

## ABSTRACT

Title of Thesis: PREDICTING STUDY ABROAD  
INTERESTS AND CHOICE GOALS  
THROUGH SOCIAL COGNITIVE CAREER  
THEORY

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Studying abroad in college is an educational choice that has significant implications for students' personal, academic, and career development. Applying the Social Cognitive Career Theory interests and choice models (SCCT; Lent, Brown, & Hackett, 1994), this study examined social cognitive predictors of study abroad interest and intent. First, the psychometric properties of new and revised domain-specific social cognitive variables were assessed with an initial sample of students ( $N = 325$ ) from a Mid-Atlantic university, yielding 8 factors and adequate factor-derived psychometrics. This was followed by measurement model testing on a second, nationwide sample of students ( $N = 277$ ), which showed that the overall model fit indices offered good fit to the data. Regressions on the second sample produced support for most of the SCCT paths predicting study abroad interests and study abroad intent. Finally, practice-based implications and directions for future research are discussed.

PREDICTING STUDY ABROAD INTERESTS AND CHOICE GOALS  
THROUGH SOCIAL COGNITIVE CAREER THEORY

by

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## Chapter 1: Introduction

Across the public and private sectors, U.S. employers have identified the importance of globally competent employees and are seeking to hire such a workforce (RAND Corporation, 2003). Just as importantly, the U.S. Department of Education (ED) recognizes the need to prepare all students for a global economy in the first sentence of its mission statement: “ED’s mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access” (U.S. Department of Education, 2011). To that end, U.S. colleges and universities are working towards internationalizing their campuses and opportunities, and they often cite study abroad experiences for their students as the highest priority among all higher education internationalization efforts (Helms & Brajkovic, 2017). “Study abroad” has been defined as “an educational program for undergraduate study, work, or research (or a credit-bearing internship) that is conducted outside the U.S. and that awards academic credit toward a college degree” (Lincoln Commission, 2005, p.14)

The prioritization of study abroad programs in U.S. higher education has not only resulted in increased programs offerings, but also a trend toward creating study abroad experiences and programs that integrate with students’ university curricula (e.g. University of Minnesota Learning Abroad Center, 2019). This integration boosts the academic value of study abroad programs, ensuring that these experiences are not simply disconnected, “bonus” learning opportunities tacked onto an undergraduate

curriculum. Rather, they are designed to be critical, integrated components of a student's undergraduate course of study (Woodruff & Henry, 2012).

### *The Choice to Study Abroad*

With the generally recognized importance of study abroad programs within higher education, it is not surprising that the rate of American undergraduate students studying abroad has increased every year for the last quarter century; however, what is surprising is that the overall percentage of U.S. students studying abroad during their undergraduate program is only 16% of the total U.S. undergraduate population at four-year colleges and universities (Institute of International Education, 2018). This begs the question: why are so few U.S. undergraduates going abroad during a time when study abroad programs are more than ever a critical part of preparing students for a globally connected world?

Efforts to increase study abroad participation among American undergraduates have yielded results – the numbers have more than doubled since 2000 (Institute of International Education, 2018). Nevertheless, having only 16% of students studying abroad is a low proportion for an opportunity that is increasingly recognized as an important component of higher education. Continuing to boost participation rates will require a better understanding of the many factors that may influence the intention to study abroad. This will include insight into demographic, socioeconomic, and other comparatively stable factors (e.g., personality), and it especially requires insight into relatively dynamic factors (e.g., social norms, awareness of campus study abroad resources, administrative barriers, beliefs about

the benefits of studying abroad) that can be targeted in an effort to increase study abroad participation.

In a review of the literature on what predicts the intention to study abroad for U.S. students, Salisbury, Umbach, Paulsen, and Pascarella (2009) noted that, “Surprisingly, almost no empirical research has explored the array and potential interaction of factors that affect intent to study abroad.” (p. 121). In a more recent, selective review, Wang, Gault, Christ, and Diggin (2016) similarly concluded that this literature continues to be characterized by relatively few rigorous, empirical studies.

Much of the extant literature focuses on demographic findings that predict study abroad willingness, intent, and choice. Among these, the importance of gender is the clearest finding. Salisbury et al. (2009), Stroud (2010), Hackney, Boggs, and Borozan (2012), and Luo and Jamieson-Drake (2015) all found that women are more likely to intend to study abroad. Most studies that looked at race found that it was a non-significant predictor, though two studies found that Asian/Pacific Islanders were less likely to intend to study abroad than students of other ethnic or racial backgrounds (Goldstein & Kim, 2006; Luo & Jamieson-Drake, 2015; Salisbury et al., 2009; Stroud, 2010).

Only one study looked specifically at age, finding that the younger a student is, the more likely they are to intend to study abroad – this finding may reflect that younger students have more flexibility and time left in their undergraduate programs to fit in a study abroad opportunity (Pope, Sanchez, Lehnert, and Schmid, 2014). Looking at household income and parental education status, most studies have found

that these are not significant factors in study abroad intent (Carlson, Burns, Useem, & Yachimowicz, 1991; Goldstein & Kim, 2006; Luo & Jamieson-Drake, 2015; Pope et al., 2014; Stroud, 2010). Noteworthy is that even among the major demographic trends listed above, there are exceptions – for example, Pope et al. (2014) found that gender was a non-significant variable, and Salisbury et al. (2009) found that more parental education predicted greater study abroad intent.

The findings on whether a student's major predicts study abroad intent are mixed; this, in part, is likely because various studies grouped academic majors in different ways. Generally, studies found that being an arts and humanities, education, or business major did not significantly predict study abroad intent (Goldstein & Kim, 2006; Luo & Jamieson-Drake, 2015; Stroud, 2010), but that being an engineering major, math major, natural sciences major, physical sciences major, or professional areas major (e.g., medicine) negatively predicted study abroad intent (Carlson et al., 1991; Luo & Jamieson-Drake, 2015; Stroud, 2010). Studies disagreed on whether being a social science major was positively predictive (Salisbury et al., 2009) or non-predictive of study abroad intent (Luo & Jamieson-Drake, 2015). Finally, Salisbury et al. (2009) found that being an undecided major was positively predictive of study abroad intent.

The remaining trends in factors predicting the intent to study abroad are malleable factors that are more amenable to change. Of note is that many of these studies utilize surveys asking students (often *post-facto*) to name factors that contributed to their decision to go abroad or to select from a list of a-theoretically compiled factors. The findings are extremely diverse, but are roughly categorized

here into the benefits of study abroad, the barriers to study abroad, past experiences, and personal points of view. For benefits, many studies have shown that interest in and expectations of personal, intercultural, and/or professional growth as a result of a study abroad program positively predict study abroad intent (Garver & Divine, 2008; Goldstein & Kim, 2006; Gullahorn & Gullahorn, 1958; Hackney et al., 2012; Luo & Jamieson-Drake, 2015; Pope et al., 2014; Spiering & Erickson, 2006; Stroud, 2010).

In terms of barriers that predict study abroad intent, concerns related to finishing one's major requirements and undergrad degree on time were negatively predictive (Albers-Miller, Prenshaw, and Straughan, 1999; Garver & Divine, 2008; Goldstein & Kim, 2006; Wang et al., 2016), and relatedly, concerns over how well study abroad would fit into one's academic plans and other life plans – including the transferability of credits and relevance of study abroad classes to one's major – were also negatively predictive (Albers-Miller et al., 1999; Garver & Divine, 2008; Hackney et al., 2012; Luo & Jamieson-Drake, 2015; Salisbury et al., 2009; Spiering & Erickson, 2006; Wang et al., 2016). Interestingly, future academic plans were also significant: Luo and Jamieson-Drake (2015) and Stroud (2010) found that students intending to obtain a graduate degree were less likely to intend to study abroad, with Salisbury, Paulsen, and Pascarella (2011) finding the same of White students specifically. Also of note is the cost of study abroad and financial concerns, which are barriers that the study abroad field is widely concerned with; here, findings are mixed, with Garver and Divine (2008) and Wang et al. (2016) finding cost to be negatively predictive, while Albers-Miller et al. (1999) found it to be non-significant.

The final set of significant predictors for study abroad intent involves students' experiences and views. Generally, a desire for adventure (Gullahorn & Gullahorn, 1958), a positive attitude towards study abroad (Wang et al., 2016), greater self-efficacy to study abroad (Hackney et al., 2012), favorable views of other countries' foreign policies, more negative views of U.S. foreign policy (Carlson et al., 1999), and more openness to diversity (Salisbury, 2009) are all positively predictive of study abroad intent. Certain experiences were also positively predictive of intent to study abroad, including having lived in another country (Pope et al., 2014), visiting other countries (Hackney et al., 2012; Pope et al., 2014), and more diversity within one's interactions (Salisbury et al., 2009). Interestingly, foreign language ability was not predictive of study abroad willingness in one study (Hackney et al., 2012), but was predictive of study abroad intent in another (Goldstein & Kim, 2006). Also of note was that academic achievement (Carlson et al., 1991) did not significantly predicted study abroad intent.

### *Theory-based Approaches*

The vast majority of research in this literature does not take a theory-based approach, and thus fails to take advantage of the guidance, explanatory power, and rigor that theory can provide. That is, theory offers a systematic, logical framework through which to conceptualize, causally model, and understand the interrelated constructs underlying complex phenomena such as intent to study abroad (Heppner, Wampold, Owen, Wang, & Thompson, 2016). Though limited, there are research studies in this domain that are based on theory, detailed below.

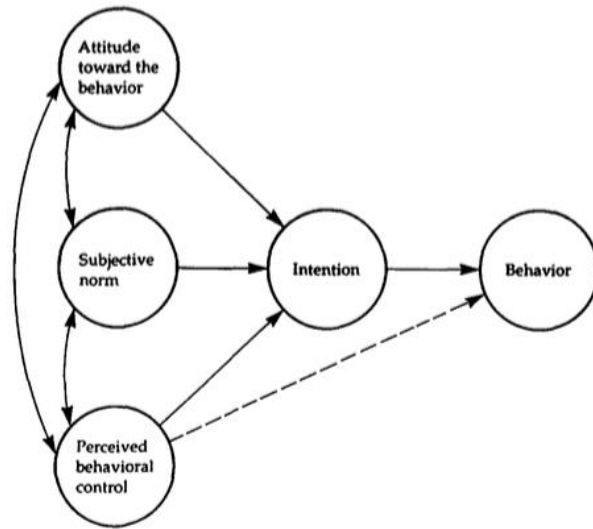
### Salisbury et al.'s Integrated Model of Student Choice

A series of studies by Salisbury and his colleagues (e.g., Salisbury et al., 2009) were loosely based on Perna's (2006) Conceptual Model of Students' College Choice. Perna's model situates students' educational decision-making in the context of forms of capital (e.g. financial, social, cultural) that can be drawn upon while making a decision (Perna, 2006). Salisbury utilized Perna's model to choose which variables to examine in an existing dataset to predict the intention to study abroad.

The results of this series of studies (Salisbury et al., 2009; Salisbury, Paulsen, & Pascarella, 2010; Salisbury, et al., 2011) are primarily incorporated into the earlier summary of study abroad findings and also detailed in the extended literature review. While these studies do attempt to ground their research in theory, they only do so loosely – the study did not specify how the predictors operated together in a causal sense, or in relation to one another in the model. Additionally, the dataset itself was not based on Perna's theory, with study abroad intent only one of many outcomes studied. Thus, the studies' grounding in theory is limited.

### Theory of Planned Behavior

Another notable exception to the lack of theoretical grounding in the literature are studies using the Theory of Planned Behavior (TPB; Ajzen, 1991) as a conceptual framework for understanding the precursors of the decision to study abroad. The theory's central constructs are shown in Figure 1.



*Figure 1.* The Theory of Planned Behavior. Copyright 1991 by I. Ajzen. Reprinted with permission.

According to Ajzen (1991), the intention to engage in a particular behavior results from three types of beliefs – attitudes, subjective norms, and perceived behavioral control. In TPB, attitudes (behavior beliefs) refer to the degree to which a person has a globally favorable or unfavorable evaluation of a behavior of interest, requiring a consideration of the overall outcome of a behavior. Subjective norms (normative beliefs) refer to whether someone believes that people of importance in their lives approve or disapprove of a behavior. Finally, perceived behavioral control (control beliefs) refers to a person's perception of the ease or difficulty of performing a behavior and the extent to which the performance of that behavior is up to the actor (Ajzen, 2002). Though the ultimate construct of interest in the TPB model is whether these three types of beliefs predict actual behavior, they are assumed to do so through



predicting the intention to engage in a behavior, which is often highly predictive of actual engagement in a behavior (Ajzen, 1991).

In the study abroad intention and choice literature that utilizes the TPB model, the majority of studies have found some support for behavioral beliefs, subjective normative beliefs, and perceived behavioral control in predicting study abroad intention and action, with the predictors accounting for 25 - 49% of the variance in study abroad intention (Fitzsimmons, Flanagan, & Wang, 2013; Goel, de Jong, & Schnusenberg, 2010; Presley, Damron-Martinez, & Zhang, 2010; Schnusenberg & de Jong, 2012; Zhuang, King, & Carnes, 2015). Individual study findings are summarized in the extended literature review.

Despite its potential to inform the understanding of why students study abroad, as a general model of beliefs and actions, TPB is somewhat limited by its focus on a relatively narrow range of person variables and by its limited attention to environmental variables. That is, all of its central constructs involve the individual's beliefs and behaviors. Yet complex decisions, such as studying abroad, necessarily include additional considerations beyond belief-based predictors. Moreover, the parsimonious nature of TPB makes for a simple and elegant model, but its economical nature has also drawn criticism. Specifically, researchers have questioned whether having just three belief-based predictor variables offers a sufficiently comprehensive explanation of behavior (Sniehotta, Pesseau, & Araújo-Soares, 2014). Finally, the TPB model has also been criticized for assuming that the effect of the belief-based predictors on behavior are mostly mediated by intention, instead of

recognizing the empirical evidence indicating that beliefs predict behavior both directly as well as indirectly via intention (Sniehotta et al., 2014).

#### Social Cognitive Career Theory

Given that study abroad programs are increasingly viewed as integral to preparing students for globally competent careers, a study abroad experience is often a significant component of a student's overall academic and career exploration during their college years. It may, therefore, be useful to draw upon theoretical models that explicitly focus on career development processes and outcomes to look at study abroad intent and action. Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) is a theoretical framework consisting of five models, two of which (the choice model and interest model) are specifically designed to aid understanding of academic and career interests and choices. Because SCCT considers a wider variety of socio-cognitive predictors of intention, it may serve as a useful approach to inquiry on the choice to study abroad. The SCCT choice model, shown in Figure 2, integrates many socio-cognitive constructs that are useful for predicting choice goals and choice actions. Its core predictors are self-efficacy, outcome expectations, interests, and supports and barriers (the latter two constructs may be referred to as proximal environmental influences; Lent et al., 1994; Lent & Brown, 2006).

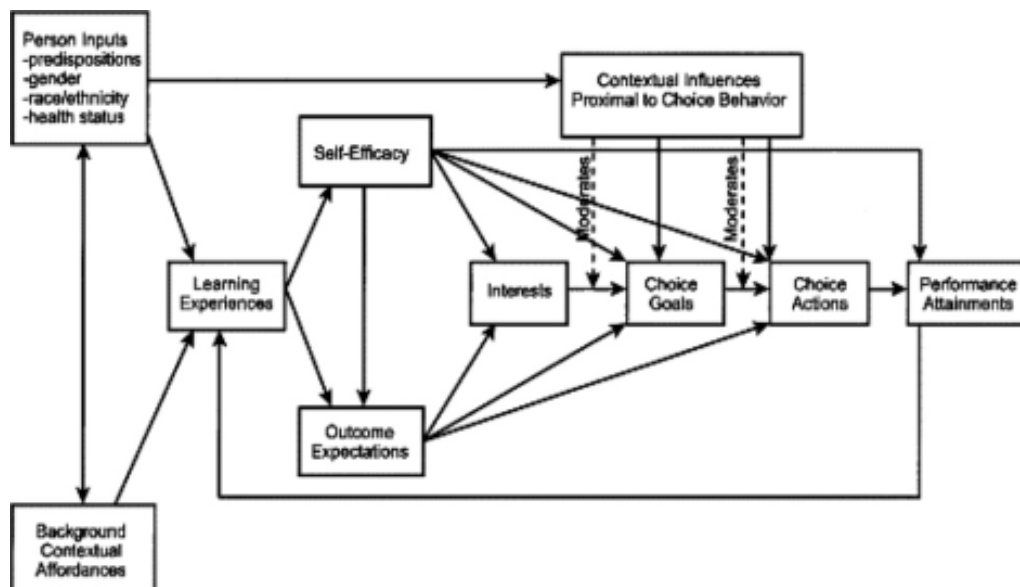


Figure 2. The Social Cognitive Career Theory choice model. Copyright 1993 by R. W. Lent, S. D. Brown, & G. Hackett. Reprinted with permission.

According to SCCT, interests are predicted by self-efficacy and outcome expectations, and all three of these constructs predict choice goals, which are identical to the TPB construct of intentions (Ajzen, 1991; Lent & Brown, 2006). As in TPB, goals (or intentions) are seen as a key predictor of choice actions (e.g., actual enrollment in a study abroad program). However, given its cross-sectional design, the present study will be limited to the prediction of study abroad intentions alone. As shown in Figure 2, supports and barriers are assumed to predict intentions directly as well as to moderate the relation of interests to goals (e.g., interests are likely to relate more strongly to goals when accompanied by strong supports and weak barriers). Though not shown in Figure 2, supports and barriers are also assumed to relate to

goals indirectly through their linkages to self-efficacy and outcome expectations (e.g., see Sheu et al., 2010).

Though the SCCT choice model was specifically designed to explain the types of academic and occupational activities and fields that people decide to pursue (or avoid), it has been extended to the study of non-vocational choices. For example, Miller et al. (2009) and Miller and Sendrowitz (2011) examined the extent to which SCCT explains how social justice interest and commitment develop, respectively, in college students and counseling psychology doctoral trainees. It may be argued that SCCT offers a reasonable theoretical framework within which to understand the choice to study abroad, which is motivated by career and/or non-career-related considerations (e.g., the desire to enhance one's job qualifications and/or to experience a different culture).

The current study is focused on the decision to study abroad (i.e., factors that promote or deter intentions to study abroad – before students actually embark on such an experience). A review of the literature identified only one previous study that examined the choice to study abroad through an SCCT lens. It specifically focused on U.S. college students studying sports management and considering sports management study abroad programs (Jones & Cunningham, 2008). The study found that barriers ( $\beta = -.17$ ) and supports ( $\beta = .66$ ) were significantly predictive of self-efficacy to study abroad, together accounting for 57% of the variance in self-efficacy. Self-efficacy, in turn, was significantly correlated with both outcome expectations ( $\beta = .39$ ) and study abroad interest ( $\beta = .39$ ). However, outcome expectations were not found to correlate with study abroad interest. Finally, study abroad interest was

strongly and significantly correlated with study abroad intent ( $\beta = .91$ ). This study was limited by its sample size ( $n = 71$ ) and its sole focus on sports management programs and students make it difficult to generalize its findings to the larger undergraduate population.

