Academic Outcomes in Documented and Undocumented Student Advocates: A Test of Social Cognitive Career Theory

by

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ABSTRACT

The Student Performance Accomplishments Questionnaire (SPAQ) was developed and validated in two studies with two normative samples totaling 315 college students, including a subsample of undocumented students. This instrument assesses academic performance accomplishments in the context of students' academic, extracurricular, and advocacy roles. Performance accomplishments are theorized to be one of four sources of efficacy (Bandura, 1977, 1986). Study 2 tested part of the Social Cognitive Career Theory model (Lent et al., 1994) in a sample of 154 student advocates. By conventional standards, the results yielded no support for the SCCT model and suggested the need for an alternative model. Results showed that student performance accomplishments in advocacy are highly related to students' academic outcomes, particularly choice actions. Choice actions were subsequently related to career goals and academic performance. No significant differences were found between documented and undocumented students on any of the variables studied. It was found that student advocates were significantly higher in performance accomplishments in advocacy, academic self-efficacy, choice action, and academic performance in comparison to student non-advocates. Clinical and research implications of these results for the field of counseling psychology were discussed.

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Chapter 1

The purpose of this study was to test certain variables of the Social Cognitive Career Theory (SCCT) model (Lent, Brown, & Hackett, 1994), a model of career development and academic achievement, in a diverse sample of politically active undocumented and documented students. The study aims to understand whether among political advocates performance accomplishments, a learning experience/source of efficacy (Bandura, 1986) contribute to documented and undocumented students' goal setting, choice action, and academic performance. This study is also interested in observing the differences between documented and undocumented students across measures of the SCCT model, taking into account that undocumented students have limited access to resources that would help them secure their academic and career success (Bygrave-Dozier, 2001; Perez et al., 2010; Storlie, 2012). This study includes the following aspects: a) measurement and operationalization of performance accomplishments through advocacy and academic activities in which undocumented and documented students participate. b) investigation of the relationship between performance accomplishments and the level of academic self-efficacy and outcome expectations. c) examination of the relationship between academic self-efficacy, outcome expectations, and academic outcome variables such as career goals, choice actions, and academic performance. The undocumented and documented students sampled in this study are affiliated with student or community groups and/or organizations that give them access to participation in advocacy.

Self-efficacy is the most crucial variable in the SCCT model, as it has been found to be the best predictor of future behavior (Bandura, 1986; Willimas & Subich, 2006). In

terms of career psychology, self-efficacy, alone or paired with outcome expectations, is highly correlated with and predictive of interests, goals, actions, and attainments. It is acknowledged in the literature that contextual factors, particularly learning experiences, are pivotal to the increase of self-efficacy (Lent et al. 1994; Lent et al., 2003). The most important factor to the increase, maintenance, or decrease of self-efficacy is the source of efficacy or learning experience (Bandura, 1977; Bandura, 1986). Bandura (1977) highlights four sources of efficacy in learning experiences: vicarious learning, performance accomplishment, verbal persuasion and emotional arousal. Despite the important role of learning experience in the SCCT model, limited attention has been given to the study and operationalization of the four learning experiences/sources of efficacy. Performance accomplishments have consistently been found to be the strongest of the four sources in increasing/decreasing self-efficacy (Anderson & Betz, 2001; Bandura, 1986; Lent et al., 1994; Schaub, 2003; Willimas & Subich, 2006), but little attempt has been made to refine the measurement of this source of efficacy. Self-efficacy has been addressed by all studies that involved the SCCT model. In contrast, outcome expectations (Bandura, 1986, 1997), a sometimes equally important variable in prediction models for career behavior (Fouad, Smith, & Zao 2002; McWhirter, Rasheed, & Crothers, 2000), have received much less attention and exploration than self-efficacy. This deficit in the SCCT literature requires further exploration to better understand the SCCT model.

Another shortfall in the literature is the lack of knowledge about undocumented students. Undocumented students are characterized as resilient, persistent, and displaying high levels of civic engagement and affiliation to the American identity (Perez et al.,

2007, 2009, 2010), but little is known about their career development and academic achievement. Due to the barriers attached to their immigration status (Bygrave-Dozier, 2001; Perez et al., 2010; Storlie, 2012) undocumented students often have limited access to opportunities (Gonzales, 2008; Passel, 2006; Chavez, Soriano, & Oliverez, 2007; Galassi, 2003; Abrego, 2006) that would allow them to develop their academic skills and enhance their academic self-efficacy and outcome expectations. Undocumented students have little access to certain learning experiences (i.e., employment, internships, federal and state funded programs, and others) that would provide them with sources of academic efficacy. Yet, it is observed that undocumented students perform well in school, set high academic goals for themselves, and are resilient (Flores & Horn, 2009; Perez et al., 2009). Why does this phenomenon happen, if undocumented students have such a narrow access to the learning experiences/sources of efficacy that would explain their positive academic outcomes? In the past few years, a trend has shown that undocumented students are becoming active in advocacy that relates to the immigration movement and is political at some level (Gonzales, 2008; Perez et al., 2010). It is observed that these students become involved in student organizations and groups (Chavez et al., 2007). Could this involvement afford them exposure to some academic learning experiences that provide sources of academic efficacy through advocacy? Do undocumented students have access to performance accomplishments through advocacy that function as a source of efficacy, and does that access have an impact on their academic performance, career goals, and actions through self-efficacy and outcome expectations? Is this relationship different for undocumented than for documented students? These are the questions this study aimed to explore.

Conducting this study presented a good opportunity to further the understanding and knowledge that exists about undocumented students. While it is known that they are actively involved in advocacy and display high levels of civic engagement (Perez et al., 2010), it is unknown whether this involvement benefits their academic and career outcomes. This study also extended the SCCT model to undocumented students, a demographic group with which, to the knowledge of the researcher, the model has not been tested in past. More broadly, this study also extended the SCCT model by testing it with student advocates. Equally important, this study contrasted undocumented students and documented students across measures of the SCCT model.

Studying the appropriateness and fit of this model with undocumented and documented students can shed light on possible actions institutions and supporters can take in order to boost the academic outcomes that these students display. This study also has the potential of signaling the direction for future interventions that can be applied with undocumented students who do not participate in advocacy, as well as with other groups of disadvantaged and underrepresented students. Using the findings from this study can inform intervention and research to increase students' exposure to activities that will allow them to experience performance accomplishments, increase their levels of self-efficacy and outcome expectations, and subsequently impact their academic outcomes. This study also intends to enhance the understanding of the functionality of performance accomplishments as a source of efficacy.

This discourse will begin with a review of the most pertinent literature on these subjects, including an overview of social cognitive career theory (SCCT) and self-efficacy, domain specificity for methodological considerations in SCCT, outcome

expectations, and undocumented students from a psychological perspective. The literature review chapter ends with the formation of the research question and an outline of the hypotheses.

This manuscript continues with a methods section that describes the sample, instruments and measurements, procedures, and analysis. The scope of the sample is defined as well as the eligibility criteria for students to participate in the study. Precautions taken in the research design to protect their identities and ensure confidentiality are also described in this section. Included next is a description of the instruments used to collect demographic data and to assess the variables of interest: immigration status, academic status, level of exposure to performance accomplishments, academic self-efficacy, and academic outcome expectations; as well as academic outcome variables: academic performance, career goals, and actions. This section ends with a description of the types of analyses performed.

The next section summarizes the results of the analyses. Descriptive statistics will be reported as well as the results from path analyses and analyses of variance (ANOVA). The last section is the discussion, which elaborates on the meaning of the results in light of the methodology and in the context specific to this sample. The discussion elaborates on what the results entail using theory and literature as guidelines. Limitations of the study, recommendations for future directions, and the most relevant findings are discussed in this section.

Chapter 2

LITERATURE REVIEW

This chapter reviews the most relevant literature that explicates the factors that come into play in the prediction of academic outcomes with students. To accomplish this objective, this chapter will begin with a review of the literature regarding self-efficacy and social cognitive career theory (SCCT). The chapter will continue with a review of both domain specificity in SCCT measurements and SCCT research in diverse populations. Subsequently, there will be a review of outcome expectations and their role in SCCT. A review of learning experiences as sources of efficacy will follow. This review will conclude with coverage of the literature about undocumented students and formulation of the research questions and hypotheses.

Self-Efficacy and Social Cognitive Career Theory (SCCT)

Since its introduction by Bandura (1977) self-efficacy has been a prominent concept that has furthered the understanding about people's behavior as a function of their beliefs about their capabilities in specific domains or behaviors. Bandura's theoretical framework provided the foundation for many expanded models and theories that arose later on, using self-efficacy as a central component. What gives Bandura's concept such a research lure is its simple yet coherent applicability. He proposed that self-efficacy, or a person's belief in his/her ability to perform a specific task or behavior, predicts future behavior in a better fashion than past performance could. He explains this predictive strength by acknowledging that "people process, weigh, and integrate diverse sources of information concerning their capability, and they regulate their choice behavior and effort expenditure accordingly" (Bandura, 1977). As noted here, Bandura

places great emphasis in the significance that learning experiences have in shaping self-efficacy beliefs, beliefs about competence and capability, which ultimately affect behaviors and outcomes. Learning experiences/sources of efficacy are a very important factor in Bandura's theory of self-efficacy as they are theorized to have a direct impact on the predictive power of self-effiacy. To further provide ease of explanation and lucidity to his theory, Bandura identifies four sources of information, or learning experiences, that have the potential of increasing or decreasing the level of perceived self-efficacy in a person. In other words, Learning experiences or sources of efficacy are exposure to opportunities to learn new skills and behaviors and thus develop efficacy. These sources of efficacy are performance accomplishments, vicarious learning, verbal persuasion, and emotional arousal. Each of these is inducted through a variety of situations such as performance exposure, suggestion, attribution, live modeling, among others. Bandura (1977) also included outcome expectations in his original self-efficacy theory.

The importance of self-efficacy in the triadic reciprocal and causal relationship between personal factors (cognitive, affective, biological), behaviors and environmental factors in the production and maintenance of the different forms of human agency is well documented in the literature (Bandura, 1986, 1999, 2000). Bandura explains the basic components of social cognitive theory and the key role that self-efficacy plays, both directly and through other factors such as outcome expectations and goals, as producer of behavior and ultimately the endeavors people choose to engage in.

Self-efficacy theory was expanded to career development in women by Hackett and Betz (1981). Their model highlighted the importance of learning experiences in the level of career self-efficacy experienced by women in terms of careers in science. They

attributed women's lack of strong career efficacy expectations to the difference of access to the four sources of efficacy in comparison to men. Their model labeled examples of socialization experiences typical in females in terms of the sources of efficacy information and identified the effect that these experiences have in academic self-efficacy. This publication succesfully adapted for the first time a theory designed for clinical application (Bandura, 1977) to the area of career development and to understanding academic cognitions and behaviors in a minority group. The importance of self-efficacy to academic outcomes and its connection to academic motivation and persistence has been acknowledged (Pajaers, 1996), its relevance to multicultural populations has also been highlighted.

Career self-efficacy has also been operationalized as a predictor of career indecision, and this operationalization has been validated and supported (Lent, Brow, & Larkin, 1986). This study shows that self-efficacy measures were related to, yet distinguishable from, past achievements and current vocational interests. This study also showed that self-efficacy expectations are related to indices of academic performance behavior, or academic outcomes, vocational interests, and perceived career options. Findings from this study confirmed that self-efficacy is related to career-relevant behavior as proposed by Bandura (1977) and as extended by Hackett and Betz (1981). Self-efficacy may be an important factor mediating educational/vocational behaviors of students. This study marks the beginning of a trend that brings together the work of Bandura, Betz, Lent and their collaborators into common notions about career psychology.

Self-efficacy was combined with outcome expectations, the expectations people have from engaging in particular behaviors, and goal mechanisms in a new theoretical framework, social-cognitive career theory (SCCT) (Lent, Brown, & Hackett,1994). They introduced the social cognitive models of interest development, choice, and performance. It was proposed here that self-efficacy directly preditcs career and academic outcimes such as interests, choice goals, choice actions, and performace. Choice goals play an important role in self-regulatory behaviors because by setting goals people organize and guide their behavior to sustain it even in the absence of external reinforcement. Choice is considered a dynamic enterprise and choice actions are conceptualized as intention to engage in action or series of actions.This was the pivotal point that combined the propositions that Bandura, Betz, and their collaborators had previously established into a comprehensive model that aimed at explaining the predictive impact that person inputs, contextual factors, learning experiences, barriers and supports may have on interest, choice goals, choice actions, and ultimately performance and attainments. The influence of these factors on performance and attainments can be direct and/or mediated by learning experiences, self-efficacy, and outcome expectations. This work proposed hypotheses and future directions for research that focuses on the understanding of the paths in the model. The utmost contribution achieved by this manuscript was the unification of concepts and variables that had been previously studied separately or in various combinations, into a theoretical framework that attached them together and proposed an all-encompassing view of the psychology of careers.

The variations between the social cognitive career theory model (Lent et al., 1994) and general social cognitive theory model (Bandura, 1999, 2000) have been

acknowledged and discussed (Lent et al., 2003). The predictive value of these two models was tested in a sample of college students. The results provided better support for Bandura's (1999, 2000) model where self-efficacy mediates the relationship between contextual supports/barriers and choice actions. Self-efficacy also mediates the relationship between contextual factors and choice goals. Interestingly, this study did not find outcome expectations to be independent from self-efficacy, but rather predicted by it, which is inconsistent with SCCT literature. The study confirmed that self-efficacy is a good predictor of interest. It was found that goals fully mediate the relationship between self-efficacy to interest and choice actions. The sample in this study was 80% male, 63% European-American, engineering students, and this demographic hampers the ability to generalize to a diverse population. It is important to keep in mind the distinction between the SCCT and Bandura's Social Cognitive Theory Model, which are similar yet distinct models, and how the paths to and from self-efficacy and outcome expectations have different implications in each model. The SCCT model will be adopted for the purpose of this study as there is a body of literature that has evolved for over twenty years and provides higher empirical support for this model (Betz & Hackett, 2006; Betz, 2007).

Recently, it has been established that self-efficacy and outcome expectations each make valuable contributions to the prediction of interests and choice goals across Holland themes (Sheu, Lent, Brown, Miller, Hennessy, & Duffy, 2010). It has been confirmed that outcome expectations greatly contribute to the prediction of interests and goals when paired with self-efficacy, although self-efficacy alone sometimes accounts for most of the variance. It is also known, because of this study, that interests partially mediate the

relationship between self-efficacy and outcome expectations to choice goals. Self-efficacy and outcome expectations are related through Holland themes.

Domain Specificity in SCCT. When aiming to measure any type of self-efficacy, the importance of domain specificity has been continuously highlighted from the very start. Striving for domain specificity, Rottinghous, Betz, and Borgen (2003) conducted a meta analysis of 60 different samples in which the relationship between vocational self-efficacy domains and interest was studied. That study also explored the relationship of these two separate standing constucts and Holland's (1997) RIASEC themes, academic dimensions, and traditional gendered occupations. This study confirms the conclusion reached by Lent et al. (1994), that there is a moderate relationship between self-efficacy and interest. More specifically, this link is consistent throughout all of the RIASEC domains. This study adds to the SCCT model by incorporating the aspect of personality in a quantitatively measurable way. Self-efficacy has been confirmed to be a a strong predictor of college student's academic performance and choice action. In Gore's (2006) incremental validity studies he highlights that this predictive strength depends on when self-efficacy beliefs are measured, the part of self-efficacy being measured, and the outcome being predicted. He also concludes that students need feedback about their social and academic performace in order for them to develop an accurate assessment of their goal achieving ability. In this last conclusion, Gore (2006) implies that having access to sources of self-efficacy expectation through learning experiences, such as feedback, increases college related perceived self-efficacy in college students.

Measures that assess students' confidence in their ability to successfully complete college related tasks have been developed (Solberg, O'Brien, Villareal, Kennel, & Davis,

1993). The College Self-Efficacy Inventory (CSEI) consists of 20 items measuring participants' beliefs in their abilities to successfully complete college-related tasks. College self-efficacy is measured in terms of three specific constructs: course, social, and roommate self-efficacy. Self-efficacy beliefs in each of the three college-related domains relate to expectations in engaging in activities in those domains. For example, self-efficacy beliefs for course/academic related activities were related to students' expectations about doing academic activities such as using the library, interacting with faculty, learning, writing, etc.). The factor structure of this instrument clearly identifies a scale that operationally defines academic self-efficacy at a more general level. "Initial analysis of the College Self-Efficacy Inventory suggests that this instrument posseses adequate reliability and validity for use in future studies with Hispanic college students" (Solberg et al., 1993).

College self-efficacy is defined by Gore, Leuwerke, and Turley (2005-2006) as "belief in one's ability to successfully engage in college-related behaviors." In this study, the authors tested the validity and reliability of the College Self-Efficacy Inventory (CSEI) constructed by Solberg et al. (1993) in measuring college self-efficacy. The authors observed that the level of self-efficacy in the domains measured, college-related activities, was connected to the outcome expectations and intention to engage in those activities. Another finding is that "students who persisted at the university for at least two years had higher efficacy beliefs than did those students no longer enrolled" (Gore et al., 2005-2006) there was also a significant correlation between CSEI scores in the course domain and GPA. It is important to note that college self-efficacy beliefs are only related to academic performance and choice action when measured at the end of the first

semester. Academic self-efficacy beliefs may, to some extent, guide students' decisions to pursue higher education or to persist in those opportunities in the face of difficulty or obstacles.

Since self-efficacy beliefs depend on the types of sources of efficacy (Hackett & Betz, 1981), it is logical to conclude that the quality of activities that students are exposed to may have an effect on the quality of their efficacy beliefs. Betz, Hammond, and Multon (2005) tested the Career Decision Self-Efficacy Scale (CDSE) in a large sample of college students and concluded that a 5 level response continuum is as reliable and valid as a 10 level one. According to them, both formats provide similar results, but the briefer one allows greater flexibility for administration and feedback.

