

Going Global:  
Understanding the choice process of  
the intent to study abroad\*

Mark H. Salisbury, Paul D. Umbach, Michael B. Paulsen, and Ernest T. Pascarella  
The University of Iowa

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Please address inquires to Mark Salisbury, Department of Educational Policy and  
Leadership Studies, 491 Lindquist Center North, Iowa City, IA, 52242-1529; telephone  
(319) 400-8011; email: [mark-salisbury@uiowa.edu](mailto:mark-salisbury@uiowa.edu).

## Going Global: Understanding the choice process of the intent to study abroad

This study applies an integrated model of college choice to better describe students who do and do not intend to study abroad. Although internationalization through study abroad is widely touted as a preferred means of developing globally competent college graduates, very little is known about the factors that influence students' predisposition to study abroad. This research explores the impact of economic, human, social, and cultural capital on students' intent to study abroad. Analysis of data from the Wabash National Study of Liberal Arts Education (WNSLAE) demonstrates a complex interplay between SES, accumulated pre-college capital, and capital acquired during the freshman year. Important implications for national policy makers, senior administrators, study abroad professionals and higher education researchers are discussed.

*“Promoting and democratizing undergraduate study abroad is the next step in the evolution of American higher education. Making study abroad the norm and not the exception can position this and future generations of Americans for success in the world in much the same way that establishment of the land-grant university system and enactment of the GI Bill helped create the ‘American century.’”*

“Global Competence and National Needs: One Million American Studying Abroad”

The Lincoln Commission Final Report, 2005

## INTRODUCTION

Government, business, and education leaders have long argued that study abroad participation must increase to ensure our nation’s future security, economic prosperity, and global leadership (CIEE, 1988, 1990; College Placement Council & NAFSA: Association of International Educators, 2008; Lincoln Commission, 2005; NASULGC, 2004; RAND, 1994, 2003). But as the pervasive effects of globalization have produced a new class of economic, geopolitical, and environmental challenges, the chorus of calls for a greater emphasis on undergraduate international experiences has surged exponentially. The Lincoln Commission, established by Congress in 2004 to recommend legislation that would significantly increase opportunity for American students to study overseas, put it starkly. “What nations do not know exacts a heavy toll. The stakes involved in study abroad are that simple, that straightforward, and that important.” (2005, p. 3). The release of their culminating report “Global Competence and National Needs: One Million Americans Studying Abroad” coincided with Senate Resolution 308 declaring 2006 the Year of Study Abroad. This document set a goal for American undergraduate study abroad participation at one million students by 2017 – a five fold

increase from the roughly 200,000 students who studied abroad in 2005-2006 (Institute of International Education, 2007). The Paul Simon Study Abroad Foundation Act (H.R. 1469/S. 991), introduced as a result of the recommendations from the Lincoln Commission and passed unanimously by the House of Representatives in June 2007 (the bill awaits final approval in the Senate though it has broad bi-partisan support), allocates an additional \$80 million per year toward study abroad scholarships.

The broad support for the Paul Simon Study Abroad Foundation Act reflects the widely held view that students who participate in a study abroad program develop in educationally important ways. Studies have shown that students who study abroad develop a deeper understanding and respect for global issues (Carlson, 1990; Douglas & Jones-Rikkens, 2001), more favorable attitudes toward other cultures (Carlson & Widaman, 1988; Kitsantas, 2004), stronger intercultural communication skills (Anderson, Lawton, Rexeisen, & Hubbard, 2006; Williams, 2005), improved personal and professional self image (Cushner & Mahon, 2002), and better foreign language skills (Brecht, Davidson, & Ginsberg, 1993; Freed, 1995). In addition, surveys of former study abroad participants consistently indicate that they believe the experience improved their self-confidence, ability to handle ambiguity, insight into their own value systems, and overall maturity (Carlson, 1990; Institute for the International Education of Students, 2004; Lindsey, 2005).

The proposed legislation to increase study abroad scholarships also reflects a nagging reality for study abroad advocates (National Task Force for Undergraduate Education Abroad, 1990). Despite a steady growth in the number of participants nationally, as a percentage of all college students, participation in study abroad remains negligible. Although participation increased by roughly 150% in the last ten years (89,242 participants in 1995 grew to 223,534 in

2005); as a proportion of total post-secondary enrollment, study abroad participation grew from a mere .6% to of total post-secondary enrollment (14,262,000) in 1995 only 1.3% of total enrollment (17,350,000) in 2005 (Institute of International Education, 2007; National Center for Education Statistics, 2006).