In sum, SCCT has thus far received little application to the intent to study abroad among U.S. undergraduates, though it may offer useful explanatory potential in this context. The current study proposes to examine the relationships between social cognitive factors associated with the intent to study abroad through the Social Cognitive Career Theory choice model. The relevance of this study to counseling psychology derives from its focus on an educational choice that may have significant implications for students' personal, social, and career development. It may also have useful implications for higher education administrators and student affairs professionals who are interested in the factors that promote and deter involvement in study abroad programs, with a goal of increasing the number and diversity of students who choose to make study abroad part of their college experience. The following section offers research questions and hypotheses based on SCCT.

### *Research Questions and Hypotheses*

Study abroad programs are an important part of higher education's mandate to prepare students for an interconnected world (Helms & Brajkovic, 2017). To increase undergraduate participation in study abroad, it is important to better understand the factors that shape students' decisions to either participate or not participate in a study abroad program. This study will look at whether social cognitive variables predict

study abroad interests and intent; more specifically, this study will test the following hypotheses, based on the model in Figure 3.

H1: Self-efficacy to study abroad (measured as a multidimensional construct) will correlate significantly and positively with study abroad (a) outcome expectations (path 1a), (b) interests (path 1b), and (c) intentions / choice goals (path 1c).

H2: Outcome expectations for studying abroad will correlate significantly and positively with study abroad (a) interests (path 2a) and (b) intentions / choice goals (path 2b).

H3: Interest in study abroad will correlate positively with intention / choice goal to study abroad (path 3).

H4: Barriers to studying abroad will correlate negatively with study abroad (a) self-efficacy (path 4a) and (b) intentions / choice goals (path 4b).

H5: Supports for studying abroad will correlate positively with study abroad (a) self-efficacy (path 5b) and (b) intention / choice goals (path 5b).

H6: Barriers will moderate the relation of study abroad interests to choice goals, such that higher levels of barriers will be associated with weaker interest-goal relations (path 6).

H7: Supports will moderate the relation of study abroad interests to choice goals, such that higher levels of supports will be associated with stronger interest-goal relations (path 7).

H8: The sets of predictors will, collectively, explain a significant amount of variation in study abroad (a) interests and (b) intentions / choice goals.

H9: Each individual predictor will account for unique variation in study abroad (a) interests and (b) intention / choice goals (i.e., after controlling for the predictive contribution of the other predictors).

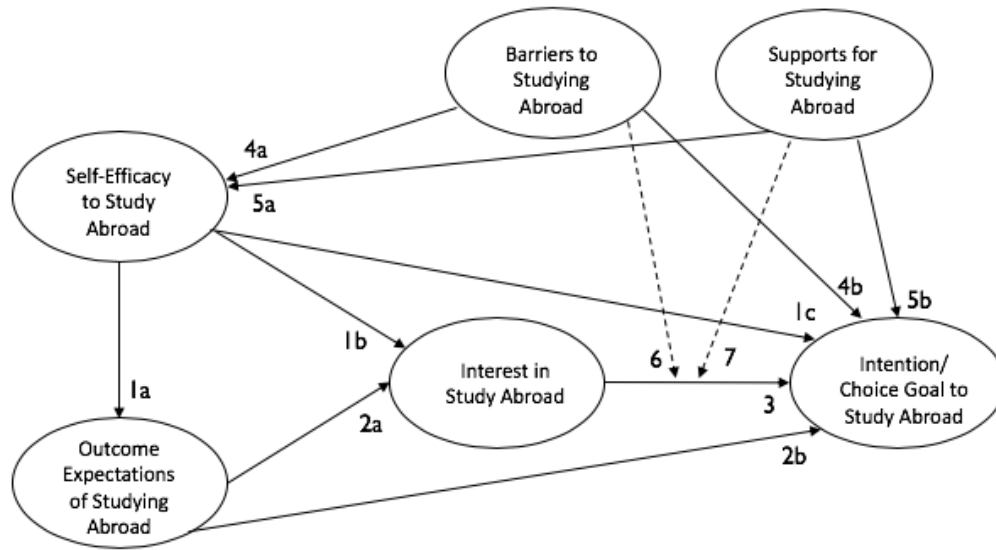


Figure 3. A Social Cognitive Model of Study Abroad Interests and Choice Goals

Because adequate, pre-existing measures of most of the constructs do not exist within the study abroad domain, the hypothesis-testing phase of the study was preceded by a measurement development phase, with separate samples for each phase. It was assumed that at least one measurement development phase would yield psychometrically adequate measures suitable for use in preliminary hypothesis-testing.

## Chapter 2: Method

### Design

This study used a cross-sectional, correlational design with a set of predictor variables consisting of the SCCT constructs of self-efficacy, outcome expectations, interests, supports, and barriers applied to the domain of study abroad. Intention to study abroad was the dependent variable.

### Participants

This study drew participants from two different sources, though all participants were sophomore and junior undergraduate students (the students most likely to be in the position to consider studying abroad) at four year colleges and universities who were at least 18 years old and had not yet studied abroad (Institute of International Education, 2018). Community college students at present comprise only two to three percent of all study abroad students, and for practical sampling reasons, were not included in this study (Institute of International Education, 2018). Initially, recruitment of qualifying participants was to take place through the use of targeted advertising on the social media site Facebook. Because initial Facebook recruitment efforts were unsuccessful, the decision was made to shift to recruitment through Qualtrics Research Services, a third-party vendor that recruits participants nationally, and SONA, the University of Maryland (UMD) Department of Psychology's research sign-up system.

The study consisted of two phases, measurement development and hypothesis testing, with two separate samples. For the measurement development phase, a sample of 325 participants was collected, following Gorsuch's (1997) guidelines for



exploratory factor analyses (EFA). For the hypothesis testing phase, a power analysis for the regression predicting choice goals, conducted with G\*Power (Faul, Erdfelder, Buchner, & Lang, 2009), indicated that a sample size of 159 students would have an 80% chance of detecting a correlation effect size of .10 at an alpha of 0.05; ultimately, a final sample size of 277 was obtained. In aggregate, across the two phases, a total of 602 valid completed responses were obtained from college sophomores (67.4%,  $n = 406$ ) and juniors (32.6%,  $n = 196$ ), ranging in age from 18 to 30 ( $M = 19.9$ ,  $SD = 1.4$ ), though the vast majority (89.4%) were ages 19 to 21.

This sample was 36.4% cisgender male ( $n = 219$ ), 1.0% transgender male ( $n = 6$ ), 61.5% cisgender female ( $n = 370$ ), 0.2% transgender female ( $n = 1$ ), and 1.0% non-binary/gender-fluid individuals ( $n = 6$ ). Approximately three-fifths of participants (62.0%,  $n = 373$ ) were White or European American, 9.8% ( $n = 59$ ) were Hispanic or Latinx American, 11.6% ( $n = 70$ ) were Black or African American, 12.6% were Asian or Pacific Islander American ( $n = 76$ ), 2.5% were multi-racial ( $n = 15$ ), 0.3% were Native American ( $n = 2$ ), and 1.2% ( $n = 7$ ) reported another racial/ethnic identity. In terms of sexual orientation, 82.7% ( $n = 498$ ) identified as heterosexual, 9.5% ( $n = 57$ ) as bisexual, 2.5% ( $n = 15$ ) as gay, 1.8% ( $n = 11$ ) as lesbian, and 3.5% ( $n = 21$ ) as another sexual orientation. Regionally, 47.8% ( $n = 288$ ) came from the Mid-Atlantic, 15.0% ( $n = 90$ ) from the Northeast, 11.1% ( $n = 67$ ) from the Southeast, 9.8% ( $n = 59$ ) from the Midwest, 6.5% ( $n = 39$ ) from the Southwest, 6.1% ( $n = 37$ ) from the West, and 3.7% ( $n = 22$ ) from the Northwest.

The participants came from two recruitment sources, with 54.0% ( $n = 325$ ) of the participants coming from SONA and 46.0% ( $n = 277$ ) of the participants coming

from Qualtrics Research Services. Of note is that the Qualtrics participants were recruited nationwide, whereas the SONA participants came solely from UMD, hence students from the Mid-Atlantic represent the largest proportion of students by region. Responses from participants who did not get to the end of the survey to complete the validity question were deemed invalid, and participants who answered “no” to the validity question were deemed invalid; both of these types of responses were deleted. Therefore, only complete, valid responses were retained for data analysis, and missing data analyses were not conducted. Of the 747 individuals who accessed the survey, 145 were deemed invalid according to the above criteria. Demographics information is also presented in Table 1.

### Measures

As previously mentioned, extant measures in the study abroad domain for most of these SCCT constructs simply do not exist, and thus using existing measures was not an option. Where possible, extant measures that are partially relevant to this current study were adapted or, based on the literature review, used to inform the measure development for this study. Specifically, for the SCCT constructs of self-efficacy, outcome expectations, interests, barriers, and supports, new measures were developed or existing measures were revised using the SCCT measurement guide developed by Lent and Brown (2006). Early drafts of these measures were reviewed by a team of SCCT researchers, comprised of three doctoral students in counseling psychology and an SCCT research expert. Additional edits and suggestions were provided by two experts in the study abroad field: (a) one senior study abroad director with 15 years of experience managing study abroad programs from the U.S. side of

operations and running U.S. study abroad programs abroad, and (b) one study abroad program manager with five years of experience working with students in the application and administrative process leading up to students departing for their programs abroad.

These measures were tested on an initial sample of 325 students so that validity and reliability could be estimated, and so that an EFA could be run on the set of SCCT items. These steps were then used to determine a final version for each measure, prior to the measures' use in hypothesis testing on a second sample of 277 students. For ease of scoring, all SCCT measures were scored on a five-point Likert scale anchored at one and five. Additionally, to maintain consistency, respondents' scale scores for each measure were calculated as an average of its item scores.

Study abroad self-efficacy was measured as a multi-dimensional construct for this study, with two hypothesized factors. The study abroad literature does not provide any guidance or evidence for determining the full scope of study abroad self-efficacy or its components, and so the creation of the subscales was based on general knowledge of the contemporary study abroad field and adaptation of existing measurement strategies.

#### Study Abroad Self-Efficacy-Adjustment (SA-SEA)

The SA-SEA is a 16-item revised version of Brenner's (2001) Intercultural Adjustment Self-Efficacy Scale (IASE). Intercultural adjustment is the most obvious aspect of self-efficacy to study abroad; that is, by definition, studying abroad requires leaving the U.S., and therefore belief in one's ability to adjust to a culture outside of the U.S. is fundamental to the concept of self-efficacy to study abroad. Brenner's

original version consisted of a 27-item scale which asks participants about their beliefs in their abilities “to do certain things effectively while on a study abroad program in a foreign country”, with items such as “How confident are you in your ability to order food at a local restaurant?” and “How confident are you in your ability to interact with local students effectively?” It was developed from a survey of 140 students from two large, R1 Mid-Atlantic universities (one public and one private) who were preparing to study abroad. Participants responded on a 10-point scale anchored at 0 (“Not Confident At All”) to 9 (“Completely Confident”), with higher scores indicating higher intercultural adjustment self-efficacy.

The IASE scale showed high internal consistency ( $\alpha = .95$ ) in the original 2001 study as well as a 2003 longitudinal study ( $\alpha = .93$  to  $.97$ ), in which data were collected at four different time periods (Brenner, 2003). Moderate test-retest reliability ( $r = .66$ ) was also found based on a two-week follow-up assessment. In the development of this scale, a principal axis factor analysis with an oblique rotation produced eight factors with three to four items each, accounting for 72.3% of variance. Internal consistency estimates for the factor-derived scale ranged from  $\alpha = .81$  to  $.91$ ; these subscales were labeled acculturation, personal care, country logistics, emergency management, interpersonal abilities, psychological strengths, cultural justification, and educational adaptation. Qualitative research by Ryan and Twibell (2000) on the primary concerns of students who studied abroad found many of the same thematic clusters of adjustment concerns, providing evidence for the existence of these aspects of intercultural adaptation.

Brenner (2001) acknowledged the potential value of the various factors, but preferred to use the total scale score as a general measure of intercultural adjustment self-efficacy. He, therefore, summed the responses to the items and divided by 27, the total number of items on the scale, in order to obtain an IASE score. Additional validity data included SCCT-consistent positive relationships of the IASE with interest in intercultural experiences ( $r = .38$ ), goal commitment to intercultural immersion ( $r = .23$ ), general self-efficacy ( $r = .38$ ), and host country language ability (as an indirect measure of past intercultural experience), such that participants with higher host country language abilities were found to have higher IASE scores ( $F[2,133]=3.52$ ,  $\eta^2 = .048$ ,  $p<.05$ ).

In revising Brenner's (2001) IASE scale, the goal was to create a briefer subscale that reflects changes that have occurred in the study abroad experience in recent years. Additionally, the IASE yields very high alpha coefficients ( $\alpha = .93$  to  $.97$ ), suggesting that it may be shortened somewhat without substantially sacrificing internal consistency reliability. A shorter measure is pragmatically preferable in SCCT research studies in that it helps constrain the length of the overall study survey; this is important because measuring multiple predictor and outcome variables is the norm when testing SCCT models.

Items from the original IASE subscales were eliminated or updated based on the following decision rules: First, using Brenner's (2001) findings, subscales that correlated minimally with the interest or goal commitment scales ( $r < .20$ ) were considered for elimination. Second, items that are obsolete due to changes in

technology, travel norms, or contemporary study abroad practices were updated to reflect those changes or eliminated completely.

Based on the first decision rule, the Psychological Strengths subscale, the Cultural Justification subscale, and the Educational Adaptation subscale were eliminated due to all three subscales correlating minimally with either the interest scale, goal commitment scales, or both. The Logistics of Country subscale was eliminated based on both decision rules due to its low correlation with goal commitment and also because items such as “How confident are you in your ability to convert and use the local currency?” are now obsolete; in this example, converting currency is obsolete due to general study abroad recommendations to use ATM cards while abroad to access local currency, to use credit cards to avoid any currency conversion entirely, or to obtain local currency at a U.S. bank prior to leaving the U.S. (e.g., Mendez, 2019).

Within the Emergency Management subscale, based on the second decision rule, the item “How confident are you in your ability to help a friend find medical attention for a serious health concern?” was replaced with “How confident are you in your ability to seek out medical attention or medication for a health concern?”. This is due to contemporary study abroad programs having protocols to ensure that staff are available to help students handle true emergencies. Updating this item to reflect self-efficacy for navigating mild to moderate medical concerns is more realistic. Also based on the second decision rule, the item “How confident are you in your ability to replace a lost or stolen train ticket?” was judged to be obsolete due to the relative ease of purchasing transportation tickets online, and was replaced with a more general

Emergency Management subscale item: “How confident are you in your ability to handle an unexpected, but minor crisis (e.g. getting lost, losing your wallet, having your phone stolen).” Finally, two items from the Personal Care subscale referring to preparing meals and shopping for food were eliminated based on the second decision rule because shopping for and preparing meals are not the norm for most students on study abroad programs. Instead, an updated item reflecting the personal care focus of this subscale was added: “How confident are you in your ability to find local leisure activities to enjoy?”

In terms of scope, the modified IASE, when reviewed by a team of SCCT researchers and two experts in the study abroad field, were judged to be adequate for the purposes of the current study, with one exception – there were no items that addressed communication (both expressed and received) self-efficacy. Thus, the items “How confident are you in your ability to understand what locals are communicating to you?”, “How confident are you in your ability to communicate your thoughts effectively while abroad?”, and “How confident are you in your ability to effectively communicate using the local language or dialect?” were added to the scale to remedy this omission. The revised SA-SEA subscale consists of 13 original or revised items from the IASE plus 3 new communication ability items, for a total of 16 items. In the measurement development phase of the present study, Cronbach’s alpha was .92 for this modified subscale. In the hypothesis testing phase, Cronbach’s alpha was .93

### Study Abroad Self-Efficacy-Planning (SA-SEP)

The study abroad literature suggests the need to account for self-efficacy in relation to one's ability to successfully navigate the exploration, planning, and decision-making process required to study abroad (Spiering & Erickson, 2006). Studying abroad requires a disruption to a student's undergraduate life for the duration of the program and can affect a student's academic plan and progress as well. Additionally, before students spend a day in a new country, study abroad offices require that they first navigate extensive educational, administrative, logistical, and personal hurdles to ensure that their study abroad experience (and, where appropriate, their study abroad academic credit) will integrate into their broader undergraduate curriculum and academic plan. Completing these daunting steps poses a barrier to entry, and thus is an important aspect of self-efficacy to study abroad (Spiering & Erickson, 2006). A modified subscale based on the Career Exploration and Decision Self-Efficacy Scale (CEDSE-BD; Lent, Ezeofor, Morrison, Penn, & Ireland, 2016) was used to capture this second aspect of self-efficacy to study abroad.

The CEDSE-BD is an eight-item scale of self-efficacy regarding one's ability to engage in common career exploration and decision-making tasks (Lent et al., 2016). It includes items such as "How much confidence do you have in your ability to identify careers that best use your skills?" and "How much confidence do you have in your ability to develop a good alternative plan if you find that your access to your most preferred [career] option is blocked for some reason?". Though the original 2016 study had participants respond on a 10-point scale, a subsequent study by Lent, Ireland, Penn, Morris, and Sappington (2017) modified the response format to a more



user-friendly five-point scale with the same descriptive anchors, ranging from 0 (“No Confidence at all”) to 4 (“Complete Confidence”), with item scores totaled and averaged to form a scale score. Higher scores indicate greater career exploration and decisional self-efficacy.

The CEDSE-BD has produced internal consistency reliability estimates of .93 to .96 (Lent et al., 2016, 2017). In terms of validity data, the CEDSE-BD was found to correlate highly with Betz et al.’s (1996) established measure of career decision self-efficacy ( $r = .74$ , Lent et al., 2016;  $r = .78$ , Lent et al., 2017). Moreover, the CEDSE-BD was found to correlate in theory-consistent ways with relevant measures of outcome expectations, goals, social support, prior engagement in career exploration, career decision status, decisional anxiety, and conscientiousness (Lent et al., 2016).

The eight-item CEDSE-BD was used as the basis for the ten-item SA-SEP subscale, with planning self-efficacy as a catch-all term for study abroad exploration, planning, and decision-making self-efficacy. Items were modified from a career context to a study abroad context by replacing the word “career” with “study abroad” or “study abroad programs” in the items. For example, “How much confidence do you have in your ability to identify careers that best match your interests?” was modified to “How much confidence do you have in your ability to identify study abroad programs that best match your interests?” Items that were not appropriate for the study abroad context were eliminated. Additional items were generated to reflect tasks specific to the study abroad domain such as “How much confidence do you have in your ability to fit a study abroad program into your overall undergraduate

plan?”. The subsequent measure was reviewed by a team of SCCT researchers and two experts in the study abroad field, with their feedback used to revise the items.

For the measurement development phase of the present study, Cronbach’s alpha for this modified subscale was .91. For the hypothesis testing phase, Cronbach’s alpha was .93. Based on EFA results (see later section for details), the SA-SEP scale was divided into two subscales, representing decision-making and administrative task self-efficacy. Cronbach’s alpha for the decision-making subscale was .90 for both the measurement development and hypothesis testing samples; Cronbach’s alpha for the administrative tasks subscale was .86 for the measurement development sample and .87 for the hypothesis testing sample. Reliability estimates for the combined study abroad and planning self-efficacy scale was .93 in the measurement development sample and .95 in the hypothesis testing sample.