When students believe themselves to be highly efficacious and anticipate positive rewards in math and science, they also expres interest and goals to complete a STEM degree (Byars-Winston, Estrada, Howard, Davis, & Zalapa, 2010). This study also highlights the significance in differences regarding paths and predictive quality of certain variables, such as self-efficacy, depending on the domain. For example the significance of self-efficacy on predicting goals is different for biology than it is for engineering. It is has also been found that self-efficacy sometimes is a good predictor of goals, but goals do not predict academic performance (i.e., GPA) as strongly as outlined in the SCCT model (Brown, Tramayne, Hoxha, Telander, Fan, & Lent, 2008). These developments in methodology and psychometric instrumentation have practical implications in the assessment of self-efficacy domains in research and practice.

SCCT and diverse groups. Lent et al. (2005) tested the predictive utility of the social cognitive career theory model in regards to engineering interests and major choice

goals in students at predominantly Black and White universities. Students at HBCUs (historically Black colleges and universities) reported higher levels of self-efficacy, outcome expectations, technical interests, social support, and educational goals than did students at the predominantly White university. Social barriers were similar across both groups, and women perceived more social support and fewer social barriers than men. Women and men did not differ significantly across the other variables in the model. It was found that supports and barriers factors relate to self-efficacy, and there is also an indirect path to goals. A direct path was also found between barriers, but not supports, and goals in the full sample. The findings suggest that social supports provided by the HBCU environment help counteract social barriers. These results have been further confirmed (Lent, Lopez, Lopez, & Sheu, 2008) when SCCT was tested in a large diverse sample at a historically Black university. Support has been provided for the idea that contextual variables relate to goals indirectly through their link to self-efficacy (through learning experiences). This study argues against the predictive value of outcome expectations but confirms the predictive strength that self-efficacy has to outcome expectations. In a subsequent study with a similar population, the SCCT choice model received further support regarding its ability to predict interest, choice actions, and choice goals in engineering students (Lent, Sheu, Gloster, & Wilkins, 2010). It is relevant to highlight that this study found that social supports increased the ability of self-efficacy to predict goals, which hints at the influence of social experiences that are also sources of efficacy. The findings from Lent et al. (2008) were corroborated in (Lent, Lopez, Sheu, & Lopez, 2011) where the SCCT model fit was assessed by following cohorts of African Americans and European Americans for two academic years. The results of contrasting

the two studies indicate that SCCT is stable across gender, educational level, university setting, and racial/ethnic group.

It has been found that women report fewer learning experiences in traditionally masculine domains (e.g. Realistic and Investigative) (Willimas & Subich, 2006). They examined learning experiences using the LEQ (Schaub & Tokar, 2005) and their relation to SCCT (Lent, Brown, & Hackett, 1994) across Holland's (1997) RIASEC typology. Men reported fewer learning experiences in the feminine Social domain. There were no gender differences in the Social domain for physiological arousal and there were no differences in the Realistic domain for vicarious learning. These findings suggest that men and women's learning experiences may be the origin of gender differences in academic attitudes and behaviors. Of the four, performance accomplishments most strongly predicted self-efficacy in both men and women. This notion is consistent with Bandura (1986). Vicarious learning was not a significant predictor for outcome expectations in men and women. When outcome expectations were paired with self-efficacy in the equation, only social persuasion and affective reactions were predictors of outcome expectations. This study supports the notion (Lent et al. 1994) that self-efficacy acts as a mediator in the relationship between learning experiences and outcome expectations. This particular study supports the idea that societal messages may strongly influence outcome expectations.

Ali, McWhirter, & Chronister (2005) studied the contribution of perceived contextual support, barriers, and SES to vocational/educational self-efficacy and vocational outcome expectations in 114 ninth-grade students of low SES who attended a semirural high school. Support from siblings was found to be an important social support

factor in career development of low SES young adults as this support has a stronger impact in youth's self-efficacy beliefs than parental support. Peer support showed to be a strong predictor of vocational/education self-efficacy as it is related to vicarious learning and verbal persuasion. Students who had higher support from parents and peers also had a lower perception of barriers, which may enhance their efficacy for overcoming obstacles. Vocational/educational self-efficacy was also a strong predictor of educational outcome expectations. The authors concluded that it is possible that self-efficacy mediated the relationship between contextual variables and outcome expectations, as these contextual variables did not directly impact vocational outcome expectations.

The contributions of social cognitive career theory factors to college expectations (outcome expectations) was studied in a similar research study (Ali & Saunders, 2006) which focused on 87 rural Appalachian high school students. This is an underserved and often ignored cultural group. Findings show that rural Appalachian high school students' vocational/educational self-efficacy beliefs and perceptions of parental support have great importance in their expectations to attend college above and beyond the impact that their parent's education or occupation. Findings of strong endorsement of expectations to attend college and high levels of self-efficacy are consistent with Appalachian cultural aspects such as self-reliance. This study lends support to the SCCT notion that contextual variables can be important in the development of self-efficacy beliefs. This conclusion is derived from the finding that vocational/education self-efficacy and parental support were the only predictors found to influence expectations to attend college.

SCCT of career choice in Mexican American adolescent women was tested in a sample of 364. This was the first study to test SCCT with academic goals in Mexican

American adolescent women. “Consistent with SCCT, nontraditional career self-efficacy predicted nontraditional career interests. In addition, nontraditional career self-efficacy had a positive effect on career choice prestige (determined by a socioeconomic index of occupational status), and a negative effect on career choice traditionality” (Flores & O’Brien, 2002, p. 22). The contextual variables of parental support and perceived future occupational barriers directly predicted career choice prestige, and parental support predicted career aspirations. Even though acculturation is not part of the SCCT model, paths from acculturation level and feminist attitudes to career choice prestige and traditionality were supported by data in the model. SCCT propositions were not supported in this study. There was no relationship found between contextual factors and nontraditional career self-efficacy, and nontraditional career interests had no impact on outcome variables. Nontraditional career self-efficacy did not predict career aspiration. The relationship between acculturation level and career aspiration is also a direct one and it is not mediated by nontraditional career self-efficacy. Learning opportunities were not measured in this study, but contextual factors were assumed to exert influence on career self-efficacy, presuming there is an association between these factors and learning experiences.

Life-role salience and career decision-making self-efficacy was measured in 137 Native American college students attending a tribal college in Brown and Lavish (2006). Findings show that Native American college students are much more involved in their home/family role and are more committed to that role than their work role. Value differences between the two roles were not significant. The authors infer that participants may perceive that their educational pursuits are providing them realistic world-of-work

expectations. The findings show that Native American students do not find their community role more salient than their work role. Home/family role was reported as more salient than work and community roles, and they reported that the community role had least importance of the three. It is inferred that participants think of work as an important life role. All three dimensions of student role salience were related to career decision-making self-efficacy. The authors suggest that Native American students are not that different from other samples of undergraduates in terms of career decision-making self-efficacy. "Overall, participants' decisions to attend college suggested that they perceive a connection between a good education and a good job/future. Although many believed a good life and future to be contingent on securing a good education, others regarded education as an opportunity to help family/community and to escape the high unemployment rate on the reservation" (Brown and Lavish, 2006, p. 127).

Recently, the relationship between elite leadership self-efficacy and elite leadership outcome expectations as predictors of elite leadership interests and goals was studied in women (Yeagley, Subich, & Tokar, 2010). This study lends support to the directionality of the paths in the SCCT although causality was not explained by the types of analysis conducted in this study. It is known from this study that outcome expectations may be a valuable indicator of women's goals. SCCT has also been applied to Mexican-American middle school students (Navarro, Flores, & Worthington, 2007). The study showed that the SCCT model is a good fit for this data for both genders and that the variables in the model explained 40% of the variance. This study also provides additional support to the notion that access to learning experiences may be afforded based on social class standing, resulting in educational inequities across social class statuses. It is known

that math/science self-efficacy predicts math/science outcome expectations, and both of these variables predict math/science interests and goals. It is evident that the predictive quality of domain specific self-efficacy and outcome expectations in the SCCT model is applicable to diverse populations.

When SCCT was tested to explain career choice for six Holland themes in groups of Mexican America college students, it was found that there were only differences in the Realistic and Investigative models across gender and institutional groups (Flores, Robitschek, Celebi, Andersen, & Hoang, 2010). This study provides support to SCCT in the six Holland domains to be appropriate for use with Mexican American college students. This study points out the need to improve the way career choice goals are operationalized to make the assessment of this variable more consistent. It is concluded that affirming Mexican orientation and providing opportunities for success experiences across the Holland themes can increase Mexican American students' self-efficacy.

Social cognitive career theory (SCCT) has also been expanded to test its appropriateness in measuring students' interest and commitment to social justice. Miller, Sendrowitz, Connacher, et al. (2009) used the Social Issues Questionnaire (SIQ) which is an adapted measure from Lent's previous measures (Lent et al., 2001, 2005, 2008) and it is intended to measure outcome expectations, interest, commitment, and social supports and barriers in social justice-related issues. This study stated that social-justice self-efficacy and outcome expectations predict social-justice interests and that the SCCT model is appropriate for studying and predicting social justice interest and commitment.

Evidently, the application of SCCT to diverse groups has been an area of emerging interest and broad coverage. Lindley (2006), in a comprehensive review of the

literature, traces how self-efficacy has been applied in research with diverse populations. It is also clear that domain specificity is vital in the development of psychometric measures to assess any variable in the SCCT model, specifically self-efficacy. Furthermore, as evidenced by the literature, the social-cognitive models of career psychology have continuously been evolving since the 70s. At the present, the SCCT model has generated vast support that extends over 20 years of empirical studies, valid and reliable instruments to test the several variables encompassed in it, and a history of adaptation and exploration in diverse populations.

Outcome expectations. Outcome expectations are what people expect from engaging in specific behaviors after weighing possible outcomes. They are the beliefs about probable response outcomes. This concept has received much less attention in the literature than self-efficacy, yet this component is still an important part of social cognitive theory. Bandura (1986) stated that outcome expectations are derived from observing situations and events in the individual's environment as well as actual outcomes resulting from actions the individual has taken.

Three forms of outcome expectations have been identified: physical outcomes, social reactions, and self-evaluations (Bandura, 1997). This clear distinction between the types of outcomes that a person can anticipate aids in the study and measurement of outcome expectations in the SCCT model. Furthermore, outcome expectations are hypothesized to directly affect interests, goals, and actions, which mediate its relationship to performance (Lent et al., 1994). This direct relationship to outcome variables emphasizes the importance of understanding the importance of outcome expectations in the prediction of academic behaviors using SCCT. Outcome expectations are also

presumed to be determined by similar sources that influence self-efficacy: direct reinforcement from engaging in actions and vicarious learning from the consequences of others' actions (Fouad & Guillen, 2006) but there are no studies that explore these sources in depth. Outcome expectations have been found to be a valid construct that has a direct path to self-efficacy. This knowledge suggests that if outcome expectations are influenced by self-efficacy, then they are also indirectly fed by learning experiences or sources of efficacy.

The importance of domain specificity in measuring constructs of the social cognitive career model was highlighted by Smith and Fouad (1999). This study shows that SCCT can be expanded to other domains outside of English and Math as long as the domains being measured are specific and clear. Self-efficacy, outcome expectations, interests, intentions and goals were measured through 16 Likert scales in math/sciences, social studies, English, and art domains. This study yields evidence for the existence of academic self-efficacy, outcome expectations, interests, and goals specific to academic subjects, which further supports the SCCT model. Using the validated scales from Smith and Fouad (1999) a follow up study with 952 undergraduates (Fouad, Smith, & Zao, 2002) showed empirical support for the social cognitive career model in four specific academic domains. It was found in this study that the social-cognitive career model is a good fit to predict the four content areas measured. This study lends evidence to the strong path between self-efficacy and outcome expectations. The theory that self-efficacy and outcome expectations predict interests and subsequently intentions in specific areas was supported. This study also acknowledged that results may be similar across all four subjects because learning experiences are similar for these students. Once again, the

influence of learning experiences on other variables of the model, such as outcome expectations, is emphasized.

A six item instrument to assess outcome expectations in a sample of 166 high school students was developed by McWhirter, Rasheed, and Crothers (2000) as part of a study that tested a 9 week career education class on career-decision self-efficacy (CDMSE) and vocational skills self-efficacy (VSSE). Items on the instrument consisted of four-point scales through which participants rated their level of agreement to statements about expecting optimistic career outcomes. The results from this study suggest that the career education classes impacted small but significant increases in career decision-making self-efficacy and vocational skills self-efficacy. It is presumed that the career education class exposed students to sources of self-efficacy expectations related to career decision-making self-efficacy and vocational skills self-efficacy tasks. The increases in CDMSE and VSSE remained after the 9 week retest and appeared superior to pretest scores. Outcome expectations about obtaining a satisfying and successful career were also significantly higher after the class for those who took it during the first quarter. These scores decreased significantly after the 9 week follow up. The authors hypothesized that outcome expectations decreased because students were not able to enact career decisions and evaluate and revise their outcome expectations once their contact with career information was terminated as the class ended.

Learning experiences/sources of efficacy. In a review and commentary about the state of research in career self-efficacy, Betz (2007) recognizes that a flourishing number of studies have furthered the understanding about self-efficacy, but little has been done to operationalize learning experiences and expand the knowledge about their

predictive and/or mediating value. This is curious given that precedence of this concept. Learning experiences are clearly outlined by Bandura (1977) as sources of efficacy expectations and have been repeatedly shown to be the key variable that predicts level of self-efficacy and outcome expectations. Learning experiences are the key component in the SCCT model as they mediate between background contextual affordances, personal inputs and self-efficacy as proposed in Lent et al.'s (1994) SCCT model. This means that learning experiences are the point in the model that has the ability to produce, decrease, increase, and/or maintain self-efficacy, which is the best predictor of behavior according to SCCT literature. Learning experiences are also the most effective and imperative point for interventions that increase self-efficacy to be implemented (McWhirter, Rasheed, & Crothers, 2000), thus, close attention is merited by this concept in the model.

A map of the four learning experiences in relation to typical socializing situations for women and their effect in their perceived academic self-efficacy was clearly outlined by Hackett and Betz (1981). For example, they observed that higher self-efficacy in domestic activities, at the expense of lower self-efficacy in career activities, was a result of a socializing experience such as greater involvement in domestic activities, which is an activity that belongs in the performance accomplishment source of self-efficacy.

The four sources of self-efficacy have held up in studies that explore their applicability in domain specific types of self-efficacy, such as mathematics self-efficacy (Lent, Lopez, & Bieschke, 1991). This study measured the four sources of self-efficacy in mathematics and correlated the results to mathematics ACT scores and found significant correlation with three of the four sources, excluding vicarious learning. In order to measure the perceived sources of mathematic self-efficacy, the authors developed an

instrument with four 10-item scales. Each of the four scales measured a different source of perceived self-efficacy (learning experience); participants indicated their level of agreement on a 5 point scale. This was the first attempt of only a handful to create an instrument that measured learning experiences in a specific domain.

Anderson and Betz (2001) developed a measure for the four sources of self-efficacy in the domain of social behavior that was designed using the same approach as Lent et al. (1991). "Self-report of memories for past experiences is an appropriate method of measuring the sources of efficacy information because, theoretically, these experiences affect the development of self-efficacy" (Anderson & Betz, 2001, p. 101). This study confirmed findings by Lent et al. (1991) concluding that the vicarious source measure differs from the other three sources. The results indicated that past performance and emotional arousal are the best predictors of social self-efficacy. Additionally, this study noted that past performance was not the best predictor of social behavior, but instead all three sources combined incrementally contribute to the prediction of behavior. It is worthy to note that differences were found in terms of race/ethnicity and gender. The scores for Hispanics fell between those of Caucasians/African Americans and Asians. Caucasians and African Americans reported developing confidence based on background experience and Asians reported relying less on background experiences. Those who reported having decided on a career also reported higher levels of social self-efficacy due to greater experiences in receiving social self-efficacy information. The findings from this study provide support to the presumptions regarding the influence of social skills, comfort, and confidence in regard to career development and decision making. It is

important to highlight that access to learning experiences (the four sources of information and self-efficacy expectancies) increase social skills development.

The influence of personality on career interests through learning experiences in the SCCT model has been tested by Schaub and Tokar (2005). They also examined the role of learning experiences in SCCT, particularly the notion that self-efficacy beliefs and outcome expectations derive from career related learning experiences. "Findings generally indicated that personality's relation to vocational interests is both direct and indirect, via learning experiences and sociocognitive variables. Additionally, findings strongly supported Lent et al.'s (1994) hypotheses that learning experiences inform self-efficacy beliefs and outcome expectations" (Schaub and Tokar, 2005, p. 320).

Schaub (2003) developed the Learning Experiences Questionnaire (LEQ) based on Bandura's descriptions of the four sources of learning experiences. The LEQ is a 120 item instrument and measures learning experiences in terms of the six Holland (1997) themes. Schaub used the same instrument development procedure as Lent et al. (1991, 1994) and Anderson and Betz (2001), in which items were worded as recollections of past experiences. This logic is in line with Bandura's (1997) statement that self-efficacy beliefs are based on the cognitive process and conscious evaluation of previous experiences. Each type of learning experience was assessed by a 5-item scale, for a total of 20 items, for each of the six Holland themes. Construct and content validity were established through the judgment of three reviewers who are experts in vocational research.

On a related vein, the LEQ was applied to a sample of midwestern university students to assess their gender differences in terms of learning experiences and Holland

themes (Williams & Subich, 2006). Results from this study lend support to the notion that higher levels of reported learning experiences in a particular domain relate to higher self-efficacy and outcome expectations in that domain. Along the same lines, it is known that there is empirical support for the multi-dimensional structure of the LEQ and that this instrument is appropriate for both genders (Tokar, Bychanan, Subich, Hall, & Williams, 2011). It is also known that the combination of personality, gender, and conformity to gender roles predicts learning experiences in the SCCT model for the Holland themes, particularly for the Realistic and Social domains (Tokar, Thompson, Plaufcan, & Williams, 2007).

The aforementioned authors have been the few to develop quantitative instruments to measure the sources of self-efficacy expectations or learning experiences and attempt to operationalize them. As previously stated and demonstrated by the literature reviewed thus far, learning experiences are a pivotal point in the SCCT model that needs further examination. Understanding the implications related to learning experiences in providing sources of efficacy has the capability of further explicating the predictive ability of self-efficacy and outcome expectations on academic behaviors and outcomes, or any type of behaviors and outcomes for that matter.

Undocumented Students

Demographics and legislation. According to the US Census Bureau's estimates from year 2000 there are approximately 2.5 million undocumented youth living in the United States (Chavez, Soriano, & Oliverez, 2007). Each year around 65,000 undocumented students graduate from high school without the benefits of full societal participation (Gonzales, 2008; Passel, 2006).