Many study abroad advocates have also lamented the consistent disparities among participants across race, gender, and academic majors – despite repeated efforts to expand and equalize participation across these groups (Council on International Education Exchange, 1991; Lincoln Commission, 2005; NAFSA, 1990). For decades, minorities have been under represented among study abroad participants (Dessoff, 2006; Henbroff & Rusz, 1993; Lambert, 1989; Lincoln Commission, 2005). Statistics from the Institute of International Education (2007) and the National Center for Educational Statistics (2007) indicate this gap has actually widened in the last decade. In 1995, minority participants in study abroad comprised 15.6% of all students studying abroad. By 2005 this proportion had increased slightly to 17% of all study abroad participants. By comparison, the proportion of minorities among all students enrolled in post-secondary education had risen from 25.3% in 1995 to 30.9% in 2005. Female students studying abroad have traditionally outnumbered their male counterparts by a ratio of almost 2:1 (Dessoff, 2006; Thomas & McMahon, 1998). Between 1995 and 2005, the percentages of female and male students abroad remained virtually constant – 65% female and 35% male (Institute of Higher Education, 2006). In addition, the distribution of majors among study abroad participants has historically favored the humanities and social sciences. Pre-professional majors such as engineering, education, and the health sciences are significantly underrepresented compared to overall participation rates (Lincoln Commission, 2005; NAFSA, 2003).

Surprisingly, almost no empirical research has explored the array and potential interaction of factors that impact intent to study abroad. Carter (1991) and Washington (1998) found in small single institution surveys that financial constraints and a lack of awareness were prominent barriers for potential minority participants. However, there is little indication of the degree to which these responses were evidence of an active barrier to participation or a retroactive justification for the decision not to participate. Cole (1991), the Lincoln Commission (2005), NAFSA (2003), and Dessoiff (2006) articulate a list of perceived barriers for participation in study abroad including finances, lack of awareness, a perception that study abroad isn't important, familial and social constraints, inflexible sequential curricular requirements among pre-professional, math, and hard science majors, and (for minority students) a fear of racism abroad. Yet Carlson et al (1990) and Spiering and Erickson (2006) found that financial concerns were not a primary barrier to participation. Carter found that familial and social constraints rarely concerned minority students, while Washington found that a fear of racism abroad was not a significant deterrent. The Council on International Educational Exchange's 2006 publication advocating a research agenda for study abroad summed up the paucity of research on student decisions regarding study abroad participation.

“While there is a good deal of folk wisdom about what motivates students to go abroad, there is very little hard data. . . . Student decision-making is clearly a rich area for research. The influences in preference selection are so complex that isolating them is challenging – yet it is precisely the complexity of variables and process that makes the need for data so important. (p. 3)”

*Purpose of the Study*

If, as the Lincoln Commission (2005) states, “promoting and democratizing undergraduate study abroad is the next step in the evolution of American higher education” (p. v), then understanding the factors that influence the decision to pursue a study abroad experience is critical. The purpose of this paper is to explore how factors that have been shown to impact students’ decisions regarding college choice (i.e., ascribed background characteristics as well as measures of human, social, cultural and financial capital) also affect the decision to intend to study abroad. This is the first in a series of studies that will analyze data from the Wabash National Study on Liberal Arts Education – a longitudinal study of 4,501 students at 19 four-year and two-year institutions - to examine the characteristics of students who do and do not participate in study abroad and measure the educational outcomes of those experiences across a range of demographic characteristics.

First, this paper will argue that participation in a study abroad program is preceded by a three stage process of predisposition, search, and choice similar to the college choice process outlined by Hossler and Gallagher (1987). Second, this paper will argue that the “student-choice” construct (Paulsen & St. John, 2002; St. John & Asker, 2001) and college choice theory in general (Hossler, Braxton & Coopersmith, 1989; Paulsen, 1990), and Laura Perna’s (2006) integrated model of student college choice in particular, can be applied to the decision to intend to study abroad. Third, this paper will apply Perna’s model to examine the combination of human, social, cultural, and financial capital, as well as organizational and other contextual factors that influence intent to study abroad among college freshmen from the Wabash National Study on Liberal Arts Education. Fourth, this paper will analyze and discuss the implications of its findings for 1) faculty, administrators and policy makers in higher education who seek to

increase study abroad participation as a means of internationalizing American college graduates, and 2) future research on student decision-making regarding participation in study abroad and other educationally valued experiences during college.

## LITERATURE REVIEW

In order to examine the factors that influence intent to study abroad, it is first necessary to identify an appropriate theoretical framework (Smart, 2005) that can account for the range of factors relevant to college student decision-making processes. In the case of choosing to participate in a study abroad program, the student-choice construct (Paulsen & St. John, 2002; St. John & Asker, 2001) provides an empirically grounded construct that recognizes the multiple stages of a sequence of college-related choices that students make and the multiple interacting factors that influence those choices.

The process of choosing to participate in a study abroad program is comprised of three stages of decision-making – the development of the predisposition or intent to study abroad, the search for an appropriate study abroad program, and the selection of and departure for a particular location and program (Leerburger, 1987; Peterson's, 2008; Sullivan, 2004; Williamson, 2004). These stages mirror the three stages of the college choice process outlined by Hossler and Gallagher (1987) and examined in depth by numerous scholars (see e.g., Hossler and Gallagher, 1987; Hossler, Schmit, and Vesper, 1999; Terenzini, Cabrera, and Bernal, 2001). The predisposition stage - in both the college choice and study abroad scenarios, is when students develop aspirations and a predisposition or intent to attend college or to study abroad. Both processes occur as part of a broader context within which students develop tentative plans or aspirations regarding possible educational and career goals. The search stage in both

scenarios is a process during which students examine the options and requirements of various colleges or study abroad programs and evaluate them with respect to their perceived needs, expectations, and preferences. Finally, students in both processes choose to enroll in a particular institution or study abroad program.

