

Exploring the Relationship between Critical Consciousness  
and Intent to Persist in Immigrant Latina/o College Students

by

German Andres Cadenas

A Dissertation Presented in Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Philosophy

Approved May 2016 by the  
Graduate Supervisory Committee:

Bianca L. Bernstein, Chair  
Terence Tracey  
Lisa B. Spanierman

ARIZONA STATE UNIVERSITY

August 2017

## ABSTRACT

The purpose of this investigation was to develop a testable integrative social cognitive model of critical consciousness (Freire, 1973) that explains the relationship between critical consciousness and intent to persist in college among underserved students, such as undocumented immigrants known as DREAMers. Three constructs based on theory (i.e., critical reflection, critical action, and political efficacy) as well as a new one (i.e., political outcome expectations) were conceptualized and tested through a framework inspired by Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994; Lent & Brown, 2013). A total of 638 college students participated in this study and reflected a spectrum of disadvantage and educational attainment, which included 120 DREAMers, 124 Latina/o students, 117 non-Latina/o minorities, and 277 non-Latina/o Whites. Goodness of fit tests showed support for the adequacy of using the new model with this diverse sample of students. Tests of structural invariance indicated that 10 relational paths in the model were invariant across student cultural groups, while 7 paths were differentiated. Most of the differences involved DREAMers and non-Latina/o White students. For DREAMers, critical action was positively related to intent to persist, while that relationship was negative for non-Latina/o Whites with legal status. Findings provide support to the structure of critical consciousness across cultural groups, highlight the key role that students' supporters (i.e., important people in their life) play in their sociopolitical engagement and intent to persist, and suggest that political outcome expectations are related to higher persistence intention across all students.

## DEDICATION

I dedicate this dissertation project to the community of immigrants everywhere, for following the human nature to explore, for believing in a better future, and for the resilience they build through the struggle. It is immigrants who brought human kind to spread globally, giving birth to the riches of cultures and diversity.

I thank my parents, Yadira and German Enrique, for the sacrifices they made to give me the chance to dream; my grandmother, Ada, for inculcating in me the significance of education; my brother, Jose Daniel, for being my brother; my uncle, Nelson, for the gift of learning English; and Ariel for being my partner and giving me wings.

## ACKNOWLEDGMENTS

I would like to acknowledge the many personal and professional mentors who have supported my journey through higher education and this PhD program. Particularly, I am thankful for Dr. Bianca Bernstein for being an excellent program advisor and research chair under whose supervision I have grown beyond what I thought I could. Thank you also Dr. G. Miguel Arciniega for believing in my potential from very early on and for being a role model. I am very grateful to the dissertation committee, Dr. Terence Tracey for his guidance in methodology, and Dr. Lisa B. Spanierman for her insights regarding social justice and her guidance during the last years of the program. I would also like to thank the faculty at ASU's Counseling and Counseling Psychology, and the many clinicians and researchers with whom I worked on campus and in the community, who shaped me into a scientist-practitioner. I thank the higher education leaders at Arizona State University, such as Dr. James Rund, who are creating an inclusive environment, and student leaders at the Graduate and Professional Student Association, for inspiring me to reach higher and do more to impact social change. I want to recognize the DREAMers and the immigrant rights movement for their courage. Lastly, I thank the many individuals and organizations that supported my grassroots fundraising effort to start this PhD program when I was an undocumented immigrant in Arizona. I am particularly grateful for Luis Avila, the Isac Amaya Foundation, Danny Ortega, and the Cesar Chavez Foundation for empowering me during a difficult time.

## TABLE OF CONTENTS

	Page
LIST OF TABLES .....	vii
LIST OF FIGURES .....	viii
CHAPTER	
1 INTRODUCTION .....	1
2 LITERATURE REVIEW .....	7
Immigrant Latinos: An Oppressed Population.....	7
Undocumented Immigrants’ Academic Achievement .....	7
Legal Status Cultural Minority Groups’ Academic Achievement .....	10
Critical Consciousness Theory.....	13
Social Cognitive Career Theory.....	18
Academic Persistence Theory .....	22
Two Integrative Social Cognitive Models of Critical Consciousness .....	25
Conceptual Models .....	26
Research Questions and Hypotheses.....	30
3 METHOD .....	33
Participants.....	33
Procedures .....	36
Instruments and Measures.....	37
Critical Consciousness.....	37
Critical Reflection .....	37
Critical Action .....	38

CHAPTER	Page
Political Efficacy and Outcome Expectations .....	39
Sociopolitical Engagement Supports and Barriers .....	41
Intent to Persist .....	41
Research Design and Analytic Strategy .....	43
4 RESULTS .....	46
Structural Invariance .....	46
Path Model Results .....	52
Post-Hoc Analyses .....	54
5 DISCUSSION .....	58
An Integrative Social Cognitive Model of Critical Consciousness .....	59
Critical Consciousness Across Student Groups .....	60
Critical Consciousness and Academic Intent to Persist .....	63
The Role of Supports and Barriers to Engaging in Critical Consciousness .....	67
Implications for Research .....	71
Implications for Practice .....	74
Limitations .....	76
Conclusions .....	78
REFERENCES .....	82
APPENDIX	
A INTERNAL REVIEW BOARD APPROVAL .....	94
B LETTER OF CONSENT .....	96

APPENDIX	Page
C RECRUITMENT SCRIPT .....	98
D SURVEYS .....	100
E CRITICAL REFLECTION INSTRUMENT .....	104
F CRITICAL ACTION INSTRUMENT .....	107
G POLITICAL EFFICACY INSTRUMENT .....	110
H POLITICAL OUTCOME EXPECTATIONS .....	113
I SOCIOPOLITICAL SUPPORTS AND BARRIERS INSTUMENT .....	115
J INTENT TO PERSIST INSTRUMENT .....	117
K SATORRA-BENTLER SCALED CHI-SQUARED DIFFERENCE TEST RESULTS CONSTAINING ONE PATH TO EQUALITY ACROSS GROUPS AT A TIME.....	119
L SATORRA-BENTLER SCALED CHI-SQUARED DIFFERENCE TEST RESULTS COMPARING MODEL 3 TO 16 MODELS EACH FREEING ONE RELATIONAL PATH PARAMETER PER GROUP(S), WHILE CONTRAINING OTHER GROUPS, AT A TIME.....	123

## LIST OF TABLES

Table	Page
1. Demographics.....	33
2. Parents' Education Level by Group .....	35
3. Summary of Intercorrelations, Means, and Standard Deviations of Measures in Undocumented Immigrant Students and Latina/o Students with Legal Status .....	46
4. Summary of Intercorrelations, Means, and Standard Deviations of Measures in Non-Latina/o Minority Students with Legal Status and Non-Latina/o White Students with Legal Status .....	47
5. Model Test Results Summary for Critical Consciousness and Intent to Persist .....	49



## LIST OF FIGURES

Figure	Page
1. Lent and Brown (2013) Social Cognitive Model of Career Self-Management. Adapted from Lent, Brown, and Hackett (1994) .....	20
2. Social Cognitive Models of Critical Consciousness and Intent to Persist Developed for this Study .....	29
3. Standardized Parameter Estimates Among Variables in Final Model with Constrained Paths to Equality Across Groups .....	53
4. Standardized Parameter Estimates Among Variables in Final Model with Partially Constrained Paths to Equality and Differentiated Parameters .....	57

## CHAPTER 1

### **Introduction**

Latinos are the fastest growing cultural minority group in the U.S., nationally as well as locally in the state of Arizona (Hart & Eisenbarth Hager, 2012), based on Census data (Ennis, Rios-Vargas, & Albert, 2011). There were about 53 million Latinos in the U.S. in 2012 (Passel, Cohn, & Gonzalez-Barrera, 2013), and more than 52% of all 11 million undocumented immigrants in 2011 were of Latino heritage. While the numbers of U.S. born and immigrant Latinos has increased over the last couple of decades, their rate of educational attainment has not, thus creating what is known as the educational attainment gap. In Arizona, only about half of Latinos who started a college education received a bachelor's degree in 2009, compared to about two thirds of Whites (Ross, Kena, Rathbun, KewalRamani, Kristapovich, & Manning, 2012).

Nationwide, Latinos' graduation rates from 4-year institutions of higher learning were significantly below those of Whites, Asians, and mixed-race students, and were similarly as low as those of Black and Native American students. These disparities also exist within Latino groups based on immigration status (Ross et al., 2012). Enrollment and graduation rates are much lower for immigrant (i.e., foreign born) Latinos than for U.S. born ones, and those differences translate to lower overall incomes and economic power (Brown & Patten, 2014). This is why the attainment gap is one of the most urgent challenges in the educational system. The implications for the largest minority group also being one of the least educated and most impoverished ones can be detrimental for the future of the United States.

The attainment gap between Latinos and other cultural groups in the U.S., as well as between U.S. born and immigrant Latinos, may be partly understood in the context of systemic or sociopolitical oppression. Watts, Griffith, and Abdul-Adil (1999) defined oppression as an outcome or state that results from the process of consistent resource asymmetry and unjust exercise of power. To this point, research indicates that Latinos are aware of systemic oppression. The Pew Hispanic Center indicates that nearly 61% of Latino Americans view discrimination toward them as a major problem in the U.S., and 36% consider immigration status to be the main factor for this discrimination (Lopez, Morin, & Taylor, 2010). In addition, research points to discrimination as being linked to higher stress, anxiety and depression (Ayón, Marsiglia, & Bermudez-Parsai, 2010; Todorova, Falcón, Lincoln, & Price, 2010). Research also highlights that discrimination based on immigration status in states where anti-immigrant legislation is adopted is a source of increased anxiety and lower quality of life (Becerra, Androff, Cimino, Wagaman, & Blachard, 2013; Salas, Ayon, & Gurrola, 2013).

There is a theory of education that takes into consideration sociopolitical oppression, such as discrimination, and students' role in it. Critical consciousness (Freire, 1973) refers to individuals' ability to understand sociopolitical barriers that impact their educational, social, and overall success as well as the actions needed to be taken in order to overcome such barriers. Empirical research to test notions presented in critical consciousness theory has advanced rapidly over the past few years (Watts, Diemer, & Voight, 2011). Of particular interest is the hypothesis derived from theory and research that critical consciousness may lead to enhanced educational outcomes (i.e., academic

persistence) for youths such as Latino immigrants who experience sociopolitical oppression (i.e., discrimination).

Thus, it is possible that Latinos who display higher critical consciousness also attain more highly in higher education. An intention with this proposed study is to build on theoretical advances that have unpacked critical consciousness theory (Freire, 1973) in order to devise a testable conceptual framework to explore the relation between critical consciousness constructs and educational outcomes. By designing a testable framework that links critical consciousness to educational attainment, we can then examine its use in advancing understanding of the attainment gap in socio-politically oppressed groups such as Latinos. The early state of empirical research in this area presents an opportunity to provide conceptual contributions to further develop Critical Consciousness Theory so that it can inform practices to solve serious educational problems such as the attainment gap.

My intent is to conceptualize these theoretical and educational problems using the lens of career psychology. I propose two models that expand Critical Consciousness Theory (Freire, 1973) by combining it with key facets of Social Cognitive Career Theory (Lent, Brown, & Hackett, 1994). The new models attempt to explain the development of critical consciousness and its relation to intent to persist in college. This model-testing component aims to further the understanding of the achievement gap between foreign-born Latinas/os and other cultural groups, especially in the context of sociopolitical oppression.

In Chapter 2 of this dissertation I review the most relevant literature related to the educational attainment of oppressed students via social cognitive and sociopolitical lenses. The chapter begins with an overview of the population of interest, undocumented

immigrant students known as DREAMers, and a description of how this population is socio-politically oppressed as it relates to their educational attainment and the societal disadvantages connected to the inequities they experience. To contrast the disadvantages experienced by DREAMers, I also present the educational attainment context for three other populations of interest in the study, each of which has the advantage of having “legal status” in terms of immigration policy but their experienced oppression may vary based on other aspects of their cultural identity, such as race. These three student populations of interest are Latinas/os, Non-Latina/o cultural minorities (i.e., Blacks or African Americans, Asians or Asian Americans, and Native Americans), and Non-Latina/o Whites. That chapter then explores the theoretical and empirical evolution of Critical Consciousness Theory (Freire, 1973), with special emphasis on the state of the art in terms of empirical research. Then, I explore the basic tenets of Social Cognitive Career Theory (Lent et al., 1994) with keen attention to meta-analytic evidence for its predictive power in studying educational outcomes such as persistence. A review of persistence theory is also presented, highlighting dominant frameworks and their gaps in the inclusion of student agency and social justice in their conceptualization. Immediately after, I present the two new integrative conceptual models that attempt to combine social cognitive and critical consciousness frameworks. Model 1 builds on theory and explores additional relational paths, while Model 2 is more constrained and adheres to theory more strictly. That chapter ends with an introduction to the research questions and hypotheses.

In Chapter 3, I provide a detailed description of the methodology I used to conduct this dissertation study. The two proposed models of critical consciousness (i.e., Models 1 and 2) were tested across four comparative groups of college students (i.e.,

undocumented immigrants, Latina/o with legal status, Non-Latina/o minority with legal status, and Non-Latina/o White with legal status) who vary in their degree of experienced social oppression. I describe design and recruitment procedures, and then provide detailed descriptions and background on each of the measures that were used for each variable of interest in the conceptual models. I end that chapter by explaining the analytic procedure for the study. Visual depictions of the two integrative conceptual and testable models for analysis are presented in this chapter in Figure 2.

Results from statistical analyses to test the two integrative social cognitive models of critical consciousness are presented in Chapter 4, which include tests of global fit, Satorra-Bentler Scaled chi-squared difference tests, and goodness of fit test on an iterated model based on modification indices and relational path results. Here, I also describe the test of structural invariance conducted on the improved model which involved constraining the model to equality across student groups and comparing to the base model with free parameters, conducting individual difference tests by constraining one path to equality across groups at a time, identifying paths to constrain and free and testing a final model based on that information, and finally comparing that model to the base model with free parameters to evaluate whether good fit was maintained in the partially constrained model. That chapter also presents results from path analysis that evaluates the specified relational paths among variables in the model.

Finally, I present a discussion of findings from this study and connect them to the extant literature on critical consciousness and career development in Chapter 5. That chapter contains a discussion of the findings about the new integrative social cognitive model of critical consciousness and what its' support means for this area of inquiry. Then

a discussion about findings about critical consciousness across the four student groups ensues, followed by discourse about the connection between critical consciousness and academic intent to persist, with a subsection on the role that supports and barriers play in this relationship. Lastly, I present discussion of research and practice implications, with concrete actionable steps for both, as well as limitations and conclusions of this dissertation study.

## Chapter 2

### LITERATURE REVIEW

#### **Immigrant Latinos: An Oppressed Population**

It has been argued that the clear gap in educational attainment and economic stability by Latinos in the U.S., particularly foreign born Latinos, is an outcome of oppression or resource asymmetry specifically in terms of access to quality education (Hart & Eisenbarth Hager, 2012). When it comes to experiencing heightened sociopolitical disadvantages, a group of foreign-born Latinos known as DREAMers experience difficulties related to their immigration status over and above the difficulties that other students would experience on average. These difficulties may interfere with their educational and vocational progress and development. Given that critical consciousness has been believed to be an antidote for oppression (Watts et al., 1999), testing its development and effectiveness in addressing and overcoming oppression that is proximal to their educational outcomes (i.e., barriers to persist) with this group of students lends itself well to the goals of this research.

**Undocumented immigrants' academic achievement.** Based on estimates by the Pew Research Center (Brown & Patten, 2014), a total of 22.6% (370,264) 18-24 year old foreign-born Latinos were enrolled in college in 2012, compared to 38.8% (1,871,850) native born Latinos. Only 5% of foreign-born Latinos and 7% of native-born Latinos over the age of 25 were enrolled in college. This national educational attainment problem translates into an economic problem. The median earning of foreign-born Latinos in the U.S. is \$20,000 vs. \$22,700 in native-born Latinos. It is clear from these figures that the



educational and economic gaps are wider between Latinos and almost all other cultural groups, and even wider and more unpleasantly felt by foreign-born Latinos.

The number of Latinos in the US was estimated to be 52,932,483 in 2012. There were 11.7 million undocumented immigrants in the United States according to Pew Research Center (Passel, Cohn, and Gonzalez-Barrera, 2012), though not all of them are of Latino background. Mexicans make up 52% of the total number of undocumented immigrants based on these estimates. Of the undocumented immigrants in the 18-24-age category in 2009, 26% had some college degree, 28% had a high school education but no college, and 6% were in high school. President Barack Obama enacted an executive order titled Deferred Action for Childhood Arrivals (DACA) (U.S. Citizenship and Immigration Services, 2013). This program allows young adult immigrants under the age of 30 to legally work in the United States if they meet a number of strict requirements to qualify. The Pew Research Center reports that 86% (643,000) of DACA applicants had been approved by March 31, 2014; and that 77% of those who received DACA are of Latino descent (Hugo Lopez & Krogstad, 2014). The young immigrants who qualify for the DACA program are known as DREAMers, a term coined by the DREAM Act and immigrant rights movement as these students could qualify for immigration relief under the Development Relief and Education for Alien Minors (DREAM) Act (Galassi, 2003) if Congress approved it into law.

DREAMers face systemic barriers in their educational journey that are well documented in the literature (Abrego, 2006; Abrego, 2008; Chavez et al., 2007, Gonzalez, 2008, Perez, 2010a, Perez et al., 2010c, Perez et al., 2010d). Though DREAMers wish to pursue the American dream of a better life, there are federal

legislations such as the Higher Education Act of 1965 (PRWORA), and the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) that prevent undocumented students from obtaining federal financial aid (Drachman, 2006). Due to several unique barriers connected to their immigration status, undocumented students may not be academically performing as their international peers who have legal status in the form of student visas (Bygrave-Dozier, 2001) and the study of their persistence patterns is rare (Flores & Horn, 2009). Despite barriers, DREAMers envision futures in the US, tend to speak English, internalize U.S. values, and are socially full-fledged members of US society (Abrego, 2006). They also tend to believe in objective meritocracy and justice, and venerate education as a result of their legal values being informed by U.S. social values (Abrego, 2008). Research also established that the academic success and high performance of these students despite systemic barriers and risk factors (e.g., feelings of societal rejection, low parental education, high hours of employment while in school) is due to resilience influenced by personal and environmental factors such as supportive parents, friends, and engagement in school activities (Perez, Espinoza, Coronado, & Cortes, 2009).

Perhaps a consequence of the difficulties they shoulder (Perez-Huber & Malagon, 2006; Perry, 2006), these students tend to have negative psychological experiences (i.e. fear, shame, anxiety), and they cope with them using civic engagement (Perez, Cortes, Ramos, Coronado, & Coronado, 2010). These students tend to display high academic achievement, leadership, and civic participation (Perez, 2010), and they have been forming their own student organizations and social action oriented networks to advocate to access rights and resources (Chavez, Soriano, & Oliver, 2007), and to participate in the

political process (Gonzales, 2008). These patterns seem to signal that DREAMers develop a high sense of civic engagement that may serve as a catalyst for their high educational achievement. One may hypothesize that as they are faced with barriers to access higher education, DREAMers may critically reflect on the root of these inequities, engage in social actions to overcome these barriers (i.e., civic demonstrations, sharing their stories with masses), and gain a sense of political efficacy when their actions succeed.

**Legal status cultural minority groups' academic achievement.** To a lesser but still disquieting degree by comparison, cultural minority groups more broadly experience similar educational attainment gaps as do undocumented immigrant students, also known as DREAMers. Even when cultural minority groups such as Latina/o, Black or African American, and Native American students have the advantage of having legal immigration status in the United States (i.e., U.S. citizenship or permanent legal residency), these students continue to face systemic difficulties that prevent them from achieving as highly as their White peers. These difficulties pertain to systemic discrimination and resource asymmetry, which may be exacerbated by the students' race, ethnicity, place of birth, language spoken at home, and other aspects of their cultural identity (Cabrera et al., 1999; Nora & Cabrera, 1996), which are known to play an important role in these students' educational and career outcomes (Gushue, 2006; Gushue et al., 2006; Gushue & Whitson, 2006). According to the U.S. Department of Education, National Center for Education Statistics (2015), despite significant gains in higher education degree attainment at the bachelor's degree level made by all cultural minority groups between 1990 and 2014, the gap between Whites and Blacks in higher education degree

attainment widened 13 to 18%, and the gap between White and Latina/o students widened from 18% to 26%.

