardian

Date



2+2+2 PARTNERSHIP PROGRAM

Financial Information

Financial Information:

All financial information is strictly confidential.

_____ How many people live in your household?
(Include yourself)

_____ Of that number, how many are children?
(Include yourself and any unmarried full-time students.)

What is your estimated annual household income for the
current year?

☐ \$Under \$25,000
☐ \$25,001 - \$35,000
☐ \$35,001 - \$45,000

☐ \$45,001 - \$55,000
☐ Greater than \$55,000

If accepted, I agree to participate fully in all components of the 2+2+2 Partnership Program. I realize that if I do not participate in 2+2+2 sponsored events my membership and status in the program will be jeopardized. I also give consent to participate in surveys and assessments which will improve the program, and agree to the exchange of academic information between the participating institutions.

Signature of Student

Date

DID YOU INCLUDE...

1. Completed application.
2. One letter of recommendation from a school official, employer or community leader.
3. High school transcript.
4. Parent Information Sheet.
5. Essay questions.

**RETURN APPLICATION TO: College of Education, Office of Student Affairs, Recruitment and Support Programs,
P.O. BOX 871211, TEMPE, AZ 85287-1211, ATTN: 2+2+2 PROGRAM.
Any questions contact (480) 965-1693 or E-mail alonzoaj@asu.edu**

Application Deadline _____

APPENDIX F

Majority-minority School Attendance Tables At all Grade Levels

Majority-Minority School Attendance Status (K-3)

Table 37

When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance at the K-3 Level

Discovered	Attended K-3 Majority-minority School			
	No (n = 20)		Yes (n = 32)	
Grades	#	%	#	%
Pre-School	2	10%	0	0%
K-3	4	20%	11	34%
4-5	4	20%	6	19%
6-8	9	45%	11	34%
9-10	1	5%	3	9%
11-12	0	0%	1	3%

Table 38

When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance at the K-3 Level

Thought About	Attended K-3 Majority-minority School			
	No (n = 20)		Yes (n = 32)	
Grades	#	%	#	%
Pre-School	1	5%	0	0%
K-3	3	15%	2	6%
4-5	1	5%	5	16%
6-8	3	15%	11	34%
9-10	8	40%	8	25%
11-12	4	20%	5	16%
Fresh/Soph in Coll	0	0%	1	3%

Table 39

When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance at the K-3 Level

Seriously Thought About	Attended K-3 Majority-minority School			
	No (n = 20)		Yes (n = 32)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	1	5%	0	0%
4-5	0	0%	0	0%
6-8	3	15%	4	13%
9-10	2	10%	10	31%
11-12	12	60%	13	41%
Fresh/Soph in Coll	1	5%	1	3%
Not Applicable	1	5%	4	13%

Table 40

When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance at the K-3 Level

Absolutely Knew	Attended K-3 Majority-minority School			
	No (n = 20)		Yes (n = 32)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	1	5%	0	0%
6-8	1	5%	1	3%
9-10	2	10%	5	16%
11-12	8	40%	12	38%
Fresh/Soph in Coll	3	15%	4	13%
Jr/Sr in Coll	1	5%	0	0%
Not Applicable	4	20%	10	31%

Table 41
When Respondents Took First Steps to Becoming Teachers, by Majority-minority Schools Attendance at the K-3 Level

First Steps	Attended K-3 Majority-minority School			
	No (n 20)		Yes (n 32)	
Grades	#	%	#	%
6	0	0%	1	3%
9	0	0%	4	13%
10	6	30%	6	19%
11	6	30%	10	31%
12	6	30%	8	25%
Freshm[a]n in College	2	10%	2	6%
Sophomore in College	0	0%	1	3%

Majority-Minority School Attendance Status (4-5)

Table 42
When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance at the 4-5 Grade Level

Discovered	Attended 4-5 Majority-minority School			
	No (n = 19)		Yes (n = 33)	
Grades	#	%	#	%
Pre-School	2	11%	0	0%
K-3	4	21%	11	33%
4-5	5	26%	5	15%
6-8	7	37%	13	39%
9-10	1	5%	3	9%
11-12	0	0%	1	3%

Table 43
When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance at the 4-5 Grade Level

Thought About	Attended 4-5 Majority-minority School			
	No (n = 19)		Yes (n = 33)	
Grades	#	%	#	%
Pre-School	1	5%	0	0%
K-3	3	16%	2	6%
4-5	1	5%	5	15%
6-8	4	21%	10	30%
9-10	6	32%	10	30%
11-12	4	21%	5	15%
Fresh/Soph in Coll	0	0%	1	3%

Table 44

When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance at the 4-5 Grade Level

Seriously Thought About	Attended 4-5 Majority-minority School			
	No (n = 19)		Yes (n = 33)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	1	5%	0	0%
4-5	0	0%	0	0%
6-8	4	21%	3	9%
9-10	2	11%	10	30%
11-12	10	53%	15	45%
Fresh/Soph in Coll	1	5%	1	3%
Not Applicable	1	5%	4	12%