In addition, like the college choice process, the study abroad choice process typically occurs over a period of time. Researchers have found that the college choice process occurs over a period of several years for traditional students (Hossler, Schmit, & Vesper, 1999; Terenzini, Cabrera, & Bernal, 2001). Similarly, literature on study abroad regularly describes the length of time from initial consideration of study abroad to departure for a specific program in terms of months and years and emphasizes the importance of planning ahead (Peterson's, 2008; Williamson, 2004). Consistent with the student-choice construct, study abroad participants progress through a sequence of decisions that begin with considering the option of study abroad and conclude with embarking for a particular destination in a particular study abroad program.

Research on study abroad suggests that a wide range of factors are related to participation decisions. National statistics suggest study abroad participants are predominantly female, white, and humanities or social science majors (Institute of International Education, 2007). Carlson et al's (1990) influential research on study abroad participants found that they tend to have traveled abroad previously, come from families with highly educated parents, and have been successful academically. Goldstein and Kim (2006) found that possible predictors of study abroad participation include concerns about completing a major, expectations about a study abroad experience, lesser levels of ethnocentrism and prejudice, and an interest in learning a foreign language. Other scholars have found that proficiency in a second language may predict participation in study abroad (Dufon & Churchill, 2006). Study abroad advocates and scholars

have also examined some of the potential barriers to participation in study abroad programs, such as increased costs, lack of awareness, perceived unimportance, complexity of the application and preparation process, social and familial obligations or constraints, inflexibly sequenced curricular requirements, and fear of discrimination or racism abroad (Carlson et al, 1990; Carter, 1991; Cole, 1991; Dessoiff, 2006; Lincoln Commission, 2005; NAFSA, 2003; Spiering & Erickson, 2006).

The “student-choice” construct and an integrated model of college choice (Perna, 2006) provide a theoretically and empirically grounded approach to examine the range of factors that affect student decisions about higher-education opportunities (Paulsen & St. John, 2002; St. John & Asker, 2001). This construct suggests that, not only do students engage in a sequence of postsecondary decisions – i.e., whether to attend college, which college, what major, whether to reenroll, etc. – but these decisions are influenced by the nature and amount of human, financial social, and cultural capital available to the student throughout the sequence (Hossler, Braxton, & Coopersmith, 1989; Paulsen, 1990; Paulsen & St. John, 2002; Perna 2006; Perna & Titus, 2005; St. John & Asker, 2001). Human capital theory suggests that individuals accumulate productive capacities (knowledge, understandings, talents, and skills), which can be enhanced through investments in education and exchanged for increased earnings, power, and occupational status (Becker, 1993; Paulsen, 2001; Rosenbaum, 1986). Common measures of human capital include a student’s, academic ability or achievement, academic preparation and educational attainment (Paulsen & Toutkoushian, 2008; Perna & Titus, 2005). When making decisions about education, individuals compare the monetary and non-monetary benefits and costs of each option (Paulsen & Toutkoushian, 2008). In order to cover the costs of college-going decisions, students also require sufficient financial capital, which has been operationalized in previous studies using

measures of income and the actual and perceived ability to pay of students and their parents (Perna & Titus, 2005). Thus, an individual's decision to study abroad can be conceptualized as a comparison of the expected costs and benefits of a study abroad program in terms of additional direct or indirect costs, family income, academic ability, achievement or preparation, educational and career aspirations, and the perceived potential of a study abroad experience to instill the intellectual or personal tools necessary in reaching those career goals.

Sociologists argue that students' educational choices are made within the boundaries of unique social contexts – often closely related to their socioeconomic backgrounds - that structure students' educational decision-making. Similarly, student-choice theory asserts that students' decisions are made in “situated contexts” based on their *habitus*, as shaped by individual home and school environments (McDonough, 1997; St. John & Asker, 2001). *Habitus* refers to the enduring beliefs, attitudes, aspirations, perceptions and values an individual acquires through home and school environments and social class that serve to frame and constrain their choices (Bourdieu & Passerson, 1977). Sociologists also apply cultural and social capital concepts to explain educational choices. Cultural capital is often described as an individual's cultural knowledge, language skills, educational credentials and school-related information, derived largely from their parents' class status (Bourdieu, 1986; Bourdieu & Passerson, 1977). Researchers often define social capital as an individual's access to information, resources and support, acquired through participation, or interaction with others who participate, in social networks or structures (Coleman, 1988; Perna, 2006; Portes, 1998). In the context of intent to study abroad, examples of social and cultural capital informing students' decisions might be the availability of information about study abroad, its perceived educational importance, social or family constraints, comfort in negotiating multicultural environments, awareness of and interest

in international events and issues, previous travel abroad, and second language proficiency. All of these factors influence a student's college-related decisions and shape an individual's accumulation of social, cultural, human and financial capital. Therefore, a student's habitus will likely influence whether they believe study abroad is a plausible or preferred option for them during college.