According to a report by Morrison Institute for Public Policy (Hart & Eisenbarth Hager, 2012), Latinos in Arizona are the fastest growing population group, based on data from the US Census 2010. Latinos currently make up about 30% of the state's population, and there are more Latinos than Whites under the age of 18 living in the state. Yet, this group continues to face barriers that keep them lagging behind other groups in educational attainment. Based on data from the U.S. Department of Commerce, that report acknowledges academic research that highlights Latinos' difficulty to stay in, do well, and achieve postsecondary degrees and certifications. The gap is wide in community colleges and universities in Arizona. In 2009, roughly 20% of those enrolled in community college identified as Latino. This is only a fraction of the enrollment rate by White students, which was at 59% in 2009. Only one in every two Latinos, compared to two thirds of White students, finished with a university degree in 2009. In 2010, Latinos attained a dismal 13% of all bachelors, masters, and doctorates awarded at the three state universities in Arizona. These trends are alarming noting that, according to Hart and Eisenbarth Hager (2012), this deficit in Latinos' educational attainment may lead to lower incomes, unemployment, lower purchasing power, more poverty, lower per-capita tax revenue, fewer less health insurance coverage, and an overall negative impact on the economy.

The aforementioned educational attainment and economic gaps are also a problem of national scope. The U.S. Department of Education, the National Center for Education Statistics, and the American Institutes for Research conducted a study to examine gaps in

educational participation and attainment between ethnic/cultural groups and across gender (Ross, Kena, Rathbun, KewalRamani, Kristapovich, & Manning, 2012). The study highlighted that in the 18-24 age range only 26% of Latino males and 36% of Latina females were enrolled in college, compared to 43% White males and 51% White females, 31% Black males and 43% Black females, and 24% American Indian males and 33% American Indian females. Enrollment rates are similarly low between Latinos and cultural groups that have faced oppression historically, such as American Indians. That study also found that the percentage of Latino and Black full time students who attained bachelor's degrees at four-year institutions (52% and 51% respectively) was lower than White (73%), Asian (76%), and multiple race (66%) students who attained a bachelor's degree. Additionally, Latino males were less socially integrated, less participative in social activities such as student organizations, than males and females in other ethnic groups. In 2010, the percentage of young Latino males and females with a bachelor's degree was lower (11% and 16%) than Whites (33% and 42%), Blacks (15% and 23%), and multiple race individuals (30% and 35%). Combined, these educational attainment patterns draw a taxonomic map of educational achievement by student group relative to the many systemic barriers that they face as the journey through higher education. Such breakdown, from higher systemic barriers to lowest, appears to be: a) undocumented immigrants students, b) Latina/o students with legal status, c) Non-Latina/o minority students with legal status (e.g. Black or African American, Native American), and d) Non-Latina/o White students with legal status.

## **Critical Consciousness Theory**

Critical Consciousness (CC) is an education concept that was popularized by Freire (1973) in his seminal work *Pedagogy of the Oppressed*. He described CC as the way in which oppressed and marginalized people learn to critically analyze their social conditions and act to change them. His application of this pedagogical concept was illustrated over several books (Freire, 1970, 1973, 1985, 1998, 2000, 2004, 2008) that described his work in educating the poor in Brazil. Diemer and Blustein (2006) defined critical consciousness as “the capacity to recognize and overcome sociopolitical barriers.” Both the original and more contemporary definitions of critical consciousness convey the same meaning; CC is about understanding what needs to be changed and how to change it in order to improve one’s conditions, which may be one’s academic achievement.

More recently, it was posited by synthesizing theory and research expansions that critical consciousness might possess three components (Watts, Diemer, & Voight, 2011). The first component is *critical reflection* and it results from the analysis of the systemic and structural causes of disparities and inequities. It frames social inequities in an historical context. This concept is the more neglected of the three in the literature as it has received minimal scientific inquiry. One may understand this concept as critical thinking or in depth analysis that is applied specifically toward the causes of social oppression. In essence, critical reflection is about understanding what makes political and social systems unjust; what sustains systemic barriers and socioeconomic inequities. *Political efficacy* is the second component, and it refers to peoples’ beliefs about their capacities to be effective political actors and their beliefs that government structures are responsive to one’s interests. This concept may be conceptualized as a sense of self-efficacy (Bandura,

1977, 1997) in specific domains dealing with political or social change. Bandura defined self-efficacy as individuals' appraisals of their abilities in specific tasks and the confidence experienced as a result. The third and final component of critical consciousness is *critical action*, and it refers to individual or collective action taken to change aspects of society, such as policies and practices, which are perceived as unjust. One may think of this last component as activism, advocacy, or political action that uses a number of skills in order to influence change in unjust systems. Though there has been qualitative research conducted in the pursuit of discovering themes related to the development of each of the three components of critical consciousness, there is no quantitative research that examines how these three components are related to one another and how they develop.

Critical consciousness is theorized to be experienced as a result of a process of sociopolitical development. In Watts, Griffith, and Abdul-Adil's (1999) 5-stage model of sociopolitical development, critical consciousness is depicted as experienced during the final stages and it is thought of as the outcome of sociopolitical development. Watts and colleagues (1999) state that "critical consciousness is the cognitive cornerstone of sociopolitical development" since it "allows people to define themselves in an affirmative way" regardless of asymmetry of resources and oppression. They define oppression as "a state and a process of inequality caused by asymmetric distribution of resources and unjust exercise of power, and sustained when the disenfranchised internalize and support their oppression." They postulate that minority youths journey through five stages, beginning at an "Acritical" stage where they are oblivious to asymmetry and oppression, advancing to an "Adaptive" stage where asymmetry is acknowledged but they remain

reluctant to engage in action, a “Precritical” stage where they become aware of inequality and begin to question it, a “Critical” stage where they analyze and learn more about the roots of asymmetry, and finally arriving at a “Liberation” stage where they take critical action to change systems. It is in this final Liberation stage that all three components of critical consciousness (i.e., critical reflection, political efficacy, and critical action) are simultaneously present and persistent after having been gained through this process of sociopolitical development.

Critical consciousness is an arguably popular and influential concept in education and other academic fields. It preceded the widespread Critical Race Theory (Ladson-Billings & Tate IV, 1995; Ladson-Billings, 1998; Delgado & Stefancic, 2012), which focuses on the intersection of race, class, and power, and *Pedagogy and the Politics of Hope: Theory, Culture, and Schooling, A Critical Reader* by Giroux (1997). CC has been applied to pre-service teacher education (Gay & Kirkland, 2003), to the interpretation of community cultural capital (Yosso, 2005), it has many applications in social work practice (Sakamoto & Pitner, 2005), and it has even applications in the health care system (Minkler & Cox, 1980), specifically toward preventive education efforts such as toward participatory HIV prevention in South African youth (Campbell & Macphail, 2002) and to increase marginalized communities’ participation in research (Carlson, Engebretson, & Chamberlain, 2006). However, the scientific study of this phenomenon is in its infancy as most of the research in this area has been qualitative in nature (Kinchelone & McLaren, 2002).

The early and ongoing qualitative research as well as practical applications of the CCT have paved the way for further theoretical expansion and empirical testing that has



occurred in the past 15 years (Diemer & Hsieh, 2008; Diemer, Hsieh, & Pan, 2009; Diemer & Blustein, 2006, Diemer et al., 2006; Watts et al., 1999; Watts & Flanagan, 2007; Watts, Diemer, & Voight, 2011). Critical consciousness is included as a central component and goal to strive toward in Theory of Sociopolitical Development (Watts et al., 1999, Watts et al., 2003). Additionally, advances in Critical Consciousness Theory and the grounding for its three components are discussed in Watts, Diemer, and Voight (2011). Their review highlights the overlap and links between Critical Consciousness and Empowerment Theory, concluding that both theories are similar but emphasize their components differently. Watts and Flanagan (2007) proposed a framework to understand the relationship between worldview and analysis, in which critical consciousness is a core component, to societal involvement behavior. In their framework, political agency and opportunity structure (i.e., resources available for action) are depicted as mediators in that relationship. These conceptual advances provide a sound foundation for understanding the nuances within seemingly distinct components of critical consciousness.

Few studies have explored the connection between critical consciousness and educational/vocational outcomes. However, early findings in this growing body of research appear to be promising. Recently, a mixed-methods approach was used to develop the Sociopolitical Consciousness Scale (Baker & Brookins, 2014) that included seven dimensions: sociopolitical awareness, global belief in a just world, equality and rights, collective responsibility, belief in collective action, localized community efficacy, and problem solving self-efficacy. Two of these factors focused on individuals' perceptions of ability (sociopolitical awareness and problem solving efficacy), which can be considered dimensions of critical consciousness. Additionally, a brief 9-item scale

named the Critical Consciousness Inventory (CCI) was recently developed (Thomas et al., 2014). Their measure of critical consciousness was shown to assess three categories of critical consciousness development (i.e., precritical, beginning critical, and postcritical). Their scale was also related to social dominance orientation and stigma consciousness. Progress in the assessment of critical consciousness serves to facilitate the understanding and empirical study of its development as a construct.

Of particular interest is the quantitative finding that critical consciousness is related to the career development of urban youth of lower socioeconomic status, specifically vocational clarity, career commitment, and work salience (Diemer & Blustein, 2006). Their study is one of the few and first to provide evidence to support the linkage between critical consciousness and educational, career, and vocational development. In another study, Diemer and Blustein (2007) found that vocational hope was an important variable to consider in urban adolescent's career development, particularly in the face of barriers. This is an important finding given the assumption that critical consciousness offers the oppressed the ability to define themselves positively despite barriers. Diemer and Hsieh (2008) found that sociopolitical development was related to higher vocational expectations, and has potential to eradicate the aspiration-expectation gap. Importantly, they operationalized a measurement of four components of sociopolitical development (i.e., consciousness of and motivation to reduce inequalities, discussion of social and political issues, motivation to help others, and participation in social action groups) for quantitative analysis. Lastly, a study conducted by Diemer (2009) longitudinally explored the impact of sociopolitical development on occupational attainment. Their findings show that sociopolitical development, the process toward

critical consciousness, directly influences educational expectations in youth and has a long-term impact on occupational attainment lasting well into adulthood. These early findings signal the key role that critical consciousness may play in the career development of the disenfranchised.

While this area of study has grown significantly in recent years, a gap in theory and research still exists (Diemer, McWhirter, Ozer, & Rapa, 2015). More theoretical work and empirical research is needed to shed light on the relationship that may exist between critical consciousness and educational outcomes as proposed by Freire (1973). If the linkage between critical consciousness and educational outcomes such as intent to persist does indeed exist, the implications for curriculum design, policymaking, and psychological interventions to attempt to retain and graduate more disenfranchised college are considerable. Building on these potential implications, understanding the structural nature of the development of critical consciousness may aid educators, policymakers, administrators, student service staff, and mental health professionals to design interventions aimed at the various components of critical consciousness in order to enhance it and boost its benefits for college students.

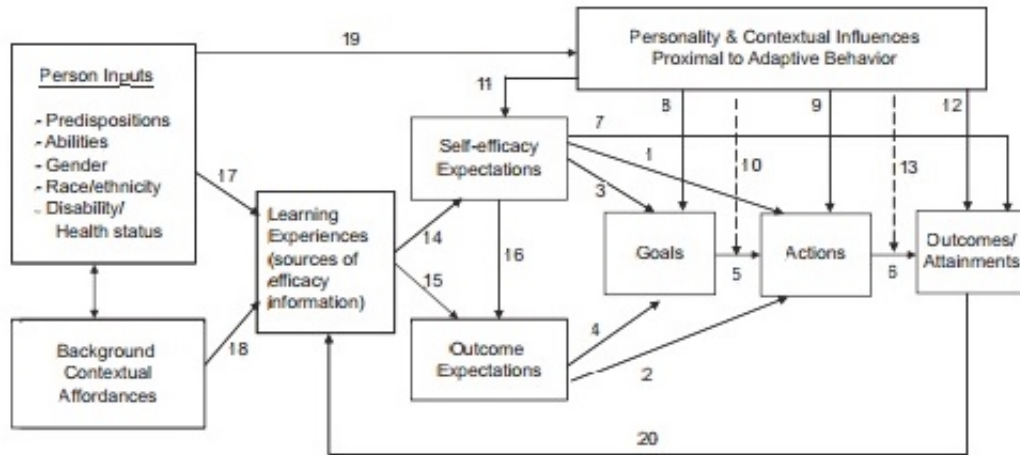
### **Social Cognitive Career Theory (SCCT)**

Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) has very quickly assumed a spot among the most empirically tested and prevalent theories of career psychology (See Figure 1). SCCT was developed in an attempt to bring together common aspects of seemingly distinct theories of career psychology that were prominent and had accumulated significant research support by the 1980s and 1990s (Lent, Brown, & Hackett, 2002). The reviews by Hackett and Lent (1992) and Hackett et al. (1991)

illustrate the state of career psychology theories around the time that SCCT came into existence in the mid 1990s. They articulated the need for a unifying theory to a) combine related constructs, b) explain common outcomes, and c) explain relationships among diverse constructs. SCCT responded to that need, and it can be considered one of the most comprehensive, and successful if judged by the theory's reception, at integrating common as well as seemingly distinct components of the major career psychology theories (i.e., self-efficacy, outcome expectations, goals, interests, choice, performance, personality, and contextual factors).

Social Cognitive Career Theory (SCCT) attempts to predict a series of content specific career outcomes via a number of models that can be applied and studied individually as well as in interlocking fashion (Lent, Brown, & Hackett, 1994). These outcome variables are namely interests, goals, choice actions, and performance; all of which are intended to be domain specific (e.g., technology goals, technology performance) for the study of their development and predictability by other variables included in the model. A number of mediation and moderation paths involving contextual variables are also accounted for in the model. While these mediation and moderation paths are depicted specifically in the general SCCT model, their positioning may change depending on the domain or criterion being studied (Nauta et al., 2002; Tracey, 2002). In essence, SCCT provides a parsimonious and specific theoretical framework that allows for flexibility to adjust predictive paths in a way that best fits the construct of study.

Figure 1. Lent and Brown (2013) Social Cognitive Model of Career Self-Management. Adapted from Lent, Brown, and Hackett (1994).



The entire SCCT model is built around Self-Efficacy Theory (Bandura, 1977), which outlines the triadic influences and ongoing reciprocal determinism (cognitive, affective, biological) that impacts and predicts a number of behavioral and psychological outcomes. Self-efficacy is defined as “a person’s belief in his/her ability to perform a specific task or behavior” (Bandura, 1977, 1999a, 1999b), and this variable has been found to be a very strong predictor of future behavior (Bandura, 1986; Willimas & Subich, 2006) and has been studied with diverse populations (Lindley, 2006; Pajares, 1996; Solberg et al., 1993). Of central importance to the increase and decrease of self-efficacy beliefs are four sources of efficacy, also known as learning experiences, which were outlined by Bandura (1977, 1986). These four sources are: performance accomplishments, vicarious learning, social persuasion, and emotional/physiological states. Together, and in some cases separately, these sources of efficacy have the power of informing self-efficacy beliefs.

Another variable that is positioned at the heart of SCCT, theorized to be highly

related to and predicted by self-efficacy, is outcome expectations. These can be thought of as people's expectations of the perceived benefits they will obtain by engaging in specific tasks. The contributions made by outcome expectations individually, and in combination with self-efficacy, to outcomes such as interests and choice goals have been supported empirically (Sheu, Lent, Brown, Miller, Hennessy, & Duffy, 2010). The theory's cognitive core is responsive to contextual factors (i.e., learning experiences/sources of efficacy), and as the models evolve from the center it integrates key variables (i.e., personality, contextual barriers and support, ethnicity, gender, age) that have been found by research to play important roles in predicting outcomes such as interests, choices, actions (i.e., intent to persist), and performance.

SCCT has been applied to study the academic achievement of underrepresented youths (Byars et al., 2010; Flores & O'Brien, 2002; Flores et al., 2010; Hackett & Betz, 1981, Navarro et al., 2007). In a recent study that combined meta-analysis and structural equation modeling methodology (Brown, Tramayne, Hoxha, Telander, Fran, & Lent, 2008) to test social cognitive models of academic performance and persistence, the authors concluded that academic self-efficacy is highly related to persistence, both directly and via academic goals. Meta-analyses conducted for a comprehensive working model of performance and persistence attainment (Burrus, Elliott, Brenneman, Markle, Carney, Moore, Betancourt, Jackson, Robbins, Kyllonen, & Roberts, 2013) showed that the true correlation between academic self-efficacy, though not other kinds of self-efficacy, and persistence is a strong .27 while academic goals and academic-related skills predicted persistence by .34 and .37. Empirical evidence from the analysis of accumulated of research findings like these two demonstrate the pivotal role that self-

efficacy plays in predicting educational outcomes such as persistence; especially since SCCT postulates that self-efficacy predicts goals and performance on skills. The advantage of studying the relationship between self-efficacy and educational outcomes through SCCT is that this framework allows for the incorporation of other variables to obtain a more complete picture regarding the prediction of outcomes.

One of the latest advancements in SCCT is the Social Cognitive Model of Self-Management (Lent & Brown, 2013) and across academic domains (Fouad, Smith, & Zao, 2002). This model is different from the original SCCT model as it is not focused on content or specific domains (e.g., school subjects, vocational interests, career fields) and instead it focuses on processes of adaptive behavior (e.g. persistence, educational attainment). A process-oriented social cognitive model lends itself better to the study of the relationships between variables that may seem unrelated or diverse in terms of task and domain specificity such as critical consciousness and intent to persist in college. For that reason, I use Social Cognitive Career Theory (SCCT), as a process rather than content framework, in the present research to investigate the relationship between critical consciousness and academic intent to persist.

### **Academic Persistence Theory**

Burrus, Elliott, Brenneman, Markle, Carney, Moore, Betancourt, Jackson, Robbins, Kyllonen, & Roberts (2013) defined persistence as the desire and action of a student to stay within the system of higher education from beginning through degree completion. Burrus et al. (2013) also differentiated persistence from related terms used in this body of literature, such as attrition, dismissal, dropout, mortality, retention, stopout, and withdrawal. All of these terms refer to the same phenomenon, students' continued or

discontinued participation in higher education, whether temporarily or permanently. Some of the main differences with these terms are the point of references from which they are viewed (e.g., from an intuitional perspective) and frame of time.

Two dominant theoretical frameworks are mainly used to study academic persistence, and Burrus et al. (2012) provided a summary of these two models as well as a working model based on quantitative research findings in this area. The two frameworks are Tinto's Theory of Student Departure (1975) and Bean's Model of Student Attrition (1980). Tinto's Theory of Student Departure (Tinto, 1975, 1982, 1987, 1993, 2006) focuses on the impact of campus interactions and integration on persistence. The model combines precollege factors (i.e., schooling, individual attributes, family attributes), goal and institutional commitment, academic system factors (i.e., academic performance, intellectual development), and social system factors (i.e., peer-group interactions, faculty interactions), in a development framework leading to students' decisions to persist. Terenzini and Pascarella (1980) and Terenzini et al. (1981) validated the model in their conceptualization and test of an instrument that incorporated the many complex dimensions in this model. Persistence decisions, as they conceptualize the model, have been found to relate to many other factors related to student persistence such as university comfort, social supports, self-beliefs, and mentoring (Gloria et al., 2005; Bordes-Edgar et al., 2011). Though this theory is the most widely used model of persistence, there is room for improvement in terms of the utility of this model with nontraditional students such as minorities (Hurtado & Carter, 1997; Maxwell, 1998; Rendon, Jalomo, & Nora, 2000).



Bean's Model of Student Attrition (1980, 1983) is a competitive alternative to Tinto's model and focuses more on nontraditional students. It also places emphasis on external factors to the institution that contribute to persistence, where Tinto's model limits itself to factors within the scope of the institution. These external factors (i.e., environmental pull) may often exist beyond the control of institutions and students themselves. This model also takes into consideration many of the same variables as Tinto's model (i.e., social integration, academic performance, institutional commitment) in combination to external factors. Another difference is the separation between persistence intention and actual persistence. Bean's model emphasizes intent to persist, students' goals to take action to either continue to be enrolled or leave their institution of higher education. According to Bean and Metzner (1985), these persistence intentions may be expected to be influenced by psychological and academic variables. As they stated it, "attitudes lead to intentions, which in turn lead to behavior." Intent to persist has been found to be the strongest predictor of actual persistence, or students' continued enrollment in vs. dropout, in 4-year and 2-year institutions of higher education (Bean & Metzner, 1985). The strength of that relationship has held up in alternative models of student persistence (Cabrera, Castaneda, Nora, & Hengstler, 1992; Cabrera, Nora, & Castaneda, 1985), where the strength of the relationship between intent to persist and persistence tended to be above .46 in longitudinal research. Even more recent research advances in Tinto's (1975) model have incorporated intent to persist, in combination with the similar construct of institutional commitment and sometimes referred to as persistence decision; and the strong predictive relationship between intent to persist and persisting in college continued to be supported (Pascarella & Terenzini, 1980; Pascarella

& Terenzini, 1983). As Tinto (2005) noted, though intent to persist predicts who will persist, it alone does not provide information about why they persist. In the current study, intent to persist will be used as a proxy for persistence and these two terms will be used interchangeably.