#### General Self-Efficacy (GSE; Schwarzer & Jerusalem, 1995)

An eight-item measure of general self-efficacy (i.e. belief in one’s ability to succeed across a variety of challenging situations) was chosen to estimate the validity of the domain-specific study abroad self-efficacy scales. The GSE (Schwarzer & Jerusalem, 1995) asks participants to indicate how much they agree with each item on a 4-point scale anchored at 1 (“Not at all true”) to 4 (“Exactly true”), with higher scores indicating higher general self-efficacy. Item examples include “I can always manage to solve difficult problems if I try hard enough” and “I am confident that I could deal efficiently with unexpected events.” A scale score is calculated by adding item scores.

Adequate reliability values have been reported for this scale across multiple studies (e.g.,  $\alpha = .88$ , Leganger, Kraft, & Røysamb, 2000). Test-retest reliability (over seven weeks) in the Leganger et al. study was also found to be adequate ( $r = .82$ ). The study also found support for construct validity via expected positive relations of the GSE with positive affect ( $r = .40$ ) and satisfaction with life ( $r = .26$ ), among other psychological traits and states. GSE scores were expected to correlate positively and moderately with the total Self-Efficacy scale score as well as the SE-SEA and SE-SEP subscale scores – that is, highly enough to suggest that the scale as a whole and the two subscales covary with global self-efficacy, but not so highly as to suggest that they are only tapping the latter construct. For the measurement development stage of the present study, an alpha coefficient of .86 was found for this scale. For the hypothesis testing phase, an alpha coefficient of .87 was found.

#### Outcome Expectations for Studying Abroad (OESA)

A new 15-item measure of outcome expectations for studying abroad (OESA) was created due to the lack of such a measure in the study abroad literature. Based on EFA results, four items were eliminated, resulting in an 11-item final version of the OESA measure. When creating this scale, the existing literature did provide a useful guide for perceived domain-specific outcomes in the form of Presley et al.'s (2010) study. Presley and colleagues conducted open-ended interviews with students to understand their attitudes towards studying abroad. Similar responses were grouped and analyzed, leading to a set of content themes that were then used to create measures for TPB constructs. One grouping of responses focused on all possible perceived outcomes of studying abroad, which the researchers reduced to a set of

seven outcome themes: experiencing a new culture, improving on language skills, the opportunity to personally grow and develop, having a fun and/or interesting experience, opening up new career opportunities, homesickness, and disruption or delay of academic progress.

Presley and his colleagues (2010) used these themes to generate items for a TPB Attitudes measure but, unfortunately, did not provide data on the reliability or factor structure of their new measure. In terms of validity data, the attitudes measure was shown to correlate significantly with the subjective norms measure ( $r = .48$ ) and with the perceived behavior control measure ( $r = .34$ ). Additionally, a regression analysis indicated that behavior beliefs together with outcome evaluation predicted study abroad intentions. A review of the study abroad literature shows no other studies that assessed study abroad outcome expectations.

Presley et al.'s (2010) seven themes of study abroad outcomes provided a content base for building the OESA measure for this study (i.e., items were generated to reflect each of the study abroad outcome factors). The structure and wording of the OESA's items draws upon Lent and Brown's (2006) social cognitive measurement guide as well as a career exploration and decision-making outcome expectations measurement study currently underway (Ireland, 2019). Items were reviewed by a team of SCCT researchers and two experts in the study abroad field, with their feedback used to further revise the scale. A sample item is "Studying abroad would most likely give me a competitive advantage in the workforce".

Participants endorsed how much they agreed with each statement on a 5-point Likert scale anchored, from 1 ("strongly disagree") to 5 ("strongly agree").

Cronbach's alphas for this scale were .85 in the measurement development phase and .87 in the hypothesis testing phase of this study. Parenthetically, though the initial intent was to assess both positive and negative outcome expectations, problems in differentiating negative outcome expectation and barrier items led to the decision to focus only on positive outcome expectations in this study.

#### Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994)

To estimate the validity of the outcome expectations, supports, and barriers measures, the 10-item Life Orientation Test-Revised (LOT-R) measure was selected. The LOT-R is a measure of general dispositional optimism and pessimism, with good evidence provided by a large sample CFA that it is a bidimensional construct with relatively independent optimism and pessimism factors (3 items each), with a correlation of  $r = -.15$  between factors (Herzberg, Glaesmer, & Hoyer, 2006; Scheier, Carver, & Bridges, 1994). An example of an optimism item is "I'm always optimistic about my future" and an example of a pessimism item is "If something can go wrong for me, it will". Responses are rated on a 1 ("Strongly Disagree") to 5 ("Strongly Agree") scale, with responses across each subscale summed; the higher the score, the higher the respective level of optimism or pessimism. An internal consistency estimate for the Optimism subscale was  $\alpha = .71$  and for the Pessimism subscale was  $\alpha = .68$  (Herzberg et al., 2006). In terms of predictive validity, the same study showed that optimism was negatively predictive of depression ( $\beta = -.47$ ) and pessimism was shown to be positively predictive of depression ( $\beta = .24$ ).

In this study, respondents' scores on the LOT-R Optimism subscale were expected to have a small-to-medium size positive correlation with the OESA items

and study abroad supports scores, and a small-to-medium negative correlation with study abroad barriers scores. Conversely, the Pessimism subscale scores on the LOT-R were expected to have a small-to-medium positive correlation with study abroad barriers, and a small-to-medium negative correlation with study abroad supports and OESA scores. For the measurement development stage of the present study, an alpha coefficient of .69 was found for the optimism subscale and an alpha coefficient of .74 was found for the pessimism subscale. For the hypothesis testing phase, an alpha coefficient of .75 was found for the optimism subscale and an alpha coefficient of .77 was found for the pessimism subscale.

#### Interest in Study Abroad (ISA)

A revised version of Brenner's (2001) Interest in Intercultural Experiences (IIE) measure was used to assess interest in studying abroad. Brenner's (2001) original 12 item measure asked participants to indicate their interest in various activities as a part of the study abroad experience, such as "exploring the local cuisine" and "immersing yourself in a different culture" on a five-point scale anchored at 1 ("Strongly Disinterested") to 5 ("Strongly Interested"). A scale score was calculated by averaging the responses for all items, with a higher score indicating greater interest in studying abroad. The original IIE's internal consistency was .75 and the IIE correlated in theory-consistent ways with the intercultural self-efficacy and goal commitment scales.

Despite its potential utility, a discussion with study abroad experts noted that the existing measure does not comprehensively capture some of the more personal interests in studying abroad (e.g. individual growth) as well as vocational interests in

studying abroad (e.g. exploring international careers). Thus, new items were generated in conjunction with these experts to expand the measure. Examples of new items are interest in “seeing things from a new perspective” and “challenging yourself to get out of your comfort zone” (personal growth-oriented), as well as “exploring international career pathways” (career-oriented). Some of the IIE intercultural items were also updated (e.g., “socializing exclusively with local students” was broadened and made more realistic by changing it to “meeting and interacting with different people”), and other outdated or irrelevant items were eliminated. The pre-EFA version of the scale consisted of 10 items (five new and five revised). Based on EFA results, two items were eliminated, resulting in an 8-item final version of the interests measure.

To examine the validity of the ISA, this study looked at the correlation between ISA scores and the answers to the three questions that capture prior sojourning for pleasure. The first two questions are “How much have you traveled around the U.S. in the past for pleasure?” and “How much have you traveled outside of the U.S. in the past for pleasure?” with responses anchored at 1 (“not at all”) and 5 (“extensively”). The third question is “How much have you enjoyed travel in the past?” with responses anchored at 1 (“not at all”) and 5 (“very much”), with an additional response option of “N/A” to capture those participants who have not traveled. Medium-sized correlations were expected between study abroad interests and previous travel. For the measurement development phase of the study, Cronbach’s alpha for this modified measure was .99; for the hypothesis testing phase, it was .88.

### Study Abroad Supports and Barriers Scales

New measures of study abroad supports and barriers were developed, based loosely on the study abroad literature cited earlier about external factors that have been found to facilitate or hinder study abroad intent. Examples of factors that emerge from that literature that are logical candidates for developing study abroad support items include academic department support for study abroad, important relationships, and a relatively easy application/administrative process (Albers-Miller et al., 1999; Hackney, et al., 2012; Stroud, 2010). Similarly, factors that emerge from the literature as logical candidates for developing study abroad barrier items can be similar: financial concerns, responsibilities to family and friends, existing jobs, as well as academic and administrative difficulties (Hackney, et al., 2012; Salisbury et al., 2009; Stroud, 2010). Both scales were reviewed with the two study abroad professionals consulted for this study, leading to edits and additional item generation. The pre-EFA version of the barriers scale consisted of 5 items; based on EFA results, one item was eliminated, resulting in a 4-item final version of the barriers measure. The final version of the supports scale consisted of 4 items.

The measure stem for the supports measure is “how much of a support would each of the following be for you to study abroad?”, followed by items such as “Getting encouragement from my departmental faculty”. Similarly, a stem of “how much of a barrier would each of the following be for you to study abroad?” was followed by items such as “Not having enough money to pay for study abroad”. Respondents rate how much they agree with each item on a 1-5 Likert scale ranging from 1 (“no barrier at all”) to 5 (“big barrier”). For the measurement development



phase, Cronbach's alpha for the Barriers measure was .70 and for the Supports measure was .66. For the hypothesis testing phase, Cronbach's alpha for the Barriers measure was .65 and for the Supports measure was .75.

Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988).

The 12-item MSPSS, in addition to the LOT-R mentioned earlier, was used to examine validity for the supports and barriers scales. It measures self-reported social support, and has three factors, each representing different sources of support: significant other, family, and friends (Zimet et al., 1988). Item examples include "My family really tries to help me" and "I can count on my friends when things go wrong", rated on a 1-7 Likert scale anchored at 1 ("Very Strongly Disagree") to 7 ("Very Strongly Agree"). A total scale score is calculated by averaging the responses to the items, with higher responses indicating greater social support. The MSPSS shows good internal reliability, with an overall scale  $\alpha = .88$  and subcale  $\alpha = .85$  - .91. Test-retest reliability over 2-3 months was  $r = .85$ . The scale correlates negatively and modestly with anxiety and depression.

In this study, the MSPSS was expected to have a small positive correlation with the supports for studying abroad and a small negative correlation with barriers to studying abroad. For the measurement development stage of the present study, an alpha coefficient of .93 was found, and for the hypothesis testing phase, an alpha coefficient of .94 was found.

#### Intention to Study Abroad (Schnusenberg et al., 2012)

Schnusenberg et al.'s (2012) Intention to Participate [in study abroad], from the TPB literature, was used as the chief dependent variable because, as discussed earlier, the SCCT construct of choice goals can be indexed as behavioral intentions (Ajzen, 1991; Lent & Brown, 2006). This measure was developed in two phases, with a pilot phase sample size of 144 undergraduate business students, and a final phase, after revisions were made, with a sample size of 254 undergraduate business students (Schnusenberg & de Jong, 2012). It included items such as "I intend to participate in a study abroad program" and "I aim to go on a study abroad program" based on extant research. Participants responded on a five-point Likert scale, from 1 ("strongly disagree") to 5 ("strongly agree"). The final six-item measure was found to yield a reliability estimate of .98. In terms of validity, the intention measure was found to be related to the TPB predictors in theory-consistent ways. For the measurement development phase of the present study, Cronbach's alpha was .99; for the hypothesis testing phase, it was .97.

#### Demographics

After participants completed the measures for this study in a randomized order, they were presented with demographic questions regarding their age, gender identity, sexual orientation, race/ethnicity, year in college, and geographic region.

### Procedures

After receiving Institutional Review Board approval, a Qualtrics survey was created to gather the data. After agreeing to the informed consent, participants were presented the measures in randomized order. Responses were required to all items of a given measure before participants were allowed to progress to the next measure. At the very end of the survey, a demographics section was presented, followed by a validity check question.

Because the initial Facebook advertisement strategy to recruit participants was found to be both expensive and ineffective, a decision was made to gather data through UMD's SONA system at no financial cost as well as through Qualtrics Research Services, which was able to provide participant responses at a cost of \$5.50 per participant. Respondents recruited through UMD's SONA system were compensated by receiving extra credit points for a psychology class, and respondents recruited through Qualtrics Research Services were compensated by Qualtrics in the form of points redeemable through e-gift cards.

In both the SONA and Qualtrics recruitment, the study was explained to prospective participants as a 10 minute survey study examining study abroad attitudes and beliefs; participation criteria and compensation were also presented. Prospective participants needed to indicate that they (a) were a sophomore or junior undergraduate student at a four-year college or university, (b) were at least 18 years old, and (c) had never studied abroad before. If participants indicated that they met these requirements, they saw an informed consent page, followed by the measures, then demographics, and finally, the validity check question.

Steps were implemented to prevent bot responses and to reduce inattentive responses. First, the Qualtrics survey was set up so that respondents had to complete a Captcha question before beginning the survey, and the “Prevent ballot box stuffing” option was selected to prevent multiple responses from the same respondent. A validity question was added to the very end of the survey, presented on its own page, that read “Lastly, it is vital to our study that we only include responses from people that devoted their full attention to this study. Otherwise, our collective efforts (the researchers’ and the time of other participants) could be wasted. In your honest opinion, should we use your data in our analyses in this study?” Because this question was presented on its own page at the end, and because participants were not penalized for selecting “no”, the expectation was that respondents would answer honestly. Respondents who answered “no” to this validity question, or who do not get to this final question in the survey, were not included in the final data set.

## Chapter 3: Results

The Qualtrics survey for this study was accessed by 747 individuals, 145 of whom started but did not complete the survey or answered “no” for the final validity question. The data set of valid, completed responses ( $N = 602$ ) was deemed sufficient for the statistical analysis needs of this study. The sample collected through SONA ( $N = 325$ ) was designated as the measurement development sample and the sample collected through Qualtrics Research Services ( $N = 277$ ) was designated as the hypothesis testing sample. Across both samples, as mentioned earlier, responses where participants did not complete the validity question and where participants selected “no” for the validity question were both considered invalid and deleted listwise.

### Exploratory Factor Analysis

For the measurement development phase sample ( $N = 325$ ), a Kaiser-Meyer-Olkin (KMO) test of sampling adequacy produced a value of .91 and a significant Bartlett’s test of sphericity ( $p < .001$ ), suggesting the matrix was appropriate for factor analysis (Worthington & Whittaker, 2006). For the present study, each measure was developed according to SCCT measurement guidelines (Lent & Brown, 2006), but in order to provide evidence that each measure actually captured a distinct construct, all of the SCCT items across measures were pooled and subjected to a combined exploratory factor analysis. Because correlated factors likely exist, a principal-axis factoring procedure with oblimin rotation was conducted, as recommended by Fabrigar, Wegener, MacCallum, and Strahan (1999) and

Worthington and Whittaker (2006). Parallel analysis, scree plot, eigenvalue, communality, and factor interpretability criteria initially suggested the viability of a nine-factor solution, with factors corresponding to each of the SCCT constructs for interests, supports, barriers, and intentions, in addition to two factors corresponding to outcome expectations and three factors corresponding to self-efficacy.

Following Worthington and Whittaker's (2006) recommendation for which items to retain, a relatively high minimum for factor loadings and a relatively low absolute magnitude difference for cross-loadings without compromising factor structure or scale length were set. Specifically, a retained item's largest pattern coefficient was at least  $|0.40|$  and the magnitude difference between an item's two largest pattern coefficients was at least  $|0.15|$ . Communalities were also considered, though there were a few instances where an item had a low communality, but met the pattern coefficient criteria, and thus were retained to see if the factor structure they are a part of will replicate with a separate sample during the confirmatory factor analysis. Several successive factor analysis iterations were conducted based on these criteria, with three items eliminated in the first round; two more items were eliminated in the second round, requiring the elimination of a third item because it was the only item left on a particular factor, which reduced the solution to an eight-factor one; one final item was eliminated in the third round of factor analyses, with a final round resulting in the retention of all the remaining items based on the retention criteria.

Table 2 presents the item content and factor loadings for the final eight-factor solution, as well as the item content for items that were eliminated. The ultimate

factor loadings of the retained items were all of magnitude  $|\geq .42|$  and greater, and the ultimate magnitude difference between the retained items' two largest pattern coefficients was at least  $|\geq .17|$  for all items, indicating a relatively clean solution. The eight factors corresponded to each of the expected SCCT constructs for interests, supports, barriers, and intentions, and outcome expectations, with three factors corresponding to self-efficacy (study abroad adjustment self-efficacy, study abroad decision-making self-efficacy, and study abroad administrative tasks self-efficacy). The eight-factor solution accounted for 61.81% of the total variance in the  $N = 325$  measurement development sample.

### *Effect of COVID-19*

The SONA sample was collected over a time span that included the onset of the COVID-19 pandemic, after which UMD study abroad for the Spring 2020 semester was cancelled and study abroad students required to come home mid-semester (M.A. Rankin, personal communication, March 14, 2020). Because the onset of the pandemic led to a general fear of travel and specifically a moratorium on non-essential international travel, it was important to see if the pandemic affected participants' responses to the idea of studying abroad (Centers for Disease Control and Prevention, 2020). To examine this, independent  $t$ -tests were run to examine mean differences between the subsample of respondents from before the U.S. widely came to terms with the global pandemic (i.e. March 11, 2020) and the subsample of respondents from after COVID-19 had altered the national landscape (Graff, 2020). With equal variances not assumed, there were no significant mean differences found

between the two subsamples across any of the variables produced from the eight-factor EFA. See Table 3 for independent *t*-test results.

### Reliability Coefficients

For the measurement development phase of the present study, the means, standard deviations, skewness, kurtosis, and coefficient alphas (as a measure of internal consistency reliability) are presented for the SCCT variables in Table 4.

For the measurement development sample, the scales produced internal consistency estimates that ranged from marginal to excellent (.66 - .99). Note that self-efficacy was originally conceptualized as a multi-dimensional construct with two factors (intercultural adjustment and study abroad planning), but the factor analysis provided support for three factors (the SA-SEA scale items all loaded on one factor, but the SA-SEP scale was found to be composed of a decision-making factor and an administrative tasks factor). The measure development data show that the three factors are moderately to highly correlated ( $r = .42-.63$ ) and have similar relationships with the other SCCT variables. Thus, for this analysis, self-efficacy was calculated as a total scale score. This approach has the added advantage of avoiding issues of multicollinearity that would arise if the subscales were treated as separate scales. Each individual subscale correlates very highly with the total score ( $r = .73-.86$ ). The alpha coefficient for the total scale was .93.