## METHOD

### *Sample*

The Wabash National Study on Liberal Arts Education (WNSLAE), funded by the Center of Inquiry in the Liberal Arts at Wabash College, is a longitudinal study of the impact of a liberal arts education on the intellectual and personal outcomes traditionally associated with a liberal arts college experience. In the fall of 2006, 4,501 full-time freshmen from nineteen different institutions completed a number of pencil and paper instruments. The institutions were selected from over 60 college and universities that expressed interest in participating in the study and they vary extensively in size, selectivity, institutional type, and geographic location. Nonetheless, because this study focuses on liberal arts education, a narrow majority of the institutions (11) are liberal arts colleges. At all but the four largest institutions, the entire freshman class was included in the sample. Three of the remaining institutions randomly selected students from the freshman class, while the largest institution randomly selected freshmen from their College of Arts and Sciences.

At the end of the freshman year, 3,081 students distributed across all of the institutions returned to participate in data collection. These students completed the identical survey instruments regarding intellectual and personal outcomes, the National Survey of Student

Engagement (NSSE), and an additional student experiences questionnaire. Because less than five percent of the returning students generated missing data for the variables in this study, they were eliminated from the dataset used for analysis. This resulted in an effective sample size of 2,878.

### *Analysis*

We used logistic regression analysis with the intent to study abroad (1=plan to study abroad; 0=do not plan to study abroad or don't know) as our dependent variable. We applied the student choice construct and the integrated model of student choice as our guides to select those independent variables (see Table 1) that most effectively capture the "situated contexts" within which students make decisions about postsecondary educational experiences (Perna, 2006). At the center of the model, Perna locates the investment decision-making process of the college-choice model. This core level of the model includes variables representing students' expected costs of college in terms of the supply of resources or the "financial capital" available to cover those costs, weighed against students' expected benefits in terms of the demand for higher education reflected in the "human capital" that influences students' perceptions of the benefits of investment in college-related opportunities, such as study abroad. In examining the intent to study abroad through the lens of the integrated student choice model, we use the variable academic ability to represent a student's human capital, and we use variables indicating whether or not the student received a federal grant, whether or not the student received an institutional grant, and whether or not the student received a student loan to represent a student's financial capital. Because of the need-based threshold inherent in qualifying for a federal grant, this variable provides a proxy measure of family financial need and a straightforward measure of a student's financial capital.

The first layer of the integrated student choice model considers the concept of habitus as represented by basic demographic characteristics and measures of social and cultural capital. We operationalized demographic characteristics using a series of dummy variables. Gender was operationalized using one binary variable (male=1,0). We created a design set of four dichotomous variables (Black=1, Hispanic=1, Asian/Pacific Islander=1, and non-white other=1) to assess differences by race in our analysis. . Because white students make up the vast majority of study abroad participants, we chose them as the reference category.

We crafted two variables and three scales to measure the existence and nature of a student's social and cultural capital. Previous research has identified parental educational attainment as a strong measure of cultural capital (the values, attitudes, and beliefs that emphasize the importance of education in general and maximizing a postsecondary experience in particular) and social capital (the awareness of, and access to, resources, networks, timelines, and processes that enable successful participation in the college selection and degree attainment experience). We assume that knowledge gained through a parent's postsecondary educational attainment would extend to, and help shape, a student's participation in educationally valuable experiences during college. Two of our survey items asked students about their mother's and father's educational attainment, with nine response options ranging from "did not finish high school" to "doctorate." We created a continuous variable representing the average of both parents' average educational attainment (if the respondent only indicated an educational attainment level for one parent, that score was imputed in place of an average). In addition, we created a dummy variable to indicate whether or not a student aspired to more than a four-year degree. This measure of post-baccalaureate degree aspirations also serves as a measure of cultural capital, particularly because it can indicate the degree to which a student believes higher

education is a valuable experience in terms of both the monetary and nonmonetary elements of its potential benefits. In combination, parental educational attainment and student's educational aspirations can be viewed as substantial indicators of early home habitus and the forms of cultural and social capital that are generated by, or accessible in, that early home environment.

We utilized three scales to assess the nature and the degree of social and cultural capital that might affect a student's predisposition or intent to study abroad. The first, a pre-existing scale often used in educational research, is the attitude toward literacy scale. This scale (alpha reliability = .69) is composed of six items, each with five Likert scale response options ranging from "strongly agree" to "strongly disagree," that ask the respondent to rate their interest in reading about history, reading literature or poetry, reading about science, writing to express ideas, writing to process their own thoughts, and reading for enjoyment. Access and interest in reading and writing can be conceived as both a symbolic and practical indicator of social and cultural capital. Books, magazines, and newspapers are primary sources of knowledge about networks and resources (social capital) as well as contrasting values, attitudes, and beliefs (cultural capital). A higher mean score on this scale should indicate a higher level of the social and cultural capital that might predispose a student to study abroad.