Although there are many similarities between the models proposed by Tinto and Dean (Hossler, 1984), it is notable that a weakness in both is that they fail to consider self-efficacy in their predictive paths. While these models take into account institutional and external factors, they do little to explain the role that students may have in understanding and addressing them. To stress the weakness of these models, they essentially assume that the student is a passive receiver of institutional and external factors, save for a few individual factors (i.e., attitudes). In contrast, Social Cognitive Career Theory (Lent et al., 1994) and Critical Consciousness Theory (Freire, 1973) both highlight that students may develop the agency to change systems that prevent their educational success, and in my view this may involve changes institutions of higher education themselves. These latter two theories may have several strengths to offer to the more predominant frameworks, Tinto's and Bean's, in the study of persistence as at their core is the understanding that individuals' agency leads to cognitive, behavioral, and sociopolitical systemic changes.

### **Two Integrative Social Cognitive Models of Critical Consciousness**

Integrating Critical Consciousness Theory and Social Cognitive Career Theory is possible thanks to the commonalities and nature of the constructs at the heart of each theory, as well as the common purposes of both theories. Both theories have cognitive foundations and behavioral components, and both operate in the context of environmental

and social influences instead of being isolated from social contexts. One may observe that both theories embody what Bandura described as triadic and reciprocal influences, a position that views the environment, personal factors such as cognition, and behavior as influencing one another constantly in recursive ways. Both theories intend to predict career, vocational, and educational outcomes that are related to individuals' vocational progress (i.e., academic intent to persist). In this section, two social cognitive conceptual models of critical consciousness (i.e., Models 1 and 2) are proposed as an expansion of both theories. These are process models, more in line with Brown and Lent's (2013) process model of career self-management. Merging key components of both SCCT and CC that overlapped in nature led to the creation of these competing models, Models 1 and 2. They lend themselves to empirical testing and comparisons in hopes of arriving at a superior model that better explicates that relationship between CC and educational intent to persist.

**Conceptual models.** As in SCCT, the new models were constructed around self-efficacy, and thus placing individual students' agency at the center. One of the components of critical consciousness is political efficacy, which is conceptually similar to the construct of social justice self-efficacy (Miller et al., 2009). Both constructs share a domain, an individual's level of confidence in influencing social and political change. This component is central in the new models. Due to the observed importance of outcome expectations in predicting outcomes in SCCT's extant research, which is a component that is missing in CC, the new models include social justice outcome expectations as well. In essence, social justice self-efficacy is depicted as a predictor of both social justice outcome expectations and academic intent to persist, which is also depicted as

being predicted by social justice outcome expectations. The addition of political outcome expectations represents an expansion of CC as studied thus far.

Additionally, another CC component is critical action, which is being conceptualized as a precursor to political efficacy in the current models. Though critical action may also exist as a result of increased political efficacy, following theoretical postulations made in Self-Efficacy Theory (Bandura, 1977), one may expect political self-efficacy to result from initial critical action. This critical action component is conceptualized in the present study as a source of efficacy that could lead to higher or lower efficacy depending on the quality of the learning experience. When students engage in critical action, such as student activism and advocacy, they may gain access to all four sources of efficacy that provide information about their abilities to be social change actors. These four sources are performance accomplishments, vicarious learning, social persuasion, and physiological states (Anderson & Betz, 2002). Critical action can be operationalized by measuring individuals' propensities to engage in social action, a construct known as activism orientation (Corning & Myers, 2002). Further, this individual sense of perceived efficacy by students in underserved groups may contribute to the collective efficacy perceived by these groups (Bandura, 2000).

Critical reflection, people's ability to analyze and understand the systemic and historical roots of sociopolitical inequities and oppressive policies, was operationalized in previous research (Diemer & Blustein, 2005, Pratto et al., 2000) through a related constructed named Social Dominance Orientation (SDO). SDO refers to one's "degree of preference for inequality among social groups" (Pratto, Sidanius, Stallworth, & Malle, 1994). In the present new models, critical reflection is conceptualized and measured

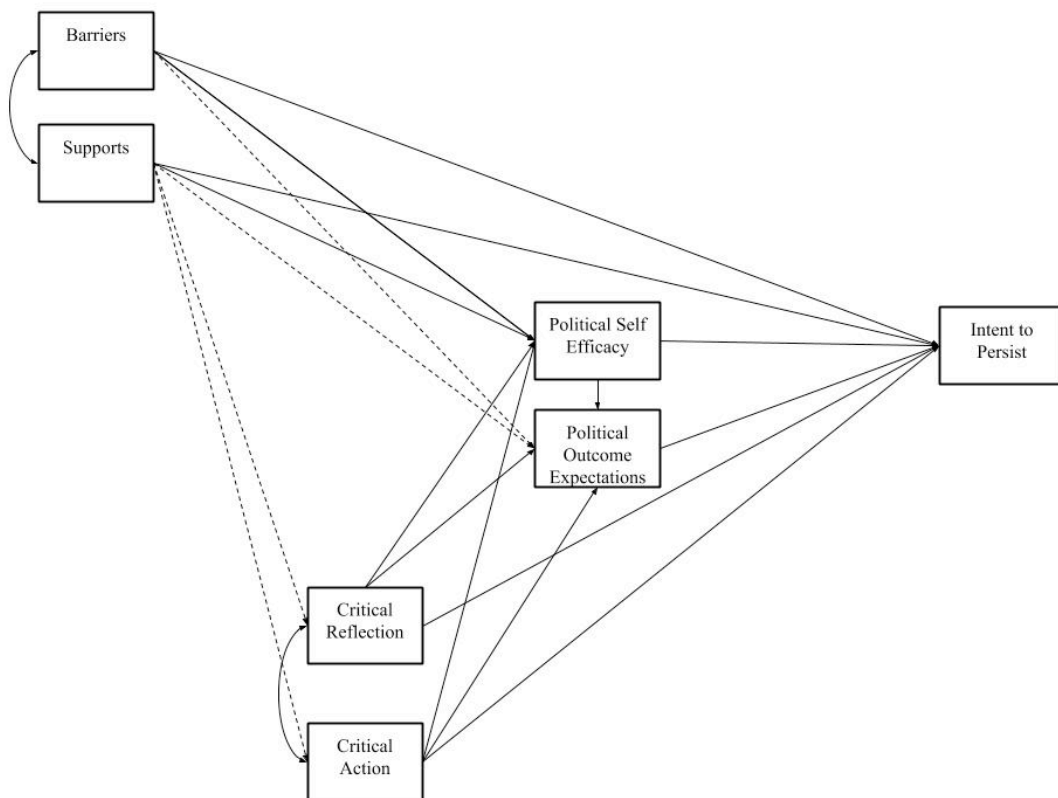
through the Color-Blind Racial Attitudes Scale (Neville, Lilly, Duran, Lee, & Browne, 2000, Neville et al., 2007), which more closely captures critical reflection. Limited awareness of institutional or structural discrimination, as measured in this scale, is reflective of limited critical reflection about the sociopolitical inequities, its roots, and the systems that perpetuate them. Following closely the latest theoretical developments as highlighted by Watts et al. (2011), critical reflection is conceptualized in the present models as a reciprocal variable to critical action. Since both variables are thought of as mutually influencing one another, and theoretically either one may precede or lead to the other, the current models position both variables as being conceptually in the same space. Together, both critical reflection and critical action form two core cognitive and behavioral components of critical consciousness, that are conceived to lead to political self-efficacy and outcome expectations.

Two other variables that mirror SCCT positioning are sociopolitical supports and barriers, conceptualized in the SCCT literature as contextual affordances and barriers that are proximal to the outcome variables. In this conceptualization, these contextual supports and barriers are specific to the institutional and familial climate that the student perceives in relation to engaging in social justice (e.g., having an advisor who believes in social justice and equity). In line with previous research (Lent & Brown, 2013), these supports and barriers are depicted as variables that contribute to self-efficacy and to the dependent outcome or criterion variable (Lent et al., 2003, Lent et al., 2005, Lent et al., 2011). This depiction is followed strictly in the more constrained current model as informed by theory, Model 2. Model 1, the less constrained model in the current study, explores whether supports and barriers are related to critical reflection and critical action.

Another expansion from theory in Model 1 is an exploration about whether supports and barriers predict political outcome expectations, and not just political self-efficacy.

Intention to persist through higher education is the criterion variable in both models. This variable can be conceptualized via both the goals model and the actions model of SCCT. No conceptual separation was made, hence goals and actions were not studied as separate variables due to their relatedness, and intent to persist was handled as an outcome similar to the way it was treated in Brown et al. (2008). See Figure 2 for a visual depiction of the new models.

Figure 2. Social Cognitive Models of Critical Consciousness and Intent to persist Developed for This Study.



*Note.* Competing social cognitive models of critical consciousness grounded in theory. Model 1: Includes dotted paths and is a less structurally constrained model. Model 2: Does not include the dotted paths, thus more constrained model and nested within Model 1.

## Research Questions and Hypotheses

This research study attempted to answer the following research questions by integrating critical consciousness theory and social cognitive career theory into two new and competing integrative social cognitive models of critical consciousness and academic intent to persist. The hypotheses presented with each question were designed to empirically explore each of these research questions.

1. Research question 1. Which of the two new models is a superior testable social cognitive framework of critical consciousness and academic intent to persist across all four-student groups of interest?

H1: The more constrained model will fit the data adequately when specified identically for all four groups of interest.

H2: The less constrained model will fit the data adequately when specified identically for all four groups of interest.

H3: Both models will fit the data equally well.

H4: Student group will moderate the relationships in the model; hence the model will be structurally variant across the four groups of interest.

2. Research question 2. How do the three components of critical consciousness relate to one another across groups?

H5: Critical reflection and critical action will significantly correlate with each other across all four groups.

H6: Critical action and critical reflection will directly predict political self-efficacy across all four groups.

H7: Critical action, critical reflection, and political self-efficacy will directly predict political outcome expectations across all four groups.

3. Research question 3. What is the relationship between critical consciousness and intent to persist in college across student groups?

H8: Critical action, critical reflection, political self-efficacy, and political outcome expectations will each predict academic intent to persist more strongly for undocumented immigrant students than for other student groups with legal status.

H9: Critical action, critical reflection, political self-efficacy, and political outcome expectations will predict academic intent to persist more strongly for cultural minority students with legal status than for Non-Latina/o White students with legal status.

4. How do supports and barriers to engage in sociopolitical action relate to critical consciousness and academic intent to persist?

H10: Supports will predict critical action, critical reflection, political self-efficacy and outcome expectations more strongly for undocumented students than for students with legal status.

H11: Supports will predict critical action, critical reflection, political self-efficacy and outcome expectations more strongly for cultural minority students with legal status than for non-Latina/o White students with legal status.

H12: Supports will predict academic intent to persist more strongly for undocumented students than for other students with legal status.

H13: Barriers and intent to persist will be inversely and more strongly related for undocumented immigrant students than for students with legal status.



H14: Barriers and intent to persist will be inversely and more strongly related for cultural minority students with legal status than for non-Latina/o White students with legal status.

## Chapter 3

### METHOD

#### Participants

A total of 638 college students who were enrolled in at least one college level course in the United States participated in the study. Of this total, 120 (18.8%) participants identified as DREAMers (foreign-born individuals without permanent legal status), 124 (19.4%) identified as Latinos who possessed permanent legal status (i.e., legal permanent residency, U.S. citizenship), 117 (18.3%) identified as non-Latino minorities with permanent legal status (i.e., Black, Asian, Native-American), and 277 (43.4%) identified as non-minority Whites with permanent legal status. These four groups constitute the categories of interest for comparative analysis. More detailed demographic information is portrayed in Table 1, and it includes ethnic/racial composition of participants, gender, and education level. Parents' education by group is illustrated in Table 2. Most participants lived in Arizona (404, 70%), Illinois (43, 7.5%), New York (27, 4.7%), California (19, 3.3%), and Florida (17, 2.9%).

Table 1

<i>Demographics</i>	N	%
DREAMer	120	18.8
Latina/o	124	19.4
Non-Latina/o Minority	117	18.3
Non-Latina/o White	277	43.4
White	282	44.2

---

Black or African-American	38	6
American Indian or Alaskan Native	11	1.7
Asian	44	6.9
Biracial or Multiracial	10	6.3
Female	430	67.7
Under 35 Years of Age	604	94.7
Freshman	175	27.6
Sophomore	129	20.2
Junior	90	14.2
Senior	75	11.8
Graduate Student	159	20.2
Other	6	.9

---

The primary group of interest is DREAMers, or undocumented immigrants who may qualify for short-term work authorization through the Deferred Action for Childhood Arrivals federal program (DACA, USCIS, 2013). Thus, this group may be able to legally work in the United States and be protected from deportation and granted lawful presence in the short-term, but still lacks “legal status.” Since lawful presence is accompanied by fewer benefits than legal/lawful status (i.e., path to legal permanent residency and citizenship), it would be expected that this group would lack certain sociopolitical advantages that those with legal status enjoy (i.e. right to vote, access to federal financial aid, access to in-state tuition in certain states, and the right to drive in some states).

The other three groups of interests (e.g., Latinas/os, non-Latino minorities, and non-Latino Whites) represent comparison groups that possess legal status (i.e., American citizenship, legal permanent or conditional residency, student visa) and represent varying levels of sociopolitical privilege. It can be inferred that these three groups face fewer sociopolitical barriers to their education as a function of the resources they can access based on their “legality.” This group may include first generation Latino immigrants who are foreign born but possess legal status and its advantages, second generation Latinos who were born in the United States and thus have the full benefits of U.S. citizenship, and other groups of legal immigrants who generally represent a higher socioeconomic class of immigrants (i.e., international students, high skilled workers) and immigrants qualifying under special humanitarian programs (i.e., refugee or asylum grantees) that grant them access to a range of social and legal benefits.

Table 2

*Parent Education Level by Group*

	Some K-12		Graduated High School/GED		Some College		College Graduate		Some Graduate School		Advanced Degree Graduate		Other	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
DREAMer Mothers	57	47.5	28	23.3	19	15.8	7	5.8	0	.0	1	.8	8	6.6
Latina/o Mothers	35	28.2	32	25.8	24	19.4	17	13.7	1	.8	6	5.0	9	7.5
Minority Mothers	12	10.5	21	18.4	28	24.6	34	29.8	2	1.8	14	12.3	3	2.6
White Mothers	11	3.9	47	17.0	55	19.9	97	35.1	8	2.9	50	18.1	8	2.9

DREAMer Fathers	51	42.5	26	21.6	16	13.3	13	10.8	1	.8	3	2.5	10	8.3
Latino Fathers	46	37.4	20	16.3	18	14.6	19	15.4	1	.8	11	8.9	8	6.5
Minority Fathers	12	10.6	21	18.6	21	18.6	31	27.4	3	2.7	19	16.8	6	59.3
White Fathers	14	5.1	55	19.9	44	15.9	87	31.4	3	1.0	67	24.2	7	2.5

## Procedures

This study received approval by the Institutional Review Board (IRB) at Arizona State University (See Appendix A). Participants were recruited through scholarship programs, colleges, universities, advocacy organizations, and ally networks that provide support to them in higher education. Specifically, for the DREAMer group, programs that provide specialized support to these students such as the Undocumented Student Project at Northeastern Illinois University were contacted for recruitment. Connections with these programs were established at the beginning of the academic year. Collaborators in these educational support services programs were presented with information about the purpose of this study and were asked to reach out to students in their programs with the recruitment script and other materials related to this study. The letter of consent as well as recruitment script used in the study are presented in Appendices B and C, respectively. Certificates of completion were created when requested by instructors who incentivized participation in their classrooms.

Students had the option to voluntarily participate in this study. If students volunteered to become participants in the study they had access to the study's battery of

measures via the web-based survey software SurveyMonkey. Participants were assigned unique participant ID numbers by the automated survey. No identifying information (i.e., full name, student ID number, contact information) was asked for in the study in order to ensure confidentiality and protect the identity of vulnerable participants. In addition, the IP address tracking option of the survey was disabled so that students are not tracked.

### **Instruments and Measures**

This study's battery of measures included a total of seven instruments that measured the constructs of interest. Four of these measures were used to assess the three distinct components of critical consciousness identified in the literature. In addition, measures of sociopolitical barriers and support were also included. The outcome variable, intent to persist, was measured with one robust and widely used instrument. Lastly, a number of relevant demographic questions were asked. These questions included year in college, number of college courses taken, self-reported GPA, gender, age, ethnicity, country of origin, income level, parents' education, and legal status. Legal status was asked by giving participants the option to select the choice that best fit their residency classification from the following list: US citizen, legal permanent resident, work visa, student visa, refugee, DACA applicant or recipient, undetermined. The last two options indicated that the student lacks "legal status" in the United States. All surveys and instruments are presented in Appendix D.

**Critical consciousness.** Four distinct instruments were used to measure the three different components of critical consciousness:

***Critical reflection.*** This first construct was measured using the Color-Blind Racial Attitudes Scale (CoBRAS) designed by Neville, Lilly, Duran, Lee, and Browne

(2000). This scale measures color-blind racial attitudes across three dimensions: Unawareness of Racial Privilege, Institutional Discrimination, and Blatant Racial Issues. According to the authors, higher scores on this scale are related to greater levels of prejudice and belief that society is just (Neville et al., 2000), and it measures awareness of institutional racism (Neville, Coleman, Falconer, & Holmes, 2005). A lack of awareness of structural discrimination is thus reflective of low critical reflection about the structural sources of oppression. This is a 20-item scale on a 6-point Likert, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Total scores range from 20 to 120, higher scores indicating denial of institutional discrimination. The scale's total score was found to be reliable, with Cronbach's alphas ranging from .84 to .91 (Neville et al., 2000). The total scale score has been found to relate to higher false consciousness, specifically victim blaming, internalized oppression, and social dominance orientation. For the purpose of tapping the construct of critical reflection, individual item scoring procedures were followed as described by the authors. Subsequently, all items were reverse scored and a total scale score was averaged. Higher scores indicate higher awareness of systemic inequities and oppression, thus displaying higher critical reflection. Sample items include "Social policies, such as affirmative action, discriminate unfairly against white people," "immigrants should try to fit into the culture and values of the U.S." and "racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin." Cronbach's alpha of .89 indicated good internal consistency of the twenty items in the total scale.

***Critical action.*** This variable was measured by the Activism Orientation Scale (Corning & Myers, 2002), which captures college students' orientation toward activist

engagement. This 35-item scale contains a 28-item subscale that measures Conventional Activism and a 7-item High Risk Activism subscale on a 3-point Likert, ranging from 0 (*extremely unlikely*) to 3 (*extremely likely*). Average scores on each subscale indicate students' propensity to engage in various collective, social-political, problem-solving behaviors considered low-risk (passive and institutionalized) or high-risk (active and unconventional). Low-Risk and High-Risk subscales obtained high internal consistency (Cronbach's  $\alpha = .96$  and  $.91$  respectively) with a sample of 296 undergraduate students (Corning & Myers, 2002). The overall scale obtained high internal consistency calculated by Cronbach's alpha in a second study with 224 college students in four distinct samples: Student Labor Union (.93), Women's Studies (.96), Sociology (.96), and Communication Skills (.95). Sample items in the Low-Risk/Conventional Activism subscale include "invite a friend to attend a meeting of a political organization or event" and "confront jokes, statements, or innuendos that opposed a particular group's cause." Sample items in the High-Risk/Unconventional Activism scale include "engage in a political activity in which you knew you would be arrested" and "engage in a political activity in which you feared for your personal safety." For the purposes of this study, total scale average scores were used. Cronbach's alpha for the 35 item scale was  $.97$ , indicating high internal consistency of the total scale in the current sample.

***Political efficacy and outcome expectations.*** This construct was measured with scales that assess social justice self-efficacy and social justice outcome expectations developed in Miller et al's (2009, 2011) Social Issues Questionnaire. The social justice self-efficacy scale is composed of 20 items that ask participants to rate their confidence to complete social justice advocacy tasks on a 10-point scale, ranging from 0 (*no confidence*



at all) to 9 (*complete confidence*). Higher scores indicate higher confidence in performing social justice behaviors. Social justice self-efficacy as defined by Miller et al (2009) “an individual’s perceived ability to engage in social justice advocacy behaviors across intrapersonal (e.g., “examine your own worldview, biases, and prejudicial attitudes after witnessing or hearing about social injustice”), interpersonal (e.g., “challenge an individual who displays racial, ethnic, and/or religious intolerance”), community (e.g., “support efforts to reduce social injustice through your own local fundraising efforts”), and institutional/political (e.g., “leading a group of coworkers in an effort to eliminate workplace discrimination in your place of employment”) domains” is very much in line with how Watts et al. (2011) conceptualized political efficacy, as “the perceived capacity to effect social and political change by individual and/or collective activism.” It appears that both definitions address the same construct, and that the Miller scale measures political efficacy across a number of domains.