Table 45

When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance at the 4-5 Grade Level

Absolutely Knew	Attended 4-5 Majority-minority School			
	No (n = 19)		Yes (n = 33)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	1	5%	0	0%
6-8	1	5%	1	3%
9-10	3	16%	4	12%
11-12	7	37%	13	39%
Fresh/Soph in Coll	3	16%	4	12%
Jr/Sr in Coll	1	5%	0	0%
Not Applicable	3	16%	11	33%

Table 46

When Respondents Took First Steps to Becoming Teachers, by Majority-minority School Attendance at the 4-5 Grade Level

First Steps	Attended 4-5 Majority-minority School			
	No (n = 19)		Yes (n = 33)	
Grades	#	%	#	%
6	0	0%	1	3%
9	0	0%	4	12%
10	6	32%	6	18%
11	5	26%	11	33%
12	6	32%	8	24%
Freshman in College	2	11%	2	6%
Sophomore in College	0	0%	1	3%

Majority-Minority School Attendance Status (6-8)

Table 47

When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance at the 6-8 Grade Level

Discovered	Attended 6-8 Majority-minority School			
	No (n = 14)		Yes (n = 38)	
Grades	#	%	#	%
Pre-School	1	7%	1	3%
K-3	4	29%	11	29%
4-5	4	29%	6	16%
6-8	5	36%	15	39%
9-10	0	0%	4	11%
11-12	0	0%	1	3%

Table 48

When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance at the 6-8 Grade Level

Thought About	Attended 6-8 Majority-minority School			
	No (n = 14)		Yes (n = 38)	
Grades	#	%	#	%
Pre-School	0	0%	1	3%
K-3	3	21%	2	5%
4-5	1	7%	5	13%
6-8	3	21%	11	29%
9-10	6	43%	10	26%
11-12	1	7%	8	21%
Fresh/Soph in Coll	0	0%	1	3%

Table 49

When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance at the 6-8 Grade Level

Seriously Thought About	Attended 6-8 Majority-minority School			
	No (n = 14)		Yes (n = 38)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	1	3%
4-5	0	0%	0	0%
6-8	4	29%	3	8%
9-10	2	14%	10	26%
11-12	6	43%	19	50%
Fresh/Soph in Coll	1	7%	1	3%
Not Applicable	1	7%	4	11%

Table 50

When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance at the 6-8 Grade Level

Absolutely Knew	Attended 6-8 Majority-minority School			
	No (n = 14)		Yes (n = 38)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	0	0%	1	3%
6-8	1	7%	1	3%
9-10	3	21%	4	11%
11-12	5	36%	15	39%
Fresh/Soph in Coll	1	7%	6	16%
Jr/Sr in Coll	1	7%	0	0%
Not Applicable	3	21%	11	29%

Table 51
When Respondents Took First Steps to Becoming Teachers, by Majority-minority School Attendance at the 6-8 Grade Level

First Steps	Attended 6-8 Majority-minority School			
	No (n = 14)		Yes (n = 38)	
Grades	#	%	#	%
6	0	0%	1	3%
9	0	0%	4	11%
10	5	36%	7	18%
11	3	21%	13	34%
12	5	36%	9	24%
Freshman in College	1	7%	3	8%
Sophomore in College	0	0%	1	3%

Majority-Minority School Attendance Status (9-10)

Table 52
When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance at the 9-10 Grade Level

Discovered	Attended 9-10 Majority-minority School			
	No (n = 16)		Yes (n = 36)	
Grades	#	%	#	%
Pre-School	1	6%	1	3%
K-3	6	38%	9	25%
4-5	4	25%	6	17%
6-8	5	31%	15	42%
9-10	0	0%	4	11%
11-12	0	0%	1	3%

Table 53
When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance at the 9-10 Grade Level

Thought About	Attended 9-10 Majority-minority School			
	No (n = 16)		Yes (n = 36)	
Grades	#	%	#	%
Pre-School	0	0%	1	3%
K-3	3	19%	2	6%
4-5	0	0%	6	17%
6-8	3	19%	11	31%
9-10	7	44%	9	25%
11-12	2	13%	7	19%
Fresh/Soph in Coll	1	6%	0	0%

Table 54

When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance at the 9-10 Grade Level

Seriously Thought About	Attended 9-10 Majority-minority School			
	No (n = 16)		Yes (n = 36)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	1	3%
4-5	0	0%	0	0%
6-8	3	19%	4	11%
9-10	2	13%	10	28%
11-12	8	50%	17	47%
Fresh/Soph in Coll	2	13%	0	0%
Not Applicable	1	6%	4	11%

Table 55

When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance at the 9-10 Grade Level