The second scale – the high school involvement scale (alpha reliability = .60) – combines six items measuring the student's level of involvement in activities during high school that might expose them to networks, resources, attitudes, values, or beliefs potentially influential in considering study abroad during college. This scale includes items that ask how often during the last year of high school did the student study with friends, talk with teachers outside of class, volunteer or participate in community service, participate in extra-curricular activities, use the library for homework or research, and use a computer for homework or research. Each item has

five response options (“never,” “rarely,” “occasionally,” “often,” or “very often”). Formal and informal interaction with high school peers and teachers is often seen as a mechanism through which social and cultural capital can be transmitted. A higher mean score on this scale should indicate a higher level of social and cultural capital that might also influence a student’s intent to study abroad.

Third, a seven-item scale – openness to diversity and challenge (alpha reliability = .83) – was employed to represent the degree of social and cultural capital specific to interacting across cultural differences. These seven items, each with five Likert scale response options ranging from “strongly agree” to “strongly disagree,” ask the student to indicate the extent to which he or she 1) enjoys having discussions with people who hold different ideas and values, 2) believes that the real value of a college education lies in being introduced to different values, 3) enjoys talking with people who have different values because it helps better understand their own values, 4) believes learning about people from different cultures is a very important part of a college education, 5) enjoys taking courses that challenge their own beliefs or values, 6) most enjoys the courses that make the respondent think from a different perspective, and 7) believes that contact with individuals whose background (e.g., race, national origin, sexual orientation) is different from one’s own is an essential part of a college education. This scale has previously been successfully employed in measuring students’ comfort with diversity (Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996). In this study, we use the scale to indicate the cultural capital embedded in one’s awareness of other cultures and belief in the value of intercultural communication skills. It is hypothesized that higher scores on the openness to diversity and challenge scale would increase a student’s predisposition or intent to study abroad.

The second layer in the integrated student choice model focuses on the school and community context. Because liberal arts colleges—as an institutional type and culture—have long been the strongest advocates of participation in study abroad opportunities (Lincoln Commission, 2005), we examined the impact of school context on intent to study abroad by including three dummy variables to control for institutional type. These variables were created based on the individual institution's Carnegie classification and were coded as research institutions (1,0), regional public institutions (1,0), and community colleges (1,0). Liberal arts colleges were the reference category and were omitted from the model. In addition, because study abroad participation rates heavily favor traditional humanities and social science majors, we created six dummy variables to control for the student's intended major. These variables are business (1,0), education (1,0), STEM (natural sciences, engineering, and math/statistics) (1,0), social sciences (1,0), undecided (1,0), and uncategorized (1,0). Since humanities majors traditionally make up the largest percentage of study abroad participants, this was selected as the reference group and omitted category.

The last layer of the integrated student choice model considered in this study was the higher education context. This was operationalized by 1) controlling for institutional type, and 2) including six of the good practice scales created and used by previous research on college students (Astin, 1993; Chickering & Reisser, 1993; Kuh, Schuh, Whitt, & Associates, 1991; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Pascarella & Terenzini, 1991, 2005). These scales are based upon Chickering and Gamson's (1987, 1991) principles of good practices in undergraduate education and have been empirically vetted for validity and reliability (Seifert et al, 2008). The six scales chosen were selected based upon the belief that higher scores on these scales might indicate a higher transfer of social and cultural capital with the potential to

influence a student's predisposition or intent to study abroad. These scales are 1) the quality of non-classroom interaction with faculty, 2) course-related diversity experiences, 3) degree of positive peer interaction, 4) degree of interaction with diverse peers, 5) integration of knowledge, information, and ideas, and 6) a single item measuring co-curricular involvement.

## RESULTS

Table 2 presents individual parameter estimates, standard errors, and odds ratios. Because the unstandardized coefficients from a logistic regression model are not easy to interpret and the interpretation of odds ratios is not intuitive, we calculate delta-p statistics for the statistically significant variables in our model. For dummy-coded variables, the delta-p represents the difference in the probability of intent to study abroad between the target and reference group. For continuous measures, delta-p represents the change in probability that results from a one-unit change around the mean. Because we standardized our continuous independent variables, this one-unit change in the independent variable is .5 SD below the mean to .5 SD above the mean. Thus, delta-p represents the change in the probability of intending to study abroad that results from a one-unit change in the relevant explanatory variable (see Long and Freese, 2003, for details).