The challenges and concern regarding the immigration status of undocumented students has been acknowledged in the past. It has been recognized that most undocumented immigrants come to the United States to pursue, like most Americans, the American dream of a better life (Drachman, 2006). *Plyler v. Doe*, a Supreme Court decision in 1982, allowed undocumented youth access to free public school K-12 education. However, this ruling did not apply to postsecondary education, which has been constrained by several federal laws that prevent undocumented students from receiving financial resources to access higher education. Examples of federal legislation that limit undocumented students from accessing federal financial aid for higher education are Title IV of the Higher Education Act of 1965, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), and the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA), both from 1996 (Drachman, 2006). Ironically, undocumented students often do not learn about their immigration status until they are in the process of applying for school programs, college admission, and employment (Chavez, Soriano, & Oliverez, 2007). Denying postsecondary benefits to undocumented students seems detrimental since the amount of financial resources that undocumented workers generate for the nation is likely higher than the overall expenditure by this group. Denying benefits to undocumented may increase costs in the long run as a result (Galassi, 2003).

The positive impacts of local and federal legislation that would allow undocumented students to adjust their immigration status and obtain access to resources to continue their postsecondary education have been a topic of interest in the literature. It is known that the passage of federal legislation such as the Development Relief and

Education Act for Alien Minors (DREAM) Act would alleviate most of the legal and economic barriers that prevent undocumented students from accessing higher education and increase their incorporation (or affiliation) patterns that lead to upward mobility (Abrego, 2006). It has also been acknowledged that undocumented students are socially full-fledged members of the US society since they have been educated in US schools, speak English, envision futures in the US and internalize US values. The current legislation, however, restricts the paths of upward mobility for undocumented students.

State legislation such as AB 540 in California, allows undocumented students to reposition themselves to being with the law (to be able to comply with the law), instead of against it, as this law allows them to have a new identity and empowers them to use the law in their favor (Abrego, 2008). It has also been concluded that because undocumented students' legal values were informed by U.S. social values, they believe in objective meritocracy, justice, and they venerate education (Abrego, 2008).

The importance of the positive impact that local legislation allowing undocumented students greater access to education may have in their academic endeavors is supported in Flores and Horn (2009) who found that undocumented students living in a state with an in-state tuition program may persist in college. This study was conducted at a highly selective university in Texas, and shows that undocumented students' college persistence patterns are very similar to those of their documented counterparts when they are allowed in-state tuition.

It is also known that undocumented student enrollment increases in community colleges that are located in states that provide in-state tuition for these students (Jauregui et al., 2008). Additionally, undocumented students prefer to attend large academic

institutions. Lastly, a statistically significant correlation between the number of undocumented students enrolled and number of total Hispanic students enrolled in the institution has also been observed (Jauregui et al., 2008).

Undocumented students are considered substantive members of society as they live in particular spatial boundaries; attain community knowledge, skills, and resources; exchange with community institutions; invest in communal provisions for membership; accept the community's identity and fate; and accept the political community's basic moral philosophy (Perry, 2006). Curiously while considered members of this society, they have consistently been denied a path to naturalization that would enable them to advance their educations and careers to become fully contributing members of this society. More recently, on June 15, 2012 the President of the United States of America issued an executive order that allows undocumented students to qualify for deferred action for childhood arrivals (DACA) (U.S. Citizenship and Immigration Services, 2013). If they meet a number of requirements outlined by the U.S. Citizenship and Immigration Services (USCIS), undocumented students may qualify to receive a two year work permit and cannot be deported from the U.S. However, even after qualifying for DACA, undocumented students cannot travel outside of the country or apply for citizenship, as DACA does not grant them legal immigration status.

Mental health. The psychological functioning of undocumented students has also been receiving growing attention from the field of psychology, but overall there is still a lack of knowledge about this population. Academic resilience in undocumented students has been studied (Perez, Espinoza, Ramos, Coronado, & Cortes, 2009) and it has been concluded that academic success is related to both personal and environmental resources,

academic performance is generally positive even in the face of psychological risk, and high risk and resilient undocumented students experience significantly high levels of adversity.

Recommendations for counseling professionals in regards to higher education access for undocumented students (i.e. financial assistance, outreach, facilitating transfer, social support, and personal development) have been outlined by Perez (2010). The challenges of career counseling with undocumented students have also been addressed (Storlie, 2012) and they include risks of undocumented students being part of the American education system and cultural challenges. It has been suggested that the Systems Theory Framework (Arthur & McMahon, 2005) be used when counseling undocumented students.The critical factors needed to support undocumented students at an institution of higher learning were identified by Perez, Huber, and Malagon (2006, 2007) and these are social support, financial aid, and campus climate.

Undocumented students have also been compared to documented international students in Bygrave-Dozier (2001). They found that 76% of undocumented students received their high school diploma in the US, which means they had more time to adjust to the American culture and experienced less socially related difficulties transitioning from high school to college compared to international students. It was found in this study that undocumented students have better placement scores for reading and writing than documented international students. It was also discovered that many undocumented students attend college part time because they are poor and receive no financial assistance from institutions. It was concluded that there are many differences between the two groups and they should not be lumped together in research studies. In particular,

undocumented students receive little financial support from their families to attend college and often have to work long hours to pay the high costs, and these demands impact their academic performance.

The experiences of undocumented students have been studied using a socioemotional framework in order to understand the benefits and detriments of their situation (Perez, Cortes, Ramos, Coronado, & 2010). On the negative side fear, uncertainty, sense of shame, sense of discrimination, anxiety, and distrust to figures of authority were identified. Parents, institutional agents, peer support, campus support programs, and civic engagement were identified as coping mechanisms. Intervention strategies are also outlined and can be implemented in academic institutions regardless of whether school officials know if students are undocumented.

Advocacy. A growing body of literature exists that focuses on undocumented students' advocacy. It has been highlighted that as a group, undocumented students show academic achievement, leadership, and civic engagement patterns that exceed those of their US citizen counterparts (Perez, 2010). Over 90 percent of undocumented students report volunteering and participating in community service, 95 participate in extracurricular activities, 78 percent of those hold leadership positions in those activities, 37 percent have been identified as gifted, and 90 percent of those surveyed aspire to obtain a master's degree or higher (Perez, 2010). It is also acknowledged that as the number of undocumented students in colleges and universities continues to increase they have begun to form their own student organizations and networks where they participate in advocacy for students' rights and access to resources (Chavez, Soriano, & Oliverez, 2007).

Over the last few years, working to promote legislation such as the DREAM Act was the central activity for most immigrant student groups. DREAM Act advocacy work has given many undocumented students the means to participate in the political process (Gonzales, 2008). In their advocacy and student groups, undocumented students became involved in advocacy such as contacting legislators, mobilizing communities, and staging public actions.

The civic engagement patterns of undocumented students (i.e. providing social service, tutoring, activism, and functionary work) have also been studied (Perez, Espinoza, Ramos, Coronado, & Cortes, 2010) and it was found that undocumented Latino youth display high rates of civic participation. It was found in this study that the majority of noncitizen college-going Latino youth are participating in the American civic life.

It is important to highlight that while some of the legal barriers, psychological aspects and the civic engagement patterns of undocumented students have received coverage in the academic literature, no previous study has focused on applying the SCCT model to undocumented students. There is no investigation on the types of learning experiences that undocumented students have access to through the advocacy they become involved in with their student organizations and groups. No previous study has investigated the relationship between involvement in advocacy and academic outcomes such as choice goals, choice actions, and academic performance. No previous study has investigated the mediating role (Baron & Kenny, 1986) of self-efficacy and outcome expectations in the relationship between learning experiences and academic outcomes.

Hypotheses

Based on the literature review, and taking into account what is known about SCCT and both undocumented and documented students, the research question posed is: what is the relationship between involvement in advocacy, academic self-efficacy, outcome expectations, and academic outcomes such as academic performance, academic choices and actions? A second question is what are the differences between undocumented and documented students on the aforementioned variables?

In order to study these research questions the following hypotheses were developed:

H1: Performance accomplishments in advocacy predict academic self-efficacy.

H2: Performance accomplishments in advocacy predict academic outcome expectations.

H3: Performance accomplishments in advocacy predict

a) Career goals.

b) Choice actions.

c) Academic performance.

H4: Academic self-efficacy mediates the relationship between performance accomplishments in advocacy and

a) Career goals.

b) Choice actions.

c) Academic performance.

H5: Academic outcome expectations mediate the relationship between performance accomplishments in advocacy and

a) Career goals.

b) Choice actions.

c) Academic performance.

H6: Undocumented/documented status moderates the relationship between performance accomplishments in advocacy and

a) Academic outcomes (career goals, choice actions, and academic performance).

b) Academic self-efficacy

c) Academic outcome expectations

H7: There are significant mean differences across variables between undocumented and documented students.

Chapter 3

GENERAL METHOD

In order to satisfy the research purpose and answer the research questions described in this manuscript, two separate studies were conducted, study 1 and study 2. Study 1 was conducted with the function of obtaining reliability measures, validating, and refining the instruments to be used in Study 2. Study 2 was subsequently conducted to test the set of hypotheses described in the previous section. Both studies were approved by the Internal Review Board (IRB) at Arizona State University prior to being conducted.

STUDY 1

Method

Participants. A total of 203 Arizona college students initiated participation in study 1. There were no restrictions placed on participants' ethnicity and/or country of origin in order to participate in the study. Students were not required to participate in advocacy, although that was a variable measured in the protocol. The only requirement for students to participate in the Study 1 was to be enrolled in at least one class at the college/university level in the fall 2012. Of the 203 participants who started the study, 42 did not complete the majority of the instruments, for this reason their responses were not used in analyses that involved certain scales. Some of their responses, however, were used in internal consistency analyses for the scale they did complete (student performance accomplishments questionnaire SPAQ extracurricular). The sample of Arizona college students that was used for the majority of analyses was N = 161, as this is the number of students who completed most of the study's battery.

Of participating students, 53% were female and 47% were male. The mean GPA among participants was *M* = 2.99, and the median was 3.0. Participants were enrolled in an average of 14.35 credit hours, with a median of 15.00. All participants were enrolled in at least one credit hour in college. The average income reported was *M* = $5,132. It is important to highlight that 52% of participants left the income field blank or put a zero as their response because these responses may skew the amount of income reported by students this sample. The average amount of income reported does not suggest that students in this sample are of low income, but rather that they did not understand the income question in the survey.

The majority of participants (87%) were born in the United States, and 14% were born in other countries that included Canada, China, Guam, Guatemala, India, Iran, Jordan, Mexico, Paraguay, Poland, Switzerland, Venezuela, and Vietnam. Most participants (84%) reported speaking English as their first language, 16% reported that English was not their first language, and 8% reported Spanish was their first language. Most participants (60%) identified as White, a small percentage of participants (17%) identified as Latino/a, 8.7% identified as being mixed race. 6.8% identified as Asian, 5% identified as Black or African American, 1.2% identified as American Indian, and 1.2% identified as native Hawaiian or Pacific Islander.

All participants in the sample attended college in the state of Arizona; 43% were freshmen in college, 29% were sophomores, 17% were juniors, 11% were seniors in college, and 1% were doctoral students. The majority of participants (93%) reported being US citizens, 3% reported being permanent residents, 3% reported having student

visas, and 1% reported having work visas. Most participants (73%) indicated participating in extracurricular activities, while 27% indicated they did not.

Recruitment. The sampling strategy used was convenience sampling. Using the researcher's networks, 30 instructors of classes at the university and community college levels were contacted. They were asked to provide the protocol to students in their classes in a voluntary fashion (see Appendix J for the informed consent letter).

The purpose of the study was clearly stated, to evaluate ways to measure various elements of a career development model. The benefits and risks of the study were also explained. The benefit of the study for participants was to contribute to the academic understanding of the applicability and measurement of a career development model. By participating, they also helped further the understanding of the types of academic and extracurricular experiences that are related to academic outcomes. There were no significant risks associated with participating in this study as the data will be kept confidential and there is no participant identifying information attached to the data (see the subsection on confidentiality considerations). It was also stated to students that they were not required to participate in the study; thus, their participation was completely voluntary.

All instructors offered a small percentage of extra credit (1 to 5%) in their classes in order to motivate students to participate in the study. The study's protocol was available on a web-based research survey site. (www.surveymonkey.com) and the instructors could make the link to the protocol available to students through their preferred vehicle (email or in person). Instructors could also provide the researcher's email address for students to request the link directly if preferred. The web protocol of

the study did not ask for any identifying information from participants, and protocol answers/data cannot be traced back to subjects. Students were allowed to complete the survey at their own convenience.

After asking instructors to approach students with the link to the protocol, the data collection phase for this study began. This phase lasted for about a week in the middle of October 2012. Of the 203 students who participated in Study 1, only 161 were deemed participants, since the rest did not complete the majority of the protocol.

The protocol provided the same information given to instructors: purpose of the study, benefits, risks, and the voluntary nature of participation. An informed consent letter restated the purpose of the study, risks, benefits, IRB approval, and contact information of the researchers.

Confidentiality considerations. The names of the instructors approached about the study will not be revealed in order to prevent potential identification of the students. Emails exchanged with instructors were destroyed immediately and permanently. Any written or digital exchange with students was destroyed to prevent keeping identifying information. The study's protocol did not ask for identifying information and the website that contains the protocol does not have the capability of tracking any identifying virtual information exchanged, such as IP numbers.

Procedures. Once participants (students enrolled in college classes in the fall 2012) visited the web link to the protocol they found an informed consent letter that explained the study, its risks, its benefits, what was asked of participants, and how to contact the researchers. They had the option to withdraw participation from the study with no penalty at any point. Students filled out a demographic survey that did not

include any identifying information. Then students completed a five-question scale on academic goals. Next, students completed a six-question scale about choice actions. Next students completed the 31-item Student Performance Accomplishments Questionnaire. Following this survey, students completed a ten-item scale about steps to complete education (academic self-efficacy) and a six-item scale about thinking about the future (academic outcome expectations). Academic performance (GPA) was measured in the demographic survey.

Instruments and measures. The following instruments were used to measure variables of interest in both study 1 and 2. Due to the novelty of the study, no measures previously existed to assess the variables in the exact form and context of interest in this study. For that reason, many of the instruments used in this study were constructed from scratch or adapted from previously validated instruments of particular relevance to the domains assessed. Study 1 was conducted in order to validate all instruments and make changes as needed before data collection for study 2. All instruments achieved a high level of internal consistency in study 1 (Cronbach's alpha > .80) and they were utilized in study 2. All measures are included in appendices. See the Results section of this study for details about psychometric properties of the instruments.

Demographic Survey. A demographic survey (see Appendix A) was administered at the beginning of the protocol, following the informed consent letter. The first question in this survey was the criterion qualifier question about being currently enrolled in college (currently enrolled in at least one credit hour at an institution of higher learning). This initial question determined whether the participant's data are to be included in the study. Following this question, students were asked if they participate in extracurricular

activities and the nature of those activities (e.g., political advocacy group, community volunteer, athletic activity/team, religious group, etc.). In study 2, students were asked if they participated in advocacy and how many hours they spent on advocacy on an average week.

Academic enrollment status (i.e. how many hours enrolled in college) was assessed with an item in the demographic survey. This survey also had a "residency" status question that gave students the option to choose between citizen, permanent resident, international student (student visa), work permit, deferred action applicant, and undetermined. The options of work permit, deferred action applicant, and undetermined were decoys for undocumented immigration status. This is the question that determined if students were undocumented.

This survey included questions that captured other demographic data such as gender, age, educational status (i.e., year in college), state of residence, and socioeconomic status. Their estimated annual income was used to assess socioeconomic status. Lastly, this demographic survey had a question that assessed academic performance through self-reported GPA.

Student Performance Accomplishments Questionnaire (SPAQ). A chart that outlines experiences in advocacy that provide sources of efficacy (i.e., personal performance accomplishments, vicarious learning verbal persuasion, and physiological arousal) in line with Bandura's (1977) definitions was created in a similar fashion to Hackett and Betz's (1981) chart to link sources of academic efficacy of women in STEM fields. This advocacy learning experiences chart (see Appendix B) was constructed by creating a list from the researcher's personal experience and observations about students

who participate in extracurricular activities and advocacy. This list was then combined with a list of academic skills related to employability proposed by Blaxell and Moore (2012). This chart guided the construction of a questionnaire intended to measure the four sources of efficacy (performance accomplishments, vicarious learning, verbal persuasion, and emotional/physiological arousal) in advocacy by including seven items per source, for a total of 28 items.

This initial questionnaire was shared with two doctoral students in counseling psychology and three counseling psychology professors who hold PhDs. After feedback from this group of five reviewers, it was decided that the instrument would be fortified by adding more items to measure the source of efficacy of interest, performance accomplishments. It was decided that it would be more productive to focus on performance accomplishments in this study as this source of self-efficacy has been theorized and shown to predict future performance over and above the other three sources of self-efficacy (Willimas & Subich, 2006; Bandura, 1986). Hence, the mastery/performance accomplishment part of the instrument was kept and the other three sources of self-efficacy were not included in the instrument. The aim was to focus on one source of self-efficacy at a time in order to carefully develop an instrument that successfully assesses this source in a comprehensive manner, as opposed to developing an instrument that would assess the four sources in a limited approach.

Following the decision to focus on only one source of efficacy in this study, the items that measured the other three sources of efficacy were dropped from the instrument. A list of 31 items that focused on measuring performance accomplishments in extracurricular activities, particularly advocacy, was created (see Appendix C). These 31

items composed the initial Student Performance Accomplishments Questionnaire (SPAQ), which measures the average number of occasions per week in the past year that students have experienced academic performance accomplishments in the context of interest (e.g. academic, extracurricular, advocacy). In order to specify the context of interest, a prompt is provided at the beginning of the instrument (e.g. the following statements describe experiences that you may encounter when in your academic role, extracurricular role, or advocacy role). This prompt allows students to think of performance accomplishments in the specified context. The SPAQ measures academic performance accomplishments, conceptualized in the current studies as learning experiences or events in a particular role in which the student performs a skill (e.g., public speaking, interpersonal and teamwork, leadership, knowledge application, intrapersonal skills, high level planning, organizational skills, problem solving, demonstration of initiative). These skills are identified to be related to academic success and employability (Blaxell and Moore, 2012).

