ASSESSING DIFFERENCES BETWEEN ETHNIC GROUPS ON

TEACHING INTERESTS, SELF-EFFICACY, AND OUTCOME

EXPECTATIONS FOR NINTH GRADE STUDENTS

by

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Title: Assessing Differences of Between Ethnic Groups on Teaching Interests, Self-Efficacy, and Outcome Expectations for Ninth Grade Students

Minority teacher representation is disproportionately low in the state of Oregon, especially for African-American, Hispanic/Latino and Native American students. To date, the Oregon State Department of Education has unsuccessfully invested in addressing the Achievement Gap by investing in minority teacher recruitment and retention: as a result, recent initiatives to increase minority teacher recruitment and retention have generated low outcomes. Many minority teacher recruitment initiatives target college age minority students to increase ethnic diversity in the teaching field. Extant research employed theories, such as Critical Race Theory, and Social Cognitive Career Theory, to explain environmental and psychological factors that influence minorities in various aspects of society. However, there is a gap in research that utilizes said theories to explore minority student aspirations as it pertains to the teaching profession. This manuscript uses a quantitative method to analyze relationships and differences between ethnic groups on teaching interests, self-efficacy for teaching, and outcome expectations for ninth grade students. The results of this study can be used to better understand teaching interests. The results can also be used for to make recommendations for statewide strategies to diversify teacher pathway programs.

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To my children Kellen and Alora, you are my sunshine.
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CHAPTER I

INTRODUCTION

A major demographic shift in the teaching population is expected over the next decade; the United States Department of Education Center for Education Statistics (NCES) anticipates 13% of teachers, mostly from the *baby boom* generation (born 1946-1964), will retire in the next five years, leaving many positions to be filled by schools across the nation (Feistritzer, 2011). Such a change presents an opportunity for states like Oregon, which have historically struggled to recruit culturally diverse teachers, to devise recruitment methods to entice prospective teachers from culturally diverse backgrounds.

Research suggests having ethnically diverse educators leads to improved student outcomes for students in ethnic minority groups (Dee, 2004; Egalite, Krisida, & Winters, 2014; Ehrenberg, Goldhaber, & Brewer, 1995; Sohn, 2009). Although the body of evidence to support this idea is relatively small, there are several qualitative studies that provide evidence of positive relationships between student performance and teachers of color (e.g., Egalite et al., 2014). One of the most influential empirical studies was a four-year large-scale randomized experiment in Tennessee by Dee (2004). In this study, student performance data provided evidence that assignment to an own-race/ethnicity teacher increases the math and reading achievement for both Black and White third grade students. Other quantitative studies, like Egalite et al.'s (2014) study, provided evidence that both math and reading achievement is significantly positively influenced by the race/ethnicity of their teacher. Additionally, Ehrenberg et al. (1995) and Sohn (2009) used quantitative national longitudinal studies on student-teacher race matching and positive relationships between student achievement and student-teacher race matching were found. Moreover, increasing the

diversity of the teaching population can benefit all students, as minority teachers bring a varied set of experiences and perspectives that are limited in homogenous teaching populations (Irizarry, 2007).

Oregon legislators have supported the premise that diverse educators lead to improved student performance since 1991, when Oregon's legislation passed the Minority Teacher Act. This legislation aimed to improve the diversity of the teaching workforce to better reflect the varied ethnic groups represented amongst Oregon's student population. These goals of diversifying the teacher workforce have been renewed in recent years, as in 2013, when Oregon legislators passed Senate Bill 755, and in 2015, with the passage of House Bill 3375. These bills intended to increase the minority educator population to better reflect the racial demographic of Oregon students; unfortunately, despite the 2016 Educator Equity report which found that Oregon's efforts to recruit diverse teachers have had some success, an overall increase of just slightly more than 1% shows that recruitment efforts are not on track to meet legislative goals (Chief Education Office [CEdO], 2016).

A core issue driving racial minority recruitment efforts in Oregon is the persistence of the achievement gap between ethnically diverse students and White students. As of 2015, these underserved minorities—African Americans, Hispanics, and Native Americans, more specifically—graduated at 67.87% in the 2014-15 school year, while White students graduated at 79.37% (Oregon Department of Education [ODE], 2016). Results of 11th-grade students in 2014-15 on Oregon's standardized state test, the *Smarter Balanced Assessment* (SBAC), showed African American, American Indian, and Hispanic students meeting state benchmarks in English Language Arts by 44%, 54%, and 57%, respectively, while 71% of White students demonstrated proficiency. In math, 16% of African American students, 16%

of American Indian students, and 18% of Hispanic students demonstrated proficiency, while 34% of White students did so. These outcome disparities reinforce the need for the state to increase efforts to meet its legislative goals of increasing teacher diversity.

To date, 36% of students in the state of Oregon represent ethnic minorities, yet only 8% of the teaching population is racially diverse (CEdO, 2016). A major challenge in increasing diverse teacher applicants is general stagnation and regression of diverse students enrolling in teacher credential programs (see Figure 1). While out-of-state licensure completion rates help maintain enrollment figures, Oregon teacher preparation programs have experienced a general decline in diverse student participation since 2010 (CEdO, 2016).
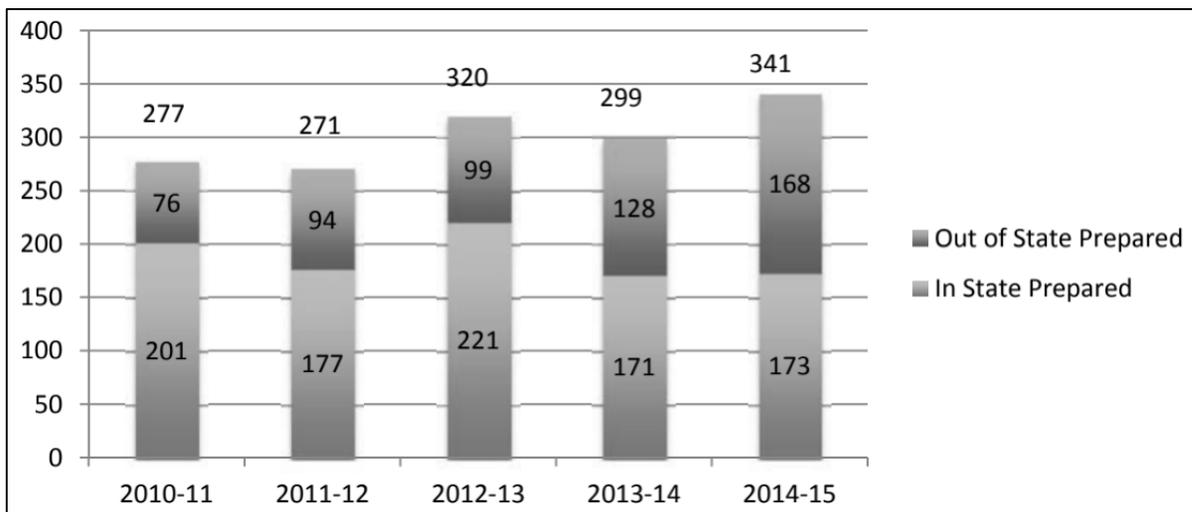
Figure 1. Five-year trend in minority teacher preparation in Oregon (CEdO, 2016).

The ODE attempted to address the disproportionate numbers of racially diverse educators by implementing multiple initiatives that encourage minority students to pursue teaching certification, such as TeachOregon, Oregon Teacher Pathway program (OTP), and Pathways in Education. Recruitment efforts for teacher-training programs have had mixed results: Small-scale initiatives, like Project TEACH in Massachusetts, demonstrate an ability to effectively recruit and retain minority teachers and match them with minority students

(Irizarry, 2007). However, Oregon-based programs have not experienced the same success and initiatives like OTP, and TeachOregon has had only limited success in growing Oregon's minority teacher membership through the pathway model (Oregon Education Investment Board [OEIB], 2014; 2015). For example, Oregon's non-White teacher population has only increased by 1.27 percent (from 8.9-10.16) in *five years* (ODE, 2016). With 197 school districts in the state—and an absence of state direction and sustainable funding—OTP and TeachOregon recruitment efforts from the last five years are not on track to meet the goal outlined in the Oregon Minority Teacher Act (see Table 1). The ethnic makeup of Oregon teachers is likely to remain disproportionately White if current recruitment and retention methods remain consistent.

Table 1

Comparisons of the 2014-2015 Five Year High School Teaching Cohort and 2014-2015 Teacher Program Completers

2014-2015 Cohorts	White	Native Hawaiian /Pacific Islander	Hispanic/ Latino	African American	Asian	American Indian/ Alaskan Native	Multi-Racial
Five-Year Graduation	68.7%	0.6%	17.5%	2.2%	4.7%	1.4%	4.8%
Teacher Program Completers							
Public Institution	684	4	34	30	30	9	21
Private Institutions	790	3	20	3	28	6	15
Total	1,474	7	54	33	58	15	36

Note. Data are sourced from CEdO (2016).

Smaller scale homegrown efforts that target high school students have demonstrated some success. For instance, Project TEACH recruited 26 teachers of color for a preservice program. Over an eight-year period, 22 of the teachers who entered the program completed their degree in four years. Of the 22 who completed their program, 18 went on to teach in public schools, two found jobs in early childhood education, and two became curriculum specialists (Irizarry, 2007). "One could argue that adding 28 teachers of color to a district which has almost 1,900 students in core academic areas is an insignificant increase. However, it is unlikely that this group of individuals would have entered the profession without Project TEACH" (Irizarry, 2007, p. 91).

Conversely, larger programs like OTP have demonstrated marginal growth in minority teacher recruitment since the OTP was introduced in the state of Oregon in 2011. More specifically, minority teacher populations have grown by 9.7% since 2012. However, the number of diverse teachers enrolled in teacher preparation programs has decreased by 163 members since 2011, indicating a massive 38% decline in enrollment within four years of the program's start (OEIB, 2015).

Teaching programs that target college-aged populations for enrollment in teacher training programs are insufficient to meet the legislative goal of diverse teachers in Oregon (Flores, Clark, Claeys, & Villarreal, 2007; Irizarry & Donaldson, 2012). Teach for America, for instance, focuses their efforts toward recruiting successful and ambitious college students (Irizarry & Donaldson, 2012). Some programs, like those from Texas A&M-Corpus Christi, The University of Wisconsin-Parkside, and Carthage College, took creative approaches to recruiting, directing campaigns at both high school and middle school student populations (Ramirez, 2009). Ramirez's study suggests that shaping attitudes at an early age can increase

the pool of minority teachers by presenting teaching as a destination career that students aspire to rather than as a career option presented during college. In addition to recruiting, studies have found that long-term retention may improve if preservice programs engage potential teachers at early ages (Boser, 2011; Ramirez, 2009). Moreover, students may be more interested in teaching if they clearly understand the benefits to the career itself, as well as learning about the potential opportunities beyond the classroom (Ramirez, 2009).

In order to address the shortage of racially diverse students enrolling in teacher credentialing programs in Oregon, we need to know more about the career aspirations and attitudes towards teaching ninth grade students have, as simply waiting to recruit credentialed teachers is unlikely to produce the numbers of diverse teachers needed to meet legislative goals. As Oregon (and many other states) design systems for recruiting, key issues that should be addressed include: (a) identifying influences that cause an individual to pursue a career in teaching, (b) finding environmental and cognitive factors that differ from culturally diverse teaching prospects versus White teaching prospects, and (c) distinguishing the steps that can be taken to increase the number of culturally diverse teachers. By addressing these issues, school districts can learn critical information that can then be applied to teacher recruitment and retention efforts.

Recruitment efforts that promote teaching as a possible career for non-White K-12 students can help shape attitudes toward teaching, as well as inform students about the process of becoming a teacher. The disproportionately low number of non-White teachers in the state of Oregon may negatively influence minority students' self-efficacy, leading them to question their ability to thrive as a teacher. Increasing the number of minority teachers could thus improve student self-efficacy, attitudes toward school, and overall academic

performance (Egalite et al., 2014). Teaching interest may be related to self-efficacy for teaching as well as personal inputs and school experiences. Research on how these factors interact with one another may lead to information that can be applied to initiatives that are intended to increase the minority teaching workforce.

CHAPTER II

LITERATURE REVIEW

Studies of student attitudes toward teaching across the nation could provide findings that would support minority teacher recruitment to teacher pathway programs in Oregon. To this end, a literature review was conducted for studies of adolescent attitudes towards teaching. This literature review omitted articles that did not focus on high school age students or minority attitudes towards education. Selected articles focused on adolescents, diverse populations, and career choice. The intent of this search was to analyze peer reviewed journal articles published between 2010-2015. The initial search resulted in six peer-reviewed journal articles. Of the six articles found, four were selected for inclusion in this review. The two omitted articles were either (a) outside the scope of the minority recruitment and retention focus, or (b) did not contain an empirical study on the subject.

To increase the number of articles after the initial search, I expanded the publishing date to 2006-2015, and changed the key words to: *teacher*, *recruit,* and *ret*. This adjustment resulted in 138 *ERIC* journal matches. I selected seven of the 138 journals for this literature review based on the inclusion criteria described above. Several of the journals, found on the *ERIC* database, referenced published works that met the criteria of this literature review. Some articles, discovered through reference lists, were also used in this literature review.

Social Cognitive Career Theory Framework

The findings from the initial literature review led to an expanded literature search and review to explore internal and external factors that influences attitudes toward teaching and vocational aspirations. This literature review focused on studies that used V*ocational Outcome Expectation* (VOE) studies and *Social Cognitive Career Theory* (SCCT) as a

theoretical framework to analyze the relations between factors that influence occupational self-efficacy and outcome expectations adolescent and minority populations.

Using the University of Oregon Libraries System, I conducted a search using the following key phrases, words, and names; *social cognitive career theory, vocational outcome expectation, education, teaching*, and authors *McWhirter* and *Lent*, because these authors are frequently referenced in SCCT and VOE studies. The *social cognitive career theory* search generated 2,268 articles. A search for *social cognitive career theory + teaching* resulted in 262 articles. Within this search, 37 articles related to career choice, 71 articles related to self-efficacy, 58 articles related to social cognition, and 39 related to career development. The most frequently published authors were Robert W. Lent, Steven D. Brown, and Lisa Y. Flores. Searching for *vocational outcome expectations + McWhirter* revealed five articles. The remaining two searches, *vocational outcome expectation theory + teaching* and *vocational outcome expectation + education*, did not return any articles.

From this expanded search, I narrowed my search to a total of 205 articles. Notably, there were multiple titles that repeated across each search, resulting in significant overlap. From a list of 2,010 total articles, I included only articles that focused on career choices specific to education. In addition, articles that addressed SCCT or VOE articles that studied underserved minorities and gender were reviewed. Based on these inclusion criteria, a total of nine articles were selected for this literature review and are described in detail, below.