The social justice outcome expectations scale is a 10-item scale that asks participants to rate their expected positive outcomes from engaging in social justice advocacy on a 10-point scale, ranging from 0 (*strongly disagree*) to 10 (*strongly agree*). Higher scores indicate higher levels of expected positive outcomes associated with social justice behaviors. Miller et al. (2007) obtained reliability estimates between .94 and .96 for the social justice self-efficacy scale, and in a subsequent study (Miller et al., 2009) the reliability scale was again .94. Sample item for social justice self-efficacy: “how much confidence do you have in your ability to challenge an individual who displays racial, ethnic, and/or religious intolerance?” For the social justice outcome expectations scale internal consistency estimates between .88 and .92 in the 2007 study; the reliability

estimate was .81 in the 2009 study. Sample item: “Engaging in social justice activities would likely allow me to reduce oppression of certain groups.” In the current study, the 20 social justice self-efficacy was found to have high internal consistency, with a Cronbach’s  $\alpha = .95$ .

**Sociopolitical engagement supports and barriers.** These constructs were measured using two subscales developed in the Social Issues Questionnaire (Miller et al., 2007, 2009). Participants are asked to rate the likelihood of experiencing support related to pursuing social justice or political engagement on 5 items and of experiencing barrier situations on 4 items, all on 10-point scales that range from 1 (*not at all*) to 10 (*extremely likely*). Higher scores in each scale indicate higher supports or barriers to social justice engagement. Miller et al (2007) found internal reliability scores ranging between .75 to .89 for the support subscale, and scores between .63 and .76 on the barriers subscale. Miller et al (2009) estimated reliability scores of .90 for the support subscale and .79 for the barriers subscale in a sample of 274 college students. The stem for both subscales is “if you were to engage in social justice activities, how likely would you be able to...” Sample items for supports include “have access to a role model (i.e., someone you can look up to and learn from by observing)” and “feel that your family members support this decision.” Sample items for barriers include “feel that you didn’t fit in socially with other people involved in the same activities” and “worry that getting involved would require too much time or energy.” The support and barriers subscales were adequately reliable in this sample, with  $\alpha = .90$  and  $\alpha = .77$  respectively.

**Intent to persist.** The Persistence/Voluntary Dropout Decisions Scale (PVDDS) developed by Pascarella and Terenzini (1980) was used to assess students’ academic

persistence decisions. The original measure consists of 30 items on a 5-point Likert-type scale ranging from 0 (*strongly agree*) to 5 (*strongly disagree*). The scale was validated with Chicana/o undergraduates (Gloria, 2005) and Latino undergraduate students (Gloria et al., 2005). In a sample of 1457 students, Pascarella and Terenzi (1980) calculated reliability estimates on each of the instruments' subscales as follows: Scale I Peer Interactions (.84, 7 items), Scale II Interactions with Family (.83, 5 items), Scale III Faculty Concerns for Student Development and Teaching (.82, 5 items), Scale IV Academic and Intellectual Development (.74, 7 items), Scale V Institutional and Goal Commitments (.71, 6 items). Gloria (2005) found that this instrument yielded adequate internal reliability (.85) with Chicana/o students, as well as with Latino undergraduate students (.86) as stated by Gloria et al. (2005). For the purposes of this study, only Scale V Institutional and Goal Commitments was used as a measure of intent to persist. Higher average scores on this scale indicate higher commitment to persist through graduation at the students' institution of higher education. This subscale made the largest contribution, compared to the other subscales, in differentiating "persisters" and "voluntary dropouts," with persisters tending to have significantly higher scores (Pascarella & Terenzini, 1980). Additionally, both institutional and goal commitment items were predictive of actual persistence when examined separately in a longitudinal study (Pascarella & Terenzini, 1983), with institutional commitment being a stronger predictor of persistence than goal commitment. Sample items include "it is important for me to graduate from college," "I am confident that I made the right decision in choosing to attend this university," and "it is not important to me to graduate from this university." Items 3, 4, and 6 were reverse coded as indicated to reflect the negative wording of the items. The directionality of the

Likert-scale was switched for this study so that higher scores would indicate higher commitment to persist through graduation. The intent to persist scale had good internal reliability in this sample, with a Cronbach's  $\alpha = .83$ .

### **Research Design and Analytic Strategy**

This study is a cross-sectional one by design, where participants completed quantitative measures at one point in time. Specifically, the same four groups of participants (e.g., immigrant students, Latinos with legal status, Non-Latino minorities with legal status, and Whites with legal status) were engaged at the same general point in time (i.e., fall 2015 semester) and were invited to complete the same aforementioned battery of measures. The data collected in the study were analyzed using path analysis (Ahn, 2002), a procedure of structural equation modeling (SEM), in MPlus Version 7 (Muthen & Muthen, 2012) in order to test how the proposed social cognitive structural models of critical consciousness and intent to persist fit the group of interest, immigrant students, in comparison to the other three groups and in order to test hypotheses related to relational paths among observed or manifest variables.

Prior to conducting the analyses, the Shapiro-Wilk test of normality was conducted in order to explore whether the data were normally distributed. Results indicated that the data were significantly different from a normal distribution ( $p < .05$ ), and thus the null hypothesis of normality was rejected. Visual examinations of the data via histograms and Q-Q Plots on each variable and each item revealed that responses tended to be skewed, positively or negatively, toward either end depending on the variable, and reflected non-linearity.

A total of 42 cases were removed listwise from an initial sample of 680 students due to high amount of missing scores on measures (i.e., missing more than 75% the survey responses), resulting in a final sample of 638. The proportion of missing responses of intent to persist was .5%, 0% on critical reflection, 8% on activism, 8% on political self-efficacy, 10.5% on political outcome expectations and 10% on both sociopolitical support and barriers scales. In addition, Little's Missing Completely at Random (MCAR) test was conducted prior to analyses to examine data missingness. Results revealed that the percent of missing data on each item ranged from .0 to 1.8. Little's MCAR Chi-Square,  $\chi^2(465) = 428.36, p > .05$ , failed to reject the null hypothesis that the data were not missing completely at random. These pieces of evidence indicate that the data are missing completely at random. In order to address the non-normality and missingness concerns, the data were analyzed in MPlus using Maximum Likelihood Robust (MLR) estimator and Full Information Maximum Likelihood (FIML). The MLR estimator uses parameter estimates with standard errors and Chi-Square statistic that are robust to non-normality and non-independence of observations. FIML allowed using all available data to estimate model parameters by labeling missing cases with the value (99).

For analyses, a sequential procedure was used in order to test the hypotheses related to critical consciousness and intent to persist in the four student groups of interest using path analysis. First, the fit of both of the competing social cognitive models of critical consciousness derived from theory (See Figure 2) were each tested for goodness of fit separately, allowing paths among variables to be free across all four groups. Second, a Satorra-Bentler scaled Chi-Square difference test (Satorra & Bentler, 2001;

Satorra & Bentler, 2010) was calculated in order to test differences between these two nested models by evaluating the null hypothesis that the more constrained model fits as well as the less-constrained model. This difference test uses a Chi-Square correction and it is the appropriate difference test to use with MLR estimation. Third, the model that fits better was improved by examining modification indices and relational paths, in order to make modifications and design an improved model, grounded in the data. That model was tested for fit and for structural invariance by testing with fully constrained paths to equality across the four groups of interest, as well as by systematically constraining one path at a time and examining the fit of the model in comparison to the same model when unconstrained. The aim of this last step was to arrive at a data driven model that identifies invariant paths across groups, as well as free paths reflective of differences among groups.

Recommendations outlined by Kline (2015) were followed in determining model fit and misspecification using a variety of global fit indices such as chi square ( $\chi^2$ ) tests of model fit, the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker Lewis Index (TLI), confidence intervals, and the Standardized Root Mean Square Residual (SRMR). Lastly, directional correlations and covariances amongst manifest variables were also evaluated in the final path model in order to test hypotheses related to specific relations among variables.

**RESULTS****Structural Invariance**

Path analyses were conducted to test two competing models derived from theory (See Figure 2) that specified hypothesized relationships among variables related to critical consciousness and academic achievement in underserved college students. Manifest variables included critical reflection, critical action, political self-efficacy, political outcome expectations, sociopolitical supports, sociopolitical barriers, and intent to persist through college graduation. Each manifest variable was calculated by computing total scale scores from established scales that measure these constructs of interest. Means, standard deviations, and correlations among variables across the four student groups of interest are presented in Tables 3 and 4.

Table 3

*Summary of Intercorrelations, Means, and Standard Deviations of Measures in Undocumented Immigrant Students and Latina/o Students with Legal Status*

Measure	1	2	3	4	5	6	7	Mean	SD
1. Intent to Persist		-.01	-.00	-.03	.15	-.07	-.18	4.22	.95
2. Political Self-Efficacy	-.13		.67	.47	.33	.52	.04	5.65	1.95
3. Political Outcome Expectations	.14	.39		.40	.29	.62	.17	6.39	1.87
4. Critical Action	-.30	.41	.19		.33	.40	.21	1.19	.75
5. Critical Reflection	.12	.30	.34	.29		.09	.02	4.53	.82
6. Supports	-.05	.34	.29	.03	.15		.28	5.98	2.13
7. Barriers	-.22	-.07	-.14	-.04	.03	-.29		4.15	2.16

<i>Mean</i>	4.35	6.35	7.10	1.54	4.63	6.93	3.60
<i>SD</i>	.79	2.01	2.02	.59	.60	1.82	2.22

*Note.* Results for undocumented immigrant students displayed below diagonal with means and standard deviations at the bottom of table. Results for Latina/o students with legal status displayed above diagonal with means and standard deviations on right-hand side of table.

Table 4

*Summary of Intercorrelations, Means, and Standard Deviations of Measures in Non-Latina/o Minority Students with Legal Status and Non-Latina/o White Students with Legal Status*

Measure	1	2	3	4	5	6	7	<i>Mean</i>	<i>SD</i>
1. Intent to Persist		.06	.18	-.11	-.19	.18	-.08	4.01	1.10
2. Political Self-Efficacy	.18		.49	.49	.31	.38	-.01	5.36	1.99
3. Political Outcome Expect	.20	.62		.37	.37	.63	.05	5.94	1.85
4. Critical Action	.04	.40	.30		.46	.23	-.06	1.08	.67
5. Critical Reflection	.18	.34	.28	.23		.24	-.13	4.12	.92
6. Supports	.03	.55	.64	.18	.16		-.03	5.82	2.04
7. Barriers	-.33	.08	.15	.10	-.15	.10		3.88	1.83
<i>Mean</i>	4.01	5.84	6.39	1.19	4.26	5.87	4.17		
<i>SD</i>	.98	2.04	1.96	.67	.81	2.24	2.35		

*Note.* Results for non-Latina/o minority students with legal status displayed below diagonal with means and standard deviation at the bottom of table, results for non-Latina/o White students with legal status displayed above diagonal with means and standard deviations on right-hand side of table.

Model 1 is a less constrained model grounded in theory where directional relationships among predictors, sociopolitical supports and barriers to critical reflection, critical action, and political outcome expectations are allowed. Model 2 constitutes a more constrained model where relationships among predictors are more constrained.



These two structural path models were tested for fit separately across four different groups of interest: 1) immigrant students without legal status, 2) Latino students who have legal status, 3) non-Latino minority students with legal status, and 4) Whites with legal status.

Results from these tests of model fit are presented in Table 5. Model 1, the less constrained model, was tested across the four groups (i.e., immigrants with no legal status, Latinos with legal status, Non-Latino minorities with legal status, and Non-Latino Whites with legal status) allowing the relationship paths to be free. The results from this model indicate very good model fit,  $\chi^2(8) = 10.30, p > .05$ , a RMSEA of .04 [CI: .00, .10], CFI of .99, TLI of .97, and SRMR was .02. Subsequently, the same procedure for testing the model fit, allowing free relational paths across the four groups, was applied to Model 2. Global fit indices revealed a chi-square statistic of  $\chi^2(24) = 186.97, p < .001$ , an RMSEA of .21 [CI: .18, .23], CFI of .71, TLI of .27, and SRMR of .10. These results indicate that Model 2 fits the data very poorly across all four groups. In order to test differences in Chi-square test statistics for these two nested models, a Satorra-Bentler Tests (Satorra & Bentler, 2001; Satorra & Bentler, 2010) was conducted as well as  $\Delta$ CFI. The difference between the Satorra-Bentler (S-B) test and a regular difference test is that a corrected  $\chi^2$  is computed as part of the calculation. This is the appropriate difference test to compute given that Maximum Likelihood Robust (MLR) was used in analyses in order to address non-normality in the data. Results from this difference test, S-B Scaled  $\chi^2_{diff}(16) = 177.77, p < .001, \Delta$  CFI .28, indicated that Model 1 fit the data significantly better than Model 2. Taken together, these pieces of evidence suggested that the superior model

was Model 1, which was a less constrained model derived from theory and also incorporated additional paths for exploration.

Table 5

*Model Test Results Summary for Critical Consciousness and Intent to Persist*

	$\chi^2$	<i>df</i>	RMSEA	RMSEA <sub>90</sub>	CFI	TLI	SRMR
Model 1 Free Paths By Group	10.30	8	.04	.00, .10	.99	.97	.02
Model 2 Free Paths By Group	186.97*	24	.21	.18, .23	.71	.27	.10
Satorra-Bentler Scaled $\chi^2$ Diff Test Model 2 vs. Model 1	177.77*	16			.28		
Model 1B Free Paths By Group	16.38	16	.01	.00, .08	.99	.99	.03
Satorra-Bentler Scaled $\chi^2$ Diff Test Model 1 vs. Model 1B	6.23	8			.00		
Model 1B Constraining Paths to Equality By Group	132.63*	67	.08	.06, .10	.90	.89	.10
Model 3 Partially Constraining Paths to Equality	52.08	46	.03	.00, .06	.99	.98	.05
Satorra-Bentler Scaled $\chi^2$ Diff	35.72	30			.00		

---

Test Model 3  
vs. Model 1B

---

*Note.* \*  $p < .001$ .

To further improve Model 1, modification indices and strength of relational paths were examined. These indicators suggested that two paths be removed from the model. These paths were sociopolitical barriers to political self-efficacy and critical action to political outcome expectations. The removal of these paths led to the testing of a data driven model titled Model 1B. When tested for goodness of fit, results indicated that this model fit the data well,  $\chi^2(16) = 16.38, p > .05$ , an RMSEA of .01 [CI: .00, .08], CFI of .99, TLI of .99, and SRMR of .03. Additionally, an S-B difference test comparing this model to Model 1, the best fitting model derived from theory, revealed both models fit the data equally well, S-B Scaled  $\chi^2_{\text{diff}}(16) = 16.38, p > .05, \Delta\text{CFI} .00$ . These results support that model 1B fits the data very well, just as well as Model 1, despite being a more constrained version of that model, thought not as constrained as Model 2.

In order to test for structural invariance of Model 1B across the four groups of interest, all paths among variables were fully constrained to equality across the four groups. That model did not fit the data very well,  $\chi^2(67) = 132.63, p < .001$ , RMSEA = .08, [CI: .06, .10], CFI = .90, TLI = .89, and SRMR = .10. These results suggest that the model is not invariant across cultural groups, and that relationships among variables may indeed vary in strength depending on the group. In other words, results suggest that student group (i.e., undocumented immigrant, Latina/o with legal status, Non-Latina/o minority with legal status, and Non-Latina/o Whites with legal status) moderates the relationships between some of the variables in the model. In order to determine what

relationships student group moderates, and where the model is invariant, a systematic approach was adopted to search for such paths. A total of 17 models were calculated, one per path in the model, constraining on relational path to equality across the four groups at a time. The fit of each of the 17 models was then compared to the fit of Model 1B using S-B difference tests to determine which paths could be constrained to equality across groups (See Appendix E). This led to identifying 10 paths that resulted in non-significant chi-squared difference tests in relation to Model 1B, paths that did not worsen the fit of the model by being constrained to equality. These paths were: political self-efficacy to intent to persist, political outcome expectations to intent to persist, sociopolitical barriers to intent to persist, critical action to political self-efficacy, critical reflection to political self-efficacy, support to political self-efficacy, political self-efficacy to political outcome expectations, critical reflection to political outcome expectations, barriers to political outcome expectations, and support to critical reflection.

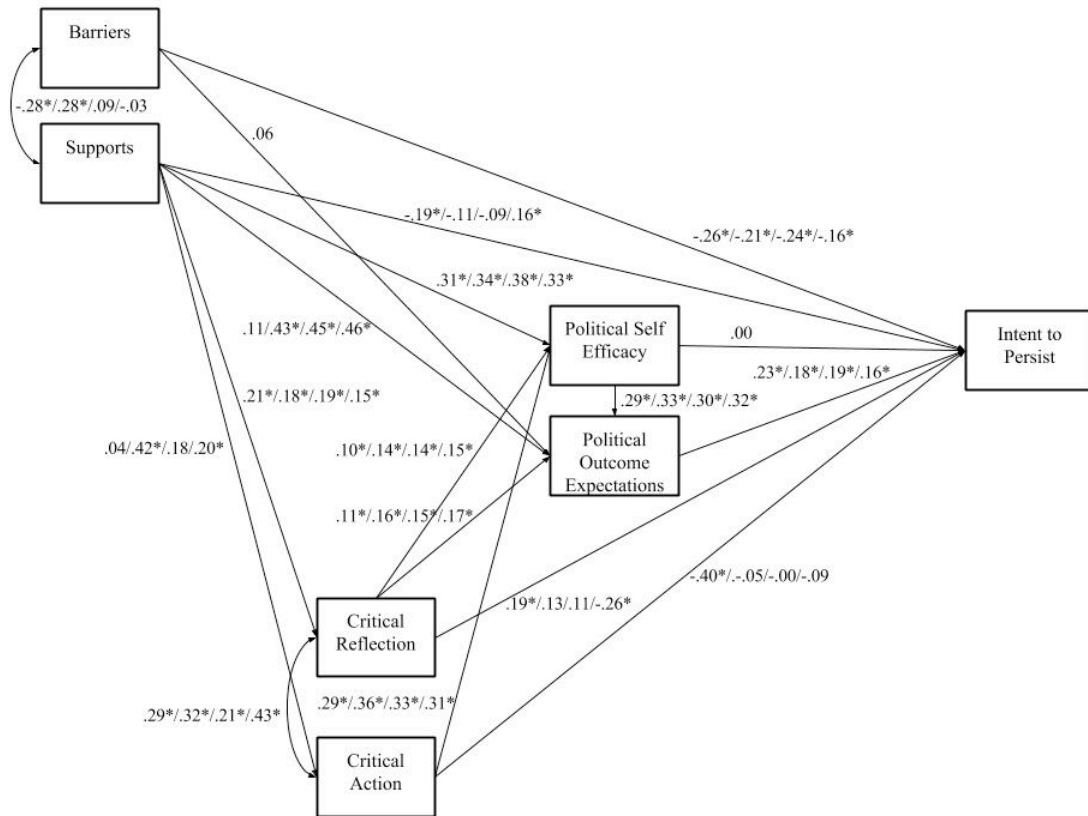
These results from difference testing were used to create a new and final model, Model 3, which constrained the aforementioned paths to equality across and allowed the remaining 7 paths to be freed across the four groups. Model 3, partially constrained to equality, was tested for goodness of fit. Results indicated a  $\chi^2(46) = 52.08, p > .05$ , RMSEA of .03 [CI: .00, .06], CFI of .99, TLI of .98, and SRMR was .05. These indices of global fit suggest good fit for Model 3 in this data. Finally, Model 3 was compared to Model 1B revealing that both models fit the data adequately, S-B Scaled  $\chi^2_{\text{diff}}(30) = 35.72, p > .05, \Delta\text{CFI} = .00$ . These results point toward Model 3, partially constraining 10 relational paths to equality across the four groups and freeing 7 paths, as the best

structural model relating critical consciousness constructs to academic intent to persist in this sample of diverse college students.

### **Path Model Results**

Given that Model 3 was found to be the best fitting model from the ones tested in the present study after a sequential procedure that tested for structural invariance, results from relationships among variables as specified are reported here and in Figure 3. When the strength of the path was the same across groups, the single index is presented in the Figure. When the strength of the path differed by group, those indices are presented in the Figure separated by a slash for undocumented immigrant students first, for Latina/o students with legal status second, for Non-Latina/o minority students third, and for Non-Latina/o White students fourth. Structural paths revealed that sociopolitical supports and barriers differed in their relationships across groups. For undocumented immigrant students, the covariance relationship was negative and statistically significant with moderate strength. For Latina/o students with legal status, the relationship was moderately strong, positive and detected at a statistically significant level, indicating that this group experiences both supports and barriers in a related manner. For Non-Latina/o cultural minorities and Non-Latina/o Whites with legal status, the relationships were not statistically significant between supports and barriers.