The original questionnaire consisted of 31 items in the forms of "I" statements which are worded to reflect past performance accomplishments (e.g., In the past year I have successfully…organized a project, event, etc.; in the past year I have successfully …given a speech). Students rate how many occasions in the past year they have successfully performed each of the 31 items on a scale from 0 to 7+ (7+ stands for seven or more occasions). Scores from each item are summed to obtain a general score that indicates the frequency that they experienced performance accomplishments in the context of interest. Higher scores indicate higher exposure to performance accomplishments in a specific context.

The SPAQ academic form was tested in study 1 with a normative sample of 187 college students, and the SPAQ extracurricular form was tested in this study with a sample of 161 college students who completed this measure in the fall of 2012. The number of students who completed the majority of the battery was 161.

Additionally, the 10 final items maintained in the SPAQ were items that maximized the differences between performance accomplishments in advocacy from performance accomplishments in the academic context (i.e. items for which mean differences in these two contexts were high). These final items reflect experiences that are common in advocacy contexts and may also be obtained in academic settings. The brief SPAQ, the 10 item form, achieved a high level of internal reliability (Cronbach's alpha of .93) which suggests that the brief and final form of the instrument possessed strong internal consistency (see Results section for more details). The items in the final form of the SPAQ also achieved a high component loading in factor analyses (see Table 2 and Figure 1), which suggests that the final items in the instrument successfully assess the domain of interest, performance accomplishments.

Three final forms of the SPAQ were created, and each assesses the source of efficacy of interest, performance accomplishments, when the student is in the context(s) of interest: in an academic role (SPAQ-AC), extracurricular role (SPAQ-ER), and/or an advocacy role (SPAQ-AD). The SPAQ-AC and SPAQ-ER were used in study 1. The SPAQ-AD and SPAQ-AC were used in study 2 to assess performance accomplishments in the academic role and advocacy role (see Appendix D for the final versions of the SPAQ).

Academic self-efficacy. Academic self-efficacy was measured using an adapted form of the Self-Efficacy for Technical/Scientific Fields measure used in Lent et al.(1986, 1984), which is based on procedures from Hackett and Betz (1981). The original version of this instrument assessed self-efficacy by asking subjects to indicate their confidence in successfully completing educational requirements and job duties in 15 science and engineering fields. This instrument measures both strength and level of self-efficacy. Only the strength of self-efficacy measure is used in the current study, which is calculated on a 10-point scale that ranges from 1- completely unsure to 10- completely sure. In the study that validated this instrument, strength scores were calculated by adding the individual strength scores and dividing them by 10. Test-retest correlation over an 8-week period was .89; the coefficient alpha used to estimate internal consistency reliability was also .89 (Lent et al., 1984). This instrument was adapted to be used in the current study and assess level of self-efficacy of participants regardless of field of study. Due to the variability of fields of study and careers of choice in the sample, the items in the adapted instrument were not tailored to specific fields or job duties. Instead, the items reflected the completion of general tasks required to fulfill educational requirements for the degree program that each student has chosen. The wording of items in this scale remains largely similar to the original scale (e.g., How much confidence do you have in your ability to: Complete all of the requirements for your degree program; How confident are you that you could: Complete a degree despite financial barriers and pressures.) with the difference of stating a general degree program prompt as opposed to identifying a specific field of study (see Appendix E for the adapted self-efficacy instrument). Internal

reliability analysis showed that the adapted instrument yielded a Cronbach's alpha of .91, suggesting high internal reliability.

Outcome expectations. Outcome expectations were measured using a modified version of the instrument used in Lent et al. (2003, 2005, 2010). Participants are asked to rate their level of agreement with 10 items that portray positive outcomes. The adapted outcome expectations instrument used in this study (see Appendix F) has 10 positive career outcomes that most students could expect from participating in academic, extracurricular, and advocacy activities (e.g. Participating in ***advocacy*** will likely allow me to: do work that I would find satisfying). This adapted outcome expectations instrument yielded high internal consistency in the study 1 (Cronbach's alpha of .93).

Academic outcome variables. Academic outcomes were measured across the following three domains and using three separate measurements.

*Academic performance***.** Academic performance was measured in the demographic survey using a self-reported GPA. The question asks "What is your current cumulative GPA?"

Career goals. This variable was measured using a 4-item scale adapted from Lent et al. (2008), which measured students' intentions to persist in their discipline. This instrument was designed to measure intentions to persist in the computing discipline. According to Lent et al. (2008), respondents rate their level of agreement with each statement on a 5-point scale, ranging from 1-strongly disagree to 5-strongly agree. Higher scores indicate stronger intentions to continue to pursue a computing discipline. Scores on the original goal measure (Lent et al., 2008) yielded adequate internal consistency estimates (coefficient alpha of .95) and were strongly predictive of future persistence in

engineering. The current instrument (see Appendix G) was adjusted to measure intentions to persist in the students' chosen degree program, without specificity of degree program due to the variability of college majors and careers in the sample (e.g. I think that earning a bachelor's degree in a field that interests me is a realistic goal for me). This modified instrument demonstrated high internal reliability (Cronbach's alpha of .97) in the study 1, which suggests that items work well together in their modified form.

Choice actions (choosing to persist). A 5-item scale was constructed to assess the types of actions students may take to ensure they persist in their education and thus continue pursuing their chosen degree program and career. The items were generated from the researchers' observations of choice actions commonly taken by students to pursue higher education despite financial barriers. This scale consisted of action statements that students can rate in terms of level of agreement on a 5-point Likert scale. This instrument (see Appendix H) emphasizes actions to persist despite financial difficulty (e.g. I intend to apply [or have already applied] for funding to cover the costs of my education). This instrument showed high internal consistency (Cronbach's alpha of .82) in study 1.

Analyses. In study 1, descriptive statistics were run on all instruments (Student Performance Accomplishments Questionnaire, academic self-efficacy, academic outcome-expectations, and academic outcomes). Individual and scale means, standard deviations, and frequency distributions were computed. Cronbach's alpha coefficients were calculated to test internal consistency of items within each of the scales.

In the SPAQ, items needed to yield item-to-scale correlation indices above the cutoff point ($|r| > .30$) in order to be maintained in the instrument. An exploratory factor

analysis (EFA) and a confirmatory factor analysis (CFA) were conducted on the SPAQ using all 31 items of the original inventory in order to determine how well each item loaded on the factor of interest. Mean differences between items in the SPAQ-ER and SPAQ-AC were calculated with the aim of keeping items that maximized the difference between the two settings (extracurricular and academic). A decision process was used to construct a brief form of the SPAQ containing 10 final items. Internal consistency indices were also tested in the final 10-item version of the SPAQ by calculating the Cronbach's alpha and factor analyses.

Results

A total of 203 college students initiated the study, and 161 of them completed the majority of the survey. For this reason, 42 responses were unusable for internal reliability analyses of the different instruments. The SPAQ-AC internal consistency analysis was computed using the 187 completed responses on the instrument, and the SPAQ-ER was validated with a sample of 163 students who completed that instrument.

Instrument construction. Cronbach's alphas were calculated to assess level of internal reliability of the 31 items in the initial Student Performance Accomplishment Questionnaire (SPAQ) – academic role version and extracurricular role version. The number of participants that completed the SPAQ academic role (N=187) was higher than the number of participants who completed the SPAQ extracurricular role (N=163). The Cronbach's alpha of the SPAQ (Academic role) was .96, which suggests high internal reliability. The mean of the scale was M = 129.76, the variance was s^2 = 2243.88, and the standard deviation was SD = 47.37. The Cronbach's alpha for the SPAQ (Extracurricular Role) was α = .98, also suggesting high internal reliability among items in this scale. The

mean was M = 113.70, the variance was s^2 = 4369.87, and the standard deviation was *SD* = 66.11. Reported scores in the SPAQ could range from 0 to 217 on a 0 to 7-point scale per item. Scores for both versions of the SPAQ were normally distributed.

The high level of internal consistency achieved by both versions of the SPAQ suggests that the 31 items assessed the same construct and were redundant. A confirmatory factor analysis (CFA) was run on both scales (see Table 1). The CFA on the SPAQ extracurricular role revealed that all 31 items loaded very heavily on one component, theorized to be performance accomplishments, with the lowest item component loading being .592. The Scree Plot confirmed the notion that all items loaded predominantly on one component (see Figure 1). The CFA on the SPAQ extracurricular role demonstrated that 61% of the variance was explained by the correlation between items and this one component. The CFA on the SPAQ academic role also showed that all items loaded on one factor and this explained 44% of the variance (see Table 1). The Scree Plot and component matrix confirmed this notion (see Figure 2). The lowest loading by any item on the one component was .41.

Figure 1. Confirmatory Factor Analysis Scree Plot on SPAQ Extracurricular Role 31 items.

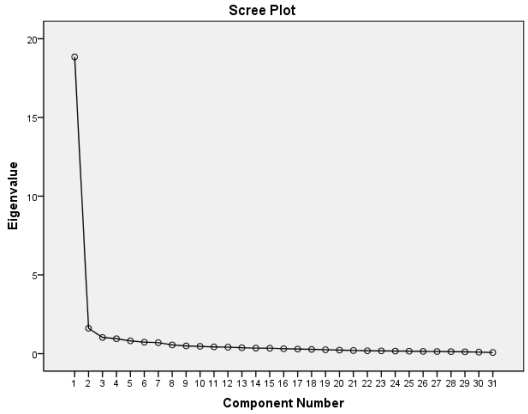
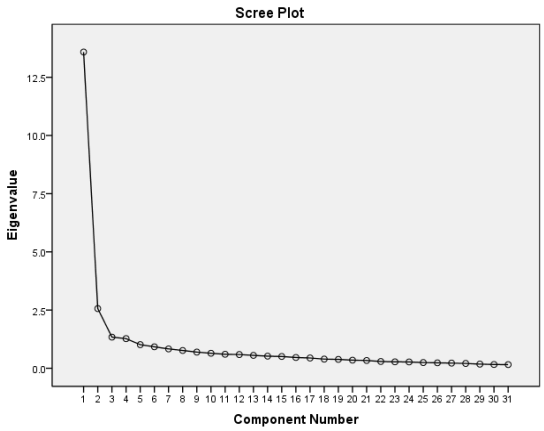


Figure 2. Confirmatory Factor Analysis Scree Plot on SPAQ academic role 31 items.



Since the 31 items on the scale were redundant, it was decided that the scale would be reduced to 10 items to minimize the time required by participants to complete the questionnaire. Items with higher means on the academic role than on the extracurricular role (items 1, 7, 14, 15, 16, 21, 22, 26, 28, 31, see Appendix for a list of the 31 items) were dropped in order to increase discriminant validity between academic and extracurricular roles. Items with significantly higher means in the extracurricular role (items 9, 11, 12, 13, 15, 16, 17) were maintained in the instrument, and those that met these criteria but were too similar to each other in presentation and phrasing (items 12, 13, 30) were also dropped. The rest of the items were chosen based on how highly they correlated with each other (see Table 2 for inter-item correlations of the 15 items chosen by these criteria).

From this list of 15 items, only those with uniqueness of presentation or face validity were maintained, i.e. those items that asked the same question using different presentation (different phrasing). Based on these criteria, the final 10 items maintained in the questionnaire were item numbers 6, 8, 9, 11, 13, 15, 17, 20, 23, 24 (see Appendix C

for the items maintained in the SPAQ). A Cronbach's alpha was calculated on the final 10 items in the SPAQ extracurricular role, which revealed high internal consistency, $\alpha = .93$. A confirmatory factor analysis of these final 10 items revealed that all 10 items loaded heavily on the one component (performance accomplishments), and explained 61% of the variance (see Table 5). The Scree Plot visually confirmed the strong relationship between items in the SPAQ and the one component. Individually, the item loadings on the one component ranged from .69 to .86, demonstrating high correlations between each item and the factor. In the final version of the SPAQ, the "extracurricular" prompt was replaced with "advocacy" in order to measure frequency of exposure to performance accomplishments in the advocacy setting (see Appendix C for the final versions of the SPAQ).

In brief, the final 10 items preserved (Table 3) in the SPAQ were items that yielded the highest correlation coefficients during internal correlation analyses (see Table 2), items that demonstrated the highest loadings on the component during confirmatory factor analyses (see Table 1 for original item component loadings, see Table 4 for final 10 item component loadings), items that highly correlated to criterion variables (academic self-efficacy, outcome expectations), and items that presented a diversified combination of performance accomplishment statements.

Cronbach's alphas were also calculated on all other instruments to assess internal reliability (see Table 6). All instruments yielded moderate to high indices of internal consistency, as calculated by Cronbach's alphas, academic self-efficacy scale (Cronbach's $\alpha = .91$), outcome expectations ($\alpha = .93$), choice actions scale ($\alpha = .82$), and the career goals (Cronbach's $\alpha = .97$). These internal consistency indices suggest that

each of these four scales contain high internal reliability. These internal consistency indicators were consistent with those achieved in previous literature when these scales were used in their original forms in other studies (described in Methods section). See Table 5 for psychometric properties of all instruments in study 1.

Chapter 4

STUDY 2

Method

Participants. Participants in study 2 were comprised of 154 undocumented and documented college students who resided and participated in advocacy from the states of Arizona, Arkansas, California, Delaware, District of Columbia, Florida, Illinois, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, and Wisconsin. Note that 55% of participants resided in the state of Arizona. There were no restrictions on the ethnicity and/or country of origin of students in order to participate. Students had to be enrolled in at least one class at the college/university level and be involved in advocacy in order to participate in the study. Participants indicated countries of origin that included the United States, Bolivia, Brazil, Canada, China, Colombia, Ecuador, Honduras, India, Iran, Libya, Mexico, Nepal, Pakistan, Peru, Philippines, Poland, Portugal, Puerto Rico, Romania, Russia, and Venezuela.

Of these students, 92 indicated that they have documented immigration status (e.g., US citizenship, legal permanent residency), and 62 indicated that they had undocumented immigration status. In terms of gender, 67% of participants identified as female and 32% identified as male. All participants were born between 1994 (18 years old) and 1961 (51 years old), and 1977 (35 years old) was the age mean. Of the students sampled, 49% identified as Latino/a, 30% identified as White, 4% identified as Black or

African America, 1% identified as American Indian, 10% identified as Asian, and 6% identified as being of multiple race.

The majority of participants (56%) indicated English was not their first language while 44% of participants indicated that English was their first language. Spanish was indicated as the first language by 42% of the sample. Other first languages reported by students in the sample included Arabic, Armenian, Cantonese, Farsi/Dari, Gujarati, Hebrew, German, Hindi, Marathi, Nepali, Polish, Portuguese, Romanian, Russian, Tagalog, Telugu, and Urdu.

Participants also indicated the number of credit hours they were taking in college, and this response had a mean of 12.51 and a standard deviation of 5.98 credit hours. Participants indicated their year in college, and the distribution was 11.5% freshmen, 19.9% sophomores, 17.9% juniors, 13.5% seniors, 11.5% master level students, 1.3% MBA students, .6% law students, 17.3% doctoral students, and 1.9% non-degree seeking students. Participants also reported their GPA, and the average GPA was 3.40 with a standard deviation of .74. Participants indicated their income levels, and $11,200 was the average amount, with a standard deviation of $11,531, which suggests that this sample is composed of students who are largely of lower socioeconomic status. The normal bell curve for this income question was skewed toward the bottom. The minimum value indicated for income was $0, and the maximum value indicated was $60,000. The income value endorsed by most participants (18% of the sample) was $0.

The income question was modified from study 1 for clarity in study 2. The income question in study 1 was “What is your current yearly personal income?,” and it

was changed to “What is your current yearly personal income from all sources? (do not enter a comma ",")” in study 2.

Students indicated how many hours on average they spent on advocacy activities on a regular week, and the mean of their responses was 19 hours a week. Participants also indicated the kind of advocacy that they participated in, which can be clustered into three types of advocacy: on behalf of students (e.g. student government), immigration advocacy, for education (e.g. K-12 education), and other (e.g. LGBTQA, women empowerment, peace, etc).

The following is a summary of their raw responses, which include advocacy: for academic opportunities for females, and activism; for federal and state DREAM Act; on behalf of international students; for immigrant rights; for access to higher education; through state wide student association; on behalf of autism; on behalf of children; K-12 education advocacy; civic engagement; for brain injury; legislative work; for comprehensive immigration reform; for education; for student interests; on behalf of English language learner legislation; on behalf of in-state tuition for undocumented students; for deferred action for childhood arrivals (DACA); for extreme poverty and HIV/AIDS; for graduate students; for health awareness; for student success; on behalf of LGBTQA students; for human rights; for justice in Palestine; for labor rights; for hunger-related issues; for justice in general; for women’s empowerment; for humanitarian causes; for student events; for minority faith; to help youth reach higher education; on behalf of residential colleges; for a political party; against a political party; against state government; on behalf of student government; for a national organization; giving know-your-rights workshops; on behalf of sports; on behalf of nonprofits; through community

organizing; for diversity; for social justice; by fundraising; by mentoring students; for state-based financial aid; for Latin organizations; to raise minimum wage; and against fear and racism.

Recruitment. The sampling strategy used was convenience sampling. The researcher used his networks to identify local and national student and community organizations to approach about the study. The purpose of the study was clearly stated, to evaluate various elements of a career development model. The benefits and risks of the study were also explained. The benefit of the study for participants was to contribute to the academic understanding of the applicability and measurement of this career development model. By participating, they would also help further the understanding of the types of advocacy experiences that are related to academic outcomes.

The study and recruitment procedure were explained and a recruitment script was provided to leaders in these organizations. The protocol of the study was available at a web-based research software site (www.surveymonkey.com), and the leaders could make the link to the protocol available to students through their preferred vehicle (email or in person). Leaders also provided the researcher's email address to students, in case they had any questions. The web protocol of the study did not ask for any identifying information from subjects and protocol answers/data could not be traced back to subjects.

After asking leaders of organizations to approach students with the link to the protocol, the data collection phase of this study begun. This phase lasted two weeks in late October 2012.

The protocol provided the same information provided to leaders of organizations: purpose of the study, benefits, risks, and the voluntary nature of participation. The

protocol also contained an informed consent letter that restated the purpose of the study, risks, benefits, IRB approval, and contact information of the researchers. Participants then completed the study's protocol. The only participation requirements were that students were enrolled in at least one credit hour of college level coursework during the fall 2012 and that they participated in advocacy.