Teacher Pathway Programs

The nine peer-reviewed studies included in the final literature review of this study focused on three related themes: (a) adolescents, including minority student, attitudes

towards teaching, (b) career planning factors, and (c) self-efficacy and contextual factors. SCCT and VOE were also areas of focus.

      Attitudes towards teaching. As displayed in Table 2, of the nine articles included in this literature review, six peer-reviewed studies analyzed adolescents attitudes towards teaching. Three peer-reviewed articles also focused on high school students in preservice teacher pathway programs (Irizarry, 2007; Irizarry and Donaldson, 2012; Ramirez, 2009). Themes in these studies included attitudes toward teaching, the presence and type of social supports, and impactful institutional factors. Results from Ramirez's study of 356 high school students across two schools showed first 58% and then 62% of students to be interested in pursuing a career in teaching if no other career options developed. In contrast, Irizarry and Donaldson's (2012) study of students participating in the Project FUERTE high school pathway program found that, on average, four of seven participants were interested in pursuing a career in teaching. However, Irizarry and Donaldson also found that minority students expressed greater reluctance to pursue professional careers in teaching because of the negative school experiences. "These negative experiences however, are driving factors behind many Latina/o students who pursue teaching careers. Latinas/os we interviewed cited a desire to combat the negative experiences they had as K-12 students as their primary motivation for entering the profession. They viewed schools as sites of transformation and possibility and overcame numerous obstacles to pursue a teaching career" (Irizarry & Donaldson, 2012, p. 167).

Table 2

Studies Measuring Attitudes and Barriers Towards the Teaching Profession

Citation	Program Type	Salary Barriers	Poor Perception of Profession	Socio-Cultural Barriers	Institutional Barriers
Achinstein and Aguirre (2008)	Teacher ($n = 15$)			X	
Flores et al. (2007)	Pre-Service ($n = 742$)		X	X	X
Irizarry and Donaldson (2012)	High School ($n = 7$)			X	X
Irizarry (2007)	High School ($n = 22$)			X	X
Kearney (2008)	Teacher ($n = 198$)	X		X	X
Ramirez (2009)	High School ($n = 386$)	X	X		X
Total		2	2	5	5

Pathway programs like Project TEACH that targeted high school youth demonstrated success in recruiting participants who later went on to become teachers (Irizarry, 2007). Irizarry attributes this success to the shared cultural experiences and investment teachers with local ties have with the school community they teach in. Ramirez (2009) suggests that schools improve minority teacher recruitment efforts by focusing on high school students' attitudes toward teaching.

Career planning factors. Both White and non-White students express a reluctance to seriously consider teaching as a career, in part because of the low-level teacher's salary, but also because they are not told about the educational process of becoming a teacher (Ramirez,

2009). After learning about pay scale (as it relates to the cost of living) and the broad set of

career opportunities, many of the high school students in Ramirez's study changed their

attitudes about pursuing teaching, suggesting that if teaching is presented to elementary and

middle school aged students as a worthy career, this could positively shift attitudes, and that

more students—especially students of color—might pursue careers as teachers.

Contextual Factors and Self-Efficacy

In addition to attitudes about teaching and career planning factors, five of the articles

examined the extent to which contextual factors, such as race, ethnicity, gender, and socio-

economic status, affected levels of self-efficacy (Betz, 2000; Chemers, Zurbriggen, Syed,

Goza, & Bearman, 2011; Gushue & Witson, 2006; Minter & Pritzker, 2015; Rogers & Creed

2011). The findings on self-efficacy and contextual factors were varied: Many findings

confirmed hypotheses that contextual factors led to socialization, which, in turn, impacted an

individual's belief in their ability to achieve in various social settings. For example, Betz's

(2000) review of self-efficacy studies found that socialization and stereotyping amongst

females lowered their self-efficacy and career planning, claiming, "traditional female

socialization often led to deficits in the sources of efficacy information important to the

development of strong expectations of efficacy with respect to such traditionally male

dominated areas as mathematics, the sciences and engineering tech careers" (p. 217). Betz

went on to suggest that similar stereotype threat also explained cognitive barriers and

lowered self-efficacy amongst ethnic minorities and historically underserved and

underrepresented populations.

Three studies intentionally focused on self-efficacy amongst non-White students

(Chemers, et al., 2011; Gushue & Whitson 2006, Minter & Pritzker, 2015;). Chemers and

colleagues' study of 665 racial minorities analyzed various forms of self-efficacy and found that, "like science self-efficacy, identity at least partially mediates the association between leadership/teamwork self-efficacy and commitment" (p. 483).

While Minter and Pritzker's (2015) study of self-efficacy amongst elementary students revealed mean differences between White and non-White students, the mean differences were not statistically significant. Gushue and Whitson's (2006) study of self-efficacy amongst minority students had similar findings. They found that, while contextual factors were important in shaping self-efficacy, "the results indicate that parental support is positively related to career decision self-efficacy and teacher support is positively related to career decision self-efficacy and career outcome expectations. No relationship is found between ethnic identity and either self-efficacy or outcome expectations" (p. 112).

Existing research has reported positive relationships between self-efficacy and outcome expectations when external variables, such as parental and teacher support, were introduced (Chemers et al., 2011; Gushue and Whitson, 2006). "The results of this study support the application of the SCCT model to African American high school students, as positive contextual affordances were found to affect cognitive-person variables. The findings offer confirmation for recent observations regarding the importance of environmental supports in the SCCT model" (Gushue & Whitson, 2006, p. 119).

Several studies reinforced hypotheses on self-efficacy and outcome expectations on race, ethnicity, and age, which authors like Bandura (1986) and Lent, Brown and Hackett (1994) studied in the 1980s and 1990s. For example, external variables, like teacher support, interact with inherent variables, such as race, ethnicity, and age, to impact a student's self-efficacy and outcome expectations. Many studies explore self-efficacy as it relates to the

sectors of science, technology, engineering, and math. However, no articles on self-efficacy and the teaching profession surfaced after multiple searches.

The application of self-efficacy studies on the education profession remains a significant gap in this research area; more specifically, understanding which factors influence students to pursue a career in education and knowing which barriers exist for students with limited self-efficacy and a career in public school settings. I posited that attitudes towards a career in teaching are shaped at an early age (K-12) and that outcome expectations are formed by the intersection of planning and self-efficacy. The following sections discuss the frameworks and methods I used to test this hypothesis.

Theoretical Framework

SCCT is a theoretical framework that suggests connections between certain personal and environmental attributes that shape self-efficacy and outcome expectations, which then influence interests, goals, and actions (Bandura, 1986; Lent et al., 1994).

Key Terms

Self-efficacy. *Self-efficacy* is a term used to describe one's belief in his or her ability to fulfill a task or to obtain a goal. In 1986, Bandura described self-efficacy as an individual's "judgments about his or her capabilities to organize and execute courses of action required to attain designated performances" (p. 391). Self-efficacy is frequently applied to studies that explain outcome discrepancies between subject groups.

Outcome expectations. *Outcome expectations* are defined as an individual's beliefs about probable outcomes and are associated with one's self-efficacy (Bandura, 1989). Outcome expectations are not necessarily aligned with one's career interest; rather, outcome

expectations are commonly associated with the SCCT and are linked to "probable outcomes of career decisions and behavior" (Ali, McWhirter, & Chronister, 2005, p. 44).

Interests. *Interests*, within the SCCT framework, refer to the curiosity and attention in an area that may lead to a possible career choice. For example, an interest in math and science may lead to a career in engineering. Environmental and personal factors often play a role in moderating one's interests (Lent, Hackett, & Brown, 1998).

Goals. *Goals* and *performance goals* are two terms that are used interchangeably in publications that study self-efficacy, SCCT, and outcome expectations. Performance is defined as "the level of achievement (e.g., course grades) as well as indices of behavioral persistence (e.g., stability of academic major) in the SCCT performance model" (Lent, Brown, & Hackett, 2002, as cited in Perkmen & Pamuk, 2010). Performance goals are heavily influenced by one's outcome expectations and self-efficacy. In addition, performance goals are also influenced by one's past performance.

Actions. Carrying out behaviors that lead to intended outcomes are *actions*. Actions may take the form of carrying out a plan influenced by a goal established by self-efficacy and outcome expectations. An example of an action would be a student enrolling in a training program necessary for a career goal (Lent et al., 1998).

Contextual influences. SCCT uses two distal *contextual influences* as independent variables: (a) personal inputs (such as gender or race/ethnicity) and personal predispositions (such as disability or health status), and (b) proximal background contextual affordances, which can present themselves in beneficial forms, such as career contacts, or adverse forms, such as discriminatory hiring practices (Lent et al., 1998).

Learning experiences. Individuals encounter varying *learning experiences* that are dependent on their personal inputs and their background / contextual affordances. For example, learning experiences may interact with beneficial factors (e.g., middle-class families accessing SAT tutors) or adverse barriers (e.g., financial challenges that prevent students from low-income backgrounds from accessing SAT tutors).

Social Cognitive Career Theory Context

The framers of SCCT posit that the interaction of contextual factors and learning experiences influences self-efficacy expectations and outcome expectations, which, in turn, influences interest, goals, and actions (Lent et al., 1998). (More information on self-efficacy variables are provided in the following section.) A person who is exposed to more positive learning experiences is thought to have a higher degree of personal agency (self-efficacy) over their goals and actions in pursuit of those goals. On the other hand, a person whose learning experiences are marred with environmental barriers may have a diminished sense of self-efficacy and belief that their career interests can propel them to create goals and an action plan to achieve those goals (see Figure 2).
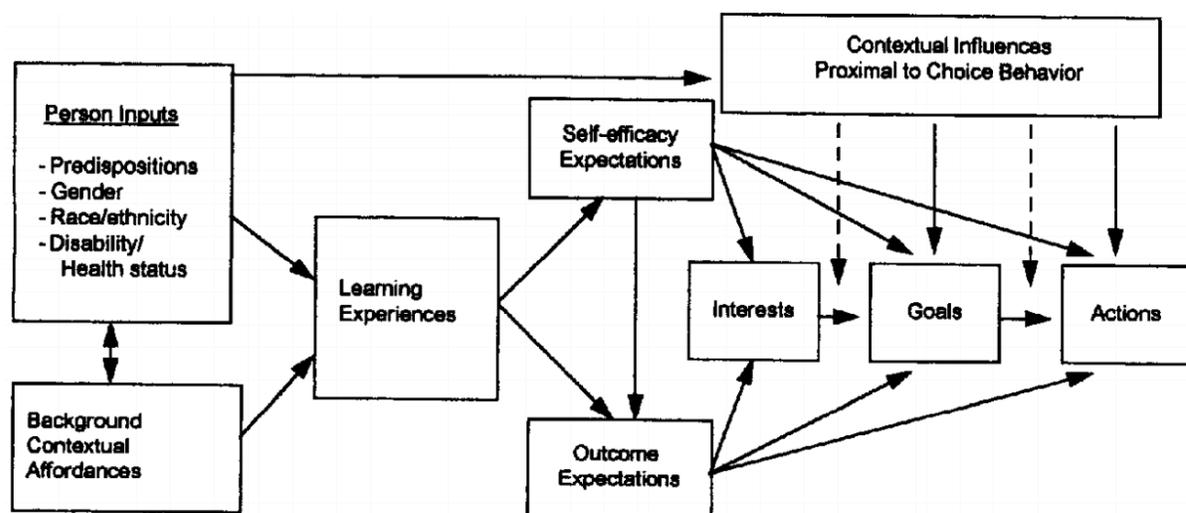
Figure 2. SCCT model (Lent et al., 1994).

Putting this theory into context, an African American female high school student from a low-income home attending school in an impoverished community is likely to face more contextual barriers than a White male high school student living in an upper-middle class household attending school in an upper-middle class community. As a result, the African American female student is likely to have lower outcome expectation and/or a self-efficacy than the White student from the upper-middle class background.

While the framers of SCCT suggest that outcome expectations and self-efficacy can be attributed to contextual factors, there is not a formula that can give a precise prediction on one's self-efficacy or outcome expectation based on environmental or personal factors—nor has anyone determined which variable, self-efficacy or outcome expectation, has a greater effect in influencing interests, goals, or actions. Some studies (e.g., Fouad, et al. 2010; Gushue & Whitson 2006; Tang, Fouad, & Smith, 1989) suggest that self-efficacy and outcome expectation do not always share a positive correlation with pursuit of interests. Tang and colleagues' study on career choices for Asian American college students illustrates this point by showing that the pressures of family environment and acculturation were stronger indicators of career choice and goals than personal interest. To this end, we know that the two independent variables in this framework—personal outputs and background contextual affordances—can have a significant effect on self-efficacy and outcome expectations and ultimately lead to various interests, goals, and outcomes.

Environmental settings that have historically benefitted one group over another may have stronger interactions with self-efficacy and outcome expectations. If SCCT were applied, using the same hypothetical students in the previous example, one may predict that the African American student may be exposed to more institutional barriers that discriminate

against females, African Americans, and persons from low socio-economic backgrounds. If both students had developed an interest in becoming a teacher, it is presumed that the White male from an upper-middle class background would face fewer barriers and have more proximal environmental factors that support goal and action plans. This is not to assume a student from a marginalized background will not be able to pursue interests because of barriers: It *does* suggest that these barriers may hinder this process for marginalized groups.

Purpose of Present Study

The purpose my study was to identify differences between ethnic groups on (a) teaching interest, (b) self-efficacy for teaching, and (c) outcome expectations for ninth grade students. Additionally, I wanted to learn more about the relations between (a) personal inputs, (b) contextual factors, and (c) socio-cognitive factors and teaching interests and outcome expectations. Finally, I wanted to determine if these relations varied amongst different ethnic groups. I hypothesized differences in teaching interest and outcome expectations when comparing responses from White participants to other ethnic subgroups. Furthermore, I predicted the relation between the previously mentioned independent factors and dependent factors such as (a) teaching interest and (b) outcome expectations would vary depending on the respondents' race and ethnicity. In short, I predicted factors related to teaching interest and outcome expectations for White respondents would vary when compared to other ethnic subgroups.

CHAPTER III

METHODS

For this study, I used quantitative methods to assess differences in ninth grade students' attitudes toward the teaching profession, outcome expectations, and self-efficacy. I used a one-time web-based survey, which I titled *Teens to Teachers*, to collect data at two Oregon urban high schools. I calculated descriptive statistics and conducted analyses of variance (ANOVA) and hierarchical regressions using IBM SPSS to measure the difference in attitudes towards teaching between ethnic subgroups. The items in the design assessed responses to the following research questions:

RQ1: What are the differences between racial and ethnic subgroups of secondary students on self-report of teaching self-efficacy, outcome expectations, and teaching interest?

RQ2: What are the relations between personal dispositions, contextual factors, school experiences, and (a) teaching interest and (b) outcome expectations amongst secondary students?

I hypothesized that there would be no significant differences between ethnic subgroups on measures of self-efficacy, but that significant differences would emerge between ethnic subgroups for outcome expectations. I anticipated the regression analysis would not show patterns of differences between African American, Latino(a), and White students on self-efficacy for teaching, but they would show differences for contextual factors and environmental factors that affect teaching interest.