### Convergent Validity

Evidence regarding convergent validity was examined by looking at the expected relationships between established measures or relevant questions (GSE,



LOT-R, MSPSS, and questions about previous travel) and the measures in this study. Overall, relatively small to large sized correlations were found between pairs of measures that were expected to capture similar, but relatively distinct content. Specifically, GSE scores correlated positively and moderately with total Study Abroad Self-Efficacy scores ( $r = .48$ ), as expected, as well as the SA-SEA, Decision-Making SE, and Administrative Task SE subscale scores ( $r = .43$ ,  $.43$ , and  $.34$  respectively). LOT-R Optimism subscale scores had a small-sized, positive correlation with the OESA measure ( $r = .18$ ) as well as a small correlation with the Supports measure ( $r = .22$ ). The LOT-R Optimism subscale was also found to have a small correlation with the Barriers measure ( $r = -.13$ ), as expected. Conversely, the LOT-R Pessimism subscale scores were expected to have a small to moderate, negative correlation with the OESA scale and the Supports measure, and a small, positive correlation with the Barriers scale. However, a significant small correlation was found only between the LOT-R Pessimism subscale and the Barriers scale ( $r = .17$ ); no significant correlations were found between the LOT-R Pessimism subscale and the OESA or Supports measures.

Medium-sized correlations were expected between study abroad interests and previous travel or previous travel enjoyment. A small correlation was found between ISA scores and previous travel in the U.S. ( $r = .14$ ) in addition to ISA scores and how much respondents enjoyed previous travel in general ( $r = .21$ ), but no significant correlation was found between ISA and international travel. The MSPSS was expected to have a small, positive correlation with the supports for studying abroad and a small negative correlation with barriers to studying abroad. A small, negative

correlation was indeed found between MSPSS scores and Barriers scores ( $r = -.17$ ), and a medium-sized correlation was found between the MSPSS and the Supports measure ( $r = .31$ ).

### Criterion-Related Validity

The bivariate correlations for the SCCT variables are presented in Table 5. Correlations between the variables were mostly consistent with extant SCCT studies, with medium significant relations between all SCCT variables, with the exception of the Barriers measure, which did not correlate significantly with outcome expectations. Interests and self-efficacy ( $r = .42$ ) as well as interests and outcome expectations ( $r = .48$ ) produced medium-sized correlations, as did barriers and self-efficacy ( $r = -.39$ ). Study abroad intentions produced medium-sized correlations with self-efficacy ( $r = .40$ ), outcome expectations ( $r = .35$ ), and barriers ( $r = -.32$ ). The remaining significant correlations between the SCCT variables were of a small-size ( $r = -.20$ -.29). These correlations suggest that the measures represent relatively distinct though related constructs.

Taken together, these validity estimates (criterion-related and convergent), the internal consistency reliability estimates, descriptive statistics, and EFA results together suggest that the set of new and modified scales yield show promising psychometrics and are suitable for a confirmatory factor analysis (CFA).

### Confirmatory Factor Analysis

A second sample of  $N=277$  participants recruited through Qualtrics Research Services was deemed to be sufficient in size for a CFA, based on a recommended

ratio of 5 respondents per parameter (Bentler & Chou, 1987; Worthington & Whittaker, 2006). Thus a CFA was conducted on this second sample of participants to establish the replicability of the eight-factor model measurement model that emerged from the earlier EFA. Multiple indices are typically reported to indicate overall model goodness-of-fit, including a chi-square test of model fit statistic ( $p > .05$  for good fit), a standardized root mean square residual (SRMR  $< .10$  for good fit), a root mean square error of approximation (RMSEA  $\leq .05$  for good fit), and a comparative fit index (CFI  $> .90$  for good fit) (Worthington & Whittaker, 2006). In aggregate, the model fit indices indicated good fit to the data:  $\chi^2(1349, N=277) = 2134.75, p < .001$ ; SRMR = .06; RMSEA = .05, 90% CI [.042, .049]; CFI = .91. All items loaded highly and significantly on their expected constructs (.53 to .93), with the exception of an item from the Barriers measure, which still loaded significantly on its expected construct, though not as highly (.32). See Table 6 for CFA factor loadings. Latent variable correlations (see Table 7) show that almost all of the variables are significantly correlated with each other, with the exception of barriers, which was only significantly correlated with administrative tasks self-efficacy. Of note are the large intercorrelations between the self-efficacy factors, which range from  $r = .69-.87$ ; this further supports the creation of a total self-efficacy scale score from the three self-efficacy factors for use in hypothesis testing. These results in aggregate support the idea that these SCCT variables represent distinct, but related latent constructs.

### Re-validation

For the re-validation phase of the present study, the means, standard deviations, skewness, kurtosis, and coefficient alphas for the hypothesis testing

sample are presented for the SCCT variables in Table 8. Each variable produced acceptable internal consistency estimates (.65-.97), similar to the Cronbach alphas from the measurement development phase.

#### Testing Hypotheses 1-5

The bivariate correlations for the SCCT variables are presented in Table 9. Unlike the measurement development phase, correlations here indicated medium-to-large significant relations between expected SCCT relationships (as opposed to small-to-medium correlations in the measurement development sample). However, unlike in the measurement development phase, barriers did not correlate significantly with any of the other SCCT variables. Among the other significant correlations, self-efficacy and outcome expectations as well as self-efficacy and interests produced large correlations ( $r = .53$  and  $r = .59$  respectively), and outcome expectations produced a large correlation with interests ( $r = .58$ ); the remaining significant correlations were of a medium size in magnitude ( $r = .35$ -.49). These results are consistent with hypotheses one through three and hypotheses five; hypothesis four (i.e. the hypothesis related to the barriers construct) was not supported.

#### Testing Hypotheses 6-9

SCCT's interest model postulates that study abroad self-efficacy and outcomes expectations should, both individually and collectively, predict study abroad interests. Similarly, SCCT's choice model postulates that study abroad self-efficacy, outcome expectations, interests, supports, and barriers should, both individually and collectively, predict study abroad choice goals. These hypotheses

were tested with two regression equations, one each predicting interest and choice goals. As previously stated, a total self-efficacy score was calculated from the three self-efficacy factors and used in the regressions.

A regression for the interests model found that both self-efficacy and outcome expectations ( $\beta = .39$  and  $.37$ , respectively) significantly predicted interests (for all betas,  $p < .05$ ); collectively, the independent variables explained 45% of the variance in interests. These results, presented in Table 10, are consistent with hypotheses 8a and 9a. In the regression predicting choice goals, only self-efficacy, outcomes expectations, and supports produced significant beta weights (respectively,  $.28$ ,  $.17$ , and  $.14$ ;  $p < .05$ ); the betas for interests, barriers, and the two interaction terms were not significant. Collectively, the independent variables explained 27% of the variance in choice goals. These results are presented in Table 11; they fully support hypothesis 8b, are only partially consistent with hypothesis 9b, and do not support hypotheses six and seven.

## Chapter 4: Discussion

The present study aimed to create SCCT measures for the study abroad domain, validate them, and test them in the context of the SCCT interests and choice models. Put more broadly, this study was intended to shed light on the social cognitive considerations through which college students may develop an interest in studying abroad and develop the intention to study abroad during their undergraduate years.

The results from the measurement development sample indicate that most of the newly created or modified measures (study abroad self-efficacy, outcome expectations, interests, barriers, and supports) yield adequate internally reliable estimates, though estimates for the Supports ( $\alpha = .66$ ) and Barriers measures ( $\alpha = .70$ ) were lower than optimal. In the hypothesis testing sample, a similar, but slightly higher alpha coefficient was produced for Supports ( $\alpha = .75$ ). This may be, in part, a reflection of the short nature of both of these scales, with the final Barriers and Supports scales each containing four items, in addition to the fact that the items on these scales generally reflect diverse types of barriers and supports. These considerations may have made it difficult to achieve higher internal consistency estimates for these scales.

The EFA results support the creation of eight SCCT measures, which appear to capture relatively distinct, though correlated constructs. The emergent EFA factors mapped onto and provided support for unidimensional outcomes expectations, interests, barriers, and supports measures, as well as three self-efficacy measures (a cultural adjustment measure, a decision-making measure, and an administrative tasks measure). Further analysis of the intercorrelations between the three scales provides support for calculating a total study abroad self-efficacy score for analyses, with the three self-efficacy factors as subscales. The CFA provided further support for this model.

In terms of convergent validity evidence, the Study Abroad Self-Efficacy scale correlated moderately to strongly with the GSE scale ( $r = .49$ ). It is possible that, in the absence of prior study abroad experience, students may have drawn partly

on their global sense of efficacy to estimate their ability to manage study abroad tasks. The Interests scale had three validity partners in the form of questions related to previous travel and enjoyment of previous travel. Two of the three questions (e.g. a question about amount of previous U.S. travel for pleasure and a question about enjoyment of previous travel) did correlate with interest in studying abroad, but the question about amount of previous international travel for pleasure did not. The correlation with domestic travel, but not with international travel is a puzzling one. One possibility is that U.S. travel is a good scaffolding experience for international travel; that is, students who have traveled domestically in the U.S. are then more interested in the structured, school-based international travel experiences of study abroad programs.

Relatedly, the educational aims of a study abroad experience reflected in the Interests scale (e.g. cultural immersion, meeting locals, being intellectually stimulated) only partially overlap with independent international travel. It is also possible that the validity items did not capture the extrinsic, academic and career-oriented motivations that attract some students to study abroad, raising questions about their usefulness as a basis for assessing the convergent validity of the new interest measure. These reasons may help explain why there was no significant correlation between international travel and interest in study abroad.

The OESA, Supports, and Barriers measures all had the same multiple convergent validity partners in the LOT-R Optimism and Pessimism subscales; the MSPSS, a measure of general support, was also a validity partner for the Supports and Barriers measures. Finding the expected correlations with its validity partners

provided convergent validity evidence for the Barriers measure - it correlated negatively with Optimism and Social Support, in addition to correlating positively with Pessimism. Some evidence for convergent validity was found for the OESA and Supports measures; they both correlated positively with the LOT-R Optimism subscale and the MSPSS, as expected, though they did not correlate with the LOT-R Pessimism subscale. This suggests that dispositional pessimism, for the most part, does not color how one sees the likely outcomes of a study abroad experience, possibly because of the positive outcomes that are frequently touted by colleges and universities in their efforts to “sell” study abroad programs to students, or possibly because pessimism is more likely to be correlated with how someone assesses what they have gained from a study abroad experience after the fact (i.e. actual vs. expected outcome expectations) (Go Abroad, 2019). Similarly, the support that a student has for study abroad (from family, faculty, and friends, as well as financially) may be “objective” enough to be independent from dispositional pessimism.

The bivariate correlations between most of the SCCT variables were relatively similar across both samples, helping establish criterion-related validity in the first sample, and providing an empirical basis for hypothesis testing in the second sample. All predicted correlations were supported in the measurement development phase, and most predicted correlations were supported in the hypothesis testing phase. However, the Barriers measure appeared to perform differently across the measurement and hypothesis testing samples, producing more theory-consistent findings in the former than the latter. It is difficult to account for this anomaly, which could be due to characteristics of the samples and/or measure. In terms of possible



measurement limitations, as noted earlier, the Barriers measure only has four items, and may not capture an adequate range of the barriers that could impede the intent to study abroad. This suggests potential problems with the Barriers measure, elaborated on later in this section, and also suggests that caution be exercised in its future use. Further development and testing of its psychometric properties may be needed.

When compared generally to Sheu et al's (2010) meta-analysis on the bivariate correlations between SCCT variables, organized by occupational themes, the present studies' correlation findings are relatively similar, though certain relationships are somewhat stronger in the present study across the two samples (self-efficacy to interests, choice goals to supports, and self-efficacy). In the measurement development sample, the correlation of barriers to self-efficacy and choice goals was stronger than expected, but weaker than expected (i.e. no significant correlations at all) in the hypothesis testing sample.

In testing the study abroad interests model, it was found that self-efficacy ( $\beta = .39$ ) and outcome expectations ( $\beta = .37$ ) uniquely and collectively predicted interests, accounting for 45% of the variance in study abroad interests. These findings contrast with the one other SCCT study in the literature looking at the choice to study abroad: Jones and Cunningham (2008) reported a beta-weight of  $\beta = .39$  for self-efficacy in the regression predicting interests (identical to the present study), but found a non-significant beta weight for outcome expectations. Additionally, they found that self-efficacy and outcomes expectations together only accounted for 15% of the variation in interests. However, Jones and Cunningham (2008) focused on sports management students and programs and used different measures than did the

present study. When compared more broadly to Sheu et al's (2010) meta-analysis with respect to occupational interests, the present study's findings are in line with the meta-analysis, which found  $R^2$  values ranging from .37 to .67 for the prediction of interests by self-efficacy and outcomes expectations.

In the regression predicting choice goals, the predictor variables of interests, barriers, and the two interaction terms (interests x barriers and interests x supports) were not significant, though self-efficacy, outcome expectations, and supports were significant. One possibility regarding the non-significance of the Interests measure is that students are driven to consider study abroad more by outcome expectations (i.e., the anticipated benefits of studying abroad) rather than by inherent interest in the study abroad experience itself. It may also be that the content of the Outcome Expectations measure is more closely tailored to the content of the intentions measure (i.e., both measures emphasize study abroad as an educational experience rather than only as an opportunity for international travel).

The non-significance of barriers in predicting study abroad intent suggests that the Barriers measure may not capture the most important sources of impediments for students to study abroad. While this measure was created by drawing from the existing literature, as with the Supports measure, its brief content (only four items) may offer limited construct representation. The poor psychometrics of the Barriers measure, in addition to it being non-predictive of choice goals in the regression, point to the need for further development, revision, and examination of this scale. The interaction terms were also found not to be significant in the regression predicting study abroad intent. Specifically, neither barriers nor supports moderated the relation

of study abroad interests to choice goals. This may again suggest that the Barriers and Supports measures are simply too limited in scope and size to adequately reflect the constructs of interest.

Finally, in the regression predicting choice goals, the independent variables explained 27% of the variance in choice goals. This contrasts with the Jones and Cunningham (2008) study which found that 91% (an extremely large amount) of the variance in choice goals were explained by the predictor variables. However, in their study, the focus was on interest and intention to study abroad within a sports management program, as opposed to more general interest in study abroad and intention to enroll in any type of study abroad program. When compared with Sheu et al.'s (2010) meta-analysis of broad occupational choice intentions, the present study's predictor variables explained a lower amount of variance in choice intentions (.27 vs. a range of .46 to .75). The present study's lower  $R^2$  value may reflect the fact that many of the goals and outcomes of studying abroad can be achieved through non-study abroad outlets (e.g., independent travel and experiential learning).

Overall, the present findings suggest that the SCCT choice model can be extended to examine students' intention to study abroad. They also advance the literature on study abroad intention by being one of few studies that are theory-based, examine a pre-study abroad student population, and look at relatively malleable elements of study abroad that can be the target of interventions by study abroad offices to increase study abroad participation in the future.

## Chapter 5: Limitations and Directions for Future Research

There are several limitations related to the design of the present study.

Whereas SCCT implies causal relationships (Lent et al. 1994), the current study employed a cross-sectional design, which cannot prove cause-effect relations. A cross-sectional design was deemed appropriate given the measure development focus of this study and the fact that there has been relatively little extant research applying SCCT to the study abroad experience. Though it cannot demonstrate causal relations, this study's hypothesis testing phase was at least able to assess that the data were largely consistent with SCCT-based correlational assumptions, which can provide a foundation for later longitudinal and experimental research.

It should also be noted that the SCCT choice model is most often used to examine choice of an academic or career path. This study applied the model to predict intent to study abroad, which is an extension of the model to a context other than the one for which it was originally designed. Miller and colleagues (Miller et al., 2009; Miller & Sendrowitz, 2011) have similarly used the SCCT choice model to study social justice interest and commitment – a behavioral domain that is not necessarily associated with a specific career field. Additionally, it is important to note that only the core variables of the SCCT choice model were utilized for the present study. This leaves out other variables (e.g., learning experiences, person inputs such as personality traits, choice actions, and performance attainments) that could be used to test the full SCCT model. Again, though not ideal, it is a logical step to first test this pared down model before testing fuller versions of the model in subsequent studies.

Other limitations involve the use of novel measures of the SCCT variables. Each measure was developed based on extant research, and when possible, based on existing measures that have yielded evidence of validity and reliability in prior studies. However, only one of the measures (intentions) came directly from prior research, with all of the other measures being adaptations of existing measures or created based on relevant models from the research literature and measurement guidelines (Lent & Brown, 2006). This was the rationale for providing initial estimates of validity, reliability, and for exploring factor structures before hypothesis testing.

Because so many new measures were being developed at the same time, a limited selection of convergent validity partner measures were utilized given considerations about survey length and access to participants. Further research is, therefore, needed to build a firmer psychometric foundation for the use of these measures in hypothesis testing. For example, a repeat administration of all of the SCCT measures on at least two occasions is needed to estimate their test-retest reliability. Also needed is more research including measures of theoretically similar and dissimilar constructs to examine convergent and discriminant validity, respectively. Because they represent different aspects of study abroad behavior, all three self-efficacy subscales should be paired with relevant measures of planning (e.g., career decision-making, administrative tasks) and cultural adjustment self-efficacy. Given the strong correlation between the study abroad self-efficacy scale and general self-efficacy, it is important to test the incremental validity of the former, beyond general self-efficacy, in accounting for study abroad interests and intentions.

Further research might also examine the reliability and validity of expanded versions of particular SCCT measures. For example, as suggested earlier, the modest reliability and predictive validity estimates of barriers and supports may have been attributable to the relatively brief and rudimentary measures developed for this study. Slightly longer measures containing a greater range of support and barrier content might yield somewhat different results. In addition, the OESA scale might be expanded to include the negative outcomes expectations of studying abroad. Finally, future studies should also consider testing the SCCT choice model with a longitudinal design and extending inquiry to the question of whether the model can predict actual participation in study abroad programs, rather than just the intention to do so. Finally, it would be useful to design and test SCCT interventions aimed at enhancing intent and actual choice to study abroad.

### Conclusion

The present study is a first step towards examining college students' choice to study abroad using an SCCT framework. The measurement development phase produced five new SCCT measures for the study abroad domain, which were found to produce promising, if uneven, validity and reliability estimates. The hypothesis testing phase suggested that overall, SCCT is an appropriate framework for examining study abroad intent. Hopefully, future studies will be able to utilize this model to design interventions to improve study abroad participation – a valuable experience for preparing today's students for an interconnected, global world.

## Chapter 6: Extended Literature Review

Preparing students for careers is a core objective of formal education. To meet this charge, education systems must take into account the steady trend of an increasingly globalized and linked world. This has been particularly true in the United States, where international trade has grown from under 10% of Gross Domestic Product (GDP) to over 25% of GDP in the last 50 years (World Bank, 2018). This rise in globalization and interconnectedness is driven by a complex variety of factors and trends, but of particular note are remarkable advances in technology, which have significantly lowered the barriers to the flow of information, the means to communicate, and the ability to travel across vast distances and borders (RAND Corporation, 2003). As new technologies develop, even putting aside their direct effect on international trade, they continue to make the world an ever more connected place. This reality highlights the importance of preparing students to communicate and work in an indisputably interlinked and diverse world, as well as making sure globally-connected opportunities are not limited to an elite group.

Within the U.S. education system, higher education has focused on preparing students for global competitiveness by focusing on internationalization efforts. A national assessment of internationalization efforts across 1,000 U.S. colleges and universities conducted by the American Council on Education (ACE) found that 72% of campuses reported an acceleration in their internationalization efforts in recent years (Helms & Brajkovic, 2017). These efforts encompass a broad variety of initiatives including on-campus international learning opportunities, faculty exchanges and professional development, and high-level partnerships between

universities, but ACE reports that studying abroad is considered the highest priority among these various internationalization efforts.