Confidentiality considerations. The study's protocol did not ask any questions that could potentially lead to the individual participant. The names of the leaders approached about the study will not be revealed in order to prevent potential tracking down of the students. Emails exchanged with leaders were destroyed immediately and permanently. Any written or digital exchange with students was destroyed to prevent keeping identifying information.

The website that contains the protocol does not have the capability of tracking any identifying virtual information exchanged, such as IP numbers. The data collected from this study will be securely stored in virtual data drives and on an external hard drive after the study ends. This information will not be accessible by anyone other than the researchers. This data does not include identifying information of participants. The data will be kept for 7 years, after which time it will be destroyed if unusable. Raw data will be destroyed immediately after completion of the study

Procedures. Once participants (college students who participate in advocacy) visited the web link to the protocol, they found an informed consent letter that explained the study, its risks, its benefits, what is asked of participants, and how to contact the researcher. At that point they had the option to continue participating in the study or withdraw with no penalty. After that, students filled out a demographic survey that asked

about GPA and class status, but did not request any identifying information. Then students completed a 5-question scale on academic goals. Next, students completed a 6-question scale about choice actions. Next, students completed the 10-item Student Performance Accomplishments Questionnaire AD form (advocacy) and AC form (academic). Following this survey, students completed a 10-item scale about steps to complete education (academic self-efficacy) and a 6-item scale about thinking about the future (academic outcome expectations). Academic performance, GPA, was assessed in the demographic survey.

Instruments and Measures. The instruments described, created, and modified in study 1 were used in the present study. These instruments included the Student Performance Accomplishment Questionnaire AD (advocacy role) and AC (academic role). The SPAQs were used in their 10-item finalized short version. Notice that the extracurricular prompts were replaced with advocacy prompts in the instrument used in study 2 (see Appendix D). Other instruments included measures of academic self-efficacy, outcome expectations, academic performance, career goals, and choice action/intent to persist. All instruments are described in detail in study 1. The same demographic questionnaire used in study 1 was utilized in the present study. Internal consistency indices were calculated for all instruments in the current sample. All instruments achieved a moderate to high level of internal consistency as indexed by Cronbach's alphas (see Table 6). Confirmatory factor analyses were also computed on the SPAQs. In each instrument one component accounted for most of the variance (see Results section).

Analyses. In Study 2, descriptive statistics were also run and examined on all instruments. Factor analyses were conducted to test that the factor structure of the SPAQs used in study 2 were consistent with those used in study 1. Path analyses were conducted to evaluate the strength of the relationships between all variables (academic performance accomplishments, academic self-efficacy, academic outcome expectations, choice goals, choice actions, and academic performance). Using path analyses to test correlations between variables instead of using a regression analysis approach allowed for the analysis to take into account and calculate the magnitude of influence of indirect and direct factors in the causal relationship model. The benefits of using path analysis instead of regression analysis are described by Ahn (2002).

Path analyses were also used to determine model fit of the proposed SCCT model in this sample. The proposed model in this study (see Figure 1) depicted direct paths from the performance accomplishments variable (which combined SPAQ-AC and SPAQ-AD scores for model fit analysis) to the three outcome variables (goals, choice actions, and academic performance/GPA). Additionally, self-efficacy and outcome expectations were included as mediators between performance accomplishments and the outcome variables. Direct paths were allowed between performance accomplishments in academic role and performance accomplishments in advocacy role, between self-efficacy and outcome expectations, and between all three outcome variables.

Immigration status (documented/undocumented) was used in analysis of variance (ANOVA) as a moderator variable between performance accomplishments and all outcome variables (self-efficacy, outcome expectations, goals, choice actions, and

academic performance/GPA) in order to test if immigration status moderated the relationships between those variables.

Furthermore, 2 x 2 analyses of variance (ANOVA) were used with immigration status (undocumented/documented) as the factor and the rest of the SCCT variables of interest (self-efficacy, outcome expectations, goals, choice actions, and academic performance/GPA) as the dependent variables. These analyzes tested if any differences existed across variables of the SCCT model between the group of undocumented students and the group of documented students.

Finally, post-hoc 2 x 2 analyses of variance (ANOVA) were conducted to compare the group of student advocates from the study 2 (N = 154) to the group of non-student advocates in study 1 (N = 163) in order to test if differences existed across variables in the SCCT model between student advocates and student non-advocates. Participation in advocacy (yes/no) was the factor, and the dependent variables were the rest of the variables from the SCCT model studied in this project (self-efficacy, outcome expectations, goals, choice actions, and academic performance/GPA).

Results

Descriptive statistics were calculated for each of the individual scales used in study 2. Results for means and standard deviations as well as minimum and maximum possible scores and number of participants are presented in Table 6. The index of internal consistency is also presented in Table 6.

Principal Component Analysis (PCA). Principal component analyses (PCA) were computed on the SPAQ scales in order to test if the structure of measures was consistent with previous calculations in study 1. For the SPAQ-AD, all 10 items loaded

on one component that explained 56% of the variance. For the SPAQ-AC, the 10 items loaded on one component that explained 49% of the variance. Additionally, the 10 items in the SPAQ-AC also loaded on a second component that explained 10% of the variance. Individual item loadings for both the SPAQ-AD and SPAQ-AC are presented in Table 7. According to principal component analysis, the structure of the SPAQ advocacy (56% of the variance explained by one component) was similar in this sample to that of the SPAQ extracurricular in study 1 (61% of the variance explained by one component). Additionally, the SPAQ academic achieved a similar component structure in this sample (49% of the variance explained by the main component) compared to its structure with the sample in study 1 (44% of the variance explained by the main component).

Model Testing. Two separate models were tested with the purposes of assessing model fit of the original SCCT model and to study the relationships among variables in both the original and modified models.

Model 1. A path analysis was conducted with two purposes. The first purpose was to test how the model used in the study fit this particular sample of student advocates. The second purpose was to conduct exploratory examinations of the relationships between all variables in the study. Notice that scores from performance accomplishments in advocacy and in academics were combined in order to obtain a total score for performance accomplishments, and thus provide an overall measure of this source of efficacy that would be in line with the SCCT model's positioning of the source of efficacy. See Figure 3 for a visual representation of this model.

In the present study, the comparative fit index (CFI), root mean squared residual (SRMR), root mean square error of approximation (RMSEA), and the chi-square test of

significance (χ^2) were used to assess the fit of the hypothesized model. These are indices of model fit highlighted in Navarro et al. (2007). Kline (2005) acknowledged that the chi square test of significance is sensitive to sample size, and that a chi square statistic below 3.0 demonstrates good model fit. CFI values > .90 indicate good model fit, as the CFI ranges from 0 to 1. SRMR values < .10 and RMSEA scores < .06 also signify good model fit (Navarro et al., 2007).

Scores for the SPAQ-AC and SPAQ-AD were combined in order to obtain a total score of performance accomplishments that participants experienced in both their academic and advocacy roles combined. This SPAQ summed score was used in path analyses to test the fitness of the SCCT model. The SPAQ summed score was used as a predictor in the first path analysis, and separate scores for SPAQ-AD and SPAQ-AC were used in separate path analyses to test the research study's hypotheses, which focus on performance accomplishments in advocacy and not in academics. Summed scores were used in order to assess the fit of the SCCT model using performance accomplishments as one variable, combining performance accomplishments in advocacy and performance accomplishments in academics. Means were calculated for all other scales (self-efficacy, outcome expectations, goals, choice actions, and academic performance) and used as outcome and/or mediator variables in path analyses.

The comparative fit index (CFI) was .90, and the standardized root mean squared residual (SRMR) was .06. These scores indicate good model fit. In contrast, the root mean square error of approximation (RMSEA) was .22; 90% CI on RMSEA = .13 -.32, and χ^2 (2, N = 154) = 16.13, p = .00 suggest model misspecification (Klein, 2011). The latter results could be largely due to the small sample size used in the study (N =154).

The convention when conducting structural equation modeling analyses is to obtain a larger sample size ($N > 200$).

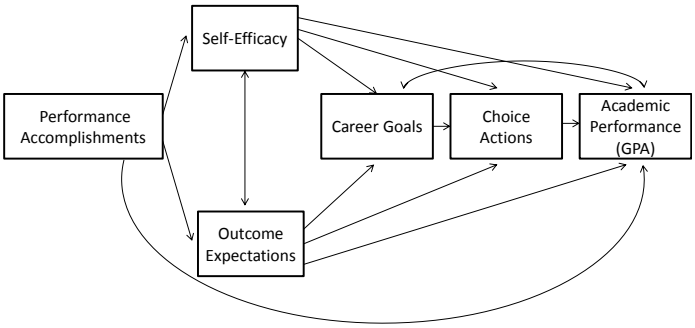
It is important to bring attention to the different conventions to indicate good model fit using the RMSEA and χ^2 as indicators. While the convention is to consider an RMSEA < .08 to indicate good model fit, other researchers (Navarro et al., 2007) have acknowledged that an RMSEA score < .10 is appropriate and can be interpreted to indicate good model fit. While the convention is to obtain a χ^2 with p value < .05, several research studies have utilized a *p* value < .10 to reject null hypotheses. These results regarding model fit should be interpreted with caution given the limitations associated with the sample size of the study.

A path analysis was conducted to test relationships among variables when predicted from a summed score of performance accomplishments (see Table 8 for correlations). Note that none of the paths were constrained for this path analysis in order to test all relationships among variables. When performance accomplishments in advocacy and academics were combined to test if performance accomplishments overall predict academic self-efficacy, this relationship was insignificant r (152) = .138 (p > .05). A significantly strong relationship was observed, r (152) = .390 ($p < .001$) between performance accomplishments and outcome expectations.

A significant and moderately strong relationship between outcome expectations and self-efficacy was also observed r (152) = .329 ($p < .001$). A strong relationship was observed between performance accomplishments and choice action, r (152) = .382 ($p < .001$), which suggests that performance accomplishments in academics contributes to the prediction of choice action from performance accomplishments in advocacy.

Additionally, in this model of combined performance accomplishments in advocacy and academics are combined, significant relationships were found between choice action and career goals, r (152) = .362 ($p < .001$), and between career goals and academic performance, r (152) = .176 ($p < .05$).

Figure 3. Model 1. Adapted from Lent et al. (1994) Tested for Model Fit with Path Analysis.



Model 2. An additional path analysis was conducted to study individual relationships between variables as outlined in each of the hypotheses (see Figure 4 for the path analysis with correlations). This path analysis specifically predicts outcome variables from performance accomplishments in advocacy. Performance accomplishments in academics were added to the prediction in order to test how performance accomplishments in advocacy add to the prediction of academic outcomes over and above performance accomplishments in academics.

Hypothesis 1 (see Figure 5), stating that performance accomplishments in advocacy predict academic self-efficacy, was not supported r (152) = .025 ($p > .05$). The

regression between performance accomplishments in academic role and academic self-efficacy was also calculated, and the relationship was not significant r (152) = .132 (p > .05).

Figure 4. Model 2. Adapted from Lent et al. (1994) Used in the Current Study for Path Analysis.

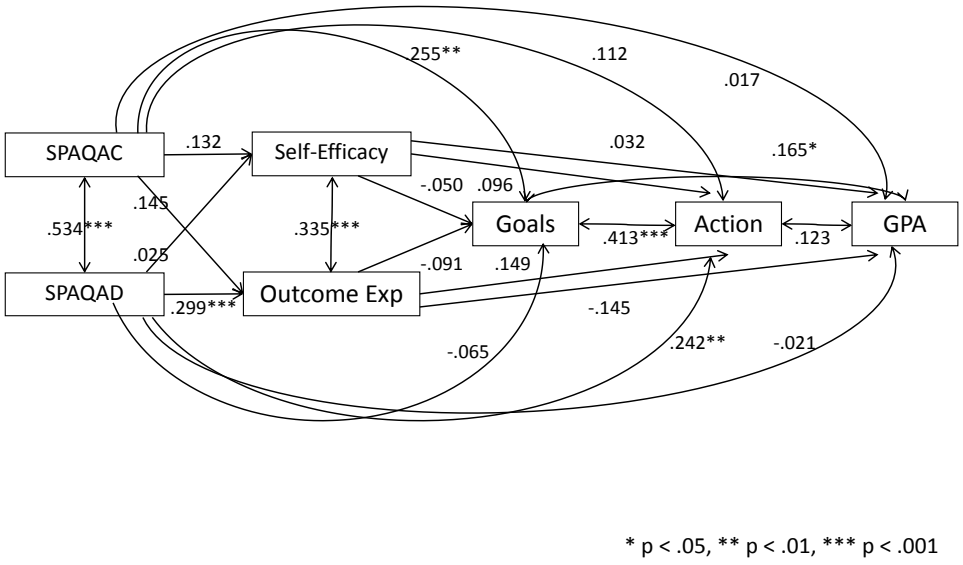
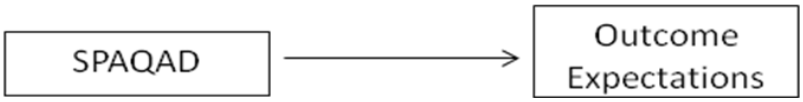


Figure 5. Hypothesis 1.

Hypothesis 2 (see Figure 6) proposing that performance accomplishments in advocacy predict outcome expectations was supported with a moderately strong relationship r (152) = .299 (p < .001). Performance accomplishments in academic role did not predict outcome expectations r (152) = .145 (p > .05).

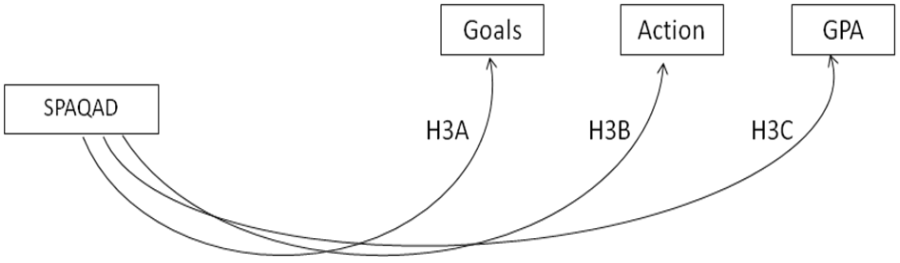
A significant and moderately strong relationship supported hypothesis 3-B that performance accomplishments in advocacy predict academic choice actions, *r* (152) = .242 (p < .001). Performance accomplishments in academics did not predict choice action *r* (152) = .112 (p > .05).

Figure 6. Hypothesis 2.



Hypotheses 3-A and 3-C (see Figure 7) were not supported, since the paths between performance accomplishments in advocacy and career goals, *r* (152) = -.065 (p > .05), and academic performance, *r* (152) = -.021 (p > .05), were not significant. The relationship between performance accomplishments in academics and career goals was statistically significant, *r* (152) = .255 (p < .01).

Figure 7. Hypothesis 3.



Hypothesis 4 (see Figure 8) was not supported as paths between performance accomplishments, academic self-efficacy and the outcome variables of interest were not

significant. A mediating linkage (Baron & Kenny, 1986) between performance accomplishments and academic outcomes was not observed with self-efficacy as a mediator. Academic self-efficacy did not mediate between performance accomplishments in advocacy, r (152) = .025 (p > .05) and academic performance r (152) = .032 (p > .05), career goals r (152) = -.05 (p > .05), or choice action r (152) = .096 (p > .05).

Figure 8. Hypothesis 4.

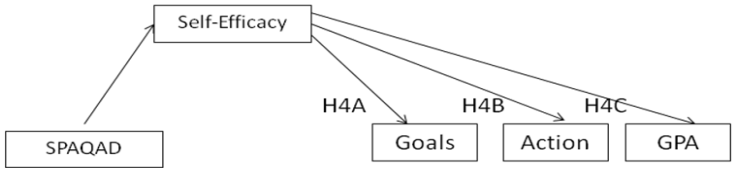
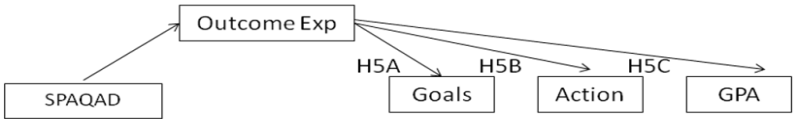


Figure 9. Hypothesis 5



Hypothesis 5 (see Figure 9) was not supported since paths involving outcome expectations, hypothesized to mediate between performance accomplishments in

advocacy and academic outcomes, were not significant. Outcome expectations did not mediate the relationship between performance accomplishments in advocacy, r (152) = .299 ($p < .001$) and academic performance r (152) = -.145 ($p > .05$), career goals r (152) = -.091 ($p > .05$), or choice action r (152) = .149 ($p > .05$). Outcome expectations did not have a significant relationship with performance accomplishments in academics r (152) = .145 ($p > .05$).

Hypothesis 6 was not supported as path analyses that tested whether immigration status moderated the relationship between performance accomplishments and a) academic performance, career goals, choice action, b) academic self-efficacy, and c) outcome expectations were not statistically significant. Immigration status did not moderate the relationship between performance accomplishments and other SCCT variables in the study. This hypothesis and each of its three sub-hypotheses were tested by calculating the direct regression between the predictor, student performance accomplishments, and each of the outcome variables, as well as the interaction effects.

Lastly, other significant relationships that were not hypothesized were revealed by the path analysis. Outcome expectations partially mediated the relationship between performance accomplishments in advocacy r (152) = .299 ($p < .001$) and academic self-efficacy r (152) = .335 ($p < .001$). Outcome expectations only partially mediated the relationship between performance accomplishments in advocacy and academic self-efficacy because, as previously reported, no direct significant relationship between performance accomplishments and academic self-efficacy was detected in this sample. A strong and significant relationship was observed between performance accomplishments in advocacy and performance accomplishments in academics r (152) = .534 ($p < .001$).

Additionally, a moderately strong and significant relationship was observed between academic self-efficacy and outcome expectations r (152) = .335 ($p < .001$).