Overview

The primary focus of these research questions was to use student responses to compare the differences in teaching interest, self-efficacy for teaching and outcome

expectations between ethnic subgroups and White students. The second part of my study was to determine relationships between personal inputs and contextual factors on teaching interest and outcome expectations using a hierarchical regression model. The purpose of the regression model was to measure relations among personal inputs, contextual factors, and socio-cognitive factors when entered hierarchically into the models with teaching interest and outcome expectations as dependent variables

SCCT suggests students will be less likely to believe they can succeed in positions where they do not see people with shared identities in this position (Lent et al., 2005), and, because there were no African American teachers in these two schools I predicted that African American students would be less likely to consider becoming teachers. Finally, I intended to identify consistencies and inconsistencies my study had with the theoretical frameworks I used for this study. Finding relationships and patterns on outcome expectations, self-efficacy for teaching and teaching interest will provide information necessary to develop future research and to implement positive changes that will support the recruitment and retention of ethnically diverse teachers throughout the state.

List of fi displays the representation of participants in my study. Because of the low incidence of respondents identifying with some racial/ethnic groups, the racial/ethnic classification was ultimately operationalized as follows: (a) African American, (b) White, (c) Hispanic/Latino, (d) Multi-Racial and (e) Other. in RQ1. For similar reasons, I only tested differences between White and Hispanic/Latino students in my analysis of data for RQ2.

Table 3

Number of Race/Ethnicity Student Participants (n = 494)

American Indian/Alaskan Native	3
Asian	14
African American	18
Hispanic/Latino	167
Native Hawaiian/Pacific Islander	1
White	258
Indigenous	4
Multi-Racial	19
Other	7
N/A	3

Sample Schools and Characteristics

Teens to Teachers was administered to ninth grade students (*n* = 494) in two large

urban schools located in Western Oregon. Public High School 1 (PHS1) (*n* = 1,212) and

Public High School 2 (PHS2) (*n* = 1,313) are similar in size and demographics but differ in

achievement. With a 68.7% graduation rate in 2016—3% lower than the state average—

PHS1's programming is centered on improving academic outcomes and encouraging

postsecondary education. PHS1 offers academic supports that have seek to prepare

traditionally underrepresented students for college, such as after school tutoring, Teacher

Cadet, and the *Advancement Via Individual Determination* program. PHS1 has several social

services, including a school-based health center and a family nursery for teen parents.

Most of PHS1's underrepresented subgroups are graduating at a lower rate than the

state average for each respective group, with African Americans graduating 20% below the

state average and Hispanic/Latino students graduating 4% below the state average with a graduation rate of 40% and 60%, respectively.

PHS2's ($n = 1,313$) academic outcomes and population contrast with PHS1. PHS2's ethnic demographic is a closer representation of the state's overall demographics, with the student population being 68% White, 18% Latino, 3% African American, 3% Asian, and 1% Native American. PHS2's programming offers a broad range of academic and career pathways, including the International Baccalaureate Program and a variety of career and technical education (CTE) pathways. PHS2's overall graduation rate was higher than both PHS1's and the state average, with an 83% graduation rate in 2015. PHS2's African American and Hispanic/Latino population graduated at 83% and 73%, respectively—both higher than state averages for each group.

Race and Ethnicity Characteristics

Table 4 displays the race and ethnicity characteristics of the participating schools.

Table 4

Ethnic Demographics of Participating Schools

Schools	White	Native Hawaiian/ Pacific Islander	Hispanic /Latino	African American	Asian	American Indian/ Alaskan Native	Multi- Racial
PHS1	56%	1%	30%	1%	2%	1%	9%
PHS2	68%	1%	18%	2%	2%	2%	6%

Note. Sourced from the ODE (2016).

Survey Protocol Development

My survey, *Teens to Teachers*, drew on items from the VOE measure (McWhirter, Rasheed & Crothers, 2000) and SCCT, which relate to adolescent attitudes toward career interests, self-efficacy, and outcome expectations. Both frameworks focus on factors that

influence career aspirations, such as contextual factors, environmental factors, self-efficacy, socio-cognitive factors, and goal setting. Further, SCCT is "concerned with the interplay between a variety of person [*sic*], environmental, and behavioral variables that are assumed to give rise to people's academic and career-related interests, choices, and performance outcomes" (Lent, 2005, p. 84). Both VOE and SCCT relate to this study as they assume that external and internal factors have a profound influence on career aspirations.

The *Teens to Teachers* instrument was designed to measure high school student teaching interest, outcome expectations, self-efficacy for teaching, and school experiences by using two existing instruments: *Vocational Outcome Expectations Revised* (VOE-R) and *Survey for High School Future Teacher Students* (HSFTS). The first instrument, VOE-R, is a 12-item measure utilized in Metheny and McWhirter (2013). An earlier version of this instrument was used by McWhirter (1997). The second survey, HSFTS, is utilized in Ramirez's (2009) *Ethnic Minorities and Teaching: An Examination of the Low Numbers in the Teaching Profession.* Ramirez' study was a 16-item measure administered to students in two Southern California high schools. I created additional items designed to measure factors described in the model of regression analysis to make the *Teens to Teachers* survey.

Survey Administration

The *Teens to Teachers* survey was a one-time web-based survey administered in April of 2017. The decision to use a web-based online survey tool was founded on the degree of familiarity students have with taking online assessments. Currently, all K-12 students are required to take state assessments electronically in fifth, eighth, and eleventh grade, so participating ninth graders would have already taken at least two standardized tests electronically. An online web-based approach reduced the burden of paper management by

site coordinators. Finally, the use of an online web survey tool provided instant feedback while eliminating human error on result summaries. Each survey site used a computer lab or portable set of laptops to access the survey on the Qualtrics web-based survey platform.

Participating sites had a trained site coordinator who administered the survey. These coordinators were trained to execute the survey protocol with precision. The protocol included: (a) timeline review, (b) roster delivery, (c) survey introduction mailing with passive consent included, (d) teacher protocol training, (e) protocol administration, (f) survey administrative make-up, (g) delivery of incentive, and (h) thank you letters for participation.

Survey Design and Scales

The *Teens to Teachers* survey consisted of 61 items. Of the 61 items, participants responded to 42 multiple-choice questions using a four-point Likert scale: (a) 1–*strongly disagree* to 4–*strongly agree*, (b) 1–*very disinterested* to 4–*very interested*, (c) 1–*not true at all* to 4–*very true*, (d) 1–*could not do at al*l to 4–*certainly I could do*, and (e) 1–*not at all stressful* to 4–*extremely stressful*. Survey items addressed RQ1 and RQ2 and all variables: (a) personal inputs–2 items, (b) positive perceptions of school–4 items, (c) school experiences–7 items, (d) outcome expectations–12 items, and (e) teaching interest–1 item.

While 61 items were developed for the instrument, only 24 items were analyzed in regression models. Table 5 shows the items used for RQ1 and RQ2. Items were omitted because they asked respondents for information outside the scope of the inquiry model for this study. See the Appendix for a complete list of all items used in this survey instrument.

Table 5

Items Used for RQ1 and RQ2

Cf	Number of items	Item #	Research Question
Demographic	6 items	Q41-46	RQ1-RQ2
Outcome expectations	12 items	Q29-40	RQ1-RQ2
Parent education	1 item	Q46	RQ2
Perceptions of teaching	4 items	Q19-22	RQ2
Self-efficacy for teaching	2 items	Q1-2	RQ1-RQ2
Teaching interest	1 item	Q8	RQ1-RQ2

Participants self-reported demographic questions about race, ethnicity, gender, and socio-economic status. These questions were placed at the end of the survey. Students had the option to select any of the six nationally recognized races/ethnicities. Dichotomous questions about gender identity and free and reduced lunch status were scaled as *yes* or *no* response options. Importantly, this survey was optional, and all selected participants had the option to anonymously decline participation. Respondents took the survey independently, but in a group setting. The survey took approximately five minutes to complete.

Data Analysis

For RQ1, an analysis of variance (ANOVA) evaluated mean differences between subgroups. I did this by testing mean differences on three factors that were measured in my instrument. Those factors were (a) teaching interest, (b) self-efficacy for teaching at the elementary and middle-secondary level and (c) outcome expectations as measured with items taken from the McWhirter et al. (2000) VOE instrument. My hypothesis was that there would be differences in teaching interest between ethnic subgroups and White students. Second, Post-hoc (Bonferroni) tests were conducted to evaluate mean differences between

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racial/ethnic subgroups based on the following independent variables, (a) African American (b) White respondents, (c) Hispanic/Latino respondents, (d) Multi-Racial respondents, and (e) respondents who identified as Other, and the following dependent variables, (a) teaching interest, (b) self-efficacy, and (c) outcome expectations.

For RQ2, I analyzed relationships between the factors articulated in the previously stated theoretical frameworks and the minority students' responses. First, I ran a four-step hierarchical regression analysis to determine if there were any correlations between the independent variables of (a) personal inputs, (b) environmental factors, and (c) socio-cognitive factors and the dependent variable of teaching interest when student race/ethnicity is considered. The second part of the hierarchical regression introduced the same variables in a three-step process, when outcome expectations were the dependent variable. The purpose of this process was to check for mediation of variables when one or more contextual variables were introduced to the model. For example, teaching interest may have a significant correlation with higher parent education for Hispanic/Latino (a) students in step one of the regression model, but the introduction of school experiences in step two of the model may mediate the effect of parent education and render parent education as a statistically non-significant factor. From this, I could conclude that the effect of school experiences on teaching interest was above and beyond that of parent education on teaching interest.

Figure 3 shows the model I used to address RQ2, which assessed the effects of contextual factors and socio-cognitive factors on teaching interest and outcome expectations.
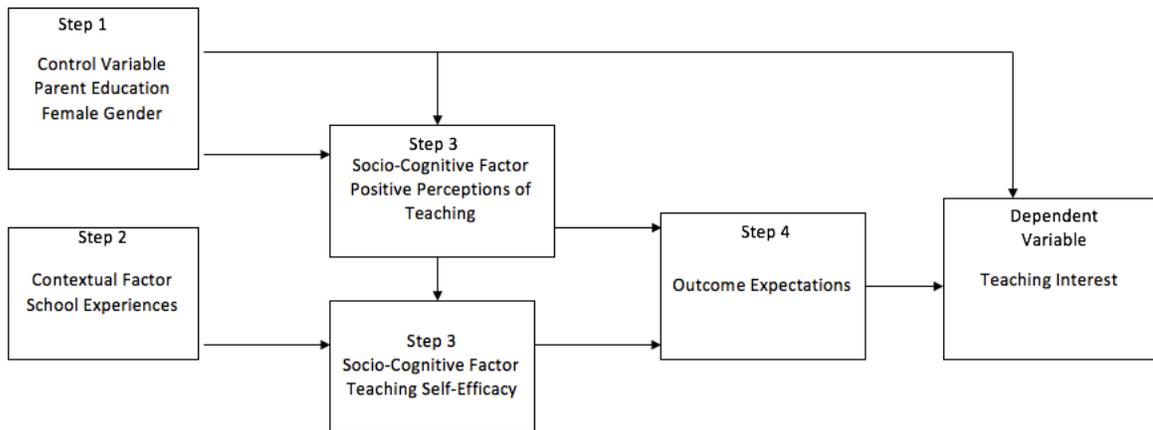
Figure 3. Hierarchical regression model for *teaching interest*.

Figure 4 illustrates the model I used to assess to address RQ2, which assessed the effects of contextual factors and teaching interest in a three-step process, when teaching interest was the dependent variable.
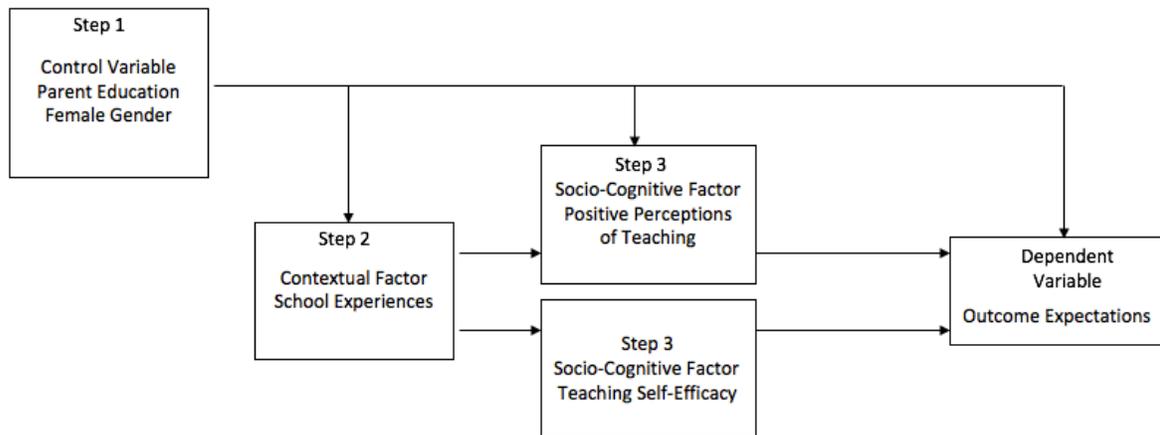
Figure 4. Hierarchical regression model for *outcome expectations*.

Reliability and Validity

Given that the instrument used was derived from two surveys that were not originally designed for the purpose of my study (or tested with a sample population to vet the reliability and validity of this measure), there are areas of this study where threats to reliability and

validity should be considered. For example, McWhirter et al.'s (2000) VOE-R instrument

was specifically designed to assess outcome expectations for career aspirations and was not

intended for the specific purpose to measure teaching interest. Finally, this instrument was

administered to students just one time at two schools, representing only a small portion of

Oregon's high school population, there was not opportunity to test the reliability of the

measure in the scope of this study.

Construct validity and content validity. The *Teens to Teachers* instrument

contained items that fell outside the scope of my research questions, and thus, 43 (of 61)

were omitted. Furthermore, the use of instruments that were designed for different studies

may also lack questions that precisely address research questions, especially those regarding

teaching aspirations and environmental contexts (Babbie, 2013).

High school future teachers study. Ramirez's measure, used in 2009, does not have

evidence of reliability or validity data. As a result, 16 of the 24 items on the *Teens to Teacher*

survey used items that have not been tested for reliability and validity. The HSFTS items,

however, *do* align with the construct of teacher career aspirations. The results from the *Teens*

to Teachers survey, which aligned with the HSFT component, could be compared to

Ramirez' (2009) results and be used to guide future research.

VOE-R. Positively speaking, the McWhirter et al. (2000) measure has evidence of

reliability and validity: "Evidence of adequate internal consistency, test-retest reliability, and

concurrent validity of scores among high school samples is reported by McWhirter and

colleagues. Items represent Bandura's (1986) three types of outcome expectations: self-

evaluation or satisfaction (two items), physical (two items), and social (two items)"

(McWhirter et al., 2000, p. 384). McWhirter and colleagues' VOE-R measure has an $\alpha = .83$

test-retest reliability over a period of nine weeks and yielded a coefficient of $r = .59$.