Figure 3. Standardized Parameter Estimates Among Variables in Final Model with Partially Constrained Paths to Equality



Note. \*  $p < .001$ . Parameters are displayed by group of students, separated by slashes. First group is undocumented immigrant students. Second group is Latina/o students with legal status. Third group is Non-Latina/o minority students with legal status. And fourth group is Non-Latina/o White students with legal status.

Sociopolitical supports were predictive of critical action with weak to moderate strength for Latina/o students with legal status and White students with legal status, but not for undocumented or Non-Latina/o minority students. Supports were also predictive of critical reflection, with weak strength across groups, and political self-efficacy, with moderate strength across groups. Supports were also strongly predictive of political outcome expectations for all groups of students, except for undocumented students. Decreases in intent to persist through college graduation was weakly predicted by

sociopolitical supports for undocumented immigrants, positively and weakly for White students, and not predictive for Latina/o or other minority students. On the other hand, sociopolitical barriers were predictive, with moderate strength, of lower intent to persist for minority groups, and with weak strength for White students. Barriers did not predict political outcome expectations in a way that would be detected at a statistically significant level.

As expected, critical reflection and critical action correlated moderately for all groups. Furthermore, critical reflection was weakly related to political self-efficacy and of political outcome expectations for all groups of students. Critical action was a negative and moderate predictor of intent to persist in undocumented immigrants, though it did not predict intent to persist in other groups of students. As expected as well, political self-efficacy was moderately predictive of political outcome expectations in all groups. Critical reflection predicted intent to persist in undocumented immigrants students with weak strength, but not for the other minority students with legal status. However, for White students with legal status, critical reflection was a negative and moderately strong predictor of their intent to persist at their university. Finally, political outcome expectations were positive and moderately strong predictors of intent to persist in college for all four groups of students.

### **Post-Hoc Analyses**

In order to deeply explore where each of the seven relational paths that were allowed to be free across groups in Model 3 differed, a series of systematic tests was conducted. Based on examination of the strength of relationships across groups in the seven free paths, a total of sixteen additional difference tests were conducted. Each of

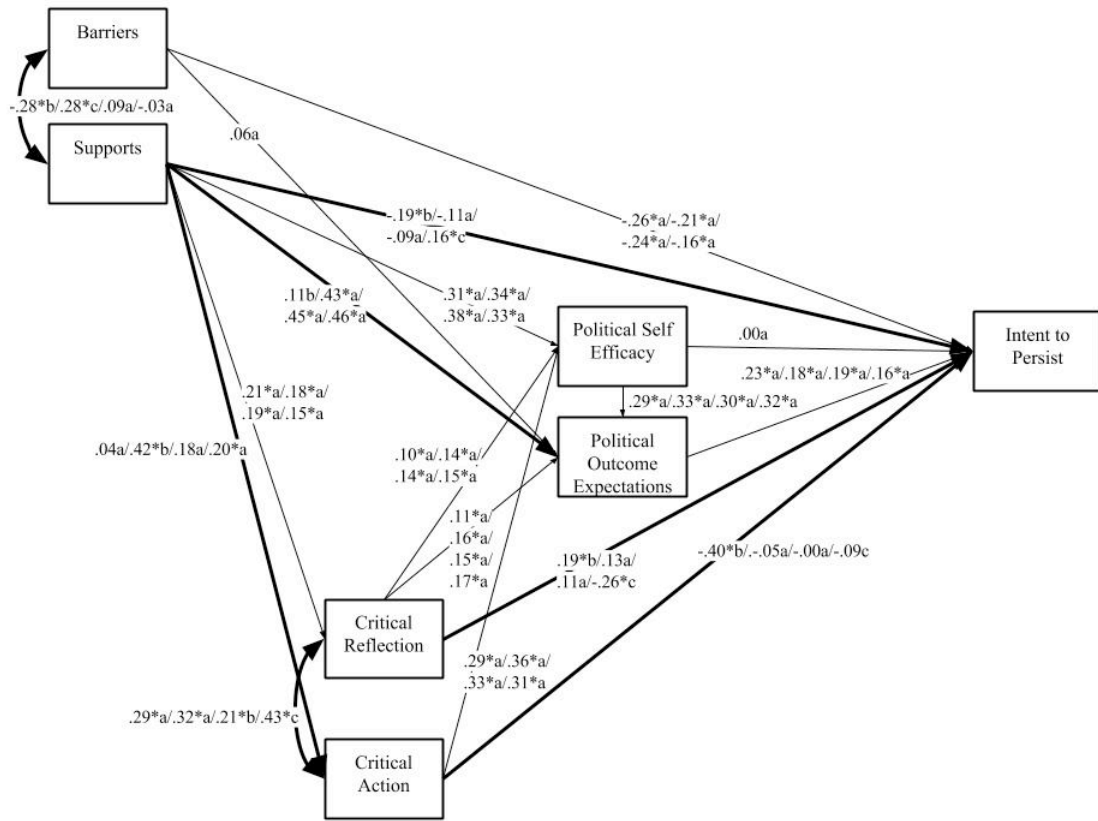
these tests involved testing the final partially constrained Model 3 by further constraining the path of inquiry across groups, except in group(s) hypothesized as differing from the others. Such evaluation was intended to provide evidence as to where each of the seven paths was different across groups. Each of the constrained sixteen models was compared to Model 3 partially constrained using Satorra-Bentler Scaled Chi-Squared Difference Tests. The null hypothesis tested was that both models, each of the new ones compared to partially constrained Model 3, fit equally well. Rejecting the null indicated worse fit, thus indicating the individual path under observation may not be freed for a particular group and constrained for others. Failing to reject the null thus indicated that fit was maintained while isolating the hypothesized difference across groups in the particular path. Results from the sixteen S-B tests are reported in Appendix F and visually in Figure 4.

These tests provided evidence to support that as suspected, the relationship between supports and intent to persist was stronger in non-Latina/o White students in comparison to all other groups. Both non-Latina/o White students and DREAMers experienced the relationship between supports and intent to persist in comparison to other groups. For White students, higher supports were related to increases in intent to persist, while for DREAMers higher supports were related to decreases in intent to persist. The relationship between critical reflection and intent to persist was different for DREAMers and non-Latina/o White students compared to other groups. For DREAMers, higher critical reflection was related to higher intent to persist. However, the opposite was the case for non-Latina/o White students, as higher critical reflection was related to lower intent to persist for them. The relationship between critical action and intent to persist was negative and strong for DREAMers compared to all other groups. The relationship



between critical reflection and critical action was different for non-Latina/o minority and White students compared to Latina/o and DREAMer students, with it being stronger in non-Latina/o White students, moderate for Latinas/os and DREAMers, and weak for minorities. Latina/o students with legal status experienced a stronger relationship between support and critical action compared to all other groups. The relationship between support and political outcome expectations was different, not significant, in DREAMers compared to all other groups. Lastly, both DREAMers' and Latina/o students with legal status experienced the relationship between support and barriers differently from non-Latina/o minorities and White students in that the correlation between these two variables was negative for DREAMers but positive for Latina/o students.

Figure 4. Standardized Parameter Estimates Among Variables in Final Model with Partially Constrained Paths to Equality and Differentiated Parameters



Note.  $* p < .001$ . Parameters are displayed by group of students, separated by slashes. First group is undocumented immigrant students. Second group are Latina/o students with legal status. Third group is Non-Latina/o minority students with legal status. And fourth group is Non-Latina/o White students with legal status. Paths with darker lines were tested for differentiation across groups. Parameters that are equal are marked as “a” and unequal parameter means are marked as “b” and “c.”

## Chapter 5

### **Discussion**

The goal of the present investigation was to answer four broad research questions relating to the educational attainment of disadvantaged cultural groups who tend to underperform compared to mainstream cultural groups. Specifically, the aim was to use a social cognitive lens to better understand the role that social justice engagement has on the academic intent to persist of immigrant students who lack legal immigration status in the U.S., also known as DREAMers, as well as their peers who have legal status (i.e., permanent residence, U.S. citizenship) and belong to cultural groups such as Latina/o, Black or African American, Asian or Asian American, Native American, and White. The first question related to the merging of the relevant and overlapping aspects of Social Cognitive Career Theory (SCCT, Lent et al., 1994; Lent & Brown, 2013) and Critical Consciousness (CC, Freire, 1973; Freire, 2000) to create a new, testable model relating critical consciousness to educational attainment outcomes such as intent to persist.

The second question pertained to the relationships among three components of critical consciousness (i.e., critical reflection, critical action, and political efficacy) identified by theorists in the past couple of decades (Watts et al., 2011), and how these relationships may vary across the four student groups. The third question aimed to further unpack the theoretical linkage between critical consciousness and academic intent to persist, with hypotheses about how each component of critical consciousness varies in how it relates to intent to persist across the four student groups, as these groups vary in the marginalization they experience as evidenced by their educational achievement. A fourth question explored how supports and barriers, constructs identified as important by

researchers in both SCCT and CC veins of study, relate to both critical consciousness and academic intent to persist. This chapter discusses the findings from model testing and path analysis to test the research questions, and it connects these findings to the extant quantitative and theoretical literature on critical consciousness, with suggestions for research and practice.

### **An Integrative Social Cognitive Model of Critical Consciousness**

Two competing models were created in an attempt to integrate SCCT and CC into a testable framework. The models are described in more detail in Chapter 2. In summary, a constrained model (Model 2) followed SCCT and CC theory very closely, while a less constrained model (Model 1) was also derived from theory, but explored additional paths among manifest variables. Variables in both models were the same and the models were differentiated in how variables related to one another. These manifest variables were intent to persist through college, political self-efficacy, political outcome expectations, critical reflection, critical action, and supports and barriers to engaging in sociopolitical activity. Both models were tested for goodness of fit separately, and their global fit indices were compared in order to determine which model more adequately represented how these constructs relate in the present data. That examination pointed toward Model 1, the less constrained model, as the preferable one.

To further improve on that model, local fit indices and relational paths were examined, which led to the deletion of two unnecessary paths. Further, that new model was subjected to systematic evaluation, which led to a clearer understanding about which relational paths were different across the four groups of students and which were essentially equal across groups. A final model was then created, which allowed 7 paths

to be different across groups and 10 paths to be constrained across, and that model fit the data adequately. The partially constrained model is presented with the strength of its relational paths in Figure 3. The new integrative model links constructs of critical consciousness to academic intent to persist, and suggests that the student group (i.e., undocumented immigrant, Latina/o with legal status, Non-Latina/o minority with legal status, and Non-Latina/o White with legal status) moderates the strength of 7 of its paths.

This new integrative social cognitive model of critical consciousness signals that it is possible to merge Social Cognitive Career Theory and Critical Consciousness at a conceptual level to understand the academic achievement of minority students who experience systemic disenfranchisement. Empirical evaluation also provides evidence that this integration is supported by the data. This study presents initial evidence to support this integrative model, which aims to understand underserved students' academic intent to persist in relation to their agency to change systems that sustain the unjust use of power that holds back their success in education and society. To date, no such model exists and this study fills gaps in the literature on the academic achievement of diverse students. The hope is that this study adds clarity about how sociopolitical inequities, and students' responses to them, contribute to students' higher education journeys.

### **Critical Consciousness Across Student Groups**

In the integrative social cognitive model of critical consciousness, specific associations between three components of critical consciousness were identified by closely following recent conceptual advances as highlighted by Watts et al. (2011). These three components are critical reflection, or oppressed students' analysis of the unjust conditions that impact them and how to begin to change them; critical action, or

engagement in activities such as advocacy and activism to address social inequities; and political self-efficacy, or students' appraisal of their ability to effect social change. A fourth component was added in this new model, inspired by SCCT and the study of self-efficacy as applied in education and vocational research. The fourth component is political outcome expectations, or students' expectations of what their abilities to effect sociopolitical change may lead to for them.

Consistent with theory (Watts et al., 2011) and with my hypothesis, critical reflection and critical action were correlated. Interestingly, this relationship has different strength depending on the group of students. The data revealed that these two variables relate more strongly for non-Latina/o White students with legal status, with comparable strength for undocumented immigrant students and for Latina/o students with legal status, and with lower strength for non-Latina/o minority students with legal status. This finding is in line with research by the Center for Information and Research on Civic Learning and Engagement (Foster-Bay, 2008), which found that Whites tend to have higher rates of civic participation, while racial/ethnic minorities and immigrants are much less likely to be civically engaged. Socioeconomic status, community, and cultural factors may present greater and more abundant barriers for these latter groups to engage actively. Bowman's (2011) meta-analysis on the relationship between diversity experiences (i.e., opportunities for diverse groups of students to connect with each other) and civic engagement (i.e., critical action) found that diversity experiences were associated with higher civic attitudes, intentions, and behaviors. In the absence or limited availability of diversity experiences for minority students (Spanierman et al., 2008), mainstream

students may have an advantage in how they experience critical reflection and critical action.

The positioning of this correlation relative to other variables in the model is new in critical consciousness research. Findings support that critical reflection and critical action may be positioned as parallel in the same space, correlated, and together predicting political self-efficacy. Each of these two variables was predictive of political self-efficacy in a way that may be considered statistically equal across all four groups. Critical reflection was a weak predictor of higher political self-efficacy, while critical action was a moderate predictor of political self-efficacy across all four groups. The strength of these two relationships toward political self-efficacy supports the notion that students need to go beyond sophisticated analysis and move toward action in order to achieve what is described as a mental state of liberation (Watts et al., 1999, Watts et al., 2003), where confidence in their abilities to effect change is constant. Indeed, Watt et al.'s (1999) five-stage theory of sociopolitical development suggests that if students remain only analytical of sociopolitical inequities and injustice without the support necessary to take action and gain confidence for bringing about change to these conditions, they may in their analysis perceive the system as predatory and immutable. In theory, that may lead to them remaining in an adaptive stage, where they sustain systemic inequities and accommodate themselves in order to receive social and material rewards. Thus, findings from the present study are in line with theory in supporting that both reflection and action are related to a higher sense of political self-efficacy.

Lastly, this research builds on recent work conducted to understand critical consciousness development among marginalized youth (Diemer & Li, 2011) by including

a new component in critical consciousness: political outcome expectations. Outcome expectations were formally separated from self-efficacy as a construct by Bandura (1986) and later on by others (Shell et al., 1989; Zimmerman, 2000). They are positioned parallel to self-efficacy in SCCT (Lent et al., 1994), and are thought of as being predicted by self-efficacy in some cases and being correlated with it in some others. Recent research is placing more attention on outcome expectations as a variable that is useful in predicting educational and vocational outcomes alongside self-efficacy (Fouad & Guillen, 2006). Thus, the inclusion of this variable as a component of critical consciousness is reasonable. In line with SCCT research, political self-efficacy was found to predict political outcome expectations with moderate strength for all four groups in the present study. Hence, higher self-appraisals by students about their abilities to effect social change were related to higher beliefs that engaging in sociopolitical action may lead to positive outcomes for themselves and others. Critical reflection, was also predictive of political outcome expectations for all groups as expected. This is a sound relation, since both variables are largely cognitive and involve analysis of one's behaviors and conditions in relation to the sociopolitical context. Contrary to a priori hypotheses, critical action was not predictive of political outcome expectations. Moreover, model tests led to the removal of the path between these two variables for model improvement.

### **Critical Consciousness and Academic Intent to Persist**

No study to date has explored the connection between critical consciousness and academic intent to persist of undocumented immigrant students, as well as their counterparts who have legal status in the U.S. However, this line of research is making headway more broadly and in recent years it has suggested that critical consciousness is



strongly related to urban youths' vocational identity, commitment to future careers, and work salience (Diemer & Blusten, 2005). Longitudinal investigation also indicates that sociopolitical development effects youths' occupational expectations as early as 12<sup>th</sup> grade, and that effect translates into occupational attainment in adulthood (Diemer, 2008; Diemer & Hsieh, 2008). More recently, McWhirter and McWhirter (2015) operationalized critical consciousness as having two dimensions in a freshly developed scale for Latina/o high school students: critical agency and critical behavior. They found that their critical consciousness measures related to Latina/o students' postsecondary education plans, vocational outcome expectations, and engagement with the school and community. Building on these foundational studies, the current study contributes to the growing body of knowledge about the connection between critical consciousness and vocational/career development of marginalized youths more broadly by extending this investigation to marginalized college students and their academic attainment in college.

In line with hypotheses for the present study, critical action was strongly predictive of intent to persist for undocumented immigrant students and not for other student groups who have the advantage of having legal status. However, the predictive relationship was negative, thus suggesting that higher propensity to engage in critical action (e.g., student activism) was related to lower intent to persist in college for DREAMers. It is possible that this effect may be connected to the considerably high risk that undocumented students shoulder in order to take action to change the systems that disadvantage them. For undocumented immigrant students, the risks of participating in actions such as peaceful protests (i.e., marching, rallies, displaying signs) or unconventional social action (i.e., arrests, hunger strikes, civil disobedience) may be very

high as it could potentially lead to detention and deportation from the U.S. (Galindo, 2012; Zimmerman, 2011). The element of risk in explaining the inverse relationship between activism and intent to persist needs to be further explored in future research. An alternative explanation is that investment of time and resources in activism may inadvertently become an interference for students.

Critical reflection was a positive predictor of intent to persist in undocumented students as hypothesized. This finding provides support to Freire's (1973) notion that as the underserved analyze systemic inequities that sustain their conditions (e.g., poverty) on their own, instead of being treated as blank vessels where information may be deposited by educators, they would in turn become more invested in their educational advancement. The assumption made by this theory is that by analyzing systems of power, the disadvantaged may arrive at the understanding that their education is a vehicle to challenge societal inequities. However, findings from this study seem to suggest that the level of societal disadvantage experienced by students may be key in the link between reflection and intent to persist. For minority student groups with legal status (i.e., Latina/o, Black or African American, Asian or Asian American, and Native American), and who may experience fewer and lower barriers based on their experienced "legality," critical reflection did not predict intent to persist.

Interestingly as well as puzzlingly, critical reflection negatively predicted intent to persist with moderate strength for White students who had legal status. This relationship is reflective of what Watts et al. (1999, 2003) described as the precritical stage in sociopolitical development, a middle point in the journey from being unaware of systemic asymmetry to being critically conscious and behaving in a liberated fashion.

According to Watts et al. (1999) youth in this stage question the value of adapting and supporting systems that perpetuate inequality. A plausible explanation to explore in future research is whether it is possible that as White students engage in higher critical analysis, they become aware of their White privilege (McIntosh, 1992; 1998) as well as color-blind racial attitudes (Neville, Worthington, & Spanierman, 2001) and other strategies that educators and educational institutions may use in order to avoid addressing Whiteness, such as liberalist notions of individualism and meritocracy (Solomona et al., 2005). Perhaps these realizations may relate to lower commitment to persisting at institutions that may be part of asymmetric systems. This is an unusual finding and one that should be replicated in future research.

Also in contradiction with the present study's hypotheses, regardless of the student group, political self-efficacy did not predict students' intent to persist in higher education. This finding is intuitively a contradictory one to a traditionalist understanding of self-efficacy theory as originally postulated by Bandura (1977). However, this finding is more complete and sound when considered along the following piece of evidence. Political outcome expectations were positively predictive of higher intent to persist in college with moderate strength for all student groups equally. Although that relational path was constrained to equality for all groups statistically, the minor differences between the strength of that path per group mirrors the level of inequity that each group may experience, which is the opposite of the level of educational attainment by group. In other words, the more disadvantaged group (i.e., undocumented immigrants) displayed the strongest relationship between political outcome expectations and intent to persist, while the least disadvantaged group (i.e., White students with legal status) had the least

strength in that relationship. These two pieces of evidence are in line with postulations made by Lent et al. (1994, 2013) that outcome expectations accompany self-efficacy as a predictor of vocational/career outcomes, and observations made by Fouad and Guillen (2006) about the important and understudied role of outcome expectations. These findings suggest it is not students' confidence in effecting sociopolitical change, but rather their expectations for how their actions will effect change, that may lead to increases in their intentions to persist in college, and groups with higher disadvantage such as undocumented immigrants benefit most from these expectations.

**The role of supports and barriers in engaging in critical consciousness.** What leads young people from oppressed and marginalized communities to take collective action to change unjust conditions? As acknowledged by Watts et al. (2011), there is no answer that may be found in research to date, though sociopolitical development theory (Watts et al., 1999) proposed a stage by stage framework that posits the psychological and action-oriented behavioral movement that takes place in marginalized youths as they awake from unawareness and take steps toward liberation. They described open-ended discussion questions that supportive practitioners who work in educational settings in marginalized communities may use to facilitate youths' critical reflection and movement toward action. That support to engage in critical action, or the opposite of it, may be the key to understanding how youth become critically activated.