Absolutely Knew	Attended 9-10 Majority-minority School			
	No (n = 16)		Yes (n = 36)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	0	0%	1	3%
6-8	0	0%	2	6%
9-10	4	25%	3	8%
11-12	6	38%	14	39%
Fresh/Soph in Coll	3	19%	4	11%
Jr/Sr in Coll	1	6%	0	0%
Not Applicable	2	13%	12	33%

Table 56
When Respondents Took First Steps to Becoming Teachers, by Majority-minority School Attendance at the 9-10 Grade Level

First Steps	Attended 9-10 Majority-minority School			
	No (n = 16)		Yes (n = 36)	
Grades	#	%	#	%
6	0	0%	1	3%
9	1	6%	3	8%
10	3	19%	9	25%
11	4	25%	12	33%
12	6	38%	8	23%
Freshman in College	2	13%	2	6%
Sophomore in College	0	0%	1	3%

Majority-Minority School Attendance Status (11-12)

Table 57
When Respondents First Discovered That Teaching Was a Profession, by Majority-minority School Attendance at the 11-12 Grade Level

Discovered	Attended 11-12 Majority-minority School			
	No (n = 16)		Yes (n = 35)	
Grades	#	%	#	%
Pre-School	1	6%	1	3%
K-3	7	44%	7	20%
4-5	3	19%	7	20%
6-8	5	31%	15	43%
9-10	0	0%	4	11%
11-12	0	0%	1	3%

Note: One respondent had yet to begin the 11th grade at the time of the telephone survey and was not included in this analysis.

Table 58

When Respondents First Began to Think about Teaching as a Career, by Majority-minority School Attendance at the 11-12 Grade Level

Thought About	Attended 11-12 Majority-minority School			
	No (n = 16)		Yes (n = 35)	
Grades	#	%	#	%
Pre-School	0	0%	1	3%
K-3	3	19%	2	6%
4-5	1	6%	5	14%
6-8	3	19%	10	29%
9-10	6	38%	10	29%
11-12	2	13%	7	19%
Fresh/Soph in Coll	1	6%	0	0%

Note: One respondent had yet to begin the 11th grade at the time of the telephone survey and was not included in this analysis

Table 59

When Respondents Seriously Thought about Teaching as a Career, by Majority-minority School Attendance at the 11-12 Grade Level

Seriously Thought About	Attended 11-12 Majority-minority School			
	No (n = 16)		Yes (n = 35)	
Grades	#	%	#	%
Pre-School	0	0%	0	0%
K-3	0	0%	1	3%
4-5	0	0%	0	0%
6-8	3	19%	4	11%
9-10	2	13%	9	26%
11-12	8	50%	17	49%
Fresh/Soph in Coll	2	13%	0	0%
Not Applicable	0	0%	4	11%

Note: One respondent had yet to begin the 11th grade at the time of the telephone survey and was not included in this analysis.

Table 60
When Respondents Absolutely Knew They Wanted to Teach, by Majority-minority School Attendance at the 11-12 Grade Level

<u>Absolutely Knew</u>	<u>Attended 11-12 Majority-minority School</u>			
	<u>No (n = 16)</u>		<u>Yes (n = 35)</u>	
<u>Grades</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Pre-School	0	0%	0	0%
K-3	0	0%	0	0%
4-5	0	0%	1	3%
6-8	0	0%	2	6%
9-10	4	25%	3	9%
11-12	7	44%	13	37%
Fresh/Soph in Coll	3	19%	4	11%
Jr/Sr in Coll	1	7%	0	0%
<u>Not Applicable</u>	1	7%	12	34%

Note: One respondent had yet to begin the 11th grade at the time of the telephone survey and was not included in this analysis.

Table 61
When Respondents took First Steps to Becoming Teachers, by Majority-minority School at Attendance the 11-12 Grade Level

<u>First Steps</u>	<u>Attended 11-12 Majority-minority School</u>			
	<u>No (n = 16)</u>		<u>Yes (n = 35)</u>	
<u>Grades</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
6	0	0%	1	3%
9	1	7%	2	6%
10	3	19%	9	26%
11	3	19%	13	37%
12	7	44%	7	20%
Freshman in College	2	13%	2	6%
<u>Sophomore in College</u>	0	0%	1	3%

Note. One respondent had yet to begin the 11th grade at the time of the telephone survey and was not included in this analysis.

VITA

Alonzo Benjamin Jones was born on January 8, 1968 in Rantoul, Illinois, to Hugh Gerald Jones and Evelyne Jones. During his formative years he lived in Las Vegas, Nevada, where he attended Eldorado High School. After completing his work at Eldorado, Alonzo entered Arizona State University (ASU) in Tempe, Arizona. He received his Bachelor of Science degree in Justice Studies from ASU in 1991. After graduation he entered the profession of higher education and has worked at Arizona State University and Southwest Texas State University (SWT). In August of 1994, he entered the Graduate School at SWT, for his Master of Arts Degree in Developmental and Adult Education.

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This thesis was typed by Alonzo Benjamin Jones