CHAPTER IV

RESULTS

For each of my two research questions, I provide descriptive statistics and data output to report results. Before discussing the results of my study, it is important to note that I used both IBM *Statistical Package for the Social Sciences* and the statistical program *R* to compute my results. I conducted a series of one-way ANOVAs for RQ1 to determine between group differences on outcome expectations, teaching interest and teaching self-efficacy. After computing the ANOVAs, I conducted post-hoc Bonferroni pairwise tests to explore differences between racial and ethnic groups on outcome variables.

Descriptive Statistics for Independent Variables

Positive school experiences. Table 6 presents descriptive statistics for race and ethnicity variables when compared to the distribution of responses on school experiences (*n* = 464). The overall mean was 2.90 with a standard deviation of .53. Means are also presented in Table 6 with the means ranging from $M = 2.70$ ($SD = 0.57$) to $M = 2.98$ ($SD = 0.51$).

Table 6

Descriptive Statistics for Positive School Experiences by Ethnicity (n = 464)

Race/Ethnicity	*M*	*SD*	*n*
White	2.99	0.51	240
African American	2.71	0.57	18
Hispanic/Latino	2.82	0.54	134
Multi-Racial	2.86	0.50	41
Other	2.88	0.57	31
Total	2.91	0.53	464

Positive perceptions of teaching. Table 7 presents descriptive statistics for race and ethnicity relative to positive perceptions of teaching ($n = 483$). The overall mean was 3.00 ($SD = 0.55$). Group means range from $M = 2.67$ ($SD = 0.64$) to $M = 3.01$ ($SD = 0.57$).

Table 7

Descriptive Statistics for Positive Perceptions of Teaching by Ethnicity (n = 483)

Race/Ethnicity	M	SD	n
White	3.05	0.52	255
African American	2.67	0.64	18
Hispanic/Latino	3.01	0.57	136
Multi-Racial	2.89	0.55	42
Other	2.95	0.55	32
Total	3.00	0.55	483

Parent education. Table 8 presents descriptive statistics for race and ethnicity relative to parent education ($n = 489$). The overall mean was 3.29 ($SD = 1.58$). Group means range from $M = 2.36$ ($SD = 1.40$) to $M = 3.61$ ($SD = 1.47$).

Table 8

Descriptive Statistics for Parent Education by Ethnicity (n = 489)

Race/Ethnicity	M	SD	n
White	3.62	1.47	258
African American	3.83	1.62	18
Hispanic/Latino	2.36	1.40	138
Multi-Racial	3.83	1.50	42
Other	3.70	1.63	33
Total	3.29	1.58	489

Outcomes of Between Group Differences

  Ninth grade differences on teaching interests. Results displayed in Table 9 show descriptive statistics for mean differences for teaching interest between ethnic groups. White (n = 258) had the highest mean teaching interest (M = 2.22; SD = 0.90), whereas African American (n = 18) had the lowest mean teaching interest (M = 1.67; SD = 0.84).

Table 9

Descriptive Statistics for Teaching Interest (n = 491)

Race/Ethnicity	n	M	SD	95% CI	
				LL	*UL*
White	258	2.22	0.90	2.11	2.33
African American	18	1.67	0.84	1.25	2.08
Hispanic/Latino	140	2.09	0.82	1.95	2.22
Multiple Races	42	2.05	0.90	1.76	2.33
Other	33	2.12	0.89	1.80	2.44
Total	491	2.14	0.88	2.06	2.22

  An ANOVA was conducted to determine mean differences between racial and ethnic groups for ninth-grade respondents on teaching interest (see Table 10). No significant differences were detected between racial/ethnic subgroups, p = .09.

Table 10

One-Way Analysis of Variances for Teaching Interest (n = 491)

Source	*SS*	*df*	*MS*	*F*	*p*
Between Groups	6.35	4	1.59	2.05	0.09
Within Groups	376.24	486	0.77		
Total	382.58	490			

Post-hoc pairwise tests indicated no significant differences between racial/ethnic subgroups, $p > .05$ (see Table 11). While nonsignificant, the largest difference was between African American and White, with African American having a lower mean $(\Delta M = -0.55, SE = 0.21)$. Students from the White and Hispanic/Latino groups had the smallest difference for teaching interest, with White having a higher mean $(\Delta M = 0.01; SE = 0.09)$.

Table 11

Pairwise Comparisons of Mean Differences Between Ethnic Groups on Teaching Interest (n = 491)

Race/Ethnicity	Cf	ΔM	SE	p	95% CI	
					LL	UL
White	AA	0.55	0.21	0.11	-0.05	1.16
	HL	0.13	0.09	1.00	-0.13	0.39
	MR	0.17	0.15	1.00	-0.24	0.58
	Other	0.10	0.16	1.00	-0.36	0.55
African American	White	-0.55	0.21	0.11	-1.16	0.05
	HL	-0.42	0.22	0.58	-1.04	0.20
	MR	-0.38	0.29	1.00	-1.08	0.32
	Other	-0.45	0.26	0.79	-1.18	0.27
Hispanic/Latino	White	-0.13	0.09	1.00	-0.39	0.13
	AA	0.41	0.22	0.58	-0.20	1.04
	MR	0.04	0.16	1.00	-0.40	0.47
	Other	-0.03	0.17	1.00	-0.52	0.44
Multi-Racial	White	-0.17	0.15	1.00	-0.58	0.24
	AA	0.38	0.25	1.00	-0.32	1.08
	Latino	-0.04	0.15	1.00	-0.47	0.40
	Other	-0.07	0.20	1.00	-0.65	0.50
Other	White	-0.10	0.16	1.00	-0.55	0.36
	AA	0.45	0.26	0.79	-0.27	1.18
	Latino	0.03	0.17	1.00	-0.44	0.52
	MR	0.07	0.20	1.00	-0.50	0.65

Note. AA = African American; HL = Hispanic/Latino; MR = Multi-Racial.

Ninth grade differences on self-efficacy for elementary level teaching. Table 12 displays mean differences for teaching interest between race/ethnic subgroups for self-efficacy on their perceived ability to teach at the elementary level with proper training. Multi-Racial had the highest reported self-efficacy for teaching at the elementary level (M = 3.31; SD = 0.64), whereas White had the lowest reported self-efficacy (M = 3.12; SD = 0.81).

Table 12

Descriptive Statistics for Self-Efficacy at the Elementary Level by Race (n = 491)

Race/Ethnicity	n	M	SD	95% CI	
				LL	*UL*
White	258	3.12	0.81	3.02	3.22
African American	18	3.17	0.51	2.91	3.42
Hispanic/Latino	140	3.18	0.69	3.06	3.29
Multi-Racial	42	3.31	0.64	3.11	3.51
Other	33	3.24	0.75	2.98	3.51
Total	491	3.16	0.75	3.10	3.23

An ANOVA showed no significant differences between ethnic subgroups for teaching self-efficacy at the elementary level, p = .58 (see Table 13).

Table 13

One-way Analysis of Variance for Teaching Self-Efficacy at the Elementary Level Between Ethnic Groups (n = 490)

Source	*SS*	*df*	*MS*	*F*	*p*
Between Groups	1.62	4	0.40	0.72	0.58
Within Groups	273.35	486	0.56		
Total	274.96	490			

Post-hoc pairwise tests indicated no significant differences between subgroups, $p > .05$ (see Table 14). While nonsignificant, the largest difference was between White and Multi-Racial, with Multi-Racial having a lower mean, ($\Delta M = -0.19$; $SE = 0.12$). African American and Hispanic/Latino had the smallest difference ($\Delta M = -0.01$; $SE = 0.14$).

Table 14

Pairwise Comparisons Between Race for Elementary Level Teaching Self-Efficacy
(n = 491)

Race/ Ethnicity	Cf	ΔM	SE	p	CI	
					LL	UL
White	AA	-0.05	0.18	1.00	-0.56	0.47
	HL	-0.06	0.08	1.00	-0.28	0.16
	MR	-0.19	0.12	1.00	-0.54	0.16
	Other	-0.12	0.14	1.00	-0.51	0.27
African American	White	0.05	0.18	1.00	-0.47	0.56
	HL	-0.01	0.19	1.00	-0.54	0.52
	MR	-0.14	0.21	1.00	-0.74	0.45
	Other	-0.08	0.22	1.00	-0.70	0.54
Hispanic/Latino	White	0.06	0.08	1.00	-0.16	0.28
	AA	0.01	0.19	1.00	-0.52	0.54
	MR	-0.13	0.13	1.00	-0.50	0.24
	Other	-0.06	0.14	1.00	-0.47	0.35
Multi-Racial	White	0.19	0.12	1.00	-0.16	0.54
	AA	0.14	0.21	1.00	-0.45	0.74
	HL	0.13	0.13	1.00	-0.24	0.50
	Other	0.07	0.17	1.00	-0.42	0.56
Other	White	0.12	0.14	1.00	-0.27	0.51
	AA	0.08	0.22	1.00	-0.54	0.70
	HL	0.06	0.14	1.00	-0.35	0.47
	MR	-0.07	0.17	1.00	-0.56	0.42

Note. AA = African American; HL = Hispanic/Latino; MR = Multi-Racial.

Ninth grade differences on self-efficacy for middle-secondary level teaching.

Table 15 shows descriptive statistics for mean differences for teaching self-efficacy at the middle-secondary level. White ($n = 258$) had the highest self-assessed self-efficacy, ($M = 2.61$; SD 0.80), whereas African American ($n = 18$) had the lowest reported teaching self-efficacy, ($M = 2.28$; SD 0.83).

Table 15

Descriptive Statistics for Middle-Secondary Level Teaching Self-Efficacy (n = 491)

Race/Ethnicity	n	M	SD	CI	
				LL	UL
White	258	2.61	0.80	2.51	2.71
African American	18	2.28	0.83	1.87	2.69
Hispanic/Latino	140	2.60	0.83	2.46	2.74
Multi-Racial	42	2.48	0.83	2.22	2.74
Other	33	2.48	0.83	2.19	2.78
Total	491	2.58	0.81	2.50	2.65

An ANOVA determined mean differences between groups for ninth grade respondents on self-efficacy for teaching the middle-secondary level. Table 16 shows no significant differences between groups, $p = .39$.

Table 16

One-Way Analysis of Variances for Self-Efficacy for Teaching at Middle-Secondary Level Between Racial and Ethnic Groups (n = 491)

Source	SS	df	MS	F	p
Between Groups	2.72	4	0.68	1.03	0.39
Within Groups	321.17	486	0.66		
Total	323.89	490			

Post-hoc pairwise tests showed no significant differences between subgroups, $p > .05$ (see Table 17). The largest difference was between African American and White, with African American having a lower mean ($\Delta M = 0.34$; $SE = 0.20$). White and Hispanic/Latino had the smallest difference, with White having a higher mean ($\Delta M = .01$; $SE = .08$).

Table 17

Pairwise Comparisons of Mean Differences Between Ethnic Groups on Teaching Self-Efficacy at the Middle-Secondary Level (n = 491)

Race/ Ethnicity	Cf	ΔM	SE	p	CI	
					LL	UL
White	AA	0.33	0.20	0.92	-0.22	0.89
	HL	0.01	0.08	1.00	-0.23	0.25
	MR	0.14	0.13	1.00	-0.25	0.52
	Other	0.13	0.15	1.00	-0.30	0.55
African American	White	-0.33	0.20	0.92	-0.89	0.22
	HL	-0.32	0.20	1.00	-0.90	0.25
	MR	-0.20	0.23	1.00	-0.84	0.45
	Other	-0.21	0.24	1.00	-0.88	0.46
Latino	White	-0.01	0.08	1.00	-0.25	0.23
	AA	0.32	0.20	1.00	-0.25	0.90
	MR	0.12	0.14	1.00	-0.28	0.53
	Other	0.11	0.16	1.00	-0.33	0.56
Multi-Racial	White	-0.14	0.13	1.00	-0.52	0.25
	AA	0.20	0.23	1.00	-0.45	0.84
	HL	-0.12	0.14	1.00	-0.53	0.28
	Other	-0.01	0.19	1.00	-0.54	0.52
Other	White	-0.13	0.15	1.00	-0.55	0.30
	AA	0.21	0.24	1.00	-0.46	0.88
	HL	-0.11	0.16	1.00	-0.56	0.33
	MR	0.01	0.19	1.00	-0.52	0.54

Note. AA = African American; HL = Hispanic/Latino; MR = Multi-Racial.

Ninth grade differences on outcome expectations. RQ1 also checked for a difference in outcome expectations between subgroups. Table 18 presents descriptive statistics for outcome expectations for subgroups. White had the highest mean score for outcome expectations ($M = 3.26$; $SD = 0.40$). African American had the lowest reported outcome expectations ($M = 3.12$; $SD = 0.22$).

Table 18

Descriptive Statistics of Outcome Expectations by Race and Ethnicity (n = 461)

Race/Ethnicity	*n*	*M*	*SD*	CI	
				LL	*UL*
White	243	3.26	0.40	3.21	3.31
African American	18	3.12	0.29	3.01	3.22
Hispanic/Latino	133	3.21	0.44	3.14	3.29
Multi-Racial	38	3.16	0.37	3.04	3.28
Other	29	3.24	0.37	3.23	3.51
Total	461	3.16	0.41	3.20	3.28

Table 19 shows the results for a one-way ANOVA with outcome expectations as the dependent variable, and no significant differences between subgroups, $p = .12$.

Table 19

One-Way Analysis of Variance of Outcome Expectation Between Racial and Ethnic Groups (n = 461)

Source	*SS*	*df*	*MS*	*F*	*p*
Between Groups	1.22	4	0.30	1.86	0.12
Within Groups	74.73	456	0.16		
Total	75.95	460			

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I conducted pairwise comparisons of subgroup means on outcome expectations and found no significant differences, $p > .05$ (see Table 20). While nonsignificant, the largest mean difference was between African American and Other ($\Delta M = -0.25$; $SE = 0.12$), while the smallest was between African American and Multi-Racial ($\Delta M = 0.04$; $SE = 0.12$).