Specifically, as described by Miller et al. (2009) these supports mean that when young people decide to engage in social justice action they need access to role models and mentors, support and encouragement for their decision by important people in their lives, and acceptance of others who are engaged in those activities. On the opposite end,

worry about time and energy required to participate, feeling unwelcomed, and feeling discouraged and pressured to not participate by important people in their lives are proximal barriers to students' sociopolitical development. Diemer, Kauffman, Koenig, Trahan, and Hsieh (2006) conducted an initial examination and found that adolescents' perceived support from important people in their lives (i.e., peers, family, and community members) to challenge racism, sexism, and social injustice was related to both critical reflection and critical action. That study began to uncover how daily interactions with marginalized youth shape their critical consciousness.

When testing the integrative social cognitive model of critical consciousness in this study, in line with research hypotheses, it was found that the four groups vary in the way they experience these supports and barriers to engaging in critical action. For undocumented immigrant students, the relationship between supports and barriers is negative and moderate; for Latina/o students with legal status, the relationship is positive and also moderate, and there is no significant relationship present for Non-Latina/o minorities and Whites. These results suggest that while higher supports may equate to lower barriers and vice versa for DREAMers, Latina/o students with legal status experience increase in supports as well as increases in barriers. This finding produces a new question to examine in future research, which is whether the resources that DREAMers may have in the form of important people in their lives may be limited, thus creating a support/barrier dichotomy where increasing one means lowering the other. Latina/o students with legal status may perhaps have access to more people, perhaps because they and their families have been in the U.S. longer, who may support or discourage their sociopolitical engagement.

Supports to engage in sociopolitical activity were predictive of higher critical reflection among undocumented immigrant students, Latina/o students with legal status, Non-Latina/o minority students (i.e., Black, Asian, and Native American) with legal status, and non-Latina/o White students with legal status. Additionally, supports also predicted critical action in Latina/o students with legal status and for Non-Latina/o White students with legal status. For all four student groups, supports were a moderately strong predictor of political self-efficacy as well. These pieces of evidence begin to illuminate just how key of a role the support of “important people” (e.g., educators, counselors, higher education practitioners, administrators, mentors, role models, and family members) may play in encouraging reflection about unjust conditions, in moving Latina/o and White students to action, and in increasing the belief in all students that they can be agents of social change. These findings are in line with previous work by Diemer, Hsieh, and Pan (2009) on a large sample of youth, which found that supports by peers, parents, and teachers led to motivation for sociopolitical development.

A surprising finding in the current study that contradicted my hypotheses is that supports were not related to intent to persist through college graduation in cultural minority students who have legal status. For non-Latina/o White students, however, supports to engage in social justice were positively predictive of higher intent to persist. Disquietingly, supports for engaging in social justice were a negative predictor of intent to persist in college for DREAMers in this study. Due to the barriers that DREAMers face, they may have fewer resources available in terms of energy and time to respond to encouragement to participate in critical action. It may be that for White students who have legal status, receiving encouragement to participate in political activity may be

experienced positively and translate into more connectedness to the institution of higher education and thus higher intent to persist. Critical action for this group may perhaps be perceived as leadership and result in positive institutional consequences. However, for cultural minorities, particularly for undocumented immigrants, the risks of participating in critical action may be much higher (McAdam, 1986). As minority students are encouraged to participate in critical action, they may reach the understanding that this engagement may lead to “high-risk” activism, as described by Corning et al. (2002). This type of high-risk action to challenge the status quo and advance their cause may potentially come at the expense of their own individual educational progress. Future research may explore whether these new hypotheses are supported, and explore whether students are aware that these actions may interfere with their educational progress, and thus set lower expectations to persist. More in-depth research is needed in order to fully understand other variables that may mediate and moderate the relationship between supports and intent to persist in immigrant students.

Finally, and consistent with what was hypothesized for this study, barriers for engaging in social justice activity were negatively related to intent to persist for undocumented students, Latina/o students with legal status, Latina/o students with legal status, non-Latina/o minority students with legal status, and non-Latina/o White students with legal status alike with moderate strength. Although there seem to be differences in how each group experiences this relational path, those differences were not statistically meaningful. Thus, this finding suggests that all student groups are similarly affected in a negative way by being discouraged to participate in social justice in relation to their intent to persist.

## **Implications for Research**

The present study represents a first step in deeply exploring the relationship between critical consciousness and academic outcomes in disadvantaged college students such as undocumented immigrants. There are many ways that future research may expand on this integrative model of critical consciousness, which was supported by the data across four different student groups who may face marginalization in very different ways based on their “legality” and race. The hope is that findings from this research add to the latest scientific advances in critical consciousness (Diemer, McWhirter, Ozer, & Rapa, 2015), particularly to the expressed need for a clear and parsimonious conceptual framework to study critical consciousness (CC), which Freire (1973) himself did not offer beyond the general theory. The new integrative model may be used as a starting point for exploring how CC may relate to other educational outcomes related to the academic achievement of underserved youths, in addition to intent to persist in college.

A contribution to highlight is that this research studied the three key elements of critical consciousness identified by Watts et al. (2011) for the first time in a model that related them coherently. These three elements are critical reflection, critical action, and political efficacy. To my knowledge, no previous study has studied the three components together in one model. The reason for that limitation is possibly due to the fact that the measurement of constructs in this area is currently in the early stages (Diemer et al., 2015). As no comprehensive measure of critical consciousness exists at the moment, research tends to rely on measurement of related constructs. For example, Diemer and Blustein (2005) operationalized critical consciousness for quantitative analysis via measures of sociopolitical analysis and sociopolitical control. More recently, notable



attempts are being made to make progress in the measurement of critical consciousness constructs, such as the scale developed by McWhirter and McWhirter (2015), which measures critical consciousness agency and behaviors in Latina/o adolescents. In the present study, a methodology is outlined for capturing the three key constructs of critical consciousness using related scales. Specifically, the reversed Color-Blind Racial Attitudes Scale (CoBRAS, Neville et al., 2000), the Activism Orientation Scale (Corning & Myers, 2002), and the social justice self-efficacy subscale in the Social Issues Questionnaire (SIQ, Miller et al., 2007, 2009) lent themselves well to operationalize critical reflection, critical action, and political self-efficacy, respectively. Testing of innovative critical consciousness measures, such as the Critical Consciousness Scale (CCS, Diemer et al., in press) and the Critical Consciousness Inventory (CCI, Thomas et al., 2014), in contrast to the aforementioned scales, will further our understanding of construct validity of scales that intend to tap key CC constructs.

The present study also provides support to the need to expand the study of critical consciousness beyond the three aforementioned variables, and to include political outcome expectations as another potent element of how youth experience critical consciousness. Future research should continue including outcome expectations as a fourth component of CC. Another construct to consider and include is one that is surfacing as important to CC in the literature, critical motivation, which is “youths’ perceived capacity and motivation to produce social change” (Diemer et al., 2015). By definition, there seems to be overlap between critical motivation and political self-efficacy and outcome expectations, as all three tap into agency. Further investigations are needed to establish discriminant validity between measures that tap into critical

motivation, such as the Measure of Adolescent Critical Consciousness (MACC, McWhirter & McWhirter, 2015), and measures of political self-efficacy and outcome expectations such as the ones used in the present study. Finally, future research will be stronger and more affirmative if a full latent variable method is used, involving testing of measurement models as well as full structural models relating these CC latent constructs.

Moving past conceptualization, operationalization, and measurement of CC constructs, future research will be needed to further clarify relationships among CC variables and academic intent to persist as well as supports and barriers that youth experience in their sociopolitical engagement. Particular attention needs to be given to the relational paths that were found to vary across student cultural groups (i.e., DREAMers, Latinas/os with legal status, Non-Latina/o minorities with legal status, and Non-Latina/o Whites with legal status), which may require the addition of mediators and moderators to fully understand what is taking place. Specifically, there are several questions that need to be addressed in order to further understand undocumented immigrants' experiences of critical consciousness in the context of their education. First, how this group experiences supports to engage in sociopolitical activity demands close examination about why it relates to lower sociopolitical engagement barriers and also a moderate decrease in intention to persist, and why it does not relate to higher political outcome expectations. Might undocumented immigrants need to reach the conclusion of whether to participate in social justice work on their own, without outward encouragement or significant discouragement from others, due to the risks that critical action may bring upon themselves and their presence in the U.S.?

Future research endeavors may also wish to pay close attention to critical action having a strong association with lower intent to persist in undocumented immigrants, while there is no association for all other students. Does the decision to engage in higher levels of advocacy and activism in order to better their circumstances come at the expense of the ability to persist in college? Does bringing about sociopolitical change, such as the DREAM Act and comprehensive immigration reform, become a more pressing priority over college completion for immigrant students due to the uncertainty of their future? These questions, and others arising from these findings, may be tested by expanding the new integrative model of CC with mediators and moderators that one may hypothesize play a role in DREAMers' CC and academic achievement. Lastly, and in similar fashion, future research may further explore why higher critical reflection was related to decreases in intent to persist in college for non-Latina/o White students with legal status, and whether their own cognitive awakening in realizing White privilege and their potential discontent with establishments, including educational institutions, may play a role in this link.

### **Implications for Practice**

Findings from this research may be used to implement counseling interventions, educational practices, and higher education policies to support the development of critical consciousness in disadvantaged students and increase their intent to persist. First, practitioners may use the scales described in this study (Neville et al., 2000; Corning & Myers, 2002; Miller et al., 2007) as tools to assess the level of critical consciousness that college students display in order to use that information to target psychological interventions, curriculum, and policies. Much can be done about sociopolitical

engagement supports and barriers. University-wide policies as well as individual interactions with students, formal or informal, to reduce the barriers they experience to engage in social justice activity need to be carried out. Findings from this research suggest that across cultural groups, college students' lower desire to graduate from an institution is related to them being discouraged to take critical action to address issues that they care about. Relatedly, it is important that all students also feel supported by important people to them at their institutions to become sociopolitically active, although this support may need to be expressed with sensitivity to undocumented immigrant students, as their sociopolitical engagement may be complicated by the risks and uncertainty that accompany their immigration conditions. Counselors and psychologists may play a very important role here, since they may offer support to DREAMers by providing a safe space where they can process and reconcile the tensions that may exist between their desire to effect change at a systemic level and their educational aspirations.

University administrators, educators, student affairs professionals, and counselors may also implement changes to increase the number of spaces, such as student organizations or diversity events, where cultural minorities and immigrant students may engage and further develop their analysis of systemic inequities and practice social action. Findings from the study suggest that the connection between critical reflection and critical action appears to be stronger for White students than for all other students, which may be a reflection of how their advantage of accessing more spaces and opportunities may lead to strengthening that connection. Additionally, in light of finding that there is a negative link between higher critical reflection and intent to persist in White students, higher education professionals may attempt to engage White students

who demonstrate high critical reflection in discussions about how their understanding of inequities impacts their own educational aspirations. These individuals may want to attempt offering a similar kind of opportunity for discussions to immigrant students in order to dialogue with them about how their critical actions may impact their own immediate intentions for academic achievement. Lastly, it may be worthwhile for institutions and practitioners to design and test interventions aimed at increasing college students' sense of political outcome expectations. Notably, this belief in the positive outcomes that social action may produce was positively linked to higher intent to persist for all students, including racial/ethnic minorities and undocumented immigrants.

### **Limitations**

Several limitations should be taken into account when interpreting the findings from this study. The first is that the samples of the four student groups studied may not be representative of national samples of students since recruitment was focused on a large public university in the southwest, and at a couple of other universities with specific programs serving undocumented students. Small sample sizes in two of the groups, undocumented immigrant students and Latina/o students, were due to the difficulty of reaching these populations given their underrepresentation in higher education. These small sample sizes prevented using a full latent variable approach in analyzing this data, and thus limited testing the measurement and full structural models associated with the proposed conceptual model. A test of the measurement model, and measurement invariance across groups, would further contribute to the understanding about how these student groups experience CC and how these constructs may be measured.

Similarly, due to the small number of Asian and Black/African American students participating in the study, these two groups were collapsed into one category of “non-Latina/o ethnic minority” students. The differences in achievement exhibited by these two groups complicate the rationale for inclusion, and future research should refrain from combining these distinct groups. Inversely, high numbers of graduate students and White college students were readily accessible for recruitment of the study. The high proportion of more educated White students needs to be considered when reading about findings that involved comparisons between White students and ethnic-minority and undocumented students. The White student sample had more education and may have had more opportunities to develop critical consciousness as a result of longer years of schooling.

Another limitation is the cross-sectional design of the study, which impedes any assertions being made about causation. The data was collected at one point in time for all variables, and thus interpretations regarding prediction are only relational and should be interpreted with caution. This research may be seen as an initial exploration of how critical consciousness variables relate to one another and to academic outcomes, and future longitudinal research may test whether these relationships hold over time and if they are indeed causal. In very related fashion, the directionality of paths is also empirically questionable due to the cross-sectional design. While both nested models studied were derived directly from theory, with specific paths being justified by previous research and theoretical assumptions, it is impossible to rule out alternative explanations that one may form by reversing the direction of any arrows. This is a major limitation that can be addressed in longitudinal research to test whether this new framework for critical consciousness and academic achievement holds over time.

Another limitation is that additional variables were needed to be captured in order to substantiate the explanations for certain relationships that were contrary to hypotheses. Such relationships include the negative link between supports and intent to persist in undocumented students, and between critical consciousness and intent to persist in White students. These findings generated new hypotheses, and many more may be generated by other researchers, to be tested in the future. Studying critical consciousness and intent to persist along with variables such as perceived risk of taking critical action (i.e., activism), attitudes towards institutional authority, and discontent with status quo may serve to further understand the more puzzling relations in the findings.

## **Conclusions**

Acknowledging local and national trends in educational attainment, which show that the gap in college completion is widening between mainstream White students and cultural minority students, as well as the underrepresentation of a relatively large group of undocumented immigrants also known as DREAMers, I aimed with this study to advance the understanding of what contributes to these underserved students' intent to persist in college. Combining a social cognitive lens inspired by Social Cognitive Career Theory (Lent et al., 1994) to clarify the theory of Critical Consciousness spouted by Freire (1973) in his work educating the working poor, an integrative social cognitive model of critical consciousness was devised. The model connects three key variables involved in critical consciousness (critical reflection, critical action, and political self-efficacy) that have been identified by researchers in this area (Diemer et al., 2015; Watts et al., 2011), while contributing a new variable in the social cognitive career theory tradition (i.e., outcome expectations), and hypothesizing how these variables may relate

to academic intent to persist and sociopolitical engagement supports and barriers. After thorough evaluation of the model, a final version was found to be supported by the data and represents a first step toward operationalizing critical consciousness and academic achievement in students affected by societal inequities and educational attainment gaps.

Path analyses results provide initial evidence to support the following conclusions about the four groups of students studied in this research: undocumented immigrant students, Latina/o students with legal status, non-Latina/o minorities with legal status, and non-Latina/o White students with legal status. When students perceived that college educators, mentors, role models, and other important people to the students discourage them from participating in sociopolitical activity, that experienced barrier was linked to lower intentions to persist for all student groups similarly. Inversely, when students felt supported to participate in social justice activities, that perceived support led to higher analysis of social inequities, higher propensity to engage in social justice behaviors such as activism, and a higher sense of confidence in their ability to be an agent of change. For all four student groups in the study, the higher sense of confidence to effect change was related to higher expectations that engaging in social change would produce positive outcomes. For all four groups, these higher political outcome expectations predicted moderate increases in intent to persist in college. These findings support the notion that when students become critically conscious of social inequities influencing their conditions, they engage more intentionally with their education (Freire, 1973).

Not all constructs in the study related to one another in a way that was equal or comparable for all four groups of students, and the largest differences appear to be experienced between undocumented immigrant students and non-Latina/o White students



who have legal status in the U.S. Many of these differences may be explained with plausible interpretations grounded in the literature, but further research is warranted to fully explore what is involved in these differences. For example, feeling supported to participate in social justice activities was linked to more intent to persist in White students, though that link was not present for minority students, and it was associated with less intent to persist in DREAMers. This may be due to the higher risks that participating in activism may bring to minorities, especially to immigrants who may risk being detained and deported. Although higher analysis and higher social justice action was moderately correlated for all groups, these two constructs related more strongly for White students, perhaps due to the higher number of spaces available to them to develop both critical reflection and action. For White students, higher critical reflection was linked with lower intent to persist, which may be due to increased awareness about White privilege and possible dissatisfaction with institutions that perpetuate it. For DREAMers, unlike for any other group, increased participation in social justice activities was strongly related to less intent to persist, which may also be due to risks associated with critical action, uncertainty about their immigration status, and policy change taking priority over educational aspirations. More nuanced research is welcomed to test whether these interpretations of the findings are justifiable.

In closing, higher education leaders, educators, student services staff, counselors and psychologists may use these findings to create and implement interventions, curriculum, and policies that would promote more equitable academic intent to persist and educational attainment among all groups, including undocumented immigrants. Concrete suggestions include creating more safe spaces where cultural minority and

immigrant students may engage to develop their critical reflection and critical action. In other words, these suggestions involve providing outlets such as student organizations, diversity events, and classroom assignments that would provide underrepresented students with avenues for analyzing systems, for understanding systems' impact on them, and for taking actions to address these systems. Policies to dissuade higher education faculty and staff from discouraging students from becoming politically active are necessary, given that such perceived barriers may lead to decreased intent to persist. Additionally, safe and in-depth discussion about students' intent to persist in college and how it may be impacted by their critical reflection and action may be worthwhile for White and immigrant students. For White students, such process discussions may center on their newfound understanding of institutions and inequities, while for undocumented immigrant students the discussions may center on the risks of sociopolitical action and their priorities in the context of the unique difficulties and stressors that come with being an undocumented immigrant.

## References

- Abrego, L.J. (2006). "I can't go to college because I don't have papers": Incorporated patterns of Latino undocumented youth. *Latino Studies*, 4, 212-231.
- Abrego, L. (2008). Legitimacy, social identity, and the mobilization of law: The effects of assembly bill 540 on undocumented students in California. *Law & Social Inquiry*, 33, 709-734.
- Ahn, J. (2002). Beyond single equation regression analysis: Path analysis and multi-stage regression analysis. *American Journal of Pharmaceutical Education*, 66, 37-42.
- Anderson, S., & Betz, N. (2000). Sources of social self-efficacy expectations. *Journal of Vocational Behavior*, 58, 98-117.
- Ayón, C., Marsiglia, F. F., & Bermudez-Parsai, M. (2010). Latino family mental health: Exploring the role of discrimination and familismo. *Journal of Community Psychology*, 38(6), 742-756.
- Baker, A. M., & Brookins, C. C. (2014). Toward the development of a measure of sociopolitical consciousness: Listening to the voices of Salvadoran youth. *Journal of Community Psychology*, 42(8), 1015-1032.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (1999a) Social cognitive theory: an agentic perspective. *Asian Journal of Social Psychology*, 2, 21-41.
- Bandura, A. (1999b). *Social cognitive theory of personality*. In L. Pervin & O. John (Eds.), *Handbook of personality* (2nd ed., pp. 154–196). New York: Guilford Press.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, 9, 75–78.
- Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12, 155–187.

- Bean, J. P. (1983). The application of a model of turnover in work organizations to the student attrition process. *Review of Higher Education*, 6, 129–148.
- Bean, J. P. (2005). Nine themes of college student retention. In A. Seidman (Ed.), *Student college retention: Formula for student success* (pp. 215–244). New York, NY: Rowman & Littlefield.
- Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55, 485–540.
- Becerra, D., Androff, D., Cimino, A., Wagaman, M. A., & Blanchard, K. N. (2013). The impact of perceived discrimination and immigration policies upon perceptions of quality of life among Latinos in the United States. *Race and Social Problems*, 5(1), 65-78.
- Burrus, J., Elliott, D., Brenneman, M., Markle, R., Carney, L., Moore, G., Betancourt, A., Jackson, T., Robbins, S., Kyllonen, P., & Roberts, R. D. (2013). Putting and Keeping Students on Track: Toward a Comprehensive Model of College Persistence and Goal Attainment. *ETS Research Report Series*, 2013(1), i-61.
- Bowman, N. A. (2011). Promoting Participation in a Diverse Democracy A Meta-Analysis of College Diversity Experiences and Civic Engagement. *Review of Educational Research*, 81(1), 29-68.
- Brown, A., & Patten, E. (2014). Statistical Portrait of the Foreign-Born Population in the United States, 2012. *PEW Hispanic Center*, <http://www.pewhispanic.org/2014/04/29/statistical-portrait-of-the-foreign-born-population-in-the-united-states-2012>.
- Brown, S. D., Tramayne, S., Hoxha, D., Telander, K., Fan, X., & Lent, R. W. (2008). Social cognitive predictors of college students' academic performance and persistence: A meta-analytic path analysis. *Journal of Vocational Behavior*, 72(3), 298-308.
- Byars-Winston, A., Estrada, Y., Howard, C., Davis, D., & Zalapa, J. (2010). Influence of social cognitive and ethnic variables on academic goals of underrepresented students in science and engineering: A multiple-groups analysis. *Journal of Counseling Psychology*, 57, 205-217.
- Bygrave-Dozier, S. (2001). Undocumented and documented international students: A comparative study of their academic performance. *Community College Review*, 29, 43-53.
- Cabrera, A. F., Castaneda, M. B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *The Journal of Higher Education*, 143-164.