Despite the institutional prioritization of study abroad, the rate of study abroad participation is low: 10.4% of all U.S. undergraduates, including both those receiving a Bachelor's degree and those receiving an Associate's degree, study abroad at some point during their college careers; the rate of studying abroad at some point in their undergraduate programs for students at four-year colleges and universities is somewhat higher at 16% (Institute of International Education, 2018). The study abroad field has spent much time and effort asking itself why the rate is so low, and it has dedicated substantial effort to finding ways of increasing study abroad rates. In particular, effort has been directed to improving participation among students who have traditionally accounted for small percentages of those choosing to study abroad, such as students of color, community college students, and students who, for a variety of reasons, cannot afford to go abroad for a full academic semester (Redden, 2018). Universities, study abroad organizations, non-profits, and the U.S. Department of State have all worked to lower the barriers and increase the appeal of studying abroad through a variety of methods such as providing scholarships and financial aid, running study abroad programs of different lengths during and outside of the academic year (i.e. during winter and summer breaks), as well as offering a diverse set of options beyond the traditional international studies or language-focused programs (e.g. Diversity Abroad, 2018; Fund for Education Abroad, 2018; Redden, 2018; U.S. Department of State, n.d.).



The Open Doors Report (Institute of International Education, 2018) tracks study abroad participation annually and provides a detailed snapshot of U.S. students who studied abroad in the most recently tracked year. Their data provide the following sketch of the approximately 333,000 American students who studied abroad for academic credit in the 2016-2017 academic year: women study abroad at a rate roughly twice that of men (67.3% and 32.7% respectively); White students comprise 70.8% of students going abroad, followed by Hispanic or Latinx students (10.2%), Asian or Pacific Islander students (8.2%), Black or African-American students (6.1%), Multiracial students (4.3%), and American Indian or Alaska Native students (0.4%).

In terms of major fields of study, science, technology, engineering, and math (STEM) students make up 25.8% of study abroad students, followed by business students (20.7%), students in the social sciences (17.2%), students with a foreign language and/or international studies major (7.3%), and fine or applied arts students (6.3%). With regard to study abroad destination, European countries are the most popular (54.4%), followed by Latin American and the Caribbean (15.5%), Asia (11.6%), multi-destination programs (7.6%), Oceania (4.4%), Sub-Saharan Africa (4%), the Middle East and North Africa (2.1%), and North America (0.5%). Finally, regarding program length, 64.6% of students participated in a program lasting eight or less weeks, 33.1% participate in a program lasting a semester, a quarter, or two quarters, and 2.3% participate in a program lasting an academic or calendar year.

### Non-Theory Based Studies

The demographically-focused findings as well as the major trends in more dynamic and malleable variables affecting study abroad intent are summarized in the introduction of the present study. Presented here is a more detailed description of the findings of individual studies.

The findings indicate that a variety of factors are associated with study abroad intent or action. Pope et al. (2014) primarily reported small to medium-sized positive relations with the desire for personal growth, former visits to other countries, and being a younger age, in addition to a large-sized relation with having lived in another country. The same study found that gender, parental education, and parental income were non-significant factors. Carlson et al. (1991) also reported small to medium-sized positive relations with positive views of foreign countries' foreign policy and negative relations with being a science or math major, having positive views of U.S. foreign policy, having positive views on U.S. cultural life, and having positive views of the U.S. post-secondary education system. Parental socioeconomic status, parental education level, and academic achievement were found to be non-significant (Carlson, et al., 1991).

One study reports positive medium-sized relations with level of interest in foreign languages and study abroad expectations of growth in personal and social domains (Goldstein & Kim, 2006). The same study found negative medium-sized relations with increased ethnocentrism, concern about completing one's major, and racial prejudice. Non-significant findings included language competence, tolerance of ambiguity, international travel experience, income, perceptions of future employers,

race/ethnicity, and academic major. Finally, Spiering and Erickson (2006) reported a large, negative correlation with views on the complexity of the study abroad process and a positive correlation with the general benefits of studying abroad.

Additional studies have also reported associations between various predictors and study abroad intent or action using regressions, but without reporting bivariate relationships. Thus, their findings can only be interpreted within the context of the full set of predictors for any given regression equation. For example, Stroud (2010) used data from the Cooperative Institutional Research Program (CIRP), a national research study on U.S. higher education. The regression used intent to study abroad as the dependent variable, and gender, race, parental income, financial concerns, parental education level, distance of university from home, the importance of understanding cultures, major, living with family, and degree planned as the predictors. She found that being female, distance of university from home, and interest in understanding other cultures and countries all positively predicted study abroad intent, whereas being an engineering or professional major, living with family, and planning to get an advanced degree produced significant negative regression coefficients. Race, parental income, parental education, and majoring in arts and humanities, biology, business, education, physical science, and technical majors were not significant predictors.

Luo and Jamieson-Drake (2015) also used the CIRP data set and ran a regression with a set of predictors that overlap with, but were not the same as, Stroud's (2010) study. They found that the following variables yielded significant positive regression coefficients: being female, planning to obtain an advanced degree,

time spent socializing with friends, artistic ability, satisfaction with college, participation in student clubs, and goals of improving one's understanding of other countries and culture. They also found the following variables yielded significant negative regression coefficients: being Asian, being an engineering or natural sciences major, having greater math ability, and helping to promote racial understanding. Race (except for being Asian), parental income and education, majoring in social sciences, and living with family were all found to be non-significant variables.

Two studies examined the self-reported reasons that motivated the decision to study abroad among students who had studied abroad or were study abroad bound. Gullahorn and Gullahorn (1958) focused on study abroad students headed to a French program and found that they listed gaining professional advancement, acquiring an understanding of their study abroad location's culture, adventure, and becoming "at home" in the language of their study abroad destination as the top four motivations for studying abroad. However, study abroad has changed much in the sixty years since its publication, and this early study also did not provide any of their survey data or statistical calculations to allow for a more rigorous interpretation of their results. Garver and Divine (2008) also looked at students who chose to study abroad and their reasons for and against making that decision. While they found that lower program prices, no graduation delays, 8-16 week programs, classes applicable to students' majors, and career benefits were preferred by the students who chose to study abroad, the authors did not provide enough information to allow for interpretation of the effect sizes.

Wang et al. (2016) found in their regression that positive attitudes towards studying abroad, perceived positive personal and career outcomes, and transferrable credits were all positively predictive of study abroad intent. Concerns about finances, however, were negatively predictive. Hackney et al. (2012) reported that willingness to study abroad in a short-term program was significantly positively predicted by the perceived benefits of study abroad, self-efficacy to study abroad, foreign language ability, and gender. Personal relationships and commitments, on the other hand, were negatively predictive of willingness to study abroad. They also ran a regression predicting willingness to study abroad in a long-term program; the significant positive predictors in this analysis were perceived benefits of studying abroad, self-efficacy to study abroad, family and friends with international experience, previous international experience, and foreign language ability, with committed personal relationships as negatively predictive. Hackney et al. (2012) also found having involvement in more university commitments (e.g. student organizations) to be a non-significant predictor.

Finally, Albers-Miller et al. (1999) looked at college students' perceptions of study abroad programs, finding that barriers to studying abroad included lacking interest in international exposure, having misinformation or a lack of information about study abroad programs, worrying about the effect of study abroad on one's ability to graduate on time, and concerns about cost. On the other hand, programs taught by university faculty, programs offering courses needed for graduation, and interest in study abroad were all facilitative of positive perceptions of study abroad.

The above findings can be described as painting a mixed picture of student intent and action to study abroad, and to a lesser degree, student willingness and

perceptions of study abroad, due to the existence of contradictory findings. For example, Albers-Miller et al. (1999) found that while students were concerned about costs, it did not discourage them from intending to study abroad, whereas Wang et al. (2016) and Garver and Divine (2008) found cost to be negatively predictive. These mixed findings may be due to differences in methodology, but moderating conditions such as age (Pope et al., 2014), length of study abroad program being considered (Hackney et al., 2012), or university type and size (Albers-Miller et al., 1999) may help explain some of the different findings.

Several comprehensive reports have been prepared by large national organizations, such as the Institute of International Education (2018), the NAFSA Association of International Educators (2003), and the U.S. Congress' Lincoln Commission (2005). These reports often list perceived barriers or perceived facilitators to studying abroad, citing leaders in the study abroad field and their wide-ranging but anecdotal experiences. These reports either make recommendations for how higher education can increase and diversify study abroad participation, or are widely cited nationally as a roadmap for growing study abroad numbers or as a roadmap for research (e.g. National Task Force on Undergraduate Education Abroad, 1990; Senate Bill 601, 2017; Terra Dotta, 2014). Though these existing studies and reports are suggestive, they cannot offer definitive conclusions about factors that promote or deter study abroad choices due to their methodological limitations.

### *Theory-Based Studies*

There are a limited number of studies on study abroad intent and choice that are theory-based. These studies and their findings are summarized below.

### Salisbury et al.'s Integrated Model of Student Choice

Salisbury and his colleagues (e.g., Salisbury et al., 2009; Salisbury, et al., 2011) adapted Perna's (2006) Conceptual Model of Students' College Choice, which looks at expected costs and benefits within an individual's situated context, for the study abroad domain. Salisbury et al., in a series of studies, described their resulting approach to study abroad choice as "grounded in the economic theory of human capital and sociological constructs of habitus and social and cultural capital" (Salisbury, et al., 2010, p. 617). Examples of human capital include one's skills, abilities, and knowledge; examples of social capital include one's access to support systems, information resources, and networks; examples of cultural capital include one's class-based cultural knowledge, skills, and norms; and one's habitus includes class-based beliefs, values, and aspirations acquired through one's early home and environment (Salisbury et al., 2010). The research questions and specific hypotheses for Salisbury's series of studies are loosely based on Perna's model.

All three studies utilized an existing data set collected as part of the Wabash National Study on Liberal Arts Education (WNSLAE), a longitudinal study of over 2,700 students from over 60 colleges and universities around the U.S. looking at how a liberal arts education impacts personal and intellectual student outcomes. For the 2009 study, using these data, Salisbury and colleagues performed a multiple regression with study abroad intent as the outcome variable and selected 17 predictor variables based on Perna's (2006) model. They found that the following variables were significantly predictive of study abroad intent when all predictors were present

in the equation: socioeconomic status, gender, being Asian/Pacific Islander, parental education, attitude toward literacy, high school involvement, openness to diversity, institution type, being a social sciences, undecided, or unlisted major, diversity in interactions, and co-curricular involvement. Collectively, the predictors accounted for 21.2% of the variance in study abroad intent.

Salisbury et al.'s (2010) study used the same data set and regression model as the 2009 study, but separated the data by gender to analyze if there were differences between the predictors of study abroad intent based on gender. The same variables found to be significantly predictive of study abroad in the original study were again all found to be significant for men only (being Asian Pacific Islander, high school involvement, openness to diversity, and being an undecided or unlisted major), women only (socioeconomic status, parental education, institution type, being a social sciences major, and co-curricular involvement), or both gender groups (attitude towards literacy, openness to diversity, and diversity in interactions).

Additionally, predictors not significant in the earlier study were found to be significant for just men (extent of integration of ideas, information, and knowledge) or women (being Hispanic, course-related diversity experiences, and integration of ideas, information, and experiences). Note that the extent of integration of ideas, information, and knowledge was not generally predictive of intent to study abroad, but when this construct was broken down by gender, it was positively predictive of men's intent to study abroad (i.e. the greater the extent of a male student's integration of ideas, information, and experiences, the more likely he is to study abroad), and negatively predictive of women's intent to study abroad (i.e. the greater the extent of



a female student's integration of ideas, information, and experiences, the less likely she is to study abroad). Collectively, the predictors accounted for 25.3% of the variance in study abroad intent for male students and for 29.1% of the variance in study abroad intent for female students.

The subsequent 2011 study by the same research team again used the Wabash National Survey, but with a larger sample size of 6,828 (due to the Wabash being an ongoing study), separating the data into four data sets by race (White, African American, Asian American, and Hispanic), and adding the additional predictor of the importance of personal/professional success (Salisbury et al., 2011). Essentially, this allowed for an analysis of intent to study abroad using the same set of predictors to see if racial differences existed.

The results for White students are similar to the original 2009 study results, likely due to the fact that the full Wabash sample is composed predominantly of White students (~80%). Of note for White students versus the general sample: aspiring to earn a graduate degree was negatively predictive of study abroad intent, but the importance of personal/professional success was positively predictive of study abroad intent. Among African American students, ACT scores were negatively predictive of intent to study abroad, but aspiring to earn a graduate degree, and co-curricular involvement were positively predictive of intent to study abroad. For Asian American students, receiving an institutional grant, aspiring to a graduate degree, and course-related diversity were positively predictive of intent to study abroad; parental education was negatively predictive of intent to study abroad (as opposed to positively predictive in the general sample). For Hispanic students, receiving a federal

grant, diverse experiences, and integration of learning were all positively predictive of study abroad intent; however, having a loan was negatively predictive of study abroad intent. For African Americans, Asian Americans, and Hispanics, having a positive attitude towards literacy was much more predictive of intent to study abroad than for the White students.

The national scale and sample size of the Wabash data provides excellent statistical power and good generalizability to U.S. college students. However, utilizing this existing data set also results in several limitations. As stated earlier, Salisbury and his colleagues identified variables from the Wabash data for their regression based on an adaptation of Perna's (2006) Model of Students' College Choice, but only loosely utilized Perna's theory, not specifying any causal relationships or relationships among the predictors within a model. Additionally, the Wabash study itself was not based on Perna's theory, and it was designed to study a broad spectrum of curricular experiences, co-curricular experiences, and higher education outcomes – not specifically study abroad intent – thus limiting the degree to which these studies were able to root their analyses in theory or the domain of study abroad. Finally, the sample size of thousands of students, which increases to almost 7,000 in the last study, is likely to lead to an over-powered study that found statistical significance for very small effects.

#### Theory of Planned Behavior

Three types of beliefs – attitudes, subjective norms, and perceived behavioral control - predict planned behaviors, according to Ajzen (1991). As its name suggests, the Theory of Planned Behavior can be applied to any planned behavior; this

versatility, coupled with its 30+ year history means that it has been applied to the prediction of a number of domain-specific behaviors, and thus it is beyond the scope of this study to do more than a cursory review of its applications. A few of the most frequently cited, diverse TPB studies from different domains include predicting leisure intentions (Ajzen & Driver, 1992), predicting intentions to visit a green (i.e. eco-friendly) hotel (Han, Hsu, & Sheu, 2010), prediction of hunting intentions (Hrubes, Ajzen, & Daigle, 2001), and predicting the intention of African American students to complete high school (Davis, Ajzen, Saunders, & Williams, 2002).

There is also a particularly robust set of studies applying TPB to health-related behaviors. A meta-analysis of the application of TPB to the health domain looked at TPB research from the prior ten years that studied a wide variety of health-related behaviors (e.g. smoking behavior, drinking behavior, reckless driving behavior, clinical and screening behavior, eating and dieting behavior, exercise behavior, oral hygiene habits, and sexual behaviors; Godin & Kok, 1996). The meta-analysis showed that the TPB variables explained an average of 41% of the variance in intention, with attitude and perceived behavioral control most frequently the variables significantly contributing to this explained variance. A 2001 meta-analysis of 185 TPB studies found that TPB accounted for 39% of the variance in intention across behavior domains (Armitage & Conner, 2001).

Applied to the study abroad domain, the attitudes construct would measure, for example, if a student believes the choice to study abroad will lead to a generally enjoyable or unenjoyable experience. The subjective norms construct would involve, for example, a student's beliefs about whether family, peers, and faculty/mentors feel

that studying abroad is a good idea. Finally, the perceived behavioral control might involve how confident a student feels about being able to navigate the added financial pressures of studying abroad, if a student believes they will have a difficult time completing the necessary administrative paperwork, or how difficult they expect living abroad will be. In the study abroad literature utilizing TPB, Presley et al. (2010) found that all three predictor variables of the TPB model were positively and significantly correlated with the intention to study abroad (attitude,  $r = .42$ ; subjective norm,  $r = .63$ ; perceived behavior control,  $r = .63$ ). In a regression equation with all three TPB variables present, subjective norms and perceived behavioral control, but not attitude, were found to be uniquely predictive of intent to study abroad.

Goel et al. (2010) found that behavioral beliefs, subjective beliefs, and control beliefs together explained 25% of the variance in study abroad intent, but only behavioral beliefs (when framed as importance to career) produced a significant beta weight ( $\beta = .48$ ). However, the measure of control beliefs in this study did not appear to conform clearly to Ajzen's (2002) definition of this construct in that it referenced the qualifications of an external agent rather than students' sense of their own behavioral control.

Schnusenberg and de Jong (2012) tested a model that included the three TPB predictor variables, along with the non-theory-based predictors of desire to participate and affordability. They also included student willingness to pay as a mediator between the TPB predictors and study abroad intent. All of the model paths were found to be significant. With each of the three TPB variables predicting willingness to pay, they operationalized behavioral beliefs as future job prospects ( $\beta = .39$ ),

normative beliefs as family expectations ( $\beta = .21$ ), and control beliefs as administrative support ( $\beta = .41$ ). In turn, willingness to pay ( $\beta = .17$ ), desire to participate ( $\beta = .25$ ), and affordability ( $\beta = .70$ ) were all predictive of intent to participate.

Fitzsimmons et al. (2013) ran a regression model and found that all the TPB predictor variables significantly predicted intention to participate in long-term study abroad programs (attitudes  $B = .19$ , subjective norms  $B = .57$ , perceived behavioral control  $B = .22$ ). For short-term study abroad programs, attitudes and subjective norms were found to significantly predict study abroad intent, but not perceived behavioral control (attitudes  $B = .53$ , subjective norms  $B = .77$ ). In the regression model for long-term programs, the TPB predictors collectively accounted for 49% of the variance in intent to study abroad, and in the regression model for short-term programs, the predictors collectively accounted for 48% of the intent to study abroad.

Finally, Zhuang et al. (2015) argued that perceived value is an important construct in study abroad, and thus added it into the TPB model. They hypothesized that behavioral, subjective, and control beliefs predict the perceived value of study abroad, which in turn predicts intention to study abroad. However, their results only supported behavioral beliefs as predictors of perceived value of study abroad ( $\beta = .84$ ), with perceived value then predicting study abroad intent ( $\beta = .69$ ).

#### Social Cognitive Career Theory

The SCCT choice model, similar to TPB, looks at various predictors of intention. Two of the SCCT variables overlap conceptually with TPB variables,

namely self-efficacy with perceived control behavior, and outcome expectations with attitudes; their similarities and differences will be noted, below.

Self-efficacy beliefs refer to a person's subjective judgments about their capability to successfully perform a behavior or sequence of behaviors (Lent & Brown, 2006). In the case of study abroad, this would refer to the belief that a student has the skills to successfully navigate behaviors involved in the study abroad application process, the pre-departure process, and in-country intercultural adjustment. While self-efficacy is similar to the TPB construct of perceived behavioral control, they differ theoretically in that self-efficacy focuses on one's ability to perform given behaviors, while perceived behavioral control involves beliefs about the ease or difficulty of performing particular behaviors and beliefs about the degree to which the behaviors are under volitional control (Ajzen, 2002).