Table 20

Pairwise Comparisons of Mean Differences in Outcome Expectations by Race and Ethnicity
(n = 461)

Ethnicity	*Cf*	*M*	*SE*	*p*	CI	
					LL	*UL*
White	AA	0.15	0.10	1.00	-0.13	0.42
	HL	0.05	0.04	1.00	-0.07	0.17
	MR	0.10	0.07	1.00	-0.10	0.30
	Other	-0.11	0.08	1.00	-0.33	0.12
African American	White	-0.15	0.10	1.00	-0.42	0.13
	HL	-0.10	0.10	1.00	-0.38	0.19
	MR	-0.04	0.12	1.00	-0.37	0.28
	Other	-0.25	0.12	0.38	-0.60	0.09
Hispanic/ Latino	White	-0.05	0.04	1.00	-0.17	0.07
	AA	0.10	0.10	1.00	-0.19	0.38
	MR	0.05	0.07	1.00	-0.16	0.26
	Other	-0.16	0.08	0.58	-0.39	0.08
Multi-Racial	White	-0.10	0.07	1.00	-0.30	0.10
	AA	0.04	0.12	1.00	-0.28	0.37
	HL	-0.05	0.07	1.00	-0.26	0.16
	Other	-0.21	0.10	0.37	-0.49	0.07
Other	White	0.11	0.08	1.00	-0.12	0.33
	AA	0.25	0.12	0.38	-0.09	0.60
	HL	0.16	0.08	0.58	-0.08	0.39
	MR	0.21	0.10	0.37	-0.07	0.49

Note. AA = African American; HL = Hispanic/Latino; MR = Multi-Racial.

Summary of Hierarchical Regression Models

  I conducted a hierarchical regression to examine the relations between positive school experiences, positive perceptions of teaching, self-efficacy for teaching, and outcome expectations controlling for gender and parent education. The model summary was four steps. Table 21 shows all models were significant in this hierarchical regression ($p < .05$).

Table 21

Regression for All Students with Teaching Interest as the Dependent Variable (n = 494)

Variables	Model 1	Model 2	Model 3	Model 4
			β	
Female Gender	0.18***	0.19***	0.16***	0.16***
Parent Education	0.02	-0.03	-0.02	-0.02
Positive School Experience	-	0.26***	0.11*	0.11*
Perceptions of Teaching	-	-	0.16***	0.16***
Self-efficacy for teaching	-	-	0.27***	0.27***
Outcome expectations	-	-	-	0.00
R^2	0.03	0.10	0.18	0.18
ΔR^2	0.03	0.06	0.08	0.00

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; all β represent standardized betas.

Hierarchical Regression for All Students Using Teaching Interest as the Dependent Variable

  In Model 1, *female gender* and *parent education* were entered into the model. The regression model was significant, $R^2 = 0.03$, $F(2, 442) = 7.58$, $p < .001$. Female gender was significantly related to more teaching interest than parent education, $\beta = 0.18$, $p < .001$.

Female gender accounted for 18% of the variance in teaching interest. Parent education was not significantly related to teaching interest for the whole sample, $\beta = 0.02$, $p > .25$.

In Model 2, the positive school experiences variable was added to the model. This overall model was significant, $R^2 = 0.10$, $F(3, 441) = 15.92$, $p < .001$. Positive school experiences significantly predicted teaching interest over and above the two control variables, R^2 change $= 0.06$, $F(1, 441) = 31.55$, $p < .001$. Results show more positive school experiences were significantly related to more teaching interest, $\beta = 0.26$, $p < .001$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were entered. This overall model was significant, $R^2 = 0.18$, $F(5, 439) = 19.50$ $p < .001$. Adding self-efficacy for teaching and positive perceptions of teaching accounted for a significant increment in the variance of teaching interest over and above the contributions of variables from Model 2, R^2 change $= 0.08$, $F(2, 439) = 22.53$, $p < .001$. More specifically, both higher student reporting of teaching self-efficacy and positive perceptions of teaching related to more interest in teaching, $\beta = 0.27$, $p < .001$ and $\beta = 0.16$, $p < .001$, respectively. When self-efficacy for teaching and positive perceptions of teaching were entered, the relation between school experiences and teaching interest continued to be significant, $\beta = 0.11$, $p < .05$, although the strength of the relation was lower ($R^2 = 0.18$). The relation between parent education and teaching interest was rendered nonsignificant when self-efficacy for teaching and positive perceptions of teaching were entered, $\beta = -0.02$, $p > .25$.

In Model 4, the outcome expectations variable was entered into the model. This overall model was significant, $R^2 = 0.18$, $F(6, 438) = 16.22$, $p < .001$; however, outcome expectations did not lead to a significant increment in the overall model effect, R^2 change $= 0.00$. The path between outcome expectations and teaching interest was likewise

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nonsignificant, $\beta = 0.00$, $p > .05$. In this model, higher levels of teaching self-efficacy and positive perceptions of teaching continued to be related to more interest in teaching, $\beta = 0.27$, $p < .001$ and $\beta = 0.16$, $p < .001$, respectively. Finally, the female gender and positive perceptions of teaching remained significant, having a positive relation with teaching interest, $\beta = 0.16$, $p < .001$ and $\beta = 0.16$, $p < .001$ respectively.

Hierarchical Regression for Students Classified as White Using Teaching Interest as the Dependent Variable

The same set of hierarchical regression models were analyzed for White and Hispanic/Latino students separately. For White respondents ($n = 236$), the regression model was significant, $R^2 = 0.03$, $F(2, 233) = 3.55$, $p < .05$. In Model 1, female gender and parent education were entered into the model. Female gender was significantly related to more teaching interest, $\beta = 0.16$, $p < .05$ and female gender accounted for 16% of the variance in teaching interest. In this model, the relation between parent education and teaching interest was nonsignificant for the White population sample, $\beta = 0.02$, $p > .05$.

In Model 2, positive school experiences was entered into the model. This overall model was significant, $R^2 = 0.25$, $F(3, 232) = 15.39$, $p < .001$. Higher positive school experiences significantly predicted teaching interest over and above the control variables, R^2 change $= 0.14$, $F(1, 232) = 37.95$, $p < .001$. In this model, positive school experiences had higher correlations to more teaching interest than other control variables, $\beta = 0.38$, $p < .001$. The female gender was also significant in this model, $\beta = 0.18$, $p < .001$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were entered to the model. This overall model was significant, $R^2 = 0.25$, $F(5, 230) = 15.49$ $p < .001$. Self-efficacy for teaching significantly related to more teaching interest than other

variables entered into the model, $\beta = 0.30$, $p < .001$ and R^2 change $= 0.14$, $F(2, 230) = 13.20$, $p < .001$. Moreover, self-efficacy for teaching accounted for 30% of the variance in teaching interest, $R^2 = 0.09$. In this model, positive school experiences and female gender were also significantly associated with teaching interest, $\beta = 0.22$, $p < .001$ and $\beta = 0.14$, $p < .05$, respectively. The relation between higher parent education and teaching interest was nonsignificant, $\beta = -0.04$, $p > .25$. Furthermore, the association between positive perceptions of teaching and teaching interest was nonsignificant in this model, $\beta = -0.10$, $p > .05$.

In Model 4, outcome expectations was entered to the model. This overall model was significant, $R^2 = 0.25$ $F(6, 229) = 12.85$, $p < .001$. The relation between outcome expectations and teaching interest was nonsignificant in this model, $\beta = -0.01$, $p > .25$. The correlation between self-efficacy for teaching and teaching interest was significant and related to more teaching interest above other variables entered into the model, $\beta = 0.31$, $p < .001$. Moreover, self-efficacy for teaching accounted for 31% of the variance in teaching interest, R^2 change $= 0.00$, $F(1, 229) = 0.03$, $p > .25$. Positive school experiences was significant in this model, $\beta = 0.23$, $p < .001$, as well as gender, $\beta = 0.14$, $p < .05$. The relation between higher parent education and teaching interest was nonsignificant, $\beta = -0.04$, $p > .25$. Importantly, the relation between higher positive perceptions of teaching and teaching interest was nonsignificant in this model, $\beta = -0.10$, $p > .05$. Table 22 shows the results of the model.

Table 22

Regression Summary of Teaching Interest for White Respondents (n = 236)

Variables	Model 1	Model 2	Model 3	Model 4
			β	
Female Gender	0.16*	0.18***	0.14*	0.14*
Parent Education	0.10	0.03	0.04	0.04
Positive School Experience	-	0.38***	0.22***	0.23***
Perceptions of teaching	-	-	0.10	0.10
Self-Efficacy Teaching	-	-	0.30***	0.31***
Outcome expectations	-	-	-	-0.01
R^2	0.03	0.17	0.25	0.25
ΔR^2	0.03	0.14	0.09	0.00

Note. *$p < .05$, **$p < .01$, ***$p < .001$; all β represent standardized betas.

Hierarchical Regression for Hispanic/Latino Students Using Teaching Interest as the Dependent Variable

In Model 1, female gender and parent education were entered. The model was significant, $R^2 = 0.05$, $F(2, 122) = 3.32$, $p < .05$. Parent education was significantly related to teaching interest, $\beta = -0.20$, $p < .001$, and accounted for 20% of the variance in teaching interest. Higher levels of parent education correlated with lower interest in teaching. Importantly, female gender was rendered nonsignificant in this model, $\beta = 0.11$, $p > .05$.

In Model 2, positive school experiences was added. This overall model was significant, $R^2 = 0.09$, $F(3, 121) = 4.04$, $p < .05$. Positive school experiences had a higher correlation with teaching interest than other variables in the model, R^2 change = 0.04, $F(1, 121) = 5.24$, $p < .05$. In this model, positive school experiences accounted for 20% of the

variance for teaching interest, $\beta = 0.20$, $p < .05$. Higher parent education was significantly associated with lower teaching interest, $\beta = -0.23$, $p < .001$. The relation between female gender and teaching interest, in this model, was rendered nonsignificant, $\beta = 0.10$, $p > .05$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were entered. The model was significant, $R^2 = 0.18$, $F(5,119) = 5.11$, $p < .001$. Higher self-efficacy for teaching was significant and had a higher effect on teaching interest than other variables in this model, $\beta = 0.30$, $p < .001$ and R^2 change = 0.09, $F(2, 119) = 6.20$, $p < .05$. Higher parent education levels were significant in this model, and there was a negative correlation between parent education and teaching interest in this model, $\beta = -0.27$, $p < .001$. Three variables were rendered nonsignificant when entered into this model and the R^2 change was 0.09: (a) positive perceptions of teaching, $\beta = 0.11$, $p > .25$, (b) positive school experiences, $\beta = -0.07$, $p > .25$, and (c) gender, $\beta = 0.28$, $p > .25$. Importantly, when self-efficacy for teaching and perceptions of teaching were entered they mediated the effect of positive school experiences, which was significant in Model 2, but nonsignificant in Model 3.

In Model 4, outcome expectations was entered. This model was significant, $F(6, 118) = 4.29$, $p < .001$. The relation between outcome expectations and teaching interest was rendered nonsignificant, $\beta = 0.22$, $p > .25$, R^2 change = 0.00, $F(1, 118) = 0.32$, $p > .25$. Self-efficacy for teaching significantly related to more teaching interest than other variables entered in this model, $\beta = 0.32$, $p < .001$. Parent education was significant in this model as well, $\beta = -0.27$, $p < .001$. Gender was rendered nonsignificant in this model, $\beta = 0.09$, $p > .25$; as were school experiences, $\beta = 0.10$, $p > .25$, and positive perceptions of teaching, $\beta = 0.11$, $p > .25$. Table 23 below shows a full model summary of teaching interest for Hispanic/Latino respondents.

Table 23

Regression Summary of Teaching Interest for Hispanic/Latino Respondents (n = 122)

Variables	Model 1	Model 2	Model 3	Model 4
			β	
Female Gender	0.11	0.10	0.09	0.09
Parent Education	-0.23*	-0.23**	-0.27***	-0.27***
Positive School Experience	-	0.20*	0.07	0.10
Perceptions of Teaching	-	-	0.11	0.11
Self-Efficacy Teaching	-	-	0.30***	0.32***
Outcome expectations	-	-		-0.06
R^2	0.05	0.09	0.18	0.18
ΔR^2	0.05	0.04	0.09	0.00

Note. * $p < .05$, ** $p < .01$, *** $p < .001$; all β represent standardized betas.

Hierarchical Regression for All Students Using Outcome Expectations as the Dependent Variable

In Model 1 female gender and parent education were entered. The regression model was significant, $R^2 = 0.03$, $F(2, 442) = 6.90$, $p < .001$. Higher parent education was significantly related to higher outcome expectations, $\beta = 0.17$, $p < .001$. Parent education accounted for 17% of the variance in outcome expectations. Gender was not significantly associated with outcome expectations, $\beta = 0.02$, $p > .25$.

In Model 2, positive school experiences was added. This model was significant, $R^2 = 0.17$ $F(3, 441) = 29.68$, $p < .001$. The entry of positive school experiences was significant, R^2 change $= 0.14$, $F(1, 441) = 7.30$, $p < .001$. More specifically, positive school experiences was

significantly related to higher outcome expectations, $\beta = 0.38$, $p < .001$, as was parent

education, $\beta = 0.11$, $p < .05$. Female gender was nonsignificant, $\beta = 0.03$, $p > .25$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were

entered. This model was significant, $R^2 = 0.24$, $F(5, 439) = 27.49$, $p < .001$. Self-efficacy for

teaching significantly related to higher outcome expectations above and beyond other

variables, $\beta = 0.27$, $p < .001$ and R^2 change $= 0.07$, $F(2, 439) = 20.32$, $p < .001$. Moreover,

self-efficacy for teaching accounted for 27% of the variance in outcome expectations. Parent

education was significant in this model, $\beta = 0.11$, $p < .001$, as was positive perceptions of

teaching, $\beta = 0.09$, $p < .05$. Female gender had a nonsignificant effect, $\beta = 0.03$, $p > .25$.

Table 24 summarizes all correlations of overall outcome expectations.

Table 24

Regression Summary for Overall Outcome Expectations (n = 494)

Variables	Model 1	Model 2	Model 3
		β	
Female Gender	0.02	0.03	0.00
Parent Education	0.17***	0.11*	0.11**
Positive School Experience	-	0.38***	0.26***
Perceptions of Teaching	-	-	0.09*
Self-Efficacy Teaching	-	-	0.27***
R^2	0.03	0.17	0.24
ΔR^2	0.03	0.14	0.07

Note. *$p < .05$, **$p < .01$, ***$p < .001$; all β represent standardized betas.

Hierarchical Regression for Students Classified as White with Outcome Expectations as the Dependent Variable

In Model 1, female gender and parent education were entered into the model. This overall model was significant, $R^2 = 0.13$, $F(3, 232) = 11.59$, $p < .001$; although, step 1 of the regression model was not significant, $R^2 = 0.02$, $F(2, 233) = 2.77$, $p > .25$. Also, the relation between female gender and outcome expectations was nonsignificant, $\beta = -0.01$, $p > .25$. Parent education had a significant correlation with outcome expectations, $\beta = 0.15$, $p < .05$.