- Cabrera, A. F., Nora, A., & Castaneda, M. B. (1993). College persistence: Structural equations modeling test of an integrated model of student retention. *Journal of Higher Education*, 123-139.
- Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of students to college: A comparison between White students and African-American students. *Journal of Higher Education*, 134-160.
- Campbell, C., & MacPhail, C. (2002). Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth. *Social Science & Medicine*, 55(2), 331-345.
- Carlson, E. D., Engebretson, J., & Chamberlain, R. M. (2006). Photovoice as a social process of critical consciousness. *Qualitative Health Research*, 16(6), 836-852.
- Chavez, M.L., Soriano, M., Oliverez, P. (2007). Undocumented students' access to college: The American dream denied. *Latino Studies*, 5, 254-263.
- Delgado, R., & Stefancic, J. (2012). *Critical race theory: An introduction*. NYU Press.
- Diemer, M. A., & Blustein, D. L. (2006). Critical consciousness and career development among urban youth. *Journal of Vocational Behavior*, 68(2), 220-232.
- Diemer, M. A., & Hsieh, C. A. (2008). Sociopolitical development and vocational expectations among lower socioeconomic status adolescents of color. *The Career Development Quarterly*, 56(3), 257-267.
- Diemer, M. A., Hsieh, C. A., & Pan, T. (2009). School and parental influences on sociopolitical development among poor adolescents of color. *The Counseling Psychologist*, 37(2), 317-344.
- Diemer, M. A., Kauffman, A., Koenig, N., Trahan, E., & Hsieh, C. A. (2006). Challenging racism, sexism, and social injustice: Support for urban adolescents' critical consciousness development. *Cultural Diversity and Ethnic Minority Psychology*, 12(3), 444.
- Diemer, M. A., McWhirter, E. H., Ozer, E. J., & Rapa, L. J. (2015). Advances in the conceptualization and measurement of critical consciousness. *The Urban Review*, 47(5), 809-823.
- Diemer, M. A., Rapa, L. J., Park, C. J., & Perry, J. C. (in press). Development and validation of the Critical Consciousness Scale. *Youth & Society*.
- Drachman, E. (2006). Access to higher education for undocumented students. *Peace Review: A Journal of Social Justice*, 18, 91-100.

- Ennis, S. R., Ríos-Vargas, M., & Albert, N. G. (2011). *The hispanic population: 2010*. US Department of Commerce, Economics and Statistics Administration, US Census Bureau.
- Freire, P. (1970). *Cultural action for freedom* (p. 46). Harvard educational review.
- Freire, P. (1973). *Education for critical consciousness* (Vol. 1). Bloomsbury Publishing.
- Freire, P. (1985). *The politics of education: Culture, power, and liberation*. Greenwood Publishing Group.
- Freire, P. (1993). *Pedagogy of the city* (p. 7740). New York: Continuum.
- Freire, P. (1998). *Pedagogy of freedom: Ethics, democracy, and civic courage*. Rowman & Littlefield.
- Freire, P. (2000). *Pedagogy of the oppressed*. Bloomsbury Publishing.
- Freire, P., & Freire, A. M. A. (2004). *EPZ pedagogy of hope: Reliving pedagogy of the oppressed*. Bloomsbury Publishing.
- Freire, P. (2008). 2.2 Teachers as cultural workers. *Handbook of Research on Teacher Education: Enduring Questions in Changing Contexts*, 208.
- Flores, L., & O'Brien, K. (2002). The career development of Mexican American adolescent women. *Journal of Counseling Psychology*, 49, 14-27.
- Flores, M.F., & Horn, C.L. (2009). College choice action among undocumented students at a selective public university: A quantitative case study analysis. *Journal of College Retention*, 11, 57-76.
- Flores, L., Robitschek, C., Celebi, E., Andersen, C., & Hoang, U. (2010). Social cognitive influences on Mexican Americans' career choices across Holland's themes. *Journal of Vocational Behavior*, 76, 198-210.
- Foster-Bey, J. (2008). Do Race, Ethnicity, Citizenship and Socio-economic Status Determine Civic-Engagement? CIRCLE Working Paper# 62. *Center for Information and Research on Civic Learning and Engagement (CIRCLE)*.
- Fouad, N. A., & Guillen, A. (2006). Outcome expectations: Looking to the past and potential future. *Journal of Career Assessment*, 14, 130-142.
- Fouad, N. A., Smith, P., & Zao, K. E. (2002). Across academic domains: Extensions of the social cognitive career model. *Journal of Counseling Psychology*, 49, 164-171.

- Galassi, J. (2003). Dare to dream? A review of the development, relief, and education for alien minors (DREAM) act. *Chinano-Latino Law Review*, 24, 79-94.
- Galindo, R. (2012). Undocumented & unafraid: The DREAM Act 5 and the public disclosure of undocumented status as a political act. *The Urban Review*, 44(5), 589-611.
- Gay, G., & Kirkland, K. (2003). Developing cultural critical consciousness and self-reflection in preservice teacher education. *Theory into practice*, 42(3), 181-187.
- Giroux, H. A. (1997). *Pedagogy and the Politics of Hope Theory, Culture, and Schooling: A Critical Reader*.
- Gonzales, R.G. (2008). Left out but not shut down: Political activism and the undocumented student movement. *Northwestern Journal of Law and Social Policy*, 3, 219-239.
- Gushue, G. V. (2006). The relationship of ethnic identity, career decision self-efficacy, and outcome expectations among Latino/a high school students. *Journal of Vocational Behavior*, 68, 85-95.
- Gushue, G.V., Clarke, C.P., Pantzer, K.M., & Scanlan, K.R.L (2006). Self-efficacy, perceptions, of barriers, vocational identity, and the career exploration behavior of Latino/a high school students. *The Career Development Quarterly*, 54, 307-317.
- Gushue, G. V., & Whitson, M. L. (2006). The relationship of ethnic identity and gender role attitudes to career choice goals among Black and Latina girls. *Journal of Counseling Psychology*, 53, 379-385.
- Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior*, 18, 326-339.
- Hackett, G., & Lent, R. W. (1992). Theoretical advances and current inquiry in career psychology.
- Hackett, G., Lent, R. W., & Greenhaus, J. H. (1991). Advances in vocational theory and research: A 20-year retrospective. *Journal of Vocational Behavior*, 38(1), 3-38.
- Hart, W., & Eisenbarth Hager, C. E. (2012). *Dropped?: Latino Education and Arizona's Economic Future*. Morrison Institute for Public Policy, Arizona State University.
- Hossler, D. (1984). *Enrollment management: An integrated approach*. New York, NY: College Board Publications.
- Hugo Lopez, M. & Krogstad, J.M. (2014). 5 facts about the deferred action for childhood arrivals program. *Washington, DC: Pew Research Center*.

- Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino students' sense of belonging. *Sociology of Education, 70*, 324– 345.
- Kincheloe, J. L., & McLaren, P. (2002). Rethinking critical theory and qualitative research. *Ethnography and schools: Qualitative approaches to the study of education*, 87-138.
- Kline, T. J. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage Publications, Incorporated.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
- Ladson-Billings, G. (1998). Just what is critical race theory and what's it doing in a nice field like education?. *International Journal of Qualitative Studies in Education, 11*(1), 7-24.
- Ladson-Billings, G., & Tate IV, W. (1995). Toward a critical race theory of education. *The Teachers College Record, 97*(1), 47-68.
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology, 60*(4), 557.
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*, 79-122.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to choice behavior in engineering majors: Test of alternative social cognitive models. *Journal of Counseling Psychology, 50*, 458-465.
- Lent R.W., Brown, S.D., & Larkin, K.C. (1986). Self-efficacy in the prediction of academic performance and perceived career options. *Journal of Counseling Psychology, 33*, 265-269.
- Lent, R. W., Brown, S. D., & Schmidt, J., Brenner, B., Lyons, H., & Treistman, D. (2003). Relation of contextual supports and barriers to choice behavior in engineering majors: Test of alternative social cognitive models. *Journal of Counseling Psychology, 50*, 458-465.
- Lent, R. W., Brown, S. D., Sheu, H-B., Schmidt, J., Brenner, B., Gloster, C. S., et al. (2005). Social cognitive predictors of academic interests and goals in engineering: Utility for women and students at historically Black universities. *Journal of Counseling Psychology, 52*, 84-92.



- Lent, R.W., Lopez, A.M., Lopez, F.G., Sheu, H.B. (2008). Social cognitive career theory and the prediction of interests and choice goals in the computing disciplines. *Journal of Vocational Behavior*, 73, 52-62.
- Lent, R.W., Lopez, F.G., Sheu, H.B., & Lopez, A.M. (2011). Social cognitive predictors of the interests and choices of computing majors: Applicability to underrepresented students. *Journal of Vocational Behavior*, 78, 184-192.
- Lent, R. W., Lopez, F., & Bieschke, K. (1991). Mathematics self-efficacy: Sources and relation to science-based career choice. *Journal of Counseling Psychology*, 38, 424-430.
- Lent, R.W., Sheu, H.B., Gloster, C.S., & Wilkins, G. (2010). Longitudinal test of the social cognitive model of choice in engineering students at historically Black universities. *Journal of Vocational Behavior*, 76, 387-394.
- Lindley, L. D. (2006). The paradox of self-efficacy: Research with diverse populations. *Journal of Career Assessment*, 14, 143-160.
- Lopez, M., Morin, R., & Taylor, P. (2010). *Illegal immigration backlash worries, divides Latinos*. Washington, D.C.: Pew Hispanic Center.
- Maxwell, W. (1998). Supplemental instruction, learning communities, and students studying together. *Community College Review*, 26, 1-18.
- Miller, M. J., & Sendrowitz, K. (2011). Counseling psychology trainees' social justice interest and commitment. *Journal of Counseling Psychology*, 58(2), 159.
- Miller, M. J., Sendrowitz, K., Connacher, C., Blanco, S., Muniz de la Pena, C., Morere, L., & Bernardi, S. (2007). Development of the SIQ. Unpublished manuscript.
- Miller, M.J., Sendrowitz, K., Connacher, C., Blanco, S., Muniz de la Pena, C., Benardi, S., & Morere, L. (2009). College students' social justice interest and commitment: A social-cognitive perspective. *Journal of Counseling Psychology*, 56, 495-507.
- Minkler, M., & Cox, K. (1980). Creating critical consciousness in health: applications of Freire's philosophy and methods to the health care setting. *International Journal of Health Services*, 10(2), 311-322.
- McAdam, D. (1986). Recruitment to high-risk activism: The case of freedom summer. *American Journal of Sociology*, 64-90.
- McIntosh, P. (1992). White privilege. *Creation Spirituality*, 33-35.
- McIntosh, P. (1998). White privilege. *Race, class and gender: An anthology*, 94-105.

- McWhirter, E.H., Rasheed, S., & Crothers, M. (2000). The effects of high school career education on social-cognitive variables. *Journal of Counseling Psychology*, 47, 330-341.
- McWhirter, E. H., & McWhirter, B. T. (2015). Critical Consciousness and Vocational Development Among Latina/o High School Youth Initial Development and Testing of a Measure. *Journal of Career Assessment*, 1069072715599535.
- Muthén, L. K., & Muthén, B. O. (2012). Mplus User's Guide (7th edn).
- Nauta, M. M., Kahn, J. H., Angell, J. W., & Cantarelli, E. A. (2002). Identifying the antecedent in the relation between career interests and self-efficacy: Is it one, the other, or both?. *Journal of Counseling Psychology*, 49(3), 290.
- Navarro, R.L., Flores, L.Y., & Worthington, R.L. (2007). Mexican American middle school students' goal intentions in mathematics and science: A test of social cognitive career theory. *Journal of Counseling Psychology*, 54, 320-335.
- Neville, H. A., Coleman, M. N., Falconer, J. W., & Holmes, D. (2005). Color-blind racial ideology and psychological false consciousness among African Americans. *Journal of Black Psychology*, 31(1), 27-45.
- Neville, H. A., Lilly, R. L., Duran, G., Lee, R. M., & Browne, L. (2000). Construction and initial validation of the Color-Blind Racial Attitudes Scale (CoBRAS). *Journal of counseling psychology*, 47(1), 59.
- Neville, H. A., Low, K. S. D., Liao, H., Walters, J. M., & Landrum-Brown, J. (2007). Color-blind racial ideology: Testing a context-based legitimizing ideology model. Unpublished manuscript.
- Neville, H. A., Worthington, R. L., & Spanierman, L. B. (2001). Race, power, and multicultural counseling psychology: Understanding white privilege and color-blind racial attitudes. *Handbook of multicultural counseling*. Sage publications, 2001.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education*, 119-148.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66, 543-578.
- Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education*, 60-75.

- Pascarella, E. T., & Terenzini, P. T. (1983). Predicting voluntary freshman year persistence/withdrawal behavior in a residential university: A path analytic validation of Tinto's model. *Journal of educational psychology*, 75(2), 215.
- Passel, J. S., Cohn, D., & Gonzalez-Barrera, A. (2013). Population decline of unauthorized immigrants stalls, may have reversed. *Washington, DC: Pew Hispanic Center*. <http://www.pewhispanic.org/files/2013/09/Unauthorized-Sept-2013-FINAL.pdf>.
- Perez, W. (2010a). Extending our investments: Higher education access for undocumented students. *Diversity & Democracy*, 13.
- Perez, W. (2010b). Higher Education Access for Undocumented Students: Recommendations for Counseling Professionals, *Journal of College Admission*, 206, 32-35.
- Perez, W., Espinoza, R., Ramos, K., & Cortes, R. (2009). Academic resilience among undocumented Latino students. *Hispanic Journal of Behavioral Sciences*, 31, 149-181.
- Perez, W., Espinoza, R., Ramos, K., Coronado, H., & Cortes, R. (2010c). Civic engagement patterns of undocumented Mexican students. *Journal of Hispanic Higher Education*, 9, 245-265.
- Perez, W., Cortes, R., Ramos, K., & Coronado, H. (2010d). Cursed and blessed: Examining the socioemotional and academic experiences of undocumented Latino/a college students. *New Directions for Student Services*, 131, 35-51.
- Perez-Huber, L., & Malagon, M.C. (2006). Silenced struggles: The experiences of Latina and Latino undocumented college students in California. *Nevada Law Journal*, 7, 840-861.
- Perry, A.M. (2006). Toward a theoretical framework for membership: The case of undocumented immigrants and financial aid for postsecondary education. *The Review of Higher Education*, 30, 21-40.
- Pratto, F., Liu, J. H., Levin, S., Sidanius, J., Shih, M., Bachrach, H., et al. (2000). Social dominance orientation and the legitimization of inequality across cultures. *Journal of Cross-Cultural Psychology*, 31(3), 369-409.
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, 67(4), 741-763.

- Rendon, L., Jalomo, L., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In J. M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 127–156). Nashville, TN: Vanderbilt University Press.
- Ross, T., Kena, G., Rathbun, A., KewalRamani, A., Zhang, J., Kristapovich, P., & Manning, E. (2012). Higher Education: Gaps in Access and Persistence Study. Statistical Analysis Report. NCEES 2012-046. *National Center for Education Statistics*.
- Sakamoto, I., & Pitner, R. O. (2005). Use of critical consciousness in anti-oppressive social work practice: Disentangling power dynamics at personal and structural levels. *British Journal of Social Work*, 35(4), 435-452.
- Salas, L. M., Ayón, C., & Gurrola, M. (2013). Estamos traumatados: The effect of anti-immigrant sentiment and policies on the mental health of Mexican immigrant families. *Journal of Community Psychology*, 41, 1005–1020.
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, 66(4), 507-514.
- Satorra, A., & Bentler, P. M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika*, 75(2), 243-248.
- Shell, D. F., Murphy, C. C., & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology*, 81(1), 91.
- Sheu, H.B., Lent, R.W., Brown, S.D., Miller, M.J., Hennessy, K.D., & Duffy, R.D. (2010). Testing the choice model of social cognitive career theory across Holland themes: A meta-analytic path analysis. *Journal of Vocational Behavior*, 6, 252-264.
- Solberg, V. S., O'Brien, K., Villarreal, P., Kennel, R., & Davis, B. (1993). Self-efficacy and Hispanic college students: Validation of the College Self-Efficacy Instrument. *Hispanic Journal of Behavioral Sciences*, 19, 182-210.
- Solomona, R. P., Portelli, J. P., Daniel, B. J., & Campbell, A. (2005). The discourse of denial: How white teacher candidates construct race, racism and 'white privilege'. *Race Ethnicity and Education*, 8(2), 147-169.
- Spanierman, L. B., Neville, H. A., Liao, H. Y., Hammer, J. H., & Wang, Y. F. (2008). Participation in formal and informal campus diversity experiences: Effects on students' racial democratic beliefs. *Journal of Diversity in Higher Education*, 1(2), 108.

- Terenzini, P. T., & Pascarella, E. T. (1980). Student/Faculty Relationships and Freshman Year Educational Outcomes: A Further Investigation. *Journal of College Student Personnel*, 21(6), 521-28.
- Terenzini, P. T., Lorang, W. G., & Pascarella, E. T. (1981). Predicting freshman persistence and voluntary dropout decisions: A replication. *Research in Higher Education*, 15(2), 109-127.
- Thomas, A. J., Barrie, R., Brunner, J., Clawson, A., Hewitt, A., Jeremie-Brink, G., & Rowe-Johnson, M. (2014). Assessing critical consciousness in youth and young adults. *Journal of Research on Adolescence*, 24(3), 485-496.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89–125.
- Tinto, V. (1982). Defining dropout: A matter of perspective. *New Directions for Institutional Research*, 36, 3–15.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago, IL: University of Chicago Press.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago, IL: University of Chicago Press.
- Tinto, V. (2006). Research and practice of student retention: What next? *Journal of College Student Retention*, 8, 1–19.
- Tokar, D.M., Buchanan, T.S., Subich, L.M., Hall, R.J., & Williams, C.M. (2011). A structural examination of the learning experiences questionnaire. *Journal of Vocational Behavior*, 80, 50-66.
- Todorova, I. L., Falcón, L. M., Lincoln, A. K., & Price, L. L. (2010). Perceived discrimination, psychological distress and health. *Sociology of Health & Illness*, 32(6), 843-861.
- Tracey, T. J. (2002). Development of interests and competency beliefs: A 1-year longitudinal study of fifth-to eighth-grade students using the ICA-R and structural equation modeling. *Journal of Counseling Psychology*, 49(2), 148.
- U.S. Citizenship and Immigration Services (2013, January 28). *Consideration of Deferred Action for Childhood Arrivals Process*. Retrieved January 20, 2013, from <http://www.uscis.gov/portal/site/uscis/menuitem.eb1d4c2a3e5b9ac89243c6a7543f6d1a/?vgnnextoid=f2ef2f19470f7310VgnVCM100000082ca60aRCRD&vgnnextchannel=f2ef2f19470f7310VgnVCM100000082ca60aRCRD>.

- U.S. Department of Education, National Center for Education Statistics. (2015). The Condition of Education 2015 (NCES 2015–144), Educational Attainment.
- U.S. Department of Health and Services, U.S. Department of Health and. (2011, June 28). *Office of Extramural Research National Institute of Health*. Retrieved March 29, 2012, from Certificates of Confidentiality: <http://grants.nih.gov/grants/policy/coc/>.
- Watts, R. J., Griffith, D. M., & Abdul-Adil, J. (1999). Sociopolitical development as an antidote for oppression—theory and action. *American Journal of Community Psychology, 27*(2), 255-271.
- Watts, R. J., & Flanagan, C. (2007). Pushing the Envelope on Youth Civic Engagement: A developmental and liberation psychology perspective. *Journal of community psychology, 35*(6), 779-792.
- Watts, R. J., Diemer, M. A., & Voight, A. M. (2011). Critical consciousness: Current status and future directions. *New directions for child and adolescent development, 2011*(134), 43-57.
- Watts, R. J., Williams, N. C., & Jagers, R. J. (2003). Sociopolitical development. *American Journal of Community Psychology, 31*(1-2), 185-194.
- Yosso\*, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race ethnicity and education, 8*(1), 69-91.
- Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology, 25*(1), 82-91.
- Zimmerman, A. M. (2011). A dream detained: Undocumented Latino youth and the DREAM movement. *NACLA Report on the Americas, 44*(6), 14.