Analyses of Variance. A series of one-way analyses of variance (ANOVA) was completed using status (documented or undocumented) as the independent variable and scores in each of the scales of interest as dependent variables. These analyses explored mean differences across all measures of interest between documented and undocumented students. The ANOVAs revealed that there are no significant mean differences between documented and undocumented students on any of the measures. Differences between documented and undocumented students were not significant in performance accomplishments in advocacy (i.e. SPAQ-AD) F (1, 154) = .209, p = .648; performance accomplishments in academics (i.e. SPAQ-AC) F (1, 154) = 2.684, p = .103; academic self-efficacy F (1, 154) = .746, p = .369; outcome expectations F (1, 154) = 1.358, p = .246; career goals F (1,154) = .260, p = .611; choice action F (1, 154) = .005, p = .946; and academic performance F (1, 154) = .917, p = .340. These results do not support hypothesis 7.

A series of one-way ANOVAs was conducted post-hoc in order to compare two groups in a sample of 315 college students. The group comprised of student advocates from study 2 (n = 154), was compared to the group of student non-advocates from study 1 (n = 161) across all measures used in this study (see Table 9 for means and standard deviations). The scores on the SPAQ extracurricular form completed by students in study 1 was compared to the scores of the SPAQ advocacy form completed by students in study 2. No statistically significant differences between student advocates and non-student advocates were found in performance accomplishments in academics F (1, 313) = 1.260,

p = 2.63, η^2 = .004; outcome expectations F (1, 313) = 1.590, p = .208, η^2 = .005; and career goals F (1, 313) = 1.792, p = .182, η^2 = .006. Results indicate significant mean differences between student advocates and student non-advocates on a number of variables. Compared to non-advocates' performance accomplishments in extracurricular activities, student advocates reported higher frequencies of performance accomplishments in advocacy F (1, 313) = 6.471, p = .011, η^2 = .020; academic self-efficacy F (1, 313) = 5.517, p = .019, η^2= .017; choice action F (1, 313) = 16.278, p = .000, η^2 = .049; and academic performance F (1, 313) = p = .000, η^2 = .040.

Chapter 5

DISCUSSION

The research reported was based on two studies and was unique for several reasons. It was the first to test the social cognitive career theory model (SCCT) assembled by Lent et al. (1994) in a) a sample of students who participate in extracurricular activities, b) a sample of students who participate in advocacy, c) a sample of students who identified as having undocumented immigration status. The current research is also unique in that it focused on operationalizing performance accomplishments, which is the one source of self-efficacy theorized by Bandura (1986) to be the best predictor of self-efficacy, outcome expectations, and behavior, compared to the other three sources of efficacy (i.e., vicarious learning, verbal persuasion, and physical/emotional arousal).

In study 1, an instrument to assess academic performance accomplishments was constructed using a list of skills associated with students' academic success and employability. This instrument was adapted from one created by Blaxell and Moore (2012) and augmented with the researcher's observations of how student advocates utilize these skills in their advocacy roles outside of the classroom. This instrument was named the Student Performance Accomplishments Questionnaire (SPAQ), and it was validated in a study 1 with a sample of 161 undergraduate students in a large public university. Analyses performed on the original items of the SPAQ revealed that the instrument possessed high internal reliability and that it was statistically feasible to reduce the number of items from 31 to 10, and still retain a high level of internal consistency. The final 10 items were chosen using a rigorous process following specific

decision-making rules that took into account mean differences, face validity, and inter-item correlations of items in the original instrument. Three forms of the SPAQ were constructed using the final 10 items in order to assess student performance accomplishments in three different settings: extracurricular (SPAQ-ER), academic (SPAQ-AC), and advocacy (SPAQ-AD). Measuring performance accomplishments in the context of students' extracurricular and advocacy roles is another facet of the current research that makes it distinct, as this endeavor had not been previously undertaken in the growing related body of literature. Similar instruments had been created in the past, such as the LEQ (Schaub, 2003; Schaub & Tokar, 2005), which measured all four sources of efficacy; but an instrument dedicated to student performance accomplishments in the contexts of interest, particularly in the context of advocacy, was not found in the literature reviewed for this thesis.

One of the main objectives of study 2 was to test whether a modified version of the SCCT model would fit in a sample of documented and undocumented student advocates. A path analysis was conducted to assess the goodness of fit of the proposed structural model. In this modified model, the academic outcome variables were allowed to co-vary. Direct paths were allowed from performance accomplishments to each of the academic outcome variables in order to test mediation roles of certain variables. These aforementioned changes are extensions of the core part of the original model. Two conventional indices of model fit (i.e., CFI and SRMR) indicated good fit of the proposed model in this sample, while another index of fit, RMSEA, suggested less than adequate fit. The chi square statistic also fell outside of the statistical range to indicate good fit, although this index is highly sensitive to sample size (Kline, 2005). The model was tested

on a sample of 154 student advocates. There is reason to believe that the chi square statistic might indicate that the model fits well if it was calculated on a larger sample. These results suggest that overall, the modified SCCT model does not fit well the sample of documented and undocumented student advocates, but this finding is inconclusive due to the size of the sample. This study was able to test a modified structural model with a group of students to which social cognitive career theory had not been applied in the past.

Research Question 1

The first research question asked about the relationship between involvement in advocacy and academic self-efficacy, outcome expectations, and academic outcomes (i.e., goals, choice actions, and academic performance). Five hypotheses were generated in order to examine this research question. Analyses conducted in this study show that contrary to the first hypothesis and what previous literature (Bandura, 1986; Lent et al., 1994; Lent et al, 2003; Willimas & Subich, 2006) has supported, performance accomplishments, in this case in an advocacy context, did not directly predict academic self-efficacy. This occurrence confirms the lack of fit of the modified SCCT model in this sample of student advocates.

Another potential explanation is that there were issues of measurement with the instruments that assessed these two constructs, which were hypothesized to be related. The SPAQ-AD measured performance accomplishments that were common in an advocacy setting and that reflected academic skills. The academic self-efficacy measure emphasized items that reflected self-efficacy statements in the classroom and the academic setting. These constructs are similar in essence, but perhaps students did not understand the similarity between the skills they use in their advocacy roles and the skills

they use in their academic roles, which were theorized to be similar skills. This suggests that while students display academic-related skills in their advocacy, performance or rehearsal of academic skills does not necessarily impact their confidence in their academic skills in the classroom. Perhaps the connection between skills displayed in their advocacy and skills displayed in the classroom is not explicit and/or evident to students.

The second hypothesis was supported, and, congruent with theory (Bandura, 1977) and previous research (Fouad & Guillen, 2006): performance accomplishments predicted outcome expectations. Opposite to what was observed in the first hypothesis, the outcome expectations instrument included items that reflected outcomes that could be expected as a result from participating in advocacy.

Interestingly, the relationship between academic self-efficacy and outcome expectations was strong, similar to previous findings (e.g., Sheu et al., 2010). The difference in this case is that, contrary to the belief that self-efficacy predicts outcome expectations; it is possible that the opposite is actually happening with this sample. The relationship between performance accomplishments and self-efficacy is partially mediated by outcome expectations, which suggests that performance accomplishments in advocacy predict outcome expectations, and outcome expectations in turn predict academic self-efficacy. This partial mediating relationship is different from what is supported in previous research and opens the possibility of rearranging the position of outcome expectations in the model, relative to self-efficacy. The predictive role of outcome expectations in the model has been studied before (Sheu et al. , 2010), and the results from this study support their notion that outcome expectations may play as imperative a role as self-efficacy. Perhaps outcome expectations are a precursor to self-

efficacy in this context. It could be that students who participate in advocacy think about the benefits of engaging in advocacy activities and academic endeavors and evaluate expected benefits that may come from engaging in those endeavors. Further, it is possible that after that evaluation process has occurred, their level of confidence in academic-related skills is impacted by their judgment as to whether their participation is worthwhile. This possibility and the new position of outcome expectations warrant further research.

Hypotheses 3-A and 3-C, stating that performance accomplishments in advocacy predict academic performance and career goals, were not supported. These direct paths from the learning experience/source of efficacy from the academic outcomes variables are not included in Lent et al.'s (1994) model, and they were added for the purpose of testing if academic self-efficacy and outcome expectations are indeed mediators in the model. The lack of support for these direct relationships suggests that self-efficacy and outcome expectations may be needed in the model in order to connect learning experiences/sources of efficacy to academic outcomes the way it is theorized in SCCT (Lent et al., 1994). The results suggest that student advocates do not obtain a direct benefit from participating in advocacy or academic activities in terms of their career goals or academic performance. Those outcomes may benefit from participation in advocacy, but that beneficial impact is not direct, but rather is mediated by other variables.

Hypothesis 3-B, that performance accomplishments in advocacy predict choice action, was supported. This direct relationship suggests that students who participate in advocacy also choose to persist in their academic work, and this relationship does not

depend on academic self-efficacy or outcome expectations as mediators. It could be argued that the range of academic skills measured in the SPAQ is highly related to academic skills needed to persist in academics. This result brings light to the direct benefit of participating in advocacy. Participating in advocacy is related to academic choice actions, which is in turn related to other academic outcomes.

It is noteworthy to highlight that a separate analysis was conducted, which combined scores of student performance accomplishments in advocacy and academics into one summed total and tested direct paths and mediation paths in the same model. This analysis found that combined scores of performance accomplishments in advocacy and academics directly predict career goals. This suggests that student advocates take into account experiences from both their advocacy and academic roles when setting career goals. It is a combination of learning experiences in both academics and extracurricular roles (such as the advocacy role) that predict career goals, and not learning experiences in academics alone.

The fourth hypothesis focused on the mediating role of academic self-efficacy between student performance accomplishments in advocacy and a) career goals, b) choice action, and c) academic performance. The results did not provide support for any of the three parts of this hypothesis. Contrary to the theory (Bandura, 1986; Lent et al., 1994), self-efficacy did not have a strong relationship with the source of efficacy, performance accomplishments, or subsequently with the academic outcome variables. The test of linkages of the mediation model (Baron & Kenny, 1986) did not support a mediating relationship. This finding can be explained in a variety of ways. One possibility is that the students misinterpreted the questions asked in the self-efficacy instrument used in this

study.. Tests of this and other instruments, however, indicated high internal consistency and the instruments were based on a previous instrument used in related research (Lent et al., 2003, 2005, 2010). More research and further evaluation of instruments to assess these three variables are needed in order to determine if instrumentation issues caused this key mediating relationship to be undetected statistically.

A second explanation is that the proposed model does not fit this sample of student advocates and that perhaps modifications need to be made to the model in order to study this sample of interest. A third explanation is that academic self-efficacy is not predicted by student performance accomplishments in the advocacy setting, and this is evidenced by the results of the test in hypothesis 1. This third explanation, however, does not provide a justification for the lack of a significant relationship between academic self-efficacy and academic outcomes, which is expected to be present even if performance accomplishments did not influence academic self-efficacy. Another explanation is that student advocate's academic outcomes are benefited by participating in advocacy and academic activities, and these benefits are not be mediated by self-efficacy.

The last hypothesis pertaining to the first research question tested the mediating role of outcome expectations in the model. This last hypothesis was not supported, which suggests that in this sample, outcome expectations do not mediate the relationship between student performance accomplishments in advocacy and academic performance, career goals, or choice action. This may mean that student outcomes in this sample are not necessarily related to the expectations students have from their involvement in advocacy.

This set of hypotheses contributed to answering the first research question in this study. The tests of the hypotheses provide evidence to explain how the variables of interests are related to each other in this sample of student advocates. This study generated results that do not support the social cognitive career theory model (Lent et al., 1994) as developed. This suggests that an alternative model might fit this population better and further research would be needed in that direction.

Additionally, some of the relationships were detected as predicted in the original model. Findings suggest that student performance accomplishments in advocacy predict outcome expectations. Additionally, there is a relationship between student performance accomplishments, the one source of efficacy of interest, and academic-self efficacy, although that relationship was mediated by outcome expectations. Additionally, relationships among the three academic outcome variables of interest were present, as proposed in SCCT. Career goals and choice action were moderately related, and career goals and academic performance were related although that was a weak relationship. Based on these results, student advocates' career goals are related to academic performance at a statistically significant level, which is in line with the original model.

The findings also point out that career goals are highly related to choice action and performance accomplishments in both the advocacy and academic roles combined. Choice action can be predicted from student performance accomplishments in advocacy alone, which sheds light on the main benefit that students obtain from their participation in advocacy activities. Further discussion about this finding and its relation to other academic outcomes is provided under the discussion for research question 2.

The study also generated results that are not in line with SCCT, and these results produce new questions. In this sample, it was observed that self-efficacy and outcome expectations did not mediate between the source of efficacy and outcome variables. Additionally, the direct and strong relationship between performance accomplishments in advocacy and choice action is not in line with that model. These results pose challenges to the core aspect of SCCT.

Furthermore, a combination of student performance accomplishments in advocacy and academics predicted career goals. These two direct paths are not posited in the original SCCT model, and this finding suggests that perhaps these direct paths ought to be incorporated in an alternative model.

Research Question 2

A second research question was created and studied in an attempt to further understand nuances in this sample across variables. The second research question asked about the differences between participating undocumented and documented students on the variables included in the model. Two additional hypotheses were tested to study this second question. The sixth hypothesis was not supported, which suggests that immigration status (documented versus undocumented) does not moderate the relationship between student performance accomplishments in advocacy and academic outcomes, academic self-efficacy, or outcome expectations. Additionally, no support was found for the seventh and last hypothesis. There were no significant mean differences between documented and undocumented students on the variables examined. There are no meaningful differences between documented and undocumented college students who participate in advocacy when it comes to their involvement in advocacy, their academic

self- efficacy, what they hope to obtain from their involvement in advocacy, and how well they perform academically.

These were particularly interesting findings as the literature highlights the series of challenges and barriers that undocumented students face in their pursuit to access and attain higher education (Bygrave-Dozier, 2001; Perez et al., 2009; Perez et al., 2010; Storlie, 2012). Given the type of barriers identified in previous research that accompany students' undocumented status, it was expected that undocumented students would differ significantly from documented students in a manner that was disadvantageous for the undocumented. What the results suggest is that undocumented students somehow correct for the lack of access and higher barriers they are said to face, and as a result they display levels of academic self-efficacy, outcome expectations, career goals, choice action, and academic performance that are not statistically different from documented students. Undocumented student advocates find ways to make up for the difficulties that are associated with their immigration status and as a result become less different from documented students in terms of their career development in college. These results also suggest that undocumented students essentially receive the same benefits from participating in student advocacy as documented students.

These results also provide support for the notion that despite the difficulties that students may experience, and despite the heightened difficulties that undocumented might experience, the outcomes are similar. In actuality, these two groups of students are more similar to each other than was hypothesized in this study and speculated in previous literature.

Unfortunately, the measures included in this research do not provide insight about how undocumented students go about closing the gap in terms of differences from documented students on SCCT variables. The SCCT model, however, suggests that background contextual affordances, person inputs, and contextual influences also impact self-efficacy and academic outcomes. These components of the model were not explored in this study. These additional variables could be derived from the demographic data collected on this sample and studied in future research projects. Future research studies using this dataset to further explore differences and similarities between undocumented and documented students should take into account measurement issues of background contextual affordances, person inputs, and contextual influences.

Research Question 3

After obtaining empirical support to answer the questions of how the variables were related to each other in this sample, and whether differences between undocumented and documented students existed, a third question arose. This third question was conceived and tested after the research study was conducted; thus, it is a post-hoc question. How are student advocates different from other college students? To test this research question, post-hoc analyses of variance were conducted to test mean differences between the group of student advocates in the study 2 and the group of students in the study 1. It was appropriate to group undocumented and documented students together as these two groups did not differ on any variables in the model.

The findings suggest that student advocates and student non-advocates are similar in a number of aspects. According to the post-hoc analyses, student advocates and non-advocates essentially perform accomplishments in a similar fashion in their academic

role. This similarity is to be expected, as it is logical to think that both groups obtain similar benefits from their participation in classroom academic activities. Both groups also expect to obtain the same benefits from participating in extracurricular activities, such as advocacy. Additionally, there is evidence to suggest that student advocates and non-advocates are alike in how they set career goals. Student advocates do not set higher or more ambitious career goals than student non-advocates, or vice versa.

The findings also suggest that student advocates are statistically different from student non-advocates across four different variables. Student advocates displayed higher means than student non-advocates in the measure that assessed student performance accomplishments in advocacy, academic self-efficacy, choice actions, and academic performance. As evidenced by the results, student advocates are able to experience higher levels of performance accomplishments, a source of efficacy, in their advocacy roles than student non-advocates did in their extracurricular roles. This means that advocacy activities afford students opportunities to perform and practice academic-related skills. Consequently, students who participate in advocacy have higher academic self-efficacy than those who do not participate in advocacy. This evidence supports the previous statement about the benefit of participating in advocacy. Essentially, student advocates have more chances to apply and practice what they learn in the classroom, and thus become more confident with those skills.

Student advocates are showed a higher level of choice actions, which means that they choose to persist more than non-advocates, and this is in line with findings related to the first research question. It was previously found in this study that student performance accomplishments in advocacy are highly related to choice action. It can be suggested that

by participating in advocacy students may also have the chance to practice and develop skills that allow them to persist academically. Lastly, student advocates perform better than student non-advocates; they have higher GPAs. This was a very revealing and unexpected finding, as previous analyses in this study found no direct relationship between performance accomplishments in advocacy and academic performance. This suggests that students gain a more developed set of skills to persist from advocacy that allows them to perform better academically in college. Further research is needed to examine whether other aspects of students' participation in advocacy, indeed in any of the other three sources of efficacy, can explain why student advocates perform better academically than non-advocates.

Evidence to answer the third research question was found in this study. It is now known that student advocates and non-advocates are similar in some aspects and very different in other aspects of their career development. The evidence suggests that there are clear benefits to participating in advocacy as student advocates display higher performance accomplishments in their advocacy role, higher academic self-efficacy, higher choice action, and higher academic performance than student non-advocates. The relationship between participation in advocacy and higher indices in the aforementioned variables needs to be studied further to test if the relationship is indeed causal.

Limitations of the Study

The results from this study should be viewed with caution and cannot be interpreted as definitive, as there are several limitations to the study. Of course, no study is perfect, and this study is not immune to common imperfections in cross-sectional research.

The first limitation of the study pertains to the instrument development phase. Due to time constraints to complete this thesis project, as well as limited resources available, a decision had to be made early in the instrument development stage in order to expedite the process. The decision made was informed by the literature, and it was to focus on one source of efficacy instead of the four sources which were all originally of interest to the researcher. It was decided that the focus would be placed on the source of efficacy that Bandura (1986) theorized to be most predictive of self-efficacy and behavior. That source of efficacy is performance accomplishments.