Several of the demographic characteristics of students included in our model influence plans to study abroad. The socioeconomic status of a student's family is positively related to intend to study abroad. Lower income students – i.e., students from families eligible for federal financial aid – are less likely to plan to study abroad than higher income students. Students who receive federal financial aid are 11 percentage points less likely to intend to study abroad than are those not getting federal aid. This suggests that finances not only serve as a barrier, as

suggested by previous research (Cole, 1991; Lincoln Commission, 2005; NAFSA, 2003; Dessoiff, 2006), but lack of resources shapes student expectations about studying abroad. This is a distressing finding. Overall, since the early 1980s the gap in expectations for college attendance between high and low-income students has narrowed substantially, while the gap in college participation rates has narrowed much less (Hearn, 2001). However, our findings indicate that insufficient financial capital significantly inhibits the likelihood of participation in study abroad even in the earliest stages when the beginnings of predisposition, plans or intentions to study abroad are first being formed. Likewise, level of parents' education is positively related with the probability of planning to study abroad. With every standard deviation increase in average parental education, the likelihood of planning to study abroad increases approximately 5 percentage points. In combination, both of these elements of socioeconomic status—as formative, class-based indicators of early home habitus—discourage even the development of aspirations or intentions to participate in study abroad programs.

With two exceptions, we see relatively few additional demographic differences in the probability of planning to study abroad. First, males are approximately 8 percentage points less likely to intend to study abroad than females. This finding is similar to the gender gap in participation in study abroad found in previous research (Dessoiff, 2006; Thomas & McMahon, 1998). Second, compared to whites, Asian Pacific Islanders are 14 percentage points less likely to plan to study abroad. Other students of color do not differ from whites in their intent to study abroad. This finding suggests that the relatively low participation of African American and Latino/a students in study abroad (Dessoiff, 2006; Henbroff & Rusz, 1993; Lambert, 1989; Lincoln Commission, 2005) may not be due to a lack of desire.

In general, social and cultural capital accumulation prior to attending college is positively related with the intent to study abroad while in college. Students who have a high interest in reading and writing, as measured by the attitude toward literacy scale are more likely to intend to study abroad. In addition, the more open a student is to diverse ideas and people, the greater the likelihood that they plan to study abroad. With every standard deviation increase in openness to diversity, the probability of intending to study abroad increases by 9 percentage points. However, involvement while in high school is negatively related ( $p < .05$ ) with intent to study abroad, but the magnitude of the effect is quite small. With every one standard deviation increase in high school involvement, the probability of intending to study abroad decreases by two points.

The types of institutions students attend and academic majors they choose also appear to influence their proclivity to study abroad. Relative to students at other types of institutions, students who attend liberal arts colleges are the most likely to express a desire to study abroad. Students attending community colleges are approximately 30 percentage points less likely than liberal arts college students to intend to study abroad; and students at regional comprehensive and research institutions are approximately 12 to 13 percentage points less likely than students at liberal arts colleges to indicate a desire to study abroad.

Students in social science majors appear to be among the most likely to plan to attend to study abroad. Compared with students in the arts and humanities, students in the social sciences are 40 percentage points more likely to express an intent to study abroad. Interestingly, students who are undecided about their major are 16 percentage points more likely than arts and humanities majors to plan to study abroad. Unlike previous research on major differences in study abroad participation (Institute of International Education, 2007), we found no statistically

significant differences in intentions between students in arts and humanities majors and students in business, education, or science, technology, engineering and math.

Finally, we found statistically significant, yet relatively small, effects for two of the variables representing principles of good practice in undergraduate education, used in this study as indicators of social and cultural capital accumulation while in college. Only two of the six measures, diverse interactions and co-curricular involvement, were significantly related to intent to study abroad. For each one standard deviation increase in diverse interactions, the probability of intending to study abroad increases by approximately 5 percentage points, while a one standard deviation increase in co-curricular involvement results in a 3 percentage point increase in the probability to plan to study abroad.

### *Simulation*

Our theoretical model and subsequent findings suggest a complex interplay between SES, capital accumulation, both before and during college, and students' plans to study abroad. With this type of complexity, Long and Freese (2003) suggest the calculation of "ideal types" to simulate the likelihood of exhibiting a behavior under various conditions. In other words, it is often helpful to calculate a predicted probability after varying the value of some of the values in a logistic regression model.

Table 3 presents the predicted probabilities for students after we vary their SES, social and cultural capital accumulation prior to college, and the amount of capital they accrue while in college. Levels of SES are determined by parental education and whether a student receives federal aid. Low SES students receive federal aid and their parents' education is one SD below the mean. Average SES students have both parental education and federal aid set equal to the

mean. High SES students are those who do not receive federal aid and whose parents' education is one SD above the mean.

Pre-college social and cultural capital combines the effects of attitude towards literacy, HS involvement, and openness to diversity. Students who score one SD above the mean on all three measures have high pre-college capital, while students who score one SD below the mean on all three measures have low pre-college capital. Average pre-college capital students have their scores on all three measures set equal to the mean. College capital accumulation uses diverse interactions while in college and co-curricular involvement. Students scoring one SD below the mean on both measures have low college capital; students who are one SD above the mean have high college capital. Average college capital students have their scores on both measures set equal to the mean.

The predicted probabilities reveal some interesting differences between students. If we look only at students who come to college with average levels of pre-college capital accumulation, students who come from low SES families are decidedly less likely to plan to study abroad, even if they accumulate high levels of social and cultural capital while in college. Approximately 59% of the low-income students, with average pre-college capital and high college capital accumulation plan to study abroad. This percentage is lower than both the average and high SES students who enter college with average levels of pre-college capital but who accumulate only low levels of capital while in college (60% and 64% respectively).