APPENDIX A

INTERNAL REVIEW BOARD APPROVAL



APPROVAL: EXPEDITED REVIEW

Bianca Bernstein  
CLS - Counseling and Counseling Psychology  
480/965-2920  
bbernstein@asu.edu

Dear Bianca Bernstein:

On 9/23/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Critical Consciousness and Latina/o Immigrant Students' College Persistence
Investigator:	Bianca Bernstein
IRB ID:	STUDY00003164
Category of review:	(7)(b) Social science methods, (7)(a) Behavioral research
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"><li>• APPENDICES IRB.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts;</li><li>• Informed Consent Form GC.pdf, Category: Consent Form;</li><li>• HRP-503a-Cadenas dissertation.docx, Category: IRB Protocol;</li></ul>

The IRB approved the protocol from 9/23/2015 to 9/22/2016 inclusive. Three weeks before 9/22/2016 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 9/22/2016 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.



APPENDIX B  
LETTER OF CONSENT

[Insert Date]

Dear Participant,

My name is German Cadenas, and I am a PhD candidate in counseling psychology at Arizona State University working on a dissertation study under the supervision of Dr. Bianca Bernstein ([bbernstein@asu.edu](mailto:bbernstein@asu.edu)).

We are interested in understanding your educational progress. Thus, we are inviting your participation in a brief study, which involves responding to a short survey. You must be 18 years or older and currently enrolled in college to participate.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Completing this survey may take about 15 minutes.

The surveys will be used to assess your responses related to your educational progress. Questions in the survey are related to your demographic characteristics, as well as your social attitudes, social involvement, and academic goals. There are no foreseeable risks or discomforts to your participation.

Your instructor may be providing you extra credit by participating in this research. Please consult your course instructor to identify the amount of extra credit offered. Please note, your course offers alternative opportunities for extra credit, should you not wish to participate.

Your responses will be confidential and your name will not be included anywhere on the survey. While the results of this study may be used in reports, presentations, or publications you will not be identified; results will be shared only in the aggregate form.

If you have any questions concerning the research study, please contact the Primary Investigator: German Cadenas ([gcadenas@asu.edu](mailto:gcadenas@asu.edu)).

If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

Thank you so much for your cooperation!

Sincerely,

German Cadenas, Graduate Student, Counseling and Counseling Psychology  
([gcadenas@asu.edu](mailto:gcadenas@asu.edu))  
Dr. Bianca Bernstein, Professor, Counseling and Counseling Psychology  
([bbernstein@asu.edu](mailto:bbernstein@asu.edu))  
Arizona State University

APPENDIX C  
RECRUITMENT SCRIPT

Dear student,

My name is German Cadenas, and I am a PhD candidate in counseling psychology at Arizona State University working on a dissertation study under the supervision of Dr. Bianca Bernstein ([bbernstein@asu.edu](mailto:bbernstein@asu.edu)).

We would like to invite you to participate in a brief online survey as part of a dissertation research study to understand students' progress through college. We are particularly interested in your involvement outside of the classroom.

Your participation in this study is **voluntary and anonymous**. If you choose not to participate or to withdraw from the study at any time, there will be no penalty.

The survey will take you about 15 minutes to complete. Declining to participate will not result in any penalties, but we would be grateful if you participated. To complete the survey, please go to [insert online survey link].

German Cadenas, Graduate Student, Counseling and Counseling Psychology ([gcadenas@asu.edu](mailto:gcadenas@asu.edu))

Dr. Bianca Bernstein, Professor, Counseling and Counseling Psychology ([bbernstein@asu.edu](mailto:bbernstein@asu.edu))  
Arizona State University

APPENDIX D  
DEMOGRAPHIC SURVEY

1. Which of the following describes you best?
  - a) College freshman
  - b) College sophomore
  - c) College junior
  - d) College senior
  - e) Graduate or professional student (e.g., JD student, MBA student)
  - f) Other: \_\_\_\_\_
2. How many college credits are you currently enrolled in?
3. What is your current GPA?
4. What is your gender?
  - a) Female
  - b) Male
  - c) Other: \_\_\_\_\_
5. How old are you?
6. What race or ethnic group do you identify with?
  - a) Latino/a
  - b) White
  - c) Black or African-American
  - d) American Indian or Alaskan Native
  - e) Asian American
  - f) Native Hawaiian or other Pacific Islander

- g) Biracial or Multiracial (please specify)
7. What is your household income? (you and your parents if dependent, you and your spouse if not a dependent)
8. What is your mother's highest education level?
- a) Some K-12
  - b) Graduated from high school
  - c) Some college
  - d) Graduated from college
  - e) Some graduate school
  - f) Graduated with graduate degree
  - g) Other: \_\_\_\_\_
9. What is your father's highest education level?
- a) Some K-12
  - b) Graduated from high school
  - c) Some college
  - d) Graduated from college
  - e) Some graduate school
  - f) Graduated with graduate degree
  - g) Other: \_\_\_\_\_
10. What is your residency status?
- a) U.S Citizen
  - b) U.S. Permanent Resident (e.g. green card holder)
  - c) Student visa holder

- d) Work visa holder
- e) Refugee
- f) Work authorization through Deferred Action for Childhood Arrivals (DACA)
- g) Undetermined
- h) Other: \_\_\_\_\_



APPENDIX E  
CRITICAL REFLECTION INSTRUMENT

Color-Blind Racial Attitudes Scale (CoBRAS; Neville, Lilly, Duran, & Browne, 2000).

**Directions.** Below is a set of questions that deal with social issues in the United States (U.S.). Using the 6-point scale, please give your honest rating about the degree to which you personally agree or disagree with each statement. Please be as open and honest as you can; there are no right or wrong answers. Record your response to the left of each item.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

1. \_\_\_\_ Everyone who works hard, no matter what race they are, has an equal chance to become rich.
2. \_\_\_\_ **Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.**
3. \_\_\_\_ It is important that people begin to think of themselves as American and not African American, Mexican American or Italian American.
4. \_\_\_\_ **Due to racial discrimination, programs such as affirmative action are necessary to help create equality.**
5. \_\_\_\_ **Racism is a major problem in the U.S.**
6. \_\_\_\_ **Race is very important in determining who is successful and who is not.**
7. \_\_\_\_ Racism may have been a problem in the past, but it is not an important problem today.
8. \_\_\_\_ **Racial and ethnic minorities do not have the same opportunities as White people in the U.S.**
9. \_\_\_\_ White people in the U.S. are discriminated against because of the color their skin.
10. \_\_\_\_ Talking about racial issues causes unnecessary tension.
11. \_\_\_\_ **It is important for political leaders to talk about racism to help work through or solve society's problems.**

12. \_\_\_\_ **White people in the U.S. have certain advantages because of the color of their skin.**
13. \_\_\_\_ Immigrants should try to fit into the culture and adopt the values of the U.S.
14. \_\_\_\_ English should be the only official language in the U.S.
15. \_\_\_\_ **White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.**
16. \_\_\_\_ Social policies, such as affirmative action, discriminate unfairly against White people.
17. \_\_\_\_ **It is important for public schools to teach about the history and contributions of racial and ethnic minorities.**
18. \_\_\_\_ Racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin.
19. \_\_\_\_ Racial problems in the U.S. are rare, isolated situations.
20. \_\_\_\_ **Race plays an important role in who gets sent to prison**

**The following items (which are bolded above) are reversed score (such that 6 = 1, 5 = 2, 4 = 3, 3 = 4, 2 = 5, 1 = 6): item #2, 4, 5, 6, 8, 11, 12, 15, 17, 20.** Higher scores should greater levels of “blindness”, denial, or unawareness.

Factor 1: Unawareness of Racial Privilege consists of the following 7 items: 1, **2, 6, 8, 12, 15, 20**

Factor 2: Unawareness of Institutional Discrimination consists of the following 7 items: 3, **4, 9, 13, 14, 16, 18**

Factor 3: Unawareness to Blatant Racial Issues consists of the following 6 items: **5, 7, 10, 11, 17, 19**

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX F  
CRITICAL ACTION INSTRUMENT

**Critical Action.** Activism Orientation Scale (Corning & Myers, 2002).

Stem: How likely is it that you will engage in this activity in the future?

Response range: 0 extremely unlikely to 3 extremely likely

1. Display a poster or bumper sticker with a political message.
2. Invite a friend to attend a meeting of a political organization or event.
3. Purchase a poster, t-shirt, etc. that endorses a political point of view.
4. Serve as an officer in a political organization.
5. Engage in a political activity in which you knew you would be arrested. **(high risk)**
6. Engage in physical confrontation at a political rally. **(high risk)**
7. Attend an informational meeting of a political group.
8. Organize a political event (e.g. talk, support group, march).
9. Give a lecture or talk about a social or political issue.
10. Go out of your way to collect information about a social or political issue.
11. Campaign door-to-door for a political candidate.
12. Present facts to contest another person's social or political statement.
13. Donate money to a political candidate.
14. Vote in a non-presidential federal, state, or local election.
15. Send a letter or e-mail expressing a political opinion to the editor of a periodical or television show.
16. Engage in a political activity in which you feared that some of your possessions would be damaged. **(high risk)**
17. Engage in an illegal act as part of a political protest. **(high risk)**
18. Confront joke, statement, or innuendos that opposed a particular group's cause.
19. Boycott a product for political reasons.
20. Distribute information representing a particular social or political group's cause.
21. Engage in a political activity in which you suspect there would be confrontation with the police or possible arrest. **(high risk)**
22. Send a letter or email about a political issue to a public official.
23. Attend a talk on a particular group's social or political concerns.

24. Attend a political organization's regular planning meeting.
25. Sign a petition for a political cause.
26. Encourage a friend to join a political organization.
27. Try to change a friend's or acquaintance's mind about a social or political issue.
28. Block access to a building or public area with your body. **(high risk)**
29. Donate money to a political organization.
30. Try to change a relative's mind about a social or political issue.
31. Wear a t-shirt or button with a political message.
32. Keep track of views of members of Congress regarding an issue important to you.
33. Participate in discussion groups designed to discuss issues or solutions of a particular social or political group.
34. Campaign by phone for a political candidate
35. Engage in a political activity in which you feared for your personal safety. (high risk)

Note: High Risk Activism Subscale **(high risk)**.

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX G  
POLITICAL EFFICACY INSTRUMENT

Social Justice Self-Efficacy Scale in Social Issues Questionnaire (Miller et al., 2009)

**Instructions:** The following is a list of social justice activities. Please indicate how much confidence you have in your ability to complete activity. Use the 0–9 point scale below to indicate your degree of confidence.

No Confidence at All						Some Confidence						Complete Confidence
	0	2	3	4	5	6	7	8	9			

How much confidence do you have in your ability to:

1. respond to social injustice (e.g., discrimination, racism, religious intolerance) with nonviolent actions.
2. examine your own worldview, biases, and prejudicial attitudes after witnessing or hearing about social injustice.
3. actively support needs of marginalized social groups.
4. help members from marginalized groups create more opportunities for success (e.g. educational, career) by developing relevant skills.
5. raise others' awareness of the oppression and marginalization of minority groups.
6. confront others that speak disparagingly about members of underprivileged groups.
7. challenge an individual who displays racial, ethnic, and/or religious intolerance.
8. convince others as to the importance of social justice.
9. discuss issues related to racism, classism, sexism, heterosexism, and ableism with your friends.
10. volunteer as a tutor or mentor with youth from an underserved and underprivileged group.
11. support efforts to reduce social injustice through your own local fundraising efforts.
12. identify the unique social, economic, political, and/or cultural needs of a marginalized group in your own community.
13. encourage and convince others to participate in community-specific social



issues.

14. develop and implement a solution to a community social issue such as unemployment, homelessness, or racial tension.
15. challenge or address institutional policies that are covertly or overtly discriminatory.
16. lead a group of coworkers in an effort to eliminate workplace discrimination in your place of employment.
17. serve as a consultant for an institutional committee aimed at providing equal opportunities for underrepresented groups.
18. advocate for social justice issues by becoming involved in local government.
19. address structural inequalities and barriers facing racial and ethnic minorities by becoming politically active (e.g., helping to create government policy).
20. raise awareness of social issues (e.g., inequality, discrimination) by engaging in political discourses or debates.

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX H

POLITICAL OUTCOME EXPECTATIONS INSTRUMENT

Social Justice Self-Efficacy Scale in Social Issues Questionnaire (Miller et al., 2009)

**Instructions:** Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.

Strongly Disagree		Disagree		Unsure		Agree		Strongly Agree
0	2	3	4	5	6	7	8	9

Engaging in social justice activities would likely allow me to:

1. reduce the oppression of certain groups.
2. help provide equal opportunities for all groups and individuals.
3. fulfill a sense of personal obligation.
4. fulfill a sense of moral responsibility.
5. fulfill a sense of social responsibility.
6. make a difference in peoples' lives.
7. do work or activities that are personally satisfying.
8. get respect from others.
9. be more competitive in applying for school or work.
10. increase my sense of self-worth.

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX I

SOCIOPOLITICAL SUPPORTS AND BARRIERS INSTRUMENT

Social Justice Supports and Barriers Scales in Social Issues Questionnaire (SIQ; Miller et al., 2007, 2009).

**Instructions:** Many factors can either support or hinder an individual’s plans for engaging in social justice activities. We are interested in learning about the types of situations that could help or hinder your plans if you were to continue on in social justice activities. For the questions below, assume that you wanted to pursue some type of social justice activity. Using the 0–9 scale, show how likely you believe you would be to experience each of the following situations.

Not At All	A Little		Moderately		Quite		Extremely Likely	
0	2	3	4	5	6	7	8	9

If you were to engage in social justice activities, how likely would you be to:

1. have access to a role model (i.e., someone you can look up to and learn from by observing).
2. feel support for this decision from important people in your life.
3. feel that there are people “like you” engaged in the same activities.
4. feel that your family members support this decision.
5. have access to a mentor who could offer you advice and encouragement.
6. receive negative comments or discouragement from friends and family members about your engagement in social justice activities.
7. worry that getting involved would require too much time or energy.
8. feel that you didn’t fit in socially with other people involved in the same activities.
9. feel pressure from parents or other important people to change your mind regarding your decision to engage in social justice activities.

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX J

INTENT TO PERSIST INSTRUMENT

Scale V. Institutional and Goal Commitments in the Persistence/Voluntary Dropout Decisions Scale (PVDDS; Pascarella & Terenzini, 1980).

**Scale V: Institutional and Goal Commitments**

- | Strongly<br>Agree<br>1   | 2 | 3 | 4 | Strongly<br>Disagree<br>5 |
|--|---|---|---|---------------------------|
| 1. It is important for me to graduate from college                                     |   |   |   |                           |
| 2. I am confident that I made the right decision in choosing to attend this university |   |   |   |                           |
| 3. It is likely that I will register at this university next fall                      |   |   |   |                           |
| 4. It is not important to me to graduate from this university                          |   |   |   |                           |
| 5. I have no idea at all what I want to major in                                       |   |   |   |                           |
| 6. Getting good grades is not important to me  |   |   |   |                           |

**Note: permission to use this instrument in the present study was obtained from author.**

APPENDIX K

SATORRA-BENTLER CHI-SQUARED DIFFERENCE TEST RESULTS



*Satorra-Bentler Scaled Chi-Squared Difference Test Results Constraining One Path to Equality Across Groups at a Time*

	$\chi^2$	df	RMSEA	RMSEA <sub>90</sub>	CFI	TLI	SRMR
Model 1B Free	16.38	16	.01	.00, .08	.99	.99	.03
Paths By Group							
S-B Difference Test Model Constraining Path 1 vs. Model 1B Free	19.15	3			-.01		
S-B Difference Test Model Constraining Path 2 vs. Model 1B Free	20.28	3			.00		
S-B Difference Test Model Constraining Path 3 vs. Model 1B Free	22.32	3			.00		
S-B Difference Test Model Constraining Path 4 vs. Model 1B Free	18.82	3			-.01		
S-B Difference Test Model Constraining Path 5 vs. Model 1B Free	41.70*	3			.00		
S-B Difference Test Model Constraining Path 6 vs. Model 1B Free	24.50*	3			.00		
S-B Difference Test Model	20.93	3			.00		

---

Constraining Path 7 vs. Model 1B Free			
S-B Difference Test Model Constraining Path 8 vs. Model 1B Free	20.22	3	.00
S-B Difference Test Model Constraining Path 9 vs. Model 1B Free	19.43	3	.00
S-B Difference Test Model Constraining Path 10 vs. Model 1B Free	20.27	3	.00
S-B Difference Test Model Constraining Path 11 vs. Model 1B Free	19.79	3	.00
S-B Difference Test Model Constraining Path 12 vs. Model 1B Free	27.17*	3	.00
S-B Difference Test Model Constraining Path 13 vs. Model 1B Free	20.69	3	.00
S-B Difference Test Model Constraining Path 14 vs. Model 1B Free	19.91	3	.00

---

---

S-B Difference Test Model Constraining Path 15 vs. Model 1B Free	25.88*	3	.00
S-B Difference Test Model Constraining Path 16 vs. Model 1B Free	24.34*	3	.00
S-B Difference Test Model Constraining Path 17 vs. Model 1B Free	31.49*	3	.02

---

*Note.* \*  $p < .05$ . Path 1: Political self-efficacy to intent to persist. Path 2: Political outcome expectations to . Path 3: Support to intent to persist. Path 4: Barriers to intent to persist. Path 5: Critical reflection to intent to persist. Path 6: Critical action to intent to persist. Path 7: Critical action to political self-efficacy. Path 8: Critical reflection to political self-efficacy. Path 9: Support to political self-efficacy. Path 10: Political self-efficacy to outcome expectations. Path 11: Critical reflection to political outcome expectations. Path 12: Support to political outcome expectations. Path 13: Barriers to political outcome expectations. Path 14: Support to critical reflection. Path 15: Support to critical action. Path 16: Critical action with critical reflection. Path 17: Support with barriers.

APPENDIX L

SATORRA-BENTLER SCALED CHI-SQUARED DIFFERENCE TEST RESULT

COMPARING MODEL 3 TO 16 MODELS

*Satorra-Bentler Scaled Chi-Squared Difference Test Results Comparing Model 3 to 16 Models Each Freeing One Relational Path Parameter per Group(s), While Constraining Other Groups, at a Time.*

	$\chi^2$	<i>df</i>	RMSEA	RMSEA <sub>90</sub>	CFI	TLI	SRMR
Model 3 Partially Constrained	52.08	46	.03	.00, .06	.99	.98	.05
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 1: Support to Intent to persist Free Only in DREAMers.	10.41*	2					-.02
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 2: Support to Intent to persist Free Only in Non-Latina/o White	.89	1					.00
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 3: Support to Persist Free only in DREAMers and Non-Latina/o White.	.05	1					.00
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 4: Support to Intent to persist Free Only in DREAMer.	17.55*	2					-.03
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 5: Critical Reflection to	.69	2					.00

---

Intent to persist Free Only in Non-Latina/o White.			
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 6: Critical Reflection to Intent to persist Free Only in DREAMer and Non-Latina/o White.	.02	1	.00
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 7: Critical Action to Intent to persist Free Only in DREAMers.	.95	2	.00
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 8: Critical Reflection with Critical Action Free Only in Non- Latina/o Minority.	8.30*	2	-.01
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 9: Critical Reflection with Critical Action Free Only in Non- Latina/o White.	1.42	2	.00
S-B Difference Test Model 3 Partially Constrained vs. Model 3 Constrain 10: Critical Reflection with	1.55	1	.00

---

---

Critical Action Free Only in Non-Latina/o Minority and White.			
S-B Difference Test	10.86*	2	-0.02
Model 3 Partially Constrained vs. Model 3 Constrain 11: Support to Critical Action Free Only in Non-Latina/o Minority.			
S-B Difference Test	10.44*	2	-0.02
Model 3 Partially Constrained vs. Model 3 Constrain 12: Support to Critical Action Free Only in Non-Latina/o White.			
S-B Difference Test	.65	2	.00
Model 3 Partially Constrained vs. Model 3 Constrain 13: Support to Political Outcome Expectations Free Only in DREAMer.			
S-B Difference Test	6.01*	2	-0.02
Model 3 Partially Constrained vs. Model 3 Constrain 14: Barriers with Support Free Only in DREAMer.			
S-B Difference Test	.93	1	.00
Model 3 Partially Constrained vs. Model 3 Constrain 15: Barrier with Support Free Only in DREAMer and			

---

---

Latina/o with Legal  
Status.

S-B Difference Test	1.70	2	.00
---------------------	------	---	-----

Model 3 Partially  
Constrained vs.  
Model 3 Constrain  
16: Support to  
Critical Action Free  
Only in Latina/o  
Students.

---

*Note.* \*  $p < .05$ .