Outcome expectations refer to a person's beliefs about the likely outcomes of a particular behavior (Lent & Brown, 2006). In the case of study abroad, outcome expectations would be measured in terms of expected benefits such as exploring new academic and career avenues, gaining positive cultural experiences, or personal growth. However, outcome expectations can also involve the negative consequences of a behavior, such as financial strain and the lack of access to one's usual academic and social supports when traveling abroad. In comparison with the TPB attitudes construct, outcome expectations focus on a variety of expected outcomes from a given behavior, often classified into social outcomes, material outcomes, and self-reactions, whereas attitudes focus on a global assessment of whether a behavior will lead to a positive or negative overall experience (Ajzen, 1991; Bandura, 1988).

Interests refer to the extent to which someone likes, dislikes, or is indifferent to a particular activity. In the case of study abroad, this construct might measure whether a student has an interest in exploring languages and cultures abroad, or whether he or she has an interest in exploring a global career path. Contextual supports and barriers refer, respectively, to proximal environmental conditions that may facilitate or hinder a given choice. In deciding whether or not to study abroad, a student may expect obstacles such as financial realities, family obligations, and graduation requirements. Supportive influences might include the encouragement of friends who want to all go abroad together as a friend group.

The SCCT interest and choice models have been studied in the context of choice of different academic majors and occupational paths. For example, a meta-analytic path analysis by Sheu et al. (2010) found that the theory generally accounted well for interests and choice intentions across Holland themes. More recently, Lent et al. (2018) found that SCCT explained substantial portions of the variance in STEM-related interests, choice goals, and choice actions across gender and racial/ethnic groups.

Because the literature on social cognitive variables predicting study abroad intention and action is sparse, more general applications of SCCT or general social cognitive theory that are conceptually relevant to sojourning are examined. Sojourners refer to persons who travel to or live in a different country, usually for a temporary stay and often for academic or business reasons. Whereas study abroad, as defined earlier, specifically refers to U.S. students attending an educational program outside of the U.S., sojourning also includes international students attending college

in the U.S. and elsewhere, expatriates from one country relocating to another country for work, international business travel, and may sometimes refer to traveling overseas as a tourist (Brein & David, 1971). Several sojourner studies found support for general or cross-cultural self-efficacy being a predictor of sociocultural adjustment in different populations, for example, Asian international students in the U.S. (Li & Gasser, 2005), international business students in Europe (Van Oudenhoven & Van der Kee, 2002), Chinese academics and students at Singaporean universities (Tsang, 2001), international students studying in Malaysia (Yusoff, 2011), and American expatriates in Europe (Harrison, Chadwick, & Scales, 1996).

Other studies have looked at more specific types of self-efficacy in sojourners; for example, Fan and Lai (2014) found that social self-efficacy significantly predicted social adjustment, sojourner stress, and academic adjustment in East Asian international students in the U.S.; social self-efficacy was also found to moderate the relationship between cross-cultural training/orientation and academic adjustment. Two additional studies found that sociocultural adjustment was predicted by academic self-efficacy for Asian international students in the U.S. (Lee & Ciftci, 2014) and for international graduate students in the U.S. (Poyrazli, Arbona, Nora, McPherson, & Pisecco (2002).

Another subset of studies has found evidence that social support predicts sociocultural adjustment in international students studying in the U.S. (Franco, Hsiao, Gnilka, & Ashby, 2018; Yeh & Inose, 2003) and in international students studying in Malaysia (Yusoff, 2011). Additionally, Franco et al. (2018) found that social support



mediated the relationship between outcome expectations and sociocultural adjustment.

When looking more specifically at students engaged in U.S. study abroad programs, Brenner (2001) developed and tested a new measure of intercultural adjustment self-efficacy (IASE), and found that it was significantly and positively related to interests ( $r = .38$ ), intention ( $r = .23$ ), and general self-efficacy ( $r = .38$ ). Additionally, he found that language ability relative to the study abroad location was related to intercultural self-efficacy. Brenner (2003) subsequently examined IASE and adjustment in a longitudinal study, finding that over the course of a study abroad experience, students' intercultural self-efficacy is associated with positive change in sojourner adjustment, establishing temporal precedence of IASE over the change in sojourner adjustment. He also found that IASE moderated the association between self-awareness and sojourner adjustment, such that at higher levels of IASE, the relationship between self-awareness and adjustment was stronger than at lower levels of IASE.

Though Brenner's (2001) study does examine study abroad utilizing SCCT, there is only one SCCT study in the literature, Jones and Cunningham (2008), specifically looking at the intent and choice to study abroad. This study and its findings are detailed earlier in the introduction section of this manuscript.

### Summary

The research literature around study abroad intent and choice is relatively new and limited. This, in part, may be due to the development of study abroad opportunities in recent decades from a niche experience to a more educationally

important and widely considered opportunity during an undergraduate program. Much of the extant research looking at the factors influencing students to study abroad has been a-theoretical, demographically-focused, and/or retrospectively-focused. Exceptions, such as a series of studies utilizing the Theory of Planned Behavior, do exist, but there is a gap in the literature for research that is rigorous, theory-based, and looks at a comprehensive set of factors that influence the intention to study abroad.

## Tables

Table 1

*Demographics Information for Combined Measurement Development and Hypothesis Testing Samples (N = 602)*

Variable	%	n
Age		
18	5.5	33
19	39.2	236
20	32.7	197
21	17.4	105
22	2.3	14
23+	2.8	17
Class Standing		
Sophomore	67.4	406
Junior	32.6	196
Gender Identity		
Cisgender Female	61.5	370
Cisgender Male	36.4	219
Non-Binary / Gender-Fluid	1.0	6
Transgender Male	1.0	6
Transgender Female	.2	1
Race / Ethnicity		
White / European American	62.0	373
Asian / Pacific Islander American	12.6	76
Black / African American	11.6	70
Hispanic / Latinx American	9.8	59
Multi-racial	2.5	15
Native American	.3	2
Other	1.2	7
Sexual Orientation		
Heterosexual	82.7	498
Bisexual	9.5	57
Gay	2.5	15
Lesbian	1.8	11
Other	3.5	21
Region		
Mid-Atlantic	47.8	288
Northeast	15.0	90

Southeast	11.1	67
Midwest	9.8	59
Southwest	6.5	39
West	6.1	37
Northwest	3.7	22

Table 2  
*Items and Factor Loadings for the Measurement Development Sample (N = 325)*

Item	EFA structure coefficients							
	1	2	3	4	5	6	7	8
How confident are you in your ability to socialize with the local people?	<b>.62</b>	-.06	.04	.09	.02	-.06	.03	.11
How confident are you in your ability to buy health and hygiene products at a local store?	<b>.56</b>	.12	.18	-.05	-.08	-.01	.01	-.04
How confident are you in your ability to act according to local customs?	<b>.67</b>	.05	.05	.09	.08	-.10	.01	.00
How confident are you in your ability to order food at a local restaurant?	<b>.71</b>	.03	-.06	.03	-.05	-.13	.07	.09
How confident are you in your ability to expand your understanding of the foreign country's political system, society, and culture?	<b>.46</b>	-.07	.12	-.01	.01	.00	-.07	.04
How confident are you in your ability to deal with the loss of your passport or other important paperwork?	<b>.56</b>	-.04	-.20	-.13	.15	.10	-.02	.07
How confident are you in your ability to communicate	<b>.69</b>	-.14	-.08	-.02	.01	-.01	-.03	.04

your thoughts effectively  
while abroad?

How confident are you in your ability to exhibit appropriate social behavior?	<b>.58</b>	-.05	.15	-.06	-.09	-.11	-.11	-.09
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How confident are you in your ability to interact with local students?	<b>.63</b>	-.08	.12	-.01	-.10	-.11	-.04	.00
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How confident are you in your ability to understand what locals are communicating to you?	<b>.67</b>	-.06	-.02	-.04	.08	.02	-.04	.01
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How confident are you in your ability to handle an unexpected, but minor crisis (e.g. getting lost, losing your wallet, having your phone stolen)?	<b>.58</b>	-.06	-.14	-.11	.06	.16	-.09	-.01
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How confident are you in your ability to get accustomed to the local culture?	<b>.57</b>	.01	.20	-.12	-.04	-.01	-.07	-.07
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How confident are you in your ability to seek out medical attention or medication for a health concern?	<b>.58</b>	.03	.02	-.08	.01	.10	-.03	-.07
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How confident are you in your ability to communicate using the local language or dialect?	<b>.63</b>	-.02	-.12	.02	.13	.07	.06	.10
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How confident are you in your ability to initiate relationships with local people?	<b>.67</b>	-.03	.11	.00	-.01	.04	.01	.08
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How confident are you in your ability to find local leisure activities to enjoy?	<b>.43</b>	-.04	.17	-.21	-.12	-.13	-.07	-.08
How much confidence do you have in your ability to pick the best-fitting study abroad option for you from a list of study abroad program possibilities?	.06	-.10	.05	<b>-.62</b>	-.06	.00	-.07	.06
How much confidence do you have in your ability to learn more about study abroad programs you might enjoy?	.01	-.13	.11	<b>-.68</b>	-.10	-.02	.05	.11
How much confidence do you have in your ability to make a well-informed choice about which study abroad program to pursue?	.02	-.03	-.02	<b>-.74</b>	-.01	-.03	-.03	.10
How much confidence do you have in your ability to identify study abroad programs that best match your interests?	.04	.01	.06	<b>-.70</b>	-.08	-.04	-.04	.14
How much confidence do you have in your ability to learn more about how study abroad can be relevant to your future career path?	.04	.01	.00	<b>-.73</b>	.16	-.04	.02	.00
How much confidence do you have in your ability to choose a study abroad program that helps you explore potential career fields?	-.03	.00	-.04	<b>-.75</b>	.17	-.04	.05	.07
How much confidence do you have in your ability to apply successfully for a study abroad program?	.06	.04	.07	-.26	-.05	-.01	-.04	<b>.59</b>

How much confidence do you have in your ability to fill out all the paperwork necessary to go abroad?	.03	.03	.06	-.14	-.11	.01	-.09	<b>.74</b>
How much confidence do you have in your ability to work with your academic advisor(s) to integrate study abroad credits and grades into your undergrad academic plan?	.07	-.03	.05	-.14	-.04	-.07	-.01	<b>.68</b>
How much confidence do you have in your ability to fit a study abroad program into your overall undergraduate plan?	.07	-.18	-.03	-.13	.13	.04	-.17	<b>.53</b>
Studying abroad would most likely enrich my understanding of the world								<i>eliminated</i>
Studying abroad would most likely help me to make new friends from outside of the U.S.								<i>eliminated</i>
Studying abroad would most likely help me develop better communication skills								<i>eliminated</i>
Studying abroad would most likely expand my ability to think creatively	.06	.03	.30	-.03	<b>.47</b>	.03	-.05	.08
Studying abroad would most likely help me feel more independent and capable as a person								<i>eliminated</i>
Studying abroad would most likely give me a competitive advantage in the workforce	.02	.07	.10	-.05	<b>.79</b>	-.06	-.07	-.10

Studying abroad would most likely add value to my college degree	-.01	-.07	.08	-.07	<b>.71</b>	-.09	-.05	-.12
Studying abroad would most likely help me explore international career pathways	.15	.00	.08	-.06	<b>.50</b>	-.11	.06	-.01
Studying abroad would most likely allow me to prove myself to others	-.04	-.08	-.02	-.02	<b>.68</b>	.09	.04	.02
Studying abroad would most likely help me figure out what I enjoy academically	.00	-.11	.09	.05	<b>.66</b>	-.07	.02	.12
How much interest do you have in exploring the local cuisine as part of a study abroad program?	.01	-.01	<b>.53</b>	-.04	.01	.02	-.02	.01
How much interest do you have in learning the everyday skills necessary for living in a foreign country as part of a study abroad program?	.05	-.09	<b>.56</b>	-.06	.14	-.06	.05	.05
How much interest do you have in immersing yourself in a foreign culture as part of a study abroad program?	.06	-.07	<b>.77</b>	-.05	.00	.02	.00	-.03
How much interest do you have in seeing things from a new perspective as part of a study abroad program?	-.09	-.05	<b>.78</b>	-.04	.00	.00	.00	-.03
How much interest do you have in opportunities to learn (or improve in) a language as part of a study abroad program?					<i>eliminated</i>			
How much interest do you have in meeting and interacting with different	.01	-.02	<b>.71</b>	-.04	.06	.06	-.06	.07



people as part of a study  
abroad program?

How much interest do you  
have in exploring  
international career pathways  
as part of a study abroad  
program?

*eliminated*

How much interest do you  
have in being intellectually  
stimulated by different ways  
of thinking as part of a study  
abroad program? .03 .08 **.60** -.01 .25 .01 -.02 .07

How much interest do you  
have in learning while  
outside of the classroom as  
part of a study abroad  
program? .04 -.03 **.71** .00 .09 -.09 .05 .00

How much interest do you  
have in challenging yourself  
to get out of your comfort  
zone as part of a study  
abroad program? .13 -.10 **.57** .09 .03 -.06 -.07 .06

How much of a barrier  
would the following be for  
you to study abroad? The  
fact that it would require me  
to be away from the people I  
look to most for support

*eliminated*

How much of a barrier  
would the following be for  
you to study abroad? Not  
having enough money to pay  
for study abroad .06 .03 .11 -.02 -.02 .19 **.43** -.14

How much of a barrier  
would the following be for  
you to study abroad? Dealing  
with a whole lot of  
paperwork in order to go  
abroad -.01 -.13 -.17 .05 .15 -.02 **.64** -.10

How much of a barrier would the following be for you to study abroad? The need to sacrifice being able to focus on my other academic requirements	-.09	.11	.07	.00	-.12	-.02	<b>.65</b>	-.02
How much of a barrier would the following be for you to study abroad? The need to sacrifice being able to attend to the other commitments I have (like a job or volunteer responsibilities)	-.02	.10	-.04	-.04	-.04	-.02	<b>.63</b>	.07
How much of a support would the following be for you to study abroad? Having the support of my family for going abroad	.06	-.04	-.06	-.12	-.09	<b>-.79</b>	-.06	-.12
How much of a support would the following be for you to study abroad? Getting encouragement from my departmental faculty	.02	-.05	.06	.15	.10	<b>-.42</b>	.05	.14
How much of a support would the following be for you to study abroad? Being able to afford paying for the program without too much trouble	-.04	.03	-.05	-.06	.00	<b>-.53</b>	-.08	.02
How much of a support would the following be for you to study abroad? Getting encouragement from my friends	.02	-.02	.06	-.06	.11	<b>-.45</b>	.02	.00
I intend to participate in a study abroad program	.00	<b>-.96</b>	.02	-.02	.00	-.02	-.01	.01
I plan to go on a study abroad program	.01	<b>-.97</b>	.03	-.01	-.01	-.01	-.01	.00

It is my intention to participate in a study abroad program	.01	<b>-.97</b>	.04	.01	-.02	.00	.00	.03
I aim to go to a study abroad program	-.01	<b>-.95</b>	-.01	-.05	.01	.00	.02	-.03
I mean to participate in a study abroad program	.00	<b>-.97</b>	.00	-.03	-.01	.00	-.02	-.02
I am determined to go on a study abroad program	.01	<b>-.92</b>	.05	.01	.02	.01	-.04	.00

*Note.* N = 325, KMO index = .91. Factor loadings were obtained with the pattern matrix of the oblique solution. 1 = Study Abroad Adjustment Self-Efficacy; 2 = Study Abroad Intentions; 3 = Study Abroad Interests; 4 = Study Abroad Decision-Making Self-Efficacy; 5 = Study Abroad Outcome Expectations; 6 = Study Abroad Supports; 7 = Study Abroad Barriers; 8 = Study Abroad Administrative Tasks Self-Efficacy.

Table 3

*Results of Independent Samples t-tests between the Pre-and-Post COVID SONA Sub-samples of the Measurement Development Sample (N = 325)*

Variable	Group				<i>t</i>	<i>df</i>
	Pre-COVID		Post-COVID			
	( <i>n</i> =133)		( <i>n</i> =192)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Total SE	3.74	.56	3.79	.63	-.66	303.92
Adjustment SE	3.63	.63	3.70	.63	-.99	283.59
Decision-Making SE	3.81	.65	3.84	.74	-.30	305.94
Admin Tasks SE	3.78	.81	3.82	.87	-.40	296.92
OE	4.05	.71	4.06	.75	-.18	293.58
Interests	4.45	.63	4.46	.54	-.24	255.43
Barriers	3.07	.89	3.04	.94	.26	294.33
Supports	4.11	.64	4.01	.78	1.28	313.99
Goal Choice	3.34	1.35	3.13	1.44	1.36	295.37

*Note.* Equal variances not assumed.