Furthermore, given the theory we apply here, it is unlikely that most college students who come from low SES backgrounds will have accumulated high levels of social and cultural capital prior to attending college. Likewise, it is more than likely that students from high SES families will come to college with high levels of capital. Therefore, if we focus on the likely pre-college

social and cultural capital accumulation for the different SES groups, we see even more striking differences between the groups that are not mitigated by capital accumulation while in college.

For example, at most, only 45% (those with high college capital accumulation) of the low SES students with low pre-college capital intend to study abroad. Compare this with 60% among the middle class (average SES, with average pre-college capital accumulation) students who accumulate low levels of capital while in college. The number increases to 74% if the same middle class student accumulates high levels of capital while in college.

The numbers for the high SES students who intend to study abroad are even more striking. High SES students who come to college with high levels of social and cultural capital overwhelmingly expect to study abroad. Depending on level of capital accumulation while in college, the percentages planning to study abroad range from 75 to 85.

## DISCUSSION

These findings present a range of important implications for higher education researchers, study abroad faculty, senior administrators, and public policy makers. First, this study reveals a wider range of complicating issues influencing students' intent to study abroad than has previously been considered. Second, it suggests that an integrated model of student choice, already successfully applied to decisions of enrollment and persistence, may provide insight into a range of student decisions regarding participation in meaningful education activities during the college experience.

Our exploration of predisposition to study abroad reveals a complex interplay between socioeconomic status, social and cultural capital accumulated before college, and social and cultural capital gained during the freshman year. The combination of these factors influences a

student's intent to study abroad substantially, from a 31% predicted probability of intent for students from low SES with low pre-college capital and low first year capital, to a 85% predicted probability of intent for students from high SES with high pre-college capital and high first year capital. This suggests that initiatives to increase study abroad participation should broaden their focus beyond efforts to simply alleviate direct costs. If students don't intend to study abroad, they are not likely to ever investigate whether such financial assistance exists.

Even if students from low or average SES backgrounds are provided with full financial assistance to study abroad, a low level of pre-college social and cultural capital could very likely prevent them from valuing the potential educational benefits enough to invest the time and foregone earnings (either from employment during college or by delaying entrance into full-time employment upon graduation) to ultimately enroll and depart for a study abroad program. In this study, these students had a less than 50% probability of intending to study abroad. Moreover, the impact of social and cultural capital accumulation before college is influential even for high SES students, whose probability of intent jumps from 51% for those with low pre-college capital to 75% for those with high pre-college capital. For students from each SES category, the amount of social and cultural capital accumulated before college impacted the probability of intent by 24 and 26 percentage points.

Our findings regarding intended major and institutional type provide add substantial nuance to the question of study abroad participation. This study supports the assertion that for students in many of the STEM (science, technology, engineering, or math) majors, the lack of participation in study abroad is not due to lack of interest. We found that students majoring in business, education, or a STEM field showed no less interest in studying abroad than students from the humanities, fine arts, or foreign languages. If, as others have claimed, that curricular

restrictions in education and STEM majors tend to truncate participation (NAFSA, 2008), these findings further document the need to examine when and where those obstacles emerge.

In addition, the differences in probability to intend to study abroad based on institutional type, while supporting some conventional wisdom, are distressing for study abroad professionals at research universities, regional institutions, and particularly community colleges. While previous research regarding the relationship between a students' SES and attending a community college might be corroborated by the findings of this study, it is useful in considering whether investment in increasing study abroad participation among community college students might not be the most efficient use of resources, especially if the ultimate goal is global awareness and increased intercultural skills. Clearly, more research is needed to examine the significant differences across institutional types and the intent to study abroad, particularly as numerous voices in and out of academe call for increases study abroad participation rates across all undergraduates regardless of institutional type (Lincoln Commission, 2005).

Lastly, other avenues of research into intent to study abroad might produce dividends for efforts to increase and democratize study abroad participation across gender, academic major, and racial or ethnic lines. The long-standing gap between the proportions of men and women who participate in study abroad is replicated in our study of intent to study abroad. This suggests that efforts to boost male participation may need to include an examination of the ways in which each gender is socialized before college toward activities that might enhance their educational experience during college. Contrary to descriptive statistics for minority students that show broad under-representation in study abroad (IIE, 2007), our study found no statistical differences between African-Americans and white students or between Latino/a and white students regarding their intent to study abroad. Interestingly, Asian/Pacific Islander students were

significantly less likely to intend to study abroad than their white counterparts. While our findings support the contention that African-American and Latino/a students are equally interested in studying abroad (Jackson, 2005), it is curious that Asian Pacific Islander students differ in probability of intent. Again, it suggests that increasing study abroad participation among all types of students may require different approaches based on more than just financial considerations. It also further indicates the need to study the entire study abroad choice process to better understand what might be happening throughout the choice process to produce such a large (and growing) gap in rates of participation.