The SPAQ instrument was designed, piloted, and utilized in the pilot and full studies with the aim of operationalizing and refining the measurement of performance accomplishments. Choosing to focus on one source of efficacy was advantageous. Now, an empirically validated instrument exists to assess student performance accomplishments in several contexts, particularly extracurricular contexts, such as when students are in their advocacy roles. While this is a gain in this area of research in terms of measurement of SCCT variables, the decision to focus on one source also added limitations to the study. The lack of assessment of the other three sources provided an incomplete picture of what students gain from participating in advocacy. The findings provided only partial support to Bandura's (1986) claim that performance accomplishments predict self-efficacy and behavior. There is a relationship between the two, but only as partially mediated by outcome expectations. The findings suggest that performance accomplishments may not be enough of a source of efficacy to explain self-efficacy and other outcome variables. The inclusion of only one source of efficacy also

presented issues with the structural model and may be a reason why contrasting evidence for model fit was obtained.

A second limitation of the study was sample size, which may have introduced issues with statistical analyses. Path analyses were performed to test the SCCT structural model. Two of the indices of model fit (i.e. RMSEA and chi-square) indicated inappropriate model fit by conventional standards but good model fit by more liberal standards. As Kline (2005) highlighted, these indices of model fit are highly sensitive to sample size. The sample size in the study was N =154, which can be considered a medium sample size to conduct path analyses. It is more customary to use sample sizes of over 200 participants in these types of analyses. All possible efforts were made to obtain a sample size of N =200 in the appropriate time window allotted to conduct this study. A sufficiently large number of participants (229) initiated participation in the study by starting to fill out the online questionnaires. However, the attrition rate was 32%; a large portion of entries was not in the analyses because answers to the study's battery were too incomplete for inclusion. This unexpected number of incomplete surveys significantly reduced the sample size, and subsequently impacted the results of the path analyses.

Lastly, it is important to consider demographic and descriptive differences between the group of documented students and undocumented students, and demographic differences between the group of student advocates and non-advocates. All of these groups were composed of college students, but there are between- and within-group differences that were not explored quantitatively for the purposes of this study. These differences include gender, first language, year in college, state of residence, age, socioeconomic status, and nation of origin, among others. A demographic variable that

may account for some of the differences observed between the two samples of students (advocates vs non-advocates) is year in college. The sample of student advocates included graduate and professional students, while the sample of non-advocates only included undergraduate students. Further exploration of group differences when controlling for year in college are to be explored in future analyses in order to further explain the differences between groups, and whether they can be attributed to demographic variables. These variables can be considered background, personal inputs, and contextual differences; which are also part of the larger SCCT model. Quantifying these variables and incorporating them in future analyses of the SCCT model in this sample may help to further explore the research questions, as well as new questions that may arise from interpreting results.

Implications for Counseling Psychology

Taking into account the methodological limitations as well as the strengths of the study, a number of implications for the field of counseling psychology can be acknowledged safely. To conclude this research project, three subsections are presented to summarize a) conclusions drawn from the study, b) suggestions for clinical practice, and c) suggestions for future research taking SCCT in the same direction and with the same population of interest.

Conclusions from the Study. There is support to state that the Student Performance Accomplishments Questionnaire (SPAQ) is an instrument that can be used to assess student performance accomplishments, a source of efficacy, in a variety of settings. Specifically, the SPAQ can measure student performance accomplishments in an academic setting, in an extracurricular setting, and in an advocacy setting. The instrument

achieved high internal consistency indices in a study 1 and was refined to a 10-item short form.

The SCCT structural model was tested to see how well it fits the population of college students of interest. By moderate standards (χ^2 with p value <.10), the SCCT model fits well in explaining career development of college student advocates. More rigorous and conventional statistical standards (χ^2 with p value <.05) suggest that the results only provide partial support for the model as proposed by Lent et al. (1994), and modifications to the original model may be needed in order to study this population's career development and academic outcomes. The addition of direct paths to the SCCT model from the source of efficacy to academic outcomes revealed useful information about the benefits of performance accomplishments in advocacy to academic outcomes. Path analyses demonstrated that important information can be obtained from studying new paths, which suggests that their addition may be useful in studying other populations and testing the mediating roles of self-efficacy and outcome expectations.

There is support to suggest that student performance accomplishments in advocacy impact students' academic self-efficacy, and this relationship is mediated by outcome expectations. The results also revealed supporting evidence to suggest that student performance accomplishments in advocacy directly impact student advocates' academic choice action in college without the need of self-efficacy or outcome expectations as mediators. It can also be suggested that student performance accomplishments of student advocates in their academic role directly impact their career goal setting behaviors. Lastly, there is evidence to support that student performance

accomplishments in advocacy are related to student advocates' GPAs. This relationship is related to choice action and career goals.

No significant differences were found between undocumented and documented students on measures of the SCCT variables. It can be hypothesized that undocumented students make up for difficulties associated with their immigration status and display skills, expectations, self-efficacy, behaviors, and performance that are not different from documented students. More research is needed to determine whether differences were not detected due to sample size. Future research can explore the methods and processes by which undocumented students are able to make up for difficulties associated with their status in order to achieve academic outcomes that are not statistically different from those of documented students.

Comparisons between students who participate in advocacy and students who do not revealed significant differences between the two groups in terms of their performance accomplishments in advocacy, their academic self-efficacy, their choice action, and their academic performance (GPA). The differences on performance accomplishments in advocacy yield support for the construct and discriminant validity of the SPAQ-AD in this sample.

The results provide evidence to conclude that student advocates have more opportunities to perform or practice academic skills in their advocacy role than non-advocates have in their extracurricular roles. These increased opportunities to practice academic skills are demonstrated by the higher degree of performance accomplishments that student advocates displayed. Subsequently, theoretically due to their higher levels of performance accomplishments, the results show that student advocates have higher

academic-self-efficacy, are more persistent, and have higher GPAs than student non-advocates.

Future Directions for Clinical Practice. Based on the results from the study, it can be suggested that the SPAQ is an instrument that can aid clinicians in assessing student performance accomplishments if that knowledge can inform interventions they use in practice. Clinicians, particularly those providing career counseling, may administer the SPAQ to see to what degree students/clients are having the chance to practice or perform academic skills in their extracurricular activities.

Clinicians may also consider the relationship between participation in advocacy and higher academic self-efficacy, academic choice action, and GPA when working with clients seeking career counseling. The results from this study supports social cognitive career theory with respect to certain learning experiences (in this case participating in advocacy) contributing to increases in student academic self-efficacy, choice action, and GPA.

When working with undocumented students, clinicians and other practitioners may consider that this study did not find differences between undocumented and documented students in terms of their career development in college and academic performance. This partially suggests that undocumented and documented students may not be different in terms of their career development as explained by the core components of the social-cognitive career theory model.

Practitioners and educators may raise awareness among high school, middle school, and college students of immigrant background about findings from current research in hopes of motivating immigrant students to engage in academic activities. This

study did not find that undocumented students were different from documented students in terms of their academic self-efficacy, outcome expectations, career goals, choice action, or academic performance. Additionally, students who participated in extracurricular activities such as advocacy in addition to academic activities displayed better academic outcomes in comparison to those who did not.

Future Directions for Research. Future research projects relating to social-cognitive career theory will make contributions to this area of study by developing instruments to operationalize the measurement of the other three sources of efficacy (i.e. vicarious learning, social persuasion, physical/emotional arousal) in extracurricular settings. Thus, studying how the four sources predict academic outcomes when combined is needed to better explain academic outcomes of documented and undocumented college student advocates and non-advocates.

Further refinements to the measures of academic-self-efficacy and outcome expectations used in this study are needed in order for these measures to be in line with the set of academic-skills assessed by the instruments that assess sources of efficacy. It is possible that model misspecification and lack of correlations between the source of efficacy and self-efficacy are a result of how self-efficacy and outcome expectations were measured in this study. The type of academic self-efficacy and outcome expectations assessed in this study were not skill specific, and this may have heightened problems related to model fit.

Further study of direct paths from sources of efficacy to outcome variables is needed in order to confirm or disconfirm the original notion that derived from the current

study, that these direct paths provide important information to understand the career development of college students.

Future research needs to expand the scope of the study to include background, personal inputs, and contextual influences and how they impact student advocates' career development in college. These variables are part of Lent et al's (1994) SCCT model and should be studied in addition to the variables studied in the present project. Additionally, it will be necessary to develop measures to quantitatively assess background contextual affordances, personal inputs, and contextual influences in order to conduct structural equation modeling analyses to assess the fitness of the model using all of its variables.

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.

Ali, S. R., & Saunders, J. L. (2006). College expectations of rural Appalachian youth: An exploration of social cognitive career theory factors. *Career Development Quarterly*, 55, 38-51.

Ali, S. R., McWhirter, E., & Chronister, K. (2005). Self-efficacy and vocational outcome expectations for adolescents of lower SES: A pilot study. *Journal of Career Assessment*, 13, 40-58.

Anderson, S., & Betz, N. (2000). Sources of social self-efficacy expectations. *Journal of Vocational Behavior*, 58, 98-117.

Arthur, N., & McMahon, M. (2005). Multicultural career counseling: Theoretical applications for the systems theory framework. *Career Development Quarterly*, 53, 208-222.

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.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.

Bandura, A. (1999) Social cognitive theory: an agentic perspective. *Asian Journal of Social Psychology*, 2, 21-41.

Bandura, A. (1999). 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.

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.

Betz, N. (2007). Career self-efficacy: exemplary recent research and emerging directions. *Journal of Career Assessment*, 15, 403-422.

Betz, N., Hackett, G. (2006). Career self-efficacy theory: back to the future. *Journal of Career Assessment*, 14, 3-11.

Betz, N., Hammond, M., & Multon, K. (2005). Reliability and validity of five-level response continua for the Career Decision Self-Efficacy Scale. *Journal of Career Assessment*, 13, 131-149.

Blaxell, R. & Moore, C. (2012). Connecting academic and employability skills and attributes. In *Developing student skills for the next decade. Proceedings of the 21st Annual Teaching Learning Forum*, 2-3 February 2012. Perth: Murdoch University. http://otl.curtin.edu.au/tlf/tlf2012/refereed/blaxell.html.

Brown, C., & Lavish, L. (2006). Career assessment with Native Americans: Role salience and career decision self-efficacy. *Journal of Career Assessment*, 14, 116-129.

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.

Chavez, M.L., Soriano, M., Oliverez, P. (2007). Undocumented students' access to college: The American dream denied. *Latino Studies*, 5, 254-263.

Drachman, E. (2006). Access to higher education for undocumented students. *Peace Review: A Journal of Social Justice*, 18, 91-100.

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.Y., 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.

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.

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.

Gore, P. A., Jr. (2006). Academic self-efficacy as a predictor of college outcomes. *Journal of Career Assessment*, 14, 92-115.

Gore, P. A., Leuwerke, W. C., & Turley, S. (2006). A psychometric study of the College Self- Efficacy Questionnaire. *Journal of College Student Retention*, 7, 227-244.

Griffin, B., & Hesketh, B. (2005). Counseling for work adjustment. In S. D. Brown & R. W. Lent (Eds.), Career development and counseling: Putting theory and research to work (pp. 483-505). New York: John Wiley.

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.

Holland, J. L. (1997). Making vocational choices: A theory of vocational personalities and work environments (3rd ed.). Odessa, FL: PAR, Inc.

Jauregui, J.A., Slate, J.R., & Stallone-Brown, M. (2008). Texas community colleges and characteristics of a growing undocumented student population. *Journal of Hispanic Higher Education*, 7, 346-355.

Kline, T. J. (2005). *Psychological testing: A practical approach to design and evaluation*. Sage Publications, Incorporated.

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.

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.

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.

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.

Olivas, M. (2005). The story of Plyler v. Doe, the education of undocumented children and the polity. *Immigration Stories*, 197-220.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66, 543-578.

Passel, J. (2006). The size and characteristics of the unauthorized migration population in the U.S.: Estimates based on the March 2005 current population survey. Washington, D.C.:Pew Hispanic Center.

Perez, W. (2010). Extending our investments: Higher education access for undocumented students. *Diversity & Democracy*, 13.

Perez, W. (2010). 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. (2010). Civic engagement patterns of undocumented Mexican students. *Journal of Hispanic Higher Education*, 9, 245-265.

Perez, W., Cortes, R., Ramos, K., & Coronado, H. (2010). 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.

Rottinghaus, P. J., Day, S. X., & Borgen, F. H. (2005). The Career Futures Inventory: A measure of career related adaptability and optimism. *Journal of Career Assessment*, 13, 3-24.

Rottinghaus, P. J., Larson, L. M., & Borgen, F. H. (2003). The relation of self-efficacy and interests: A meta-analysis of 60 samples. *Journal of Vocational Behavior*, 62, 221-236.

Schaub, M. (2004). Social cognitive theory: Examining the mediating role of sociocognitive variables in the relation of personality to vocational interests. Dissertation Abstracts International, 64, 7-A. (UMI No. AAT 3098455).

Schaub, M., & Tokar, D. (2005). The role of personality and learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, 66, 304-325.

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.

Storlie, C. (2012). *Career Convergence Magazine*. Retrieved March 5, 2012, from National Career Development Association: http://associationdatabase.com/aws/NCDA/pt/sd/news_article/52966/_self/layout_details/false.

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.

Tokar, D.M., Thompson, M.N., Plaufcan, M.R., & Williams, C.M. (2007). Precursors of learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, 71, 319-339.

U.S. Citizen 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/?vgnextoid=f2ef2f19470f7310VgnVCM100000082ca60aRCRD&vgnextchannel=f2ef2f19470f7310VgnVCM100000082ca60aRCRD.

U.S. Department of Health and Services, U.S. Department of Health and. (2011, June 28). *Office of Extramural Research National Institue of Health*. Retrieved March 29, 2012, from Certificates of Confidentiality: http://grants.nih.gov/grants/policy/coc/.

Williams, C. M., & Subich, L. (2006). The gendered nature of academic learning experiences: A social cognitive career theory perspective. *Journal of Vocational Behavior*, 69, 262-275.

Table 1

Original SPAQ –ER 31 Items and SPAQ-AC 31 Items from Study 1. Component Matrix.

Item	Component 1 SPAQ-ER	Component 1 SPAQ-AC
1. Fulfilled requirements for project	.788	.615
2. Did research on topics	.709	.557
3. Took responsibility for tasks	.823	.665
4. Persisted despite lack of support	.769	.651
5. Completed projects despite barriers	.809	.676
6. Participated even if unaccepted	.741	.601
7. Fulfilled personal responsibilities	.845	.657
8. Gave a speech	.731	.597
9. Spoke in front of media	.592	.411
10. Presented point of view	.769	.677
11. Persuaded others to take action	.830	.679
12. Established external networks	.661	.574
13. Used networks in the community	.722	.602
14. Collaborated with others in goals	.825	.744
15. Took a role in a team	.803	.772
16. Committed to a team	.794	.778
17. Attended leadership training	.625	.549
18. Assisted others with project	.825	.723
19. Led a project	.783	.791

20. Taught new concepts	.813	.687
21. Prioritized tasks	.835	.638
22. Planned workloads	.788	.621
23. Organized project or event	.793	.702
24. Created innovative solutions	.852	.764
25. Identified opportunities	.805	.724
26. Created strategy to achieve goal	.798	.721
27. Analyzed information	.786	.638
28. Did work despite personal responsibilities	.769	.582
29. Used own resources for a project	.856	.754
30. Used networks in the community	.754	.608
31. Allocated time toward deadlines	.801	.610

Note: See Appendix C for full wording of items.

Table 2

SPAQ Extracurricular Role 15 Best Items Considered for Final Instrument. Inter-Item Correlations.

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Allocated time														
2.Used own resources	.72													
3.Created solutions	.63	.68												
4.Planned workload	.68	.79	.68											
5.Leadership training	.61	.76	.66	.82										
6.Assisted others	.61	.71	.66	.76	.81									
7.Led a project	.51	.49	.51	.39	.43	.45								
8.Taught concepts	.71	.70	.67	.77	.69	.69	.47							
9.Prioritized tasks	.63	.59	.65	.66	.64	.61	.59	.71						
10.Collaborated	.65	.65	.71	.70	.66	.64	.54	.67	.67					
11.Took a role	.69	.77	.71	.62	.65	.68	.45	.70	.62	.67				
12.Committed to team	.62	.69	.70	.60	.61	.59	.37	.62	.59	.60	.79			
13.Persuaded others	.66	.66	.73	.69	.64	.66	.51	.70	.67	.69	.66	.66		
14.Fulfilled resp.	.66	.72	.68	.68	.70	.72	.51	.65	.61	.67	.73	.69	.70	
15.Took responsibility	.66	.72	.64	.63	.63	.62	.39	.64	.54	.57	.75	.72	.69	.81

Note: See Appendix C for full wording of items.

Table 3

Final SPAQ 10 Items from Study 1. Inter-Item Correlations.

Item	1	2	3	4	5	6	7	8	9	*M*	*SD*
1.Media										3.52	2.72
2.Participated	.49									2.88	2.83
3.Organized	.43	.66								2.04	2.56
4.Persuaded	.54	.64	.54							3.80	2.78
5.Established	.48	.54	.43	.63						3.04	2.74
6.Took role	.59	.59	.40	.67	.52					4.57	2.72
7.Leadership	.39	.58	.55	.50	.48	.43				2.34	2.71
8.Taught	.56	.62	.47	.71	.60	.67	.54			3.71	2.81
9.Speech	.54	.57	.49	.65	.55	.59	.57	.61		3.45	2.84
10.Created	.55	.65	.49	.72	.64	.64	.52	.67	.75	3.44	2.65

Note: See Appendix C for full items wording.