Table 4

*Descriptive Statistics for Measurement Development Sample (N = 325)*

Variable	<i>m</i>	<i>SD</i>	<i>a</i>	<i>Skewness</i>		<i>Kurtosis</i>	
Total SE	3.77	.60	.93	-.16	(.14)	-.02	(.27)
Adjustment SE	3.67	.63	.92	.11	(.14)	-.12	(.27)
Decision-Making SE	3.83	.71	.90	-.33	(.14)	.06	(.27)
Admin Tasks SE	3.80	.85	.86	-.55	(.14)	.16	(.27)
Outcome Exp	4.06	.74	.85	-.44	(.14)	-.56	(.27)
Interests	4.46	.57	.99	-1.39	(.14)	2.40	(.27)
Barriers	3.06	.92	.70	-.09	(.14)	-.65	(.27)
Supports	4.05	.73	.66	-.91	(.14)	1.56	(.27)
Goal Choice	3.21	1.41	.99	-.19	(.14)	-1.26	(.27)

Table 5

*Bivariate Correlations Between SCCT Independent and Validity Partners for Measurement Development Sample (N = 325)*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Self-Efficacy	--												
2. Outcome Exp	.29*	--											
3. Interests	.42*	.48*	--										
4. Barriers	-.39*	-.07	-.19*	--									
5. Supports	.24*	.20*	.25*	-.20*	--								
6. Intentions	.40*	.35*	.29*	-.32*	.20*	--							
7. General SE	.48*	.12*	.27*	-.14*	.10	.09	--						
8. Optimism	.38*	.18*	.25*	-.13*	.22*	.11	.49*	--					
9. Pessimism	-.23*	-.03	-.14*	.17*	-.09	-.04	-.22*	-.33*	--				
10. MSPSS	.31*	.13*	.20*	-.17*	.31*	.16*	.25*	.27*	-.28*	--			
11. U.S. Travel	.27*	.11*	.14*	-.22*	.19*	.23*	.18*	.11	-.08	.16*	--		
12. Travel Abroad	.27*	.13*	.09	-.26*	.23*	.22*	.11	.05	-.02	.08	.40*	--	
13. Travel Enj.	.26*	.23*	.21*	-.23*	.23*	.29*	.01	.02	-.10	.08	.19*	.23*	--

*Note.* An \* indicates that a correlation is significant at the .01 level

Table 6

*Confirmatory Factor Analysis Standardized Loadings for Latent Variables (N = 277)*

<b>Latent Variable and items</b>	<b>Standardized Estimate</b>	<b>S.E.</b>	<b>p-value</b>
<i>Self-Efficacy: Adjustment</i>			
How confident are you in your ability to socialize with the local people?	<b>0.686</b>	0.029	0.000
How confident are you in your ability to buy health and hygiene products at a local store?	<b>0.603</b>	0.039	0.000
How confident are you in your ability to act according to local customs?	<b>0.665</b>	0.031	0.000
How confident are you in your ability to order food at a local restaurant?	<b>0.650</b>	0.033	0.000
How confident are you in your ability to expand your understanding of the foreign country's political system, society, and culture?	<b>0.653</b>	0.036	0.000
How confident are you in your ability to deal with the loss of your passport or other important paperwork?	<b>0.610</b>	0.032	0.000
How confident are you in your ability to communicate your thoughts effectively while abroad?	<b>0.714</b>	0.024	0.000
How confident are you in your ability to exhibit appropriate social behavior?	<b>0.688</b>	0.030	0.000
How confident are you in your ability to interact with local students?	<b>0.760</b>	0.022	0.000
How confident are you in your ability to understand what locals are communicating to you?	<b>0.724</b>	0.029	0.000
How confident are you in your ability to handle an unexpected, but minor	<b>0.626</b>	0.031	0.000

crisis (e.g. getting lost, losing your wallet, having your phone stolen)?			
How confident are you in your ability to get accustomed to the local culture?	<b>0.701</b>	0.030	0.000
How confident are you in your ability to seek out medical attention or medication for a health concern?	<b>0.684</b>	0.031	0.000
How confident are you in your ability to communicate using the local language or dialect?	<b>0.626</b>	0.035	0.000
How confident are you in your ability to initiate relationships with local people?	<b>0.793</b>	0.019	0.000
How confident are you in your ability to find local leisure activities to enjoy?	<b>0.711</b>	0.030	0.000
<i>Self-Efficacy: Decision-Making</i>			
How much confidence do you have in your ability to pick the best-fitting study abroad option for you from a list of study abroad program possibilities?	<b>0.76</b>	0.026	0.000
How much confidence do you have in your ability to learn more about study abroad programs you might enjoy?	<b>0.761</b>	0.025	0.000
How much confidence do you have in your ability to make a well-informed choice about which study abroad program to pursue?	<b>0.811</b>	0.02	0.000
How much confidence do you have in your ability to identify study abroad programs that best match your interests?	<b>0.732</b>	0.029	0.000

How much confidence do you have in your ability to learn more about how study abroad can be relevant to your future career path?	<b>0.756</b>	0.025	0.000
How much confidence do you have in your ability to choose a study abroad program that helps you explore potential career fields?	<b>0.794</b>	0.022	0.000
<i>Self-Efficacy: Administrative Tasks</i>			
How much confidence do you have in your ability to apply successfully for a study abroad program?	<b>0.797</b>	0.024	0.000
How much confidence do you have in your ability to fill out all the paperwork necessary to go abroad?	<b>0.786</b>	0.023	0.000
How much confidence do you have in your ability to work with your academic advisor(s) to integrate study abroad credits and grades into your undergrad academic plan?	<b>0.81</b>	0.023	0.000
How much confidence do you have in your ability to fit a study abroad program into your overall undergraduate plan?	<b>0.793</b>	0.02	0.000
<i>Outcome Expectations</i>			
Studying abroad would most likely expand my ability to think creatively	<b>0.702</b>	0.034	0.000
Studying abroad would most likely give me a competitive advantage in the workforce	<b>0.712</b>	0.031	0.000
Studying abroad would most likely add value to my college degree	<b>0.75</b>	0.028	0.000
Studying abroad would most likely help me explore international career pathways	<b>0.764</b>	0.026	0.000

Studying abroad would most likely allow me to prove myself to others	<b>0.709</b>	0.036	0.000
Studying abroad would most likely help me figure out what I enjoy academically	<b>0.747</b>	0.026	0.000
<i>Interests</i>			
How much interest do you have in exploring the local cuisine as part of a study abroad program?	<b>0.636</b>	0.037	0.000
How much interest do you have in learning the everyday skills necessary for living in a foreign country as part of a study abroad program?	<b>0.808</b>	0.019	0.000
How much interest do you have in immersing yourself in a foreign culture as part of a study abroad program?	<b>0.781</b>	0.019	0.000
How much interest do you have in seeing things from a new perspective as part of a study abroad program?	<b>0.787</b>	0.023	0.000
How much interest do you have in meeting and interacting with different people as part of a study abroad program?	<b>0.743</b>	0.024	0.000
How much interest do you have in being intellectually stimulated by different ways of thinking as part of a study abroad program?	<b>0.722</b>	0.025	0.000
How much interest do you have in learning while outside of the classroom as part of a study abroad program?	<b>0.728</b>	0.026	0.000
How much interest do you have in challenging yourself to get out of your comfort zone as part of a study abroad program?	<b>0.694</b>	0.029	0.000



<i>Barriers</i>			
How much of a barrier would the following be for you to study abroad? Not having enough money to pay for study abroad	<b>0.322</b>	0.059	0.000
How much of a barrier would the following be for you to study abroad? Dealing with a whole lot of paperwork in order to go abroad	<b>0.532</b>	0.05	0.000
How much of a barrier would the following be for you to study abroad? The need to sacrifice being able to focus on my other academic requirements	<b>0.803</b>	0.042	0.000
How much of a barrier would the following be for you to study abroad? The need to sacrifice being able to attend to the other commitments I have (like a job or volunteer responsibilities)	<b>0.619</b>	0.053	0.000
<i>Supports</i>			
How much of a support would the following be for you to study abroad? Having the support of my family for going abroad	<b>0.717</b>	0.034	0.000
How much of a support would the following be for you to study abroad? Getting encouragement from my departmental faculty	<b>0.745</b>	0.03	0.000
How much of a support would the following be for you to study abroad? Being able to afford paying for the program without too much trouble	<b>0.466</b>	0.047	0.000
How much of a support would the following be for you to study abroad? Getting encouragement from my friends	<b>0.741</b>	0.033	0.000

<i>Intentions</i>			
I intend to participate in a study abroad program	<b>0.903</b>	0.012	0.000
I plan to go on a study abroad program	<b>0.922</b>	0.009	0.000
It is my intention to participate in a study abroad program	<b>0.911</b>	0.013	0.000
I aim to go to a study abroad program	<b>0.919</b>	0.008	0.000
I mean to participate in a study abroad program	<b>0.928</b>	0.008	0.000
I am determined to go on a study abroad program	<b>0.898</b>	0.012	0.000

*Note.* Standardized estimates in bold are significant at the .01 level

Table 7  
*Latent Variable Correlations in Measurement Model Test*

Variables	1	2	3	4	5	6	7	8
1. SE: Adjustment	--							
2. SE: Dec-Making	.73*	--						
3. SE: Admin Tasks	.69*	.87*	--					
4. Outcome Exp	.53*	.55*	.51*	--				
5. Interests	.56*	.63*	.57*	.64*	--			
6. Barriers	-.07	-.12	-.17*	.09	-.03	--		
7. Supports	.44*	.62*	.55*	.53*	.57*	.07	--	
8. Intentions	.43*	.47*	.42*	.43*	.40*	-.02	.42*	--

An \* indicates that a correlation is significant at the .05 level

Table 8

*Descriptive Statistics for Hypothesis Testing Sample (N = 277)*

Variable	<i>m</i>	<i>SD</i>	<i>a</i>	<i>Skewness</i>		<i>Kurtosis</i>	
Self-Efficacy	3.59	.77	.95	-.47	(.15)	.45	(.29)
Outcome Exp	3.93	.87	.87	-.93	(.15)	.87	(.29)
Interests	3.81	.99	.88	-.79	(.15)	-.04	(.29)
Barriers	3.37	.87	.65	-.29	(.15)	.07	(.29)
Supports	3.78	.94	.75	-.92	(.15)	.73	(.29)
Goal Choice	3.12	1.24	.97	-.22	(.15)	-.86	(.29)

Table 9

*Bivariate Correlations Between SCCT Independent and Dependent Variables for Hypothesis Testing Sample (N = 277)*

Variables	1	2	3	4	5	6
1. Self-Efficacy	--					
2. Outcome Exp	.53*	--				
3. Interests	.59*	.58*	--			
4. Barriers	-.10	.10	.02	--		
5. Supports	.49*	.42*	.44*	.06	--	
6. Intentions / Choice Goals	.46*	.39*	.38*	-.05	.35*	--

*Note.* An \* indicates that a correlation is significant at the .01 level

Table 10

*Regression Analysis for SCCT Variables Predicting Study Abroad Interests (N = 277)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Self-Efficacy	.50	.07	.39*
Outcome Expectations	.42	.06	.37*

Notes.  $R^2 = .445$ . \*  $p < .05$ , one-tailed.

Table 11

*Regression Analysis for SCCT Variables Predicting Study Abroad Choice Goals (N = 277)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Self-Efficacy	.45	.12	.28*
Outcome Expectations	.24	.10	.17*
Interests	.11	.09	.09
Barriers	-.05	.08	-.04
Supports	.18	.08	.14*
Interests x Barriers	.03	.07	.03
Interests x Supports	.09	.06	.08

Notes.  $R^2 = .269$ . \*  $p < .05$ .

## Appendices

### Appendix A

#### **Study Abroad Self-Efficacy-Adjustment (SA-SEA)**

The following questions ask about your beliefs in your abilities to do certain things effectively while on a study abroad program in a foreign country. Please answer these questions according to how you would feel IF you considered studying abroad. It is okay if in reality, you do NOT plan to study abroad or if you are unsure if you will ultimately study abroad. Rate yourself according to your expected capabilities at the beginning of your time abroad (e.g., in the first month). There are no right or wrong answers. Please answer honestly and candidly.

Not Confident		Somewhat		Completely
At All		Confident		Confident
1	2	3	4	5

#### **How confident are you in your ability to do the following things effectively?**

1. socialize with the local people.
2. buy health and hygiene products at a local store.
3. act according to local customs.
4. order food at a local restaurant.
5. expand your understanding of the foreign country's political system, society, and culture.

6. deal with the loss of your passport or other important paperwork.
7. communicate your thoughts effectively while abroad.
8. exhibit appropriate social behavior.
9. interact with local students.
10. understand what locals are communicating to you.
11. handle an unexpected, but minor crisis (e.g. getting lost, losing your wallet, having your phone stolen).
12. get accustomed to the local culture.
13. seek out medical attention or medication for a health concern.
14. communicate using the local language or dialect.
15. initiate relationships with local people.
16. find local leisure activities to enjoy.

- Items 3, 5, 8, 12 = Brenner (2001) Acculturation subscale
- **Items 2, 4 = Brenner (2001) Personal Care subscale**
- **Item 16 = Brenner (2001) Personal Care subscale - updated item**
- Items 1, 9, 15 = Brenner (2001) Interpersonal Abilities subscale
- **Item 6 = Brenner (2001) Emergency Management subscale**
- **Items 11, 13 = Brenner (2001) Emergency Management subscale - updated items**
- Items 7, 10, 14 = new Communicative Ability subscale

## Appendix B

### **Study Abroad Self-Efficacy-Planning (SA-SEP)**

Instructions: The following is a list of activities involved in exploring and deciding about study abroad options. Please indicate how much confidence you have in your ability to do each task, answering as IF you were considering studying abroad. It is okay if in reality, you do NOT plan to study abroad. Use the 1 to 5 scale to indicate your degree of confidence.

[No conf. at all – Very little conf. – Moderate conf. – Much conf. – Complete conf.]

1

2

3

4

5

#### **How much confidence do you have in your ability to:**

1. Pick the best-fitting study abroad option for you from a list of study abroad program possibilities
2. Learn more about study abroad programs you might enjoy
3. Make a well-informed choice about which study abroad program to pursue
4. Identify study abroad programs that best match your interests
5. Learn more about how study abroad can be relevant to your future career path
6. Choose a study abroad program that helps you explore potential career fields
7. Apply successfully for a study abroad program
8. Fill out all the paperwork necessary to go abroad

9. Work with your academic advisor(s) to integrate study abroad credits and grades into your undergrad academic plan
10. Fit a study abroad program into your overall undergraduate plan



Appendix C

**Generalized Self-Efficacy GSE (Schwarzer & Jerusalem, 1995)**

Select the number that best describes your opinion

Not at	hardly	Moderately	Exactly
All true	true	true	true
1	2	3	4

1. I can always manage to solve difficult problems if I try hard enough.
2. If someone opposes me, I can find the means and ways to get what I want.
3. It is easy for me to stick to my aims and accomplish my goals.
4. I am confident that I could deal efficiently with unexpected events.
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
6. I can solve most problems if I invest the necessary effort.
7. I can remain calm when facing difficulties because I can rely on my coping abilities.
8. When I am confronted with a problem, I can usually find several solutions.
9. If I am in trouble, I can usually think of a solution.
10. I can usually handle whatever comes my way.

## Appendix D

### **Outcome Expectations for Studying Abroad (OESA)**

The following is a list of potential outcomes that could result from studying abroad.

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

Please answer these questions according to what you think is likely IF you studied abroad. It is okay if in reality, you do NOT plan to study abroad or if you are unsure if you will ultimately study abroad.

Strongly		Neither agree		Strongly
Disagree		nor disagree		Agree
1	2	3	4	5

### **Studying abroad would most likely ...**

- ~~1. ... enrich my understanding of the world— eliminated through EFA~~
- ~~2. ... help me to make new friends from outside of the U.S.— eliminated through EFA~~
- ~~3. ... help me develop better communication skills— eliminated through EFA~~
4. ... expand my ability to think creatively
- ~~5. ... help me feel more independent and capable as a person— eliminated through EFA~~
6. ... give me a competitive advantage in the workforce

7. ... add value to my college degree
8. ... help me explore international career pathways
9. ... allow me to prove myself to others
10. ... help me figure out what I enjoy academically

Appendix E

**Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994)**

Please answer the following questions about yourself by indicating the extent of your agreement using the following scale:

strongly	disagree	neutral	agree	strongly
disagree				agree
1	2	3	4	5

Be as honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers.

1. In uncertain times, I usually expect the best.
2. It's easy for me to relax.
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
5. I enjoy my friends a lot.
6. It's important for me to keep busy.
7. I hardly ever expect things to go my way.
8. I don't get upset too easily.
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

Scoring:

- Pessimism items 3, 7, and 9 (sum for score)
- Optimism items 1, 4, and 10 (sum for score)
- Note: items 2, 5, 6, and 8 are filler items only. They are not scored as part of the revised scale.

## Appendix F

### **Interest in Study Abroad (ISA)**

Please answer these questions according to your interest level as IF you were considering studying abroad. It is okay if in reality, you don't plan to study abroad or if you are unsure if you will ultimately study abroad.

Strongly		Indifferent		Strongly
Disinterested				Interested
1	2	3	4	5

**How much interest do you have in doing the following things *as part of a study abroad program* ...**

1. ... exploring the local cuisine
2. ... learning the everyday skills necessary for living in a foreign country
3. ... immersing yourself in a foreign culture
4. ... seeing things from a new perspective
5. ~~... opportunities to learn (or improve in) a language – eliminated through EFA~~
6. ... meeting and interacting with different people
7. ~~... exploring international career pathways – eliminated through EFA~~
8. ... being intellectually stimulated by different ways of thinking
9. ... learning while outside of the classroom
10. ... challenging yourself to get out of your comfort zone

**Validity Questions:**

1. How much have you traveled around the U.S. in the past for pleasure?
  - *responses anchored at 0 (“not at all”) and 4 (“extensively”).*
2. How much have you traveled outside of the U.S. in the past for pleasure?
  - *responses anchored at 0 (“not at all”) and 4 (“extensively”).*
3. How much have you enjoyed travel in the past?
  - *responses anchored at 0 (“not at all”) and 4 (“strongly”), with an additional response option of “N/A” to capture those participants who have not traveled.*

Appendix G

**BARRIERS MEASURE**

Using the scale below, please indicate **how much of a barrier** each of the following things might be to your attending a study abroad program, assuming you wanted to study abroad.

No barrier					big
At all					barrier
1	2	3	4	5	

**How much of a barrier would each of the following be for you to study abroad?**

- ~~1. The fact that it would require me to be away from the people I look to most for support~~ *eliminated through EFA*
2. Not having enough money to pay for study abroad
3. Dealing with a whole lot of paperwork in order to go abroad
4. The need to sacrifice being able to focus on my other academic requirements
5. The need to sacrifice being able to attend to the other commitments I have (like a job or volunteer responsibilities)



### **SUPPORTS MEASURE**

Using the scale below, please indicate how much each of the following things might be to **support your plans to study abroad program**, assuming you wanted to study abroad.

No support					big
At all					support
1	2	3	4	5	

**How much of a support would each of the following be for you to study abroad?**

1. Having the support of my family for going abroad
2. Getting encouragement from my departmental faculty
3. Being able to afford paying for the program without too much trouble
4. Getting encouragement from my friends to go abroad

Appendix H

**Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988)**

We are interested in how you feel about the following statements. Read each carefully. Indicate how you feel about each statement.

Very Strongly Disagree                  Neutral                  Very Strongly Agree

1   2   3                  4                  5   6   7

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

Appendix I

**Intention to Participate Scale** (Schnusenberg et al., 2012)

Using the scale below, please answer the following questions about yourself.

Strongly					Strongly
Disagree					Agree
1	2	3	4	5	

1. I intend to participate in a study abroad program
2. I plan to go on a study abroad program
3. It is my intention to participate in a study abroad program
4. I aim to go to a study abroad program
5. I mean to participate in a study abroad program
6. I am determined to go on a study abroad program

Appendix J

**Demographics Questions**

Please provide the following demographic information.