In Model 2, positive school experiences was entered. Higher positive school experiences had a greater effect on outcome expectations than other control variables in this model, $\beta = 0.33$, $p < .001$ and R^2 change $= 0.11$, $F(1, 232) = 28.58$, $p < .001$. When positive school experiences was entered, it had a mediating effect on parent education, which was rendered nonsignificant, $\beta = 0.09$, $p > .05$. Further, the association with female gender was nonsignificant for White students on outcome expectations, $\beta = 0.02$, $p > .25$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were entered. This model was significant, $R^2 = 0.20$, $F(5, 230) = 11.33$, $p < .001$. Self-efficacy for teaching significantly related to higher outcome expectations above and beyond other variables in this model, $\beta = 0.28$, $p < 00$ and R^2 change $= 0.07$, $F(2, 230) = 9.65$, $p < .001$. Higher self-efficacy for teaching accounted for 28% of the variance in outcome expectations. Also, positive school experiences was significantly associated with higher outcome expectations, $\beta = 0.23$, $p < .001$. Other variables, female gender, parent education, and perceptions of teaching, had nonsignificant relationships with outcome expectations, $\beta = -0.02$, $p > .25$, $\beta = 0.10$, $p > .05$, and $\beta = 0.02$, $p > .25$, respectively. Table 25 summarizes regression statistics for White respondents on outcome expectations.

Table 25

Regression Summary for Outcome Expectations for White Respondents (n = 236)

Variables	Model 1	Model 2	Model 3
		β	
Female Gender	-0.01	0.02	-0.02
Parent Education	0.15*	0.09	0.10
Positive School Experience	-	0.33***	0.23***
Perceptions of Teaching	-	-	0.02
Self-Efficacy Teaching	-	-	0.28***
R^2	0.02	0.13	0.20
ΔR^2	0.02	0.11	0.07

Note. $*p < .05$, $**p < .01$, $***p < .001$; all β represent standardized betas.

Hierarchical Regression for Hispanic/Latino Students Using Outcome Expectations as the Dependent Variable

In Model 1, female gender and parent education were entered. The model was significant, $R^2 = 0.07$, $F(2, 122) = 4.75$, $p < .05$. Parent education was significant, $\beta = 0.26$, $p < .001$. Parent education accounted for 26% of the variance. The relation between female gender and outcome expectations was nonsignificant, $\beta = 0.08$, $p > .25$.

In Model 2, positive school experiences was added. This model was significant, $R^2 = 0.34$, $F(3, 121) = 20.78$, $p < .001$. The effect of positive school experiences on outcome expectations was significant, $\beta = 0.52$, $p < .001$ and R^2 change $= 0.27$, $F(1, 121) = 49.07$, $p < .001$. Also significant in this model was parent education, $\beta = 0.18$, $p < .05$. Female gender had a nonsignificant effect on outcome expectations, $\beta = 0.04$, $p > .25$.

In Model 3, self-efficacy for teaching and positive perceptions of teaching were entered. This model was significant, $R^2 = 0.43$, $F(5, 119) = 18.32$, $p < .001$. Positive school experiences significantly related to higher outcome expectations, $\beta = 0.39$, $p < 001$ and R^2 change = 0.10, $F(2, 119) = 10.01$, $p < .001$. Moreover, positive school experiences accounted for 39% of the variance in outcome expectations. Higher self-efficacy for teaching was significantly related to outcome expectations, $\beta = 0.32$ $p < .001$. The relation between parent education and outcome expectations was nonsignificant, $\beta = 0.13$, $p > .05$. Self-efficacy for teaching and perceptions of teaching mediated the effect of parent education, which was rendered nonsignificant, $\beta = 0.13$, $p > .05$. Table 26 summarizes regression statistics for Hispanic/Latino respondents on outcome expectations.

Table 26

Regression Summary for Outcome Expectations for Hispanic/Latino Respondents (n= 125)

Variables	Model 1	Model 2	Model 3
		β	
Female Gender	0.08	0.04	0.03
Parent Education	0.26***	0.18*	0.13
Positive School Experience	-	0.52***	0.39***
Perceptions of Teaching	-	-	0.10
Self-Efficacy Teaching	-	-	0.32***
R^2	0.07	0.34	0.43
ΔR^2	0.07	0.27	0.10

Note. *$p < .05$, **$p < .01$, ***$p < .001$; all β represent standardized betas.

CHAPTER V

DISCUSSION

The goal of my *Teens to Teachers* study was to identify differences between ethnic groups on (a) teaching interest, (b) self-efficacy for teaching, and (c) outcome expectations. I explored the relation between those factors, personal inputs, and contextual influences. The results of my study provided data on levels of teaching interest and factors that affect teaching interest and outcome expectations for ninth grade students. I discussed the results of this study and provided analysis on how my findings relate to the literature on the topics of minority teaching interest, self-efficacy, and outcome expectations. Additionally, I reviewed implications and limitations and provide recommendations for future research.

Contextualizing the Diversification of Teaching Ranks

The fundamental premise of this study was to address an ongoing problem in education—especially in Oregon—of diversifying teaching ranks. As Oregon has become more diverse over the last two decades, the teaching force has remained predominately White. In 2015, Whites represented 92% of the teaching population in Oregon, while ethnic minorities made up 40% of the overall population in Oregon. My literature review revealed little existing research on teaching interest amongst high school students. However, I found it imperative to consider teaching interest from an adolescent perspective, as research shows that high school is a time when important career decisions are made (Seligman, 1994). My research on this problem led me to consider how an appraisal of teaching interest amongst students of color could serve teacher recruitment efforts and help practitioners understand what influences teaching interest and career planning. My goal was to prompt secondary students to contemplate career choices with an emphasis on the teaching profession.

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The decision to survey ninth grade students was influenced by my hypothesis that students in early adolescence potentially have less negative biases toward teaching than older students who are more advanced in their development of career interests and more likely to have biases toward the teaching profession. (Boser, 2011; Ramirez, 2009). The results of the *Teens to Teachers* survey did not substantiate or refute this claim; rather, my study showed students surveyed in ninth grade had a variety of feelings—including strong feelings— toward the teaching profession. When students showed polarizing opinions on teaching interest, the results showed far more ninth-grade students to be *very disinterested* ($n = 143$) in teaching than *very interested* in teaching ($n = 19$). While strong attitudes towards teaching were evident, my results also indicated many students had positive attitudes toward teaching with 39% of students reporting some interest.

Though polarizing opinions on teaching interest appeared evident and skewed toward *very disinterested* in teaching, especially amongst ethnic minorities, I cannot conclude that my findings fully support theories from my literature review which predicted similar outcomes because I did not have statistically significant evidence. Overall, ethnic minorities were more likely to report disinterest than White respondents. The effect institutional socialization has on career interest could be a factor that affects teaching interest between ethnic minorities and White students. This claim is supported by Hackett and Byars (1996), who suggested socialization occurs at an early age and impacts career development in a polarizing manner. According to Hackett and Byars, contextual factors and learning experiences either enhance or diminish outcome expectations, self-efficacy, and interest toward careers. Again, my findings did not produce statistically significant results that support this theory as it relates to teaching interest. While a one-time snap shot of teaching

interest did not support this claim, a longitudinal study potentially could provide more thorough findings of differences in teaching interests by ethnic groups. Furthermore, collecting data at an early age could support longitudinal tracking of career interest.

Summary of between group differences for teaching interest, self-efficacy for teaching and outcome expectations. The ANOVA for my study (see Tables 10, 13, 16, and 19) showed no significant differences between groups of students on teaching interest, self-efficacy for teaching, or outcome expectations. The non-significant finding regarding differences on teaching interest was not anticipated, as I predicted findings would be consistent with Irizarry's (2007) study which posited White students are more likely to be interested in teaching than non-White student groups because of environmental factors of the predominately White institution that may cause negative feelings towards school for ethnic minority students. Perhaps the interaction of environmental and socio-cognitive factors were greater predictors of teaching interest, self-efficacy and outcome expectations than race and ethnicity. This may explain non-significant findings in the ANOVA. I found no literature supporting this explanation but recommend future research to better understand this.

The results of the ANOVA and pairwise comparisons were not significant (see Tables 11, 14, 17, and 20), therefore, the data would imply that other factors beyond race and ethnicity have a greater impact on teaching interest. If other environmental factors outside the scope of this study are affecting teaching interest, then those factors should be identified and taken into consideration when designing strategies to increase teacher diversity. Different research design, such as clinical trials and longitudinal studies could be conducted to assess teaching interest and the pursuit of teaching careers amongst minority elementary, middle, and high school students. Results from future studies may lead to strategies designed to

improve teaching interest and self-efficacy for teaching amongst ethnically diverse populations. Furthermore, a larger scale study could address the problem of low sample sizes for minority student participation. In my study, low sample sizes created a problem of power in my statistical analyses, likely exacerbating the impact of Type II error. As a result, I was unable to determine with confidence if between-group mean differences would be generalizable to populations with larger ethnic minority populations.

Ad hoc pairwise tests. Though pairwise comparison between groups of African American, Hispanic/Latino, multiple races, *other* races, and White respondents did not show significant mean differences, it was an important step that provided a detailed comparison between ethnic groups on teaching interest and self-efficacy. Furthermore, this process helped summarize between group comparisons for all ethnic groups rather than reducing group comparisons of ethnic subgroups to White participants only. Though findings were not statistically significant, the data showed that White students have higher teaching interest than other groups and that African American participants had the lowest teaching interest of all other groups. The pattern of these findings aligns with the current pattern of ethnic distribution in Oregon's teaching population. Additionally, these results encouraged me to consider the role teaching interest plays in relation to executing a plan to become a teacher. Other factors, such as attainment of a high school diploma, college graduation, and competing occupational opportunities, are areas that may also affect the pursuit of a teaching career for ethnic minorities. If ethnic minorities are graduating at a lower rate than White students and attending college at a lower rate, then they will be less likely to be eligible for teaching programs, even if they had the same level of teaching interested as White students (Vegas, Murnane, & Willett, 2001).

Regression model procedure and summary. The second part of my study was designed to assess the relations of multiple factors on teaching interest and outcome expectations for teaching in a hierarchical model. I conducted three regression analyses, one for all participants, a second for White only respondents, and a third for Hispanic/Latino only respondents. These models showed four noteworthy findings on teaching interest: (a) *self-efficacy for teaching* was a significant predictor above and beyond other significant variables, such as *perceptions of teaching* and *positive school experience*; (b) contextual factors that affected teaching interest for Hispanic/Latino students differ for White students; (c) outcome expectations were a nonsignificant predictor for teaching interest for all groups; and (d) the regression analysis produced an unexpected negative correlation between *parental education* and *teaching interest* for Hispanic/Latino participants.

Regression Model for All with Teaching Interest as the Dependent Variable

The regression model for all students (see Table 21) showed all but two factors—*parent education* and *outcome expectations*—had a statistically significant relation for the overall model. These results were the same for the regression analysis for White students (see Table 22). Yet, *parent education* was a significant factor for Hispanic/Latino students. The differing outcomes *parent education* had between White and Hispanic/Latino students led me to question why parental supports did not significantly influence career interest for White students but did have a significant effect for Hispanic/Latino students. One possible reason for this is the significance positive school environment had for White respondents. For White respondents, positive school experiences rendered *parent education* non-significant. At the same time, minority students may not have the same positive experiences in the school environment, so they relied more on parental support for input on career interest.

Though some factors on teaching interest differed from one model to another, *self-efficacy for teaching* consistently had a related more with teaching interest compared to other factors in all models. In some models, *self-efficacy for teaching* acted as a potential mediator to other factors the models. For instance, the introduction of *self-efficacy for teaching* in the third step of the regression model rendered the relationship between *positive school experiences* and *teaching interest* non-significant among Hispanic/Latino respondents.

Regression Model on Teaching Interest for White Students

When conducting a regression model for White students only, results showed *self-efficacy for teaching* had the highest correlation with teaching interest, but other significant predictors included *positive school experiences* and *female gender*. *Outcome expectations*, *parent education*, and *perceptions of teaching* were nonsignificant in this model. The nonsignificant results of *outcome expectations* for White students was an indication that other factors have greater impacts on the career interest of this population. Importantly, background contextual affordance and distal background contextual factors may have played a role in the shaping of career of self-efficacy and outcome expectations (Ali et al., 2005). Many other background contextual affordances, such as financial support and limited financial and social barriers could lead to increased self-efficacy and teaching interest, but not necessarily correlate with higher outcome expectations.

Regression Model on Teaching Interest for Hispanic/Latino Students

When analyzing the regression data for the Hispanic/Latino population only, results showed *self-efficacy for teaching* and *parent education* to be the only statistically significant factors and other factors were nonsignificant. Interestingly, when *self-efficacy for teaching* was entered into the model, it acted as a mediator to *positive school experiences* (see Table

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23). The impact of self-efficacy and parent education on teaching interest align with Gushue and Whitson's (2006) findings that parental supports have a significant effect on career decision self-efficacy. The mediation on *positive school experiences* when *perceptions of teaching* and *self-efficacy for teaching* were introduced was unexpected, as I hypothesized that *positive school experiences* would have a positive relationship with teaching interest. Though Gushue and Whitson also found positive teacher support to have a significant relationship with career decision self-efficacy, *Teens to Teachers* would suggest that home influences such as parental educations had a mediating effect on school experience. My findings on the relation between the Hispanic/Latino population reported self-efficacy and teaching interest give rise to the importance of understanding the impact of self-efficacy on career interest and outcome expectations (Gushue & Whitson 2006).

Outcome expectations on teaching interest. I designed my logic model using the SCCT framework, which identified outcome expectations as a key indicator for career planning and career interest. Outcome expectations were a nonsignificant predictor of teaching interest when inserted into the whole group regression model. These findings were unexpected, as the SCCT framework illustrated a direct path to *outcome expectations* and *interests* and indicated that one variable should have impacted the other. (Lent et al., 1994). I designed my logic model, using the principles of the SCCT framework, with the notion that high outcome expectations would have higher positive correlation with teaching interest, but this was not the case.

The limited relationship of *outcome expectations* as a predictor of teaching interest was not anticipated and did not align with the frameworks cited in my literature review. For instance, Morrow, Gore, and Campbell (1996) indicated that outcome expectations may be a

more powerful predictor of vocational behavior than self-efficacy for marginalized groups. This finding was also supported by Ali et al. (2005). My findings on outcome expectations led me to question where teaching falls in the spectrum of occupations for those with lower outcome expectations and higher outcome expectations. For instance, those with lower outcome expectations might have expressed an interest in lower skilled service occupations to meet their living needs, while those with higher outcome expectations may have aspired to more prestigious and high paying occupations that required years of training. Teaching may fall somewhere between lower skilled occupations and high paying high skilled jobs. If this is the case, this hypothesis would explain why the non-significant relationships between outcome expectations and teaching interest exist.