Table 4

Final SPAQ 10 Items from Study 1. Component Matrix

Item	Component 1
1. spoken in front of media	.707
2. participated even if I didn't feel accepted	.813
3. organized a project, event, etc.	.689
4. persuaded others to take action.	.851
5. established and used community networks	.749
6. taken a role within a team	.782
7. attended leadership training	.706
8. taught new concepts to others	.832
9. given a speech	.812
10. created innovative solutions to a given problem	.857

Table 5

Psychometric Properties of Instruments in Study 1

Measure	*N*	α	*M*	*SD*	N
SPAQ-ER Final	163	.93	32.80	21.37	10
SPAQ-ER Original	187	.96	113.71	66.11	31
SPAQ-AC Original	163	.98	129.76	47.37	31
Self-efficacy	161	.91	81.86	14.72	10
Outcome Expectations	161	.93	80.99	14.78	10
Career Goals	161	.97	18.21	3.91	4
Choice action	161	.82	24.28	5.11	6

Table 6

Descriptive Statistics and Internal Consistency for Individual Scales in Study 2.

Scale	*N*	Min	Max	*M*	*SD*	α
SPAQAD	154	10.00	80.00	48.62	18.91	.91
SPAQAC	154	10.00	80.00	42.25	17.37	.88
SPAQSUM	154	20.00	160.00	90.86	31.78	_
Self-efficacy	154	.00	100.00	85.77	14.81	.88
Outcome Exp.	154	.00	100.00	78.87	15.10	.87
Goals	154	4.00	20.00	18.73	2.92	.89
Choice action	154	6.00	30.00	26.30	3.60	.74
Performance	154	.00	4.00	3.40	.74	_

Table 7

Final SPAQ –AD and SPAQ-AC 10 Items from Study 2. Component Matrix

Instrument		SPAQ-AD	SPAQ-AC	
Item		Component 1	Component 1	Component 2
1.	Spoken in front of media	.65	.56	.63
2.	Participated even if I didn't feel accepted	.51	.53	-.20
3.	Organized a project, event, etc.	.83	.74	.08
4.	Persuaded others to take action.	.75	.73	-.18
5.	Established and used networks in the community.	.83	.76	-.06
6.	Taken a role within a team.	.82	.78	-.22
7.	Attended leadership training.	.65	.70	.35
8.	Taught new concepts to others.	.82	.71	-.47
9.	Given a speech.	.75	.66	.38
10.	Created innovative solutions to a given problem.	.82	.77	-.16

See Appendix D for a List of Items.

Table 8

Correlations among Unconstrained Variables in Study 2. Model 1 Path Analysis.

Measure	Self-efficacy	Outcome Exp.	Goals	Choice actions	Performance
SPAQ	.14	.39***	.12	.38***	-.056
Self-efficacy		.33**	-0.04	0.09	0.04
Outcome Exp			-0.11	0.15	-0.15
Goals				.36***	.18*
Choice action					.10

*Note: * p < .05, ** p < .01, *** p < .001, no asterisk means correlation was not significant, p > .05*

Table 9

Means and Standard Deviations of Student Advocates and Non-Advocates from Study 1 and 2.

Group	Advocates		Non-Advocates	
Variable	*M*	*SD*	*M*	*SD*
SPAQ-AC	42.25	17.37	44.44	17.32
SPAQ-AD/ER	48.67	18.91	42.81	21.47
Academic Self-Efficacy	8.58	1.48	8.18	1.42
Outcome Expectations	78.87	15.10	80.99	14.79
Goals	4.68	.73	4.55	.98
Choice actions	4.38	.60	4.05	.85
Academic Performance	3.4	.74	3.05	.97

APPENDIX A

DEMOGRAPHIC SURVEY

1. In what year were you born? (enter 4 digit birth year; for example, 1976)

2. In what state of U.S. do you live?

3. What is your gender?

4. In what country were you born/ what is your country of origin?

5. Is English your first language?

6. If English is not your first language, what is your first language?

7. What race or ethnic group do you identify with?

    White

    Black or AfricanAmerican

    American Indian or Alaskan Native

    Asian

    Native Hawaiian or other Pacific Islander

    From multiple races

    Other (please specify)

8. How many credit hours are you currently enrolled in?

9. What is your current year in college?

    Freshman

    Sophomore

    Junior

    Senior

    Master's student

    MBA

    Law student

    Doctoral student

    Nondegree student

    Other

10. What is your current cumulative GPA?

11. Enter date (or anticipated date) of graduation from your current degree program (for example 05/11/2016)

12. What is your current yearly personal income from all sources? (do not enter a comma ",")

13. What is your residency status?

US Citizen

US Permanent Resident

Student Visa

Work Visa

Work Authorization

Deferred Action Applicant

Undetermined

Refugee

14. Do you participate in advocacy?

Advocacy is defined as participating in, pleading for, or leading activities on behalf of a group or a cause. Advocacy is political at some level.

15. What kind of advocacy are you involved in? please enter in the text box a brief description of the type of advocacy you participate in.

16. On an average week in the past year, how many hours do you spend working on advocacy? Advocacy is defined as participating in, pleading for, or leading activities on behalf of a group or a cause. Advocacy is political at some level.

APPENDIX B

ADVOCACY LEARNING EXPERIENCES CHART

Learning Experiences in Advocacy:
By participating in ***advocacy***, students have the opportunity to be exposed to certain academic learning experiences which provide a specific source of efficacy.

Source	Mode of Induction	Relation having Learning Experiences in ***Advocacy***
Performance Accomplishments (enactive)	Performance exposure	Performing item from list below (**referring to list of learning experiences in *advocacy* below this chart**).
Vicarious Learning (vicarious)	Modeling	Seeing others perform item from list below in person.
Verbal Persuasion (exhortative)	Exhortation	Being required or motivated by someone to perform item from list below.
	Self-instruction	Self-talking or self-convincing to perform item from list below.
	Suggestion	Being suggested or advised to perform item from list below.
Emotional/Physiological Arousal (emotive)	Excitement	Becoming emotionally and/or physically excited in a positive way before or while performing item from list below.
	Symbolic Exposure	Imagining performing item from list below.
	Attribution	Attributing importance and value of performing item from list below to self.

Public speaking:

- giving a presentation in front of other people
- giving a speech
- telling personal story
- participating in a forum
- speaking for the media
- speaking in front of a legislator or other figure of power in the state
- speaking in front of large and/or small groups

Interpersonal and teamwork skills:

- ability and willingness to engage with diverse cultures
- communicating respectfully (using voice and body)
- listening actively
- empathizing
- persuading effectively
- establishing and using networks within the university
- establishing external community and industry networks
- collaborating with others to achieve team goals
- recognizing and adopting roles within teams
- giving and receiving feedback and
- committing to a team for the period required to complete the task
- telling my story

Leadership skills:

- attending a leadership training
- leading a group of people into action
- leading a meeting, leading a project,
- leading an event/political action
- motivating others to do something
- having others follow you
- guiding others through a project or activity
- taking charge

Applying discipline specific knowledge:

- applying what I have learned in school to advocacy in authentic contexts
- applying what I have learned in school in advocacy for authentic purposes
- being involved in discipline related activities through advocacy
- teaching new concepts to others, leading a training, informing strangers about your cause, informing others about your cause.

Intrapersonal skills:

- adapting to new situations
- maintaining sense of humor and positive self-esteem under pressure
- being open to new ideas and techniques
- self-assessment
- taking responsibility
- managing own learning
- prioritizing tasks according to personal goals

High level planning and organizing skills:

- planning and management of workloads for a specific period of time (hour, day, week, month, year, etc.).

- allocating of time and resources
- Planning a project, event, advocacy action, campaign, etc.
- Taking responsibility for a project or tasks in a project
- making time to participate in advocacy
- meeting deadlines for advocacy projects
- participating in other activities besides advocacy, allowing time for personal activities, participating in school and/or work.
- Making lists of resources
- using my resources and personal contacts in a project
- creating something using limited resources
- fundraising.

Problem solving:

- Thinking innovatively and independently about the cause.
- conducting and completing research about my cause (political figures, events, resources, history, politics, government, and other concepts related to my cause)
- engaging in logical and orderly thinking
- willingly and proactively making decisions
- identifying opportunities not immediately obvious to others
- creating innovative solutions to given problems
- accurately analyzing and synthesizing information
- identifying opportunities
- generating a range of options
- initiating innovative solutions
- translating ideas into action
- Creating a strategy to accomplish goals

Initiative to learn new skills and concepts:

- attending training about organizing or advocacy,
- seeking information about politics
- seeking information about concepts related to advocacy
- researching options available to undocumented students
- attempting to understand factors that affect political action
- thinking about the community and how it works

APPENDIX C

STUDENT PERFORMANCE ACCOMPLISHMENTS QUESTIONNAIRE (SPAQ)

ORIGINAL 31 ITEM ACADEMIC AND EXTRACURRICULAR FORM

The following statements describe experiences that you may encounter when participating in academic and/or extracurricular activities.

Please indicate on a scale from 0 to 7+ on how many occasions *in the past year* you have done each of these successfully in your academic and/or extracurricular activities.

	In the past year I have successfully…	In my college/university role	In my extracurricular role
1.	fulfilled the requirements for a project	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
2.	done background research on a specific topic	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
3.	taken responsibility for project tasks	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
4.	persisted despite the lack of support from others	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
5.	completed projects despite financial barriers	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
6.	participated even if I didn't feel accepted	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
7.	fulfilled my personal responsibilities even when I had academic/extracurricular work to do	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
8.	given a speech	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
9.	spoken in front of media	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
10.	presented a point of view in front of an authority figure	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
11.	persuaded others to take action.	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
12.	established external community or industry network	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
13.	established and used networks in the community.	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
14.	collaborated with others to achieve team goals	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
15.	taken a role within a team	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
16.	committed to a team for a period of time	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
17.	attended leadership training	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
18.	assisted others with a	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+

	project or activity		
19.	led a project or part of a project	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
20.	taught new concepts to others	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
21.	prioritized tasks according to goals	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
22.	planned and managed my workloads for a specific period of time	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
23.	organized a project, event, etc.	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
24.	created innovative solutions to a given problem	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
25.	identified opportunities not immediately obvious to others	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
26.	created a strategy to accomplish a goal	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
27.	analyzed and synthesized information on a topic	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
28.	did my academic/extracurricular work even when I had personal responsibilities to fulfill	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
29.	used my own resources for the benefit of a project or activity	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
30.	used networks in the community	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+
31.	allocated my time and resources to meet pressing deadlines	0-1-2-3-4-5-6-7+	0-1-2-3-4-5-6-7+

APPENDIX D

STUDENT PERFORMANCE ACCOMPLISHMENTS QUESTIONNAIRE (SPAQ) 10

ITEM FORMS

SPAQ –AD

The following statements describe experiences that you may encounter when in your advocacy role. Advocacy is defined as participating in, pleading for, or leading activities on behalf of a group or a cause. Advocacy is political at some level. Please indicate on a scale from 0 to 7+ on how many occasions you have done each of these successfully in your advocacy role in the past year. In the past year I have successfully…	
1. spoken in front of media	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
2. participated even if I didn't feel accepted	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
3. organized a project, event, etc.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
4. persuaded others to take action.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
5. established and used networks in the community.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
6. taken a role within a team	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
7. attended leadership training	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
8. taught new concepts to others	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
9. given a speech	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
10. created innovative solutions to a given problem	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+

SPAQ –AC

The following statements describe experiences that you may encounter when in your academic role. Academic role is defined as your activities when in college as a student. Please indicate on a scale from 0 to 7+ on how many occasions you have done each of these successfully in your advocacy role in the past year. In the past year I have successfully…	
1. spoken in front of media	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
2. participated even if I didn't feel accepted	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
3. organized a project, event, etc.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
4. persuaded others to take action.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
5. established and used networks in the community.	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
6. taken a role within a team	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
7. attended leadership training	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
8. taught new concepts to others	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
9. given a speech	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+
10. created innovative solutions to a given problem	0 . 1 . 2 . 3 . 4 . 5 . 6 . 7+

APPENDIX E

SELF EFFICACY MEASURE

The following is a list of major steps to complete your education. Please indicate how much confidence you have in your ability to complete each of these steps in relation to the major that you intend to pursue.

How much confidence do you have in your ability to:

	No confidence at all									Complete confidence
Complete all of the requirements for your degree program.	○	○	○	○	○	○	○	○	○	○
Do well in your studies over the next year.	○	○	○	○	○	○	○	○	○	○
Do well in your studies until you graduate.	○	○	○	○	○	○	○	○	○	○
Complete the advanced requirements of your degree program with an overall grade point average of B or better	○	○	○	○	○	○	○	○	○	○

Please indicate your confidence in your ability to cope with, or solve, each of the following problem situations.

How confident are you that you could:

	No confidence at all									Complete confidence
Cope with a lack of support from professors or your advisor.	○	○	○	○	○	○	○	○	○	○
Complete a degree despite financial barriers and pressures.	○	○	○	○	○	○	○	○	○	○
Continue with your education even if you did not feel accepted by your classmates and professors.	○	○	○	○	○	○	○	○	○	○
Find solutions to overcome communication problems with professors or teaching assistants.	○	○	○	○	○	○	○	○	○	○

	No confidence at all									Complete confidence
Balance the pressures of studying for courses and the demands of funding your education.	○	○	○	○	○	○	○	○	○	○
Balance the pressures of studying for courses and the desire to have spare time.	○	○	○	○	○	○	○	○	○	○

APPENDIX F

OUTCOME EXPECTATIONS MEASURE

Instructions: Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements.	
Participating in ***advocacy*** will likely allow me to:	Strongly Disagree Disagree Unsure Agree Strongly Agree
1. ... receive a good job offer	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
2. ... earn an attractive salary	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
3. ... get respect from other people	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
4. ... do work that I would find satisfying	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
5. ... increase my sense of self-worth	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
6. ... have a career that is valued by my family	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
7. ... do work that can "make a difference" in people's lives	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
8. ... go into a field with high employment demand	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
9. ... do exciting work	0…..1…..2…..3…..4…..5…..6…..7…..8…..9
10. ... have the right type and amount of contact with other people (i.e., "right" for me)	0…..1…..2…..3…..4…..5…..6…..7…..8…..9

APPENDIX G

CAREER GOALS SCALE

Using the scale below, indicate your level of agreement with each of the following statements.	
How much do you agree or disagree with the following statements:	Strongly Disagree Strongly Disagree Undecided Agree Agree
1. I intend to major in a field of study that interests me.	1…….. 2…….. 3…….. 4…….. 5
2. I plan to remain enrolled in school over the next semester.	1…….. 2…….. 3…….. 4…….. 5
3. I think that earning a bachelors degree in a field that interests me is a realistic goal for me.	1…….. 2…….. 3…….. 4…….. 5
4. Obtaining a college degree is one of my priorities.	1…….. 2…….. 3…….. 4…….. 5

APPENDIX H

CHOICE ACTION SCALE

Using the scale below, indicate your level of agreement with each of the following statements.	
How much do you agree or disagree with the following statements:	Strongly Disagree 1…….. 2…..… 3…….. 4…….. 5 Strongly Agree Undecided
1. I intend to apply (or have already applied) for funding to cover the costs of my education	1…….. 2…..… 3…….. 4…….. 5
2. I plan to try (or have tried) alternative ways of fundraising if I cannot find funds for my education	1…….. 2…..… 3…….. 4…….. 5
3. I plan to work (or have worked) and save money, if possible, to pay for my education	1…….. 2…..… 3…….. 4…….. 5
4. I am willing to do whatever it takes to get my education	1…….. 2…..… 3…….. 4…….. 5
5. I will continue to participate in advocacy	1…….. 2…..… 3…….. 4…….. 5
6. I plan to do whatever I can to have more access to resources for my education	1…….. 2…..… 3…….. 4…….. 5

APPENDIX I

IRB APPROVAL LETTER

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Bianca Bernstein EDB
From:	Mark Roosa, Chair Soc Beh IRB
Date:	09/21/2012
Committee Action:	**Exemption Granted**
IRB Action Date:	09/21/2012
IRB Protocol #:	1209008226
Study Title:	Career Development and Extracurricular Activities

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX J

INFORMED CONSENT LETTER STUDY 1

Dear student,

My name is German Cadenas. I am a graduate student under the direction of Dr. Bianca Bernstein at the Counseling Psychology program in the School of Letters and Sciences at Arizona State University. I am conducting a research study to evaluate ways to measure various elements of a career development model.

I am inviting your participation, which will involve filling out a survey and will last between 10 and 20 minutes. You have the right not to answer any question, and to stop the survey at any time.

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, (for example, it will not affect your grade). You must be 18 years old and a college student to participate in the study. You will receive extra credit for participating in this study. Please contact your instructor via email once you have filled out and submitted the survey to receive extra credit. Your responses will not be attached to your name.

Your participation will further the understanding of career psychology and the relationship between extracurricular activities and academic outcomes. There are no foreseeable risks or discomforts to your participation.

The survey is online and your answers are completely anonymous and will not be traced back to you. The researcher will keep the data stored in a secure location with no identifying information from participants. You will not be asked your name or any other identifying information in this study.

If you have any questions concerning the research study, please contact German Cadenas at gcadenas@asu.edu or (480) 238-0749 or Dr. Bianca Bernstein at bbernstein@asu.edu. If you have any questions about your rights as a subject/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.

Please continue to the survey if you wish to participate in the study.

Thank you,
German Cadenas

APPENDIX K

INFORMED CONSENT LETTER STUDY 2

Dear student,

My name is German Cadenas. I am a graduate student under the direction of Dr. Bianca Bernstein at the Counseling Psychology program in the School of Letters and Sciences at Arizona State University. I am conducting a research study to evaluate ways to measure various elements of a career development model.
I am inviting your participation, which will involve filling out a survey and will last between 10 and 20 minutes. You have the right not to answer any question, and to stop the survey at any time.

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, (for example, it will not affect your grade). You must be 18 years old and a college student to participate in the study. Your responses will not be attached to your name.

When you are done filling out the survey you will have the option to enter your email address for a chance to win a $100 gift card. If you choose to enter your email address it will not be linked to your answers.
Your participation will further the understanding of career psychology and the relationship between advocacy and academic outcomes. There are no foreseeable risks or discomforts to your participation.

The survey is online and your answers are completely anonymous and will not be traced back to you. The researcher will keep the data stored in a secure location with no identifying information from participants. You will not be asked your name or any other identifying information in this study.

If you have any questions concerning the research study, please contact German Cadenas at gcadenas@asu.edu or (480) 238-0749 or Dr. Bianca Bernstein at bbernstein@asu.edu. If you have any questions about your rights as a subject/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.

Please continue to the survey if you wish to participate in the study.

Thank you,
German Cadenas