Age:

\_\_\_\_\_

Gender:

- Male
- Female
- Male-to-Female Transgender
- Female-to-Male Transgender
- Other (please specify) \_\_\_\_\_

Sexual Orientation:

- Gay
- Lesbian
- Bisexual
- Heterosexual
- Other (please specify) \_\_\_\_\_

Race / ethnicity:

- Black or African American
- Hispanic American or Latinx
- White or European American

- Asian / Pacific Islander American
- Native American
- Multiracial
- Other (please specify) \_\_\_\_\_

Year in college:

- Sophomore
- Junior

Region:

- Northwest (e.g., OR, WY, MT)
- West (e.g., CA, AK, HI)
- Southwest (e.g., TX, OK, UT)
- Midwest (e.g., KS, NE, IN)
- Southeast (e.g., FL, LA, NC)
- Northeast (e.g., MA, CT, ME)
- Mid-Atlantic (e.g. VA, MD, NY)

## Bibliography

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. *Action-control: From cognition to behavior*, 11-39. Heidelberg: Springer.  
[https://doi.org/10.1007/978-3-642-69746-3\\_2](https://doi.org/10.1007/978-3-642-69746-3_2)
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32, 665-683. <https://doi.org/10.1111/j.1559-1816.2002.tb00236.x>
- Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of leisure research*, 24(3), 207-224.  
<https://doi.org/10.1080/00222216.1992.11969889>
- Albers-Miller, N. D., Prenshaw, P. J., & Straughan, R. D. (1999). Student perceptions of study abroad programs: A survey of US colleges and universities. *Marketing Education Review*, 9(1), 29-36.  
<https://doi.org/10.1080/10528008.1999.11488657>
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British journal of social psychology*, 40(4), 471-499.  
<https://doi.org/10.1348/014466601164939>
- Bandura, A. (1988). Self-regulation of motivation and action through goal systems. *Cognitive perspectives on emotion and motivation*, 37-61. Dordrecht, The Netherlands: Kluwer Academic. [https://doi.org/10.1007/978-94-009-2792-6\\_2](https://doi.org/10.1007/978-94-009-2792-6_2)

- Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, 16(1), 78-117.  
<https://doi.org/10.1177/0049124187016001004>
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment*, 4(1), 47-57.  
<https://doi.org/10.1177/106907279600400103>
- Bikson, T.K., Treverton, G. F., Moini, J., & Lindstrom, G. (2003). New Challenges for International Leadership: Lessons from Organizations with Global Missions. Santa Monica, CA: RAND Corporation. Retrieved from [https://www.rand.org/pubs/monograph\\_reports/MR1670.html](https://www.rand.org/pubs/monograph_reports/MR1670.html)
- Brein, M., & David, K. H. (1971). Intercultural communication and the adjustment of the sojourner. *Psychological Bulletin*, 76(3), 215.  
<https://doi.org/10.1037/h0031441>
- Brenner, B. R. (2001). *Measuring sojourner experiences in a new culture: Development of an intercultural adjustment self-efficacy scale* (Master's Thesis, University of Maryland, College Park). Retrieved from <https://drum.lib.umd.edu/>
- Brenner, B. R. (2003). *A study of self-awareness, self-efficacy, and sojourner adjustment over time* (Doctoral dissertation, University of Maryland, College Park). Retrieved from <https://drum.lib.umd.edu/>
- Carlson, J. S., Burn, B. B., Useem, J., & Yachimowicz, D. (1991). The experience of American undergraduates in Western Europe and the United

- States. *Occasional papers on international educational exchange research series*. New York: Council on International Educational Exchange.
- Centers for Disease Control and Prevention. (2020). Travel: Frequently Asked Questions and Answers. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/travelers/faqs.html>
- Davis, L. E., Ajzen, I., Saunders, J., & Williams, T. (2002). The decision of African American students to complete high school: An application of the theory of planned behavior. *Journal of Educational Psychology*, 94(4), 810. <https://doi.org/10.1037//0022-0663.94.4.810>
- Diversity Abroad. (2016). Diversity Abroad about us. Retrieved from [www.diversityabroad.com/about-us](http://www.diversityabroad.com/about-us)
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods*, 4(3), 272. <https://doi.org/10.1037//1082-989x.4.3.272>
- Fan, J., & Lai, L. (2014). Pre-training perceived social self-efficacy accentuates the effects of a cross-cultural coping orientation program: Evidence from a longitudinal field experiment. *Journal of Organizational Behavior*, 35(6), 831-850. <https://doi.org/10.1002/job.1932>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160. <https://doi.org/10.3758/brm.41.4.1149>



- Fitzsimmons, S. R., Flanagan, D. J., & Wang, X. (2013). Business students' choice of short-term or long-term study abroad opportunities. *Journal of Teaching in International Business*, 24(2), 125–137. <https://doi.org/10.1080/08975930.2013.819710>
- Franco, M., Hsiao, Y. S., Gnilka, P. B., & Ashby, J. S. (2018). Acculturative stress, social support, and career outcome expectations among international students. *International Journal for Educational and Vocational Guidance*, 1-17. <https://doi.org/10.1007/s10775-018-9380-7>
- Fund for Education Abroad. (2018). About FEA. Retrieved from <https://fundforeducationabroad.org/about-fea/>
- Garver, M., & Divine, R. (2008). Conjoint analysis of study abroad preferences: Key attributes, segments and implications for increasing student participation. *Journal of Marketing for Higher Education*, 17(2), 189-215. <https://doi.org/10.1080/08841240801912427>
- Go Abroad (2019). 4 study abroad marketing strategies. Retrieved from <https://blog.goabroad.com/study-abroad-marketing-strategies/>
- Godin, G., & Kok, G. (1996). The theory of planned behavior: a review of its applications to health-related behaviors. *American journal of health promotion*, 11(2), 87-98. <https://doi.org/10.4278/0890-1171-11.2.87>
- Goel, L., de Jong, P., & Schunsenberg, O. (2010). Toward a comprehensive framework of study abroad intentions and behaviors. *Journal of Teaching in International Business*, 21, 248–265. <https://doi.org/10.1080/08975930.2010.526011>

- Goldstein, S., & Kim, R. (2006). Predictors of us college students' participation in study abroad programs: A longitudinal study. *International Journal of Intercultural Relations*, 30(4), 507-521.  
<https://doi.org/10.1016/j.ijintrel.2005.10.001>
- Gorsuch, R. L. (1997). Exploratory factor analysis: Its role in item analysis. *Journal of personality assessment*, 68(3), 532-560.  
[https://doi.org/10.1207/s15327752jpa6803\\_5](https://doi.org/10.1207/s15327752jpa6803_5)
- Graff, G. M. (2020, April 24). An Oral History of the Day Everything Changed. Retrieved March 18, 2020, from <https://www.wired.com/story/an-oral-history-of-the-day-everything-changed-coronavirus/>
- Gullahorn, J. T., & Gullahorn, J. E. (1958). American objectives in study abroad. *The Journal of Higher Education*, 29(7), 369-374.  
<https://doi.org/10.2307/1978752>
- Hackney, K., Boggs, D., & Borozan, A. (2012). An empirical study of student willingness to study abroad. *Journal of Teaching in International Business*, 23(2), 123-144. <https://doi.org/10.1080/08975930.2012.718705>
- Han, H., Hsu, L. T. J., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism management*, 31(3), 325-334.  
<https://doi.org/10.1016/j.tourman.2009.03.013>
- Harrison, J. K., Chadwick, M., & Scales, M. (1996). The relationship between cross-cultural adjustment and the personality variables of self-efficacy and self-

- monitoring. *International Journal of Intercultural Relations*, 20(2), 167-188.  
[https://doi.org/10.1016/0147-1767\(95\)00039-9](https://doi.org/10.1016/0147-1767(95)00039-9)
- Helms, R.M., & Brajkovic, L. (2017). *Mapping Internationalization on U.S. Campuses – 2017 Edition*. The American Council on Education. Retrieved March 4, 2018. <http://www.acenet.edu/news-room/Pages/Mapping-Internationalization-on-U-S-Campuses.aspx>
- Heppner, P., Wampold, B., Owen, J., Wang, K., & Thompson, M. (2016). *Research design in counseling* (Fourth ed.). Boston, MA: Cengage Learning.
- Herzberg, P. Y., Glaesmer, H., & Hoyer, J. (2006). Separating optimism and pessimism: A robust psychometric analysis of the Revised Life Orientation Test (LOT-R). *Psychological assessment*, 18(4), 433.  
<https://doi.org/10.1037/1040-3590.18.4.433>
- Hrubes, D., Ajzen, I., & Daigle, J. (2001). Predicting hunting intentions and behavior: An application of the theory of planned behavior. *Leisure Sciences*, 23(3), 165-178. <https://doi.org/10.1080/014904001316896855>
- Institute of International Education. (2018). Open Doors Report on International Educational Exchange. Retrieved from <https://www.iie.org/Research-and-Insights/Open-Doors/Fact-Sheets-and-Infographics/Fast-Facts>
- Ireland, G. W. (2019). *The Role of Negative Outcome Expectations in Career Exploration and Decision-Making*. Unpublished manuscript, Department of Counseling, Higher Education, and Special Education, University of Maryland, College Park, USA.

- Jones, G. C., & Cunningham, G. B. (2008). The impact of sport management students' perceptions of study abroad programs on their intentions to study abroad. *Sport Management Review*, 11(2), 149-163.  
[https://doi.org/10.1016/s1441-3523\(08\)70107-4](https://doi.org/10.1016/s1441-3523(08)70107-4)
- Lee, J. Y., & Ciftci, A. (2014). Asian international students' socio-cultural adaptation: Influence of multicultural personality, assertiveness, academic self-efficacy, and social support. *International Journal of Intercultural Relations*, 38, 97-105. <https://doi.org/10.1016/j.ijintrel.2013.08.009>
- Leganger, A., Kraft, P., & Røysamb, E. (2000). Perceived self-efficacy in health behaviour research: Conceptualisation, measurement and correlates. *Psychology & Health*, 15(1), 51-69.  
<https://doi.org/10.1080/08870440008400288>
- Lent, R. W., & Brown, S. D. (2006). On conceptualizing and assessing social cognitive constructs in career research: A measurement guide. *Journal of career assessment*, 14(1), 12-35. <https://doi.org/10.1177/1069072705281364>
- 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(1), 79-122. <https://doi.org/10.1006/jvbe.1994.1027>
- Lent, R. W., Ezeofor, I., Morrison, M. A., Penn, L. T., & Ireland, G. W. (2016). Applying the social cognitive model of career self-management to career exploration and decision-making. *Journal of Vocational Behavior*, 93, 47-57.  
<https://doi.org/10.1016/j.jvb.2015.12.007>

- Lent, R. W., Ireland, G. W., Penn, L. T., Morris, T. R., & Sappington, R. (2017). Sources of self-efficacy and outcome expectations for career exploration and decision-making: A test of the social cognitive model of career self-management. *Journal of Vocational Behavior*, 99, 107-117.  
<https://doi.org/10.1016/j.jvb.2017.01.002>
- Lent, R. W., Sheu, H. B., Miller, M. J., Cusick, M. E., Penn, L. T., & Truong, N. N. (2018). Predictors of science, technology, engineering, and mathematics choice options: A meta-analytic path analysis of the social–cognitive choice model by gender and race/ethnicity. *Journal of Counseling Psychology*, 65(1), 17. <https://doi.org/10.1037/cou0000243>
- Li, A., & Gasser, M. B. (2005). Predicting Asian international students' sociocultural adjustment: A test of two mediation models. *International Journal of Intercultural Relations*, 29(5), 561-576.  
<https://doi.org/10.1016/j.ijintrel.2005.06.003>
- Lincoln Commission. (2005). Global competence and national needs: One million Americans studying abroad. *Final Report from the Commission on the Abraham Lincoln Fellowship Program, Washington, DC*. Retrieved from <https://www.nafsa.org/policy-and-advocacy/policy-resources/report-commission-abraham-lincoln-study-abroad-fellowship-program>
- Luo, J., & Jamieson-Drake, D. (2015). Predictors of study abroad intent, participation, and college outcomes. *Research in Higher Education: Journal of the Association for Institutional Research*, 56(1), 29-56.  
<https://doi.org/10.1007/s11162-014-9338-7>

- Mendez, L. (2019). 8 Useful International Travel Tips for First-Time Travelers. Go Overseas. Retrieved May 20, 2019. <https://www.gooverseas.com/blog/best-international-travel-tips-for-first-time-travelers>
- Miller, M. J., & Sendrowitz, K. (2011). Counseling psychology trainees' social justice interest and commitment. *Journal of Counseling Psychology*, 58(2), 159. <https://doi.org/10.1037/a0022663>
- Miller, M. J., Sendrowitz, K., Connacher, C., Blanco, S., de La Pena, C. M., Bernardi, S., & Morere, L. (2009). College students' social justice interest and commitment: A social-cognitive perspective. *Journal of Counseling Psychology*, 56(4), 495. <https://doi.org/10.1037/a0017220>
- NAFSA. (2003). Securing America's future: Global education for a global age. Retrieved from <https://www.nafsa.org/policy-and-advocacy/policy-resources/securing-americas-future>
- National Task Force on Undergraduate Education Abroad (U.S.) (1990). *A national mandate for education Abroad: Getting on with the task*. Washington, DC: NAFSA Association of International Educators.
- Poyrazli, S., Arbona, C., Nora, A., McPherson, R., & Pisecco, S. (2002). Relation between assertiveness, academic self-efficacy, and psychosocial adjustment among international graduate students. *Journal of College Student Development*, 43(5), 632–642. <https://psycnet.apa.org/record/2002-04434-002>  
[no doi available]
- Pope, J. A., Sanchez, C. M., Lehnert, K., & Schmid, A. S. (2014). Why do Gen Y Students study abroad? Individual Growth and the Intent to Study Abroad.

*Journal of Teaching in International Business*, 25(2), 97–118.

<https://doi.org/10.1080/08975930.2014.896232>

Presley, A., Damron-Martinez, D., & Zhang, L. (2010). A study of business student choice to study abroad: A test of the theory of planned behavior. *Journal of Teaching in International Business*, 21, 227–247.

<https://doi.org/10.1080/08975930.2010.526009>

Redden, E. (2018). Study abroad numbers continue to grow, driven by continued growth in short-term programs. *Inside Higher Ed.*. Retrieved from

<https://www.insidehighered.com/news/2018/11/13/study-abroad-numbers-continue-grow-driven-continued-growth-short-term-programs>

Ryan, M. E., & Twibell, R. S. (2000). Concerns, values, stress, coping, health and educational outcomes of college students who studied abroad. *International Journal of Intercultural Relations*, 24(4), 409–435.

[https://doi.org/10.1016/s0147-1767\(00\)00014-6](https://doi.org/10.1016/s0147-1767(00)00014-6)

Salisbury, M. H., Paulsen, M. B., & Pascarella, E. T. (2010). To see the world or stay at home: Applying an integrated student choice model to explore the gender gap in the intent to study abroad. *Research in Higher Education*, 51(7), 615–

640. <https://doi.org/10.1007/s11162-010-9171-6>

Salisbury, M. H., Paulsen, M. B., & Pascarella, E. T. (2011). Why do all the study abroad students look alike? Applying an integrated student choice model to explore differences in the factors that influence white and minority students' intent to study abroad. *Research in Higher Education*, 52(2), 123–150.

<https://doi.org/10.1007/s11162-010-9191-2>

- Salisbury, M. H., Umbach, P. D., Paulsen, M. B., & Pascarella, E. T. (2009). Going global: Understanding the choice process of the intent to study abroad. *Research in Higher Education*, 50(2), 119–143.  
<https://doi.org/10.1007/s11162-008-9111-x>
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): a reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063. <https://doi.org/10.1037//0022-3514.67.6.1063>
- Schnusenberg, O., & de Jong, P. (2012). Predicting study abroad intentions based on the theory of planned behavior. *Decision Sciences Journal of Innovative Education*, 10(3), 337–361. <https://doi.org/10.1111/j.1540-4609.2012.00350.x>
- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. Measures in health psychology: A user's portfolio. *Causal and Control Beliefs*. Windsor, UK: NFER-NELSON.
- Senator Paul Simon Study Abroad Program Act of 2017, S. 601, 115 Cong. (2017). Retrieved from <https://www.congress.gov/bill/115th-congress/senate-bill/601>
- 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*, 76(2), 252-264. <https://doi.org/10.1016/j.jvb.2009.10.015>
- Sniehotta, F. F., Pesseau, J., & Araújo-Soares, V. (2014). Time to retire the theory of planned behaviour. *Health Psychology Review*, 8(1), 1–7.  
<https://doi.org/10.1080/17437199.2013.869710>



- Spiering, K., & Erickson, S. (2006). Study abroad as innovation: Applying the diffusion model to international education. *International Education Journal*, 7(3), 314-322. Retrieved from <https://files.eric.ed.gov/fulltext/EJ847314.pdf> [no doi available]
- Stroud, A. (2010). Who plans (not) to study abroad? An examination of U.S. student intent. *Journal of Studies in International Education*, 14(5), 491-507. <https://doi.org/10.1177/1028315309357942>
- Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of vocational behavior*, 22(1), 63-81. [https://doi.org/10.1016/0001-8791\(83\)90006-4](https://doi.org/10.1016/0001-8791(83)90006-4)
- Terra Dotta. (2014). Best practices and successful strategies for increasing study abroad participation. Retrieved from <http://www.terradotta.com/articles/article-Best-Practices-Strategies-Increasing-Study-Abroad-Participation-12-14.pdf>
- Tsang, E. W. (2001). Adjustment of mainland Chinese academics and students to Singapore. *International Journal of Intercultural Relations*, 25(4), 347-372. [https://doi.org/10.1016/s0147-1767\(01\)00010-4](https://doi.org/10.1016/s0147-1767(01)00010-4)
- University of Maryland Education Abroad. (2019). Facts and figures. Retrieved from <https://globalmaryland.umd.edu/offices/education-abroad/facts-and-figures>
- University of Maryland Institutional Research, Planning, and Assessment. (2019). UMD Undergraduate Student Profile. Retrieved from [https://irpa.umd.edu/CampusCounts/Enrollments/stuprofile\\_allug.pdf](https://irpa.umd.edu/CampusCounts/Enrollments/stuprofile_allug.pdf)

- University of Minnesota Learning Abroad Center. (2019). University of Minnesota Model of Curriculum Integration. Retrieved from <https://umabroad.umn.edu/professionals/curriculumintegration/general/minnesotamodel>
- U.S. Department of Education. (2011). About ED mission. Retrieved from <https://www2.ed.gov/about/overview/mission/mission.html>
- U.S. Department of State (n.d.). USA Study Abroad building capacity for study abroad. Retrieved from <https://studyabroad.state.gov/building-capacity-study-abroad>
- Van Oudenhoven, J. P., & Van der Zee, K. I. (2002). Predicting multicultural effectiveness of international students: The Multicultural Personality Questionnaire. *International Journal of Intercultural Relations*, 26(6), 679-694. [https://doi.org/10.1016/s0147-1767\(02\)00041-x](https://doi.org/10.1016/s0147-1767(02)00041-x)
- Wang, L., Gault, J., Christ, P., & Diggin, P. (2016). Individual attitudes and social influences on college students' intent to participate in study abroad programs. *Journal of Marketing for Higher Education*, 26(1), 103-128. <https://doi.org/10.1080/08841241.2016.1146385>
- Woodruff, Gayle A., & Henry, A.M. (2012). Curriculum Integration of Education Abroad. Washington D.C.: NAFSA Association of International Educators. Retrieved from <https://www.nafsa.org/professional-resources/publications/nafsa-pdf-download-publications>

- Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist*, 34(6), 806-838. <https://doi.org/10.1177/0011000006288127>
- The World Bank Group. (2018). Trade (% of GDP) in the U.S. | The World Bank Data. Retrieved from <https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS?locations=US>
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counselling Psychology Quarterly*, 16(1), 15-28. <https://doi.org/10.1080/0951507031000114058>
- Yusoff, Y. M. (2011). International students' adjustment in higher education: relation between social support, self-efficacy, and socio-cultural adjustment. *Australian Journal of Business and Management Research*, 1(1), 1. Retrieved from <https://core.ac.uk/download/pdf/25776737.pdf> [no doi available]
- Zhuang, W., King, K., & Carnes, L. (2015). Studying abroad: Understanding the relationships among beliefs, perceived value, and behavioral intentions. *Journal of Teaching in International Business*, 26(1), 32-45. <https://doi.org/10.1080/08975930.2014.956974>
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30-41. [https://doi.org/10.1207/s15327752jpa5201\\_2](https://doi.org/10.1207/s15327752jpa5201_2)