Outcome expectations as the dependent variable. I conducted a hierarchical regression model with outcome expectations as the dependent variable. I compared the differences of relationships between ethnic groups for this model and observed several similarities from one ethnic subgroup to another. *Positive school experiences* had the highest beta coefficient with all outcome expectation models. *Self-efficacy for teaching* was a significant predictor of *outcome expectation*, although it was not as high of a predictor of teaching interest as *positive school experiences*. The findings from my regression analysis with outcome expectations as the dependent variable supported ideas presented in the SCCT framework that suggested the effects of self-efficacy and environmental experiences had a significant effect on outcome expectations. (Gushue & Whitson, 2006)

Within group Hispanic/Latino differences. *Parent education* was the only significant variable that had a negative correlation with teaching experiences. For Hispanic/Latino students, parent education was a predictive factor on teaching interest and

stood out as a key difference between Hispanic/Latino students and White students. Among Hispanic/Latino participants, there was a negative relationship between higher *parent education* and higher interest in teaching. Thus, Hispanic/Latino students whose parents who achieved higher education reported lower interest in teaching. These findings were reflected in Gushue and Whitson's (2006) study which found parental support (i.e., parent education) to be positively related to career decisions on self-efficacy. Teacher support was also found to be positively related to career decision self-efficacy and career outcome expectations (Gushue & Whitson, 2006). Although my study did not specifically examine the relation between race and self-efficacy as found in Gushue and Whitson's study, examining Hispanic/Latino within group differences would provide greater insight on how racial identity is not absolutely tied to contextual factors.

The diverse backgrounds of the Hispanic/Latino subgroup as a collective with assorted values may explain the variance of Hispanic/Latino teaching interest when parent education factors into the model. Irizarry and Donaldson (2012) expressed concerns regarding the oversimplification of the *Latino* group in the United States and that Latinos have several within group cultural differences yet have been historically regarded as an ethnic group with homogenous values. Furthermore, treating Hispanic/Latinos as a homogenous group does not account for the vast cultural differences that exist as well as influences from regional origins, cultural, and socio-economic backgrounds (Irizarry & Donaldson, 2012). The divergent results amongst the Hispanic/Latino participants in my study reinforce the opinions shared by Irizarry and Donaldson.

One possible explanation for the negative relationship between teaching interest and parent education for Hispanic/Latino students could be variance in background affordances

that are associated with households where parents have higher education. It could be that students from homes with lower education achievements view teaching as an attainable and suitable profession, while respondents who come from educated homes view teaching as an undesirable profession, given their own family's level of education. Parent influence for highly educated Hispanic/Latino students mediated school influences and encouraged career decisions to go beyond the teaching profession. One explanation for this may be connected to the lack of prestige associated with the teaching profession. A Brown University (2004) report on minority teaching interest linked prestige with earning potential. Teaching, which has a reputation for having a low paying salary, may rank lower in career interest amongst minority students when compared to other professions in the field of medicine, law, and business. Ethnic minority parents that have a high level of education may have already encouraged their child to focus on a high paying profession based on prestige.

Between Group Differences for Hispanic/Latino and White Respondents

Positive school experiences. *Positive school experiences* had a significant effect on White students' teaching interest and accounted for 23% of the variance for White students. Interestingly, *positive school experiences* were not significantly related to teaching interest for the Hispanic/Latino participants. Moreover, *positive school experiences*—which had a significant relationship on the first model—was mediated when *self-efficacy for teaching* was inserted to the model. For my study, personal inputs such as *parent education* and *gender* consistently had significant effects on teaching interest for subgroups above and beyond other variables. From this standpoint, distal contextual factors were greater indicators of teaching interest than factors that are affected by the school environment.

Between group differences on self-efficacy for teaching. *Self-efficacy for teaching* related higher for Hispanic/Latino than White students on the path between *positive school experiences* and *teaching interest* and *outcome expectations*. These differences in relationships were consistent with research that showed self-efficacy had a greater impact on minorities than it did for Whites (Chemers et al., 2011; Minter & Pritzker, 2015). My findings supported the notion that differences between White and ethnic minority groups are shaped at an early age by their environmental experiences. In our school system, White students are reflected in the dominant culture, so other factors, such as positive school experiences, influence their teaching interest. Oppositely, for ethnic minorities are not represented in the school environment and factors such as self-efficacy may be a greater indicator for teaching interest. Results from my study did not substantiate nor refute the influences of self-efficacy on teaching interest, but results from my study do support ideas presented by Ali et al. (2005) on the importance of self-efficacy and outcome expectations, as all groups with higher self-efficacy for teaching had a significant relationship with higher outcome expectations.

Regression Model for Outcome Expectations for Hispanic/Latino and White Students

Regression results for both White and Hispanic/Latino students indicated that *positive school experience* and *self-efficacy for teaching* had significant relationships with outcome expectations. *Female gender*, *parent education*, and that *positive perceptions of teaching* had nonsignificant correlations with *outcome expectations*. These results indicated that learning experiences and self-efficacy had a higher effect than distal environmental influences for White students. Interestingly proximal factors, such as learning environment, provided enough environmental influences to render distal influences nonsignificant.

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Interestingly, the range in effect of school experiences between Hispanic/Latino and White students was quite different. Specifically, positive *school experiences* accounted for 39% of the variance in outcome expectations for Hispanic/Latino students, compared to the 23% of variance *school experiences* factored into the outcome expectations for White students. I observed similar differences between White and Hispanic/Latino respondents for *self-efficacy for teaching* and on *outcome expectations*. For this analysis, the difference in effect was less dramatic, with self-efficacy representing 32% for Hispanic/Latino respondents and 28% for White respondents. This prompted a question about the differences of school experiences between White students and Hispanic/Latino students. Though a test was not conducted to check for differences in school experiences, it appeared as if positive school experiences had a greater effect on Hispanic/Latino students on *outcome expectations,* yet the frequency of positive school experiences was probably higher for White students in predominately White institutions.

In this case, proximal supports appear to relate more to outcome expectation than personal inputs. Lent et al. (1994) explained that proximal environmental influences, such as career role models (i.e., teachers), had an impact on career decisions especially when encouragement or discouragement was present in these experiences. Given that both *Teens to Teachers* survey locations were primarily White institutions, I question if the abundance of exposure to White role models provided White respondents with more opportunities for deeper connections with adults who have shared cultural experiences. If this is the case, the environmental influence on White students in a predominately White institution may have acted as a mediator on personal inputs such as *parent education* or female gender.

SCCT Framework

The SCCT framework (Bandura, 1986; Lent et al., 1994) hypothesized that outcome expectations are related to personal inputs and environmental factors, as those factors interact with experiences, self-efficacy, and personal interests. For the *Teens to Teachers* study, the SCCT was a useful framework and provided an organized theoretical construct to support the identification of significant incises and eliminate inclusive assumptions. There were several components of the SCCT that supported anticipated findings in my study. For instance, the SCCT emphasized the importance of personal inputs like *parent education* on career interests like teaching. The application of the SCCT was especially important in the development of my research questions and logic model for pairwise comparisons as I could address the problem of teaching interest using a more sophisticated approach that analyzed the interaction of several environmental factors on a deeper level.

The tenets from the SCCT framework helped predict relationships that affected teaching interest, but there was some divergence from the SCCT indicators in the logic model illustrated in Figure 2. One important example was the nonsignificant relationship between outcome expectations and teaching interest. As stated earlier, literature from Ali et al. (2005) and Byars and Hackett (1996) contended that outcome expectations related to career interest. For my study, I hypothesized that higher self-efficacy for teaching and outcome expectations would relate to higher teaching interest. Additionally, Morrow et al. (1996) theorized that outcome expectations would have a greater relationship with ethnic subgroups, but my findings suggested *outcome expectations* had no statistically significant relationships with teaching interest for Hispanic/Latino and White respondents. These results indicated that different factors affect both Hispanic/Latino and White populations. For

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Hispanic/Latino participants, *parent education* related more to teaching interest than *outcome expectations*, whereas *positive school experiences* had a higher beta coefficient than *outcome expectations* for White participants. It is difficult to speculate on the source of disconnection between outcome expectations and teaching interest for both groups with my given information. These finding on relationships to teaching interest and outcome expectations amongst Whites and Hispanic/Latinos reinforced the notion presented by Gushue and Whitson (2006) and Lent, Brown, and Hackett (2000) that both environmental conditions and contextual affordances acted as either supports or barriers on outcome expectations, self-efficacy, and career interest, and suggested that there was a presence of support networks for minority students who had high levels of self-efficacy for teaching interest.

Overall, there were multiple factors specific to the SCCT, such as personal inputs (*gender*, *ethnicity*), background affordances (*self-efficacy for teaching*), and learning experiences (*positive perceptions of teaching* and *positive school experiences*), which illuminated relationships that vary from one ethnic group to another. The hierarchical regression helped convey the variance of relationships that environmental factors and socio-cognitive factors have on teaching interest for different ethnic groups, my findings contributed to a better overall understanding of teaching interest.

Comparison of Teaching Interest to Previous Studies

Comparison of Ramirez's (2009) study. I compared my results on teaching interest to Ramirez' (2009) study to examine similarities and differences in our studies of adolescent teaching interest. I found that students in my study showed more interest in teaching than those in the Ramirez' study. More specifically, Ramirez' study on teaching interest—which was conducted at two Southern California high schools—indicated higher disinterest in

teaching, with 81% and 79% of respondents of the two sites expressing disinterest in teaching. *Teens to Teachers* showed 60% of students to be disinterested in teaching with 28.9% reporting being *very disinterested* in teaching. Table 27 shows frequency counts of student teaching interests for my study compared to the Ramirez study.

Table 27

Comparison of Teacher Interest, from 2017 Teens to Teachers Study to 2009 Ramirez Study

Scale	Frequency % Teens to Teachers	Frequency % Ramirez Site 1	Frequency % Ramirez Site 2
Very interested	19 (3.8%)	18 (8%)	1 (2%)
Somewhat interested	174 (35.2%)	27 (11%)	12 (19%)
Somewhat disinterested	157 (31.8%)	94 (39%)	25 (40%)
Very disinterested	143 (28.9%)	99 (42%)	24 (39%)
Totals	494 (100%)	238 (100%)	62 (100%)

Quantitative measure versus mixed methods. Though my study provided data on between group differences in teaching interest, my results did not afford an explanation for why one may or may not be interested in teaching. More could be ascertained about factors that affect teaching interest by incorporating mixed methods. For instance, Ramirez (2009) found that high school students were not interested in teaching because they were deterred by the daily burdens of the job, salary, and the apparent overall boringness of the career. In another study, Irizarry and Donaldson (2012) explained that some Hispanic/Latino participants were interested in the teaching profession to change the status quo and a sense of obligation to improve educational conditions for Hispanic/Latino students in the public education system. Understanding influences of teaching interest could be better supported by taking a mixed method approach to learn more about why students are interested or

disinterested in the profession. A qualitative study may have revealed factors that were not explored in the *Teens to Teachers* survey. For example, personal qualities related to patience, desired pay, and pleasure may be important factors on teaching interest. All were factors that were mentioned in Ramirez's study yet not explored in *Teens to Teachers*.

Limitations

  Instrument design and administration. The *Teens for Teachers* instrument incorporated items from two existing measures. One measure was on teaching interest and the other was on outcome expectations. Only one of these instruments—the outcome expectations measure—tested for validity and reliability. *Teens to Teachers* was tested by a small cohort of five to ensure that the survey functioned properly on the web platform but was not evaluated for reliability or validity. The lack of psychometric backing for my survey created internal, external, and statistical conclusion validity limitations. Consequently, results must be interpreted cautiously.

  A few participants expressed confusion with the multiple-choice items. For instance, several students asked for clarification on the item about language, namely, "what language do you speak at home?" In one instance, a student verbally communicated they spoke Spanish to their parents and English to their siblings. I encouraged the student to select the choice that best represented them. This student then selected English. This problem could have been resolved by providing a *bilingual* option for students who speak multiple languages at home. Instead, many students who come from homes where English may not be the native language may have made a response that does not accurately capture the diversity of language spoken and used in the household.

Teens to Teachers' quantitative design allowed a measurement of differences between groups but did not give the respondent an opportunity to provide rationale for their responses. While the study assisted with measuring the differences in teaching aspirations between subgroups, the constraints of the Likert model prevented deeper analysis of why minority students expressed a low interest in teaching. An instrument with a mixed method design, including open-ended items, would have provided a qualitative platform for subjects to share their experiences, and perhaps would have result in deeper understanding of how personal experiences influenced career aspirations.

Finally, my instrument incorporated items that checked for perceived social supports or barriers, such as income, mobility, and teacher support. However, these barriers appear to have not given significant rise to higher or lower interest in teaching, self-efficacy for teaching, or outcome expectations. The lack of statistically significant findings for perceived social supports as they relate to teaching interest, self-efficacy for teaching and outcome expectations led me to question if there were other variables that better suited the framework that were statistically modeled in this study.

Sample size. There were limitations to sample size for several ethnic groups. My study only had enough participants from two ethnic sub groups – White and Hispanic/Latino – to conduct a regression analysis. There were only 18 African American participants and less than 20 participants from all other minority groups (see Table 3). This presented a problem of power when running the stepwise regression analysis.

Political climate. The political climate at the time of the study placed a substantial

degree of scrutiny for many students from migrant households and students of

Hispanic/Latino and Middle Eastern descent. To this end, respondents may have been

reluctant to genuinely respond to questions about demographics that could pose as a self-

perceived threat to their family's wellbeing or give the impression that they are impacted by

their social disposition or current social conditions.

Setting. Although instructions were read aloud to students and the protocol

emphasized, the importance of the study being unclear and the fact that participation was

voluntary and anonymous might have contributed to external validity threats. I observed

several students carrying on side conversations, making comments about the survey, and

toggling back and forth between taking the survey and engaging in alternate activities (e.g.,

doing homework, playing on electronic devices, and signing registration forms). These

observed distracted behaviors led me to question (a) how carefully students were reading and

interpreting the questions, (b) if students were being sufficiently reflective in their responses,

and (c) if the students were truly feeling that they could respond honestly to questions that

might be perceived as highlighting personal vulnerabilities.

Implications for Diverse Teacher Recruitment

This study was conducted with the purpose of learning more about factors that

influence teaching interest and outcome expectations as they relate to the teaching

profession. If filling vacant teaching positions is dependent on teaching interest, then the

state of Oregon may have a difficult time of meeting the minority teaching demands by

recruiting within the state as my findings supported literature by Hanushek and Pace (1995)

that suggested teaching aspirations did not correlate with professional attainment of a

teaching position. Hanushek and Pace's longitudinal study showed that only 8% of African American high school students ($n = 66$) who expressed interest in a teaching career went on to become teachers, and 10% of Hispanic/Latino high school students ($n = 83$) who aspired to become teachers went on to become teachers. Therefore, teaching recruitment efforts must focus on the removal of institutional barriers in conjunction with improving teaching interest amongst students in the ethnic minority to change the trajectory of the slow growth of the minority teacher population in Oregon.

Future Research

Expand participant age groups. The *Teens to Teachers* study provided quantitative data about how teaching aspirations interact with social cognitive factors and environment. For future research, I recommend expanding the age range of the respondents to determine if teaching aspirations, as well as the interaction of teaching aspiration and social cognitive factors, vary from one age group to another. In a study that focused on a specific age group (ninth graders), I would expand the current age range from ninth grade only to fourth grade through college undergraduates. This approach could help researchers understand to what extent age influences teaching aspirations and help determine at what point students are most and least interested in teaching.

Qualitative measure. As stated earlier, a qualitative study that utilized the SCCT framework could provide more detailed information as to why students are not interested in the teaching profession. For example, students could discuss why they were not interested in returning to their local school district to teach. Through this process, respondents may convey significant factors that are not taken into consideration in the SCCT framework as a reason for their disinterest in the teaching profession.

Between profession comparison. I recommend a similar study with participants from the teaching profession and participants from non-teaching professions. More specifically, I would recommend administering a study about professions from the health care, technology, and financial sectors to compare student interest, social cognitive factors, outcome expectations, and differences between White and non-White respondents to the results of the same factors that were measured in the *Teens to Teachers* survey towards multiple career choices. For example, administering a study with similar items to examine if ninth grade students truly have low interest in teaching, or if their current interest levels are parallel to other professions.

Within group study. The *Teens to Teachers* study showed within group differences for the Hispanic/Latino population. Ethnic minorities such as African American, Hispanic/Latino, Native American, etc. are grouped in an oversimplified manner that suggested limited variance in cultural values between groups. The Brown University (2004) study on minority teacher recruitment supported this argument by explaining within group differences on migration status, acculturation, and tribal affiliation and how they can lead to divergent values within groups. These factors should be explored and taken into consideration. My study showed evidence of within groups differences on teaching interest for Hispanic/Latino respondents when parent education entered the logic model. A within group study on teaching interest for more ethnic minority groups could convey deeper understanding of relationships between contextual factors and teaching interest, self-efficacy for teaching, and outcome expectations. A study with this focus could help to distinguish how contextual factors affect ethnic minority students from different cross sections, perhaps

providing an explanation for why, in this study, Hispanic/Latino students with higher parent education levels had a negative relationship with teaching interest and more.

State. Policy makers and the Oregon Department of Education should consider initiatives at the state level that address self-efficacy and outcome expectations among minority students by promoting culturally inclusive environments in the K-12 system. The *Teens to Teachers* study showed positive school environment related to teaching interest for White students more than it did for Latino students. One reason for this could be that implicit bias in the classroom relates to the development of self-efficacy and outcome expectation among Latino students. Policy makers should consider professional development initiatives that address how school practices impact positive school experience that may relate to self-efficacy and outcome expectations. The state currently has initiatives that invest in research on the diversification of the teaching workforce. States should invest in the expansion of equity related research by exploring the relationships of positive school experiences and minority teaching self-efficacy and outcome expectations. Results from this study could inform strategies for improved equitable practices on a state and local level.

District. School districts are positioned to allocate resources toward professional development and programming that supports positive school experiences and the development of teaching self-efficacy among minority students. School districts can strategically invest resources to support culturally responsive practices that relate to positive school experiences for minority students. Districts may also use data from schools to measure how school experiences and self-efficacy relate to student outcomes. Districts may use this data for decision making on interventions and programs related to supporting minority students and promoting a culturally inclusive school environment.

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School. Findings from my study indicate significant relations exists between students with a high self-efficacy for teaching and teaching interest. School district should focus on improving self-efficacy for teaching by investing in teacher pathway programs that promote the teaching profession to middle and high school level students. The implementation of programs such as the *Teacher Cadet* program can give high school level students the experiences and exposure to teaching programs that could improve self-efficacy for teaching and perceptions of the teaching profession for minority students.

Conclusion

The purpose of my research was to learn more about adolescent teaching interest and how the interactions of personal inputs and environmental factors affect teaching interest. The use of a logic model supported the identification of factors that influenced minority teaching interest such as, *parent education*, *positive school experiences*, and *self-efficacy for teaching*. Though my study did not show differences between ethnic minorities and White students as anticipated, the study did reveal that personal inputs were, at times, greater indicators of teaching interest for ethnic minority respondents than school experiences. From this, I inferred non-school experiences of those with a variety of personal inputs (i.e., race/ethnicity, gender, parent education) have a greater effect on teaching interest for minority students than the school environment. Conversely, school environment had a greater effect on teaching interest for White students than personal inputs. To this end, developing culturally inclusive practices for all students may change the impact of school environment on teaching interest, self-efficacy for teaching and outcome expectations.

Results from the *Teens to Teachers* study give rise to deeper questions on the effects of factors such as *self-efficacy for teaching* and *positive school experiences* as they relate to

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outcome expectations and teaching interest. A focused examination on how these factors influence different ethnic groups could provide clarity on the between group and within group differences found in the *Teens to Teachers* study as they pertain to teaching interest and career planning. Outcomes from these measures could support school improvement initiatives that support the learning experiences for all students and improve teaching interest amongst more diverse student groups.

My study did not fully answer my inquiry of the implications of adolescent attitudes toward teaching. This is partially due to the inconclusive nature of my findings on between group differences of teaching interest. Secondly, the one-time administration of the *Teens to Teachers* survey did not illustrate how attitudes toward teaching evolve over time and how this influences the pursuit of a career in teaching. A longitudinal study with large sample size of Oregon students beginning in early adolescence could resolve existing questions about minority teaching interests as it relates to minority teaching recruitment and retention. Furthermore, conducting a mixed-method measure that prompts respondents to provide rationale for responses may provide greater insight on why some factors influence teaching interest and others do not.

Prior to administering the survey, I operated under the assumption that teaching interest was positively associated with the planning of execution of completing a teaching licensure program. Yet the literature in this chapter suggested going beyond teaching interest to understand the shortage of minority teachers in Oregon. Other factors, such as attrition, career prestige, and salary may have played a role in the problem of growing the minority teaching population in Oregon. Brown University (2004) expanded on this idea, explaining that "the interest expressed by minority students in social professions such as teaching

indicates that recruiting minority students is not just a matter of augmenting general interest in the profession. Rather, the challenge lies in preparing a wider pool of well-prepared minority students who can then be recruited into a long-term career in teaching" (p. 27).

Understanding adolescent attitudes toward the teaching profession provided valuable insight on why the minority teaching population is low. Importantly, within the 3.8% ($n = 19$) of students expressing a high interest in teaching, only 1.2% ($n = 6$) of those respondents identified as minority students. Therefore, it is difficult to dispute how low overall interest affect minority teacher recruitment and retention. Those invested in growing minority teacher population through recruitment and retention should contemplate the implication of factors—like those explored in this study—and consider strategic approaches to counter factors that deter minorities from pursuing a career in teaching. The charge to increase the number of minority teaching professionals is a challenge that can be better understood by an expansion of research on the topic and a broadening of horizons for a deeper understanding of this issue. Continued research is necessary to discern the causes and factors that affect low minority teacher interest to support initiatives that promote successful attainment of a diverse teaching workforce.

APPENDIX

SURVEY MEASURE

Teens to Teachers 2017

Q0 The following survey is about student attitudes toward the teaching profession. Your

participation is anonymous and voluntary. You may skip any question if it makes you

uncomfortable or you wish to not answer it.

❍ I understand and wish to proceed (1)
❍ I understand and do not want to participate (2)

Condition: I understand and wish to pr... Is Selected. Skip To: Given the right preparation I could e....Condition: I understand and do not wan... Is Selected. Skip To: End of Survey.

Q1 Given the right preparation I could effectively teach at the elementary school level.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q2 Given the right preparation I could effectively teach at the middle or high school level.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q3a Given the right preparation I could be an effective English teacher.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q3b Given the right preparation I could be an effective Math teacher.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q4 Given the right preparation I could be an effective Science teacher.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q5 Given the right preparation I could be an effective Social Studies teacher.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q6 Given the right preparation I could be an effective Special Education teacher.

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q7 Given the right preparation I could be an effective World Languages teacher. (i.e.,

Spanish, French, Mandarin)

❍ could not do at all (1)
❍ not sure I could do (2)
❍ pretty sure I can do (3)
❍ certain I could do (4)

Q8a How interested are you in possibly becoming a teacher?

○ very disinterested (1)
○ somewhat disinterested (2)
○ somewhat interested (3)
○ very interested (4)

Condition: very disinterested Is Selected. Skip To: If you did become a teacher, how inte....

Q8b What level interests you (Mark all that apply)?

○ elementary school (1)
○ middle school (2)
○ high school (3)
○ college level (4)

Q9 If you did become a teacher, how interested would you be in coming back to your school

district to work?

○ very disinterested (1)
○ somewhat disinterested (2)
○ somewhat interested (3)
○ very interested (4)

Q10 It's important for me to find a job in the area where I currently live.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q11 Other peoples' opinions about my future life (parents, siblings, peers) play a big role in

my career goals.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q12 Most of my classes are interesting.

○ not true at all (1)
○ not really true (2)
○ somewhat true (3)
○ very true (4)

Q13 I feel successful in school this year.

○ not true at all (1)
○ not really true (2)
○ somewhat true (3)
○ very true (4)

Q14 I am involved in athletics or extra-curricular clubs.

○ not true at all (1)
○ not really true (2)
○ somewhat true (3)
○ very true (4)

Q15 My teachers provide me with verbal and/or written encouragement.

○ not true at all (1)
○ not really true (2)
○ somewhat true (3)
○ very true (4)

Q16 My teachers are patient with me if I am struggling in their class.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q17 I have teachers with shared racial backgrounds as me.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q18 I have an adult at school I can go to for school support.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q19 My teachers generally have classroom behaviors under control.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q20 My teachers are respected by students.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q21 My teachers seem happy with their job.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q22 My teachers make teaching look easy.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q23 My parents expect me to go to college.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q24 My parents expect me to get a job directly after high school.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q25 My parents have not discussed college/career plans with me.

- ○ not true at all (1)
- ○ not really true (2)
- ○ somewhat true (3)
- ○ very true (4)

Q26 My parents regularly check in with me about homework.

- ❍ not true at all (1)
- ❍ not really true (2)
- ❍ somewhat true (3)
- ❍ very true (4)

Q27 My parents tell me that my home responsibilities are a priority over school work.

- ❍ not true at all (1)
- ❍ not really true (2)
- ❍ somewhat true (3)
- ❍ very true (4)

Q28 I can ask my parents for help if I have a problem with school work or teachers.

- ❍ not true at all (1)
- ❍ not really true (2)
- ❍ somewhat true (3)
- ❍ very true (4)

Q29 My career planning will lead to a satisfying career for me.

- ❍ strongly disagree (1)
- ❍ disagree (2)
- ❍ agree (3)
- ❍ strongly agree (4)

Q30 I will be successful in my chosen career/occupation.

- ❍ strongly disagree (1)
- ❍ disagree (2)
- ❍ agree (3)
- ❍ strongly agree (4)

Q31 The future looks bright for me.

- ⭕ strongly disagree (1)
- ⭕ disagree (2)
- ⭕ agree (3)
- ⭕ strongly agree (4)

Q32 My talents and skills will be used in my career/occupation.

- ⭕ strongly disagree (1)
- ⭕ disagree (2)
- ⭕ agree (3)
- ⭕ strongly agree (4)

Q33 I have control over my career decisions.

- ⭕ strongly disagree (1)
- ⭕ disagree (2)
- ⭕ agree (3)
- ⭕ strongly agree (4)

Q34 I can make my future a happy one.

- ⭕ strongly disagree (1)
- ⭕ disagree (2)
- ⭕ agree (3)
- ⭕ strongly agree (4)

Q35 I will get the job I want in my chosen career.

- ⭕ strongly disagree (1)
- ⭕ disagree (2)
- ⭕ agree (3)
- ⭕ strongly agree (4)

Q36 My career/occupation choice will provide the income I need.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q37 I will have a career/occupation that is respected in society.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q38 I will achieve my career/occupation goal.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q39 My family will approve of my career/occupation choice.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q40 My career/occupation choice will allow me to have the lifestyle I that I want.

○ strongly disagree (1)
○ disagree (2)
○ agree (3)
○ strongly agree (4)

Q41 What is your gender?

○ female (1)
○ male (2)
○ gender fluid (3)

Q42 What is your race (select one or more responses)?

○ White (1)
○ Hispanic, Latino, or Spanish Origin (2)
○ Black or African American (3)
○ Asian (4)
○ American Indian or Alaska Native (5)
○ Indigenous from Mexico, Central America or South America (6)
○ Middle Eastern or North African (7)
○ Native Hawaiian or Pacific Islander (8)
○ Other (9)

Q43 What language do you speak at home?

○ English (1)
○ Spanish (2)
○ Indigenous language(s) (e.g., Mixtec, Zapotec, Purépecha, Tarasco, etc.) (3)
○ Other [Indicate language]: (4)

Q44 How many times have you moved in the last five years?

○ None (1)
○ Once (2)
○ Twice (3)
○ More than twice (4)

Q45 Which of the following statements best describes your family's financial situation?

○ We do not have enough money (1)
○ We have enough money to get by (2)
○ We only have to worry about money for fun extras (3)
○ We don't worry about money (4)

Q46 My parent/guardian has this much education (think of your guardian with the most

education):

❍ Some high school (1)
❍ High School diploma (2)
❍ Some college (3)
❍ Earned two-year associates degree (4)
❍ Earned a bachelor degree from a four-year university (5)
❍ Earned a master or doctoral degree (6)

Q47a I experienced unfair treatment from my teachers because of my race or skin color.

❍ Yes (1)
❍ No (2)

Condition: No Is Selected. Skip To: I experienced unfair treatment from m....

Q47b How stressful was this experience?

❍ not at all stressful (1)
❍ a little stressful (2)
❍ very stressful (3)
❍ extremely stressful (4)

Q48a I experienced unfair treatment from my peers because of my race or skin color.

❍ Yes (1)
❍ No (2)

Condition: No Is Selected. Skip To: I have been called racist names.

Q48b How stressful was this experience?

❍ not at all stressful (1)
❍ a little stressful (2)
❍ very stressful (3)
❍ extremely stressful (4)

Q49a I have been called racist names.

❍ Yes (1)
❍ No (2)
Condition: No Is Selected. Skip To: I have been angry about racist statem....

Q49b How stressful was this experience?

❍ not at all stressful (1)
❍ a little stressful (2)
❍ very stressful (3)
❍ extremely stressful (4)

Q50a I have been angry about racist statements made to me about my race or skin color.

❍ Yes (1)
❍ No (2)
Condition: No Is Selected. Skip To: I have felt ignored because of my race. .

Q50b How stressful was this experience?

❍ not at all stressful (1)
❍ a little stressful (2)
❍ very stressful (3)
❍ extremely stressful (4)

Q51a I have felt ignored because of my race.

❍ Yes (1)
❍ No (2)
Condition: No Is Selected. Skip To: Because racism at school it has been ....

Q51b How stressful was this experience?

- ○ not at all stressful (1)
- ○ a little stressful (2)
- ○ very stressful (3)
- ○ extremely stressful (4)

Q52a Racism makes school challenging for me.

- ○ Yes (1)
- ○ No (2)

Condition: No Is Selected. Skip To: End of Block.

Q52b How stressful was this experience?

- ○ not at all stressful (1)
- ○ a little stressful (2)
- ○ very stressful (3)
- ○ extremely stressful (4)

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