This discrepancy between rates of intent and previously reported rates of participation may also be due to the nature of our sample, which included only full-time college students. As discussed earlier in this paper, minority students disproportionately enroll at community colleges or attend college part-time. This study found that community college students were 30% less likely to intend to study abroad than students at liberal arts colleges. Given this information, it is no wonder that as a proportion of all undergraduate students, minority students are underrepresented in study abroad participation. This reiterates the importance of further research on the choice process of studying abroad and its implications for issues of access, not just to initial college enrollment, but to the full array of educationally important activities available throughout the college experience.

Indeed, the results of this study provide intriguing evidence that extends the application of the student choice construct beyond the decision to enroll and persist. Our application of Perna's (2006) integrated model of student choice to a student's propensity to study abroad suggests that this construct can be applied to the decision to study abroad – one of the many of decisions students make regarding the possibility of participation in educationally important

activities during a college experience. This suggests that the integrated model of student choice could plausibly be applied to examine the factors that encourage or hinder student participation in service learning opportunities, living/learning communities, first-year transition courses, and host of campus involvement programs that have all been shown to positively influence the postsecondary educational experience (Astin, 1993, Kuh, Kinzie, Schuh, Witt, & Assoc, 2006). Further, this approach might shed important light on the reasons that students choose or decline to utilize academic advisors, tutors, career counselors, or engage with faculty in or out of class.

The findings of this study also suggest that not all social or cultural capital is created equal or functions in the same way. While our findings support our overall hypothesis that the accumulation of social and cultural capital plays a critical role in the predisposition to study abroad, not all capital included in the model produced a positive effect. While a positive attitude toward literacy and increased diverse interactions had significant positive effects on the intent to study abroad, high school involvement in activities that might provide social capital (one's networks for acquiring knowledge) or cultural capital (experiences and information that broaden one's horizons) had a significant negative, albeit marginal, effect on intent to study abroad. Recognizing that the social and cultural capital gained through high school involvement has been linked to positive educational experiences (Astin, 1993; McDonough, 1997, Walpole, 2003), this suggests that there may be different types of social and cultural capital that benefit different types of equally important educational experiences.

Most importantly, our study indicates that the effects of accumulating low levels of social and cultural capital before college continue to impact the choices students make about their educational experience long after they matriculate. Furthermore, these effects are not substantially mitigated by the related capital they may acquire during the freshman year. This

perpetually limiting perception likely colors the lens through which students view many potentially valuable opportunities and inhibits postsecondary education from fulfilling its role as an equalizing force for all members of society.

As student populations continue to grow more diverse, it is increasingly incumbent upon institutions to consider the contexts from which their students come and recognize that each student's accumulated pre-college capital will shape how they engage the educational opportunities available to them throughout the college experience. While this presents a level of challenge that many postsecondary institutions struggle to grasp, this study indicates that initiatives to increase participation in educationally valuable programs such as study abroad can benefit from taking into account the role of accumulated capital in shaping the decision processes of college students.

## CONCLUSION

Extensive research on the benefits of enrolling in a study abroad program has provided numerous reasons to encourage participation. Yet, while only a handful of studies have empirically explored the obstacles to increasing participation, very little is known about the factors that influence intent to study abroad. Because the decision to study abroad so closely mirrors the three stages of the college choice process (predisposition, search, and choice), research on study abroad participation should expand its scope to focus on all three phases of this decision-making process. This study provides an early glimpse into the cumulative effect of many forms of capital that students accumulate before college in considering the possibility of participating in study abroad. While shedding light for national policy makers on important elements to consider when constructing initiatives to increase and democratize study abroad, this

study also provides evidence that institutions can mitigate some of the effects of low pre-college capital accumulation by crafting more opportunities for students to engage in diverse interactions and co-curricular experiences. We hope this paper will also encourage further research into the effects of accumulated economic, human, social, and cultural capital on student decisions to engage in other educationally important experiences during college. This vein of exploration may well provide an important key to reversing the disparities that remain in postsecondary education.

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Table 1. Description of variables included in our model

Variable Name	Description	Mean	SD	Alpha (# of items)
Intent to study abroad	the student intends to study abroad	.6324	.48224	----
ACT/SAT	pre-college standardized test score converted to an ACT score	.0000	1.0000	----
Federal grant	institutional data indicating the student received a federal grant	.1498	.35689	----
Institutional grant	institutional data indicating the student received an institutional grant	.4927	.50003	----
Loan	institutional data indicating the student received a student loan	.4920	.50002	----
Male	gender (male=1, female=0)	.3482	.47647	----
African American	race (African American=1)	.0493	.21661	----
Asian/Pacific Islander	race (Asian Pacific Islander=1)	.0719	.25841	----
Latino	race (Latino=1)	.0570	.23185	----
Other race	race (non-White other=1)	.0153	.12272	----
Parental Education	average of mother's and father's educational attainment (if only one score was provided, then it replaced the average)	.0000	1.0000	----
Aspire to more than 4-year degree	the student aspires to a graduate degree beyond a bachelor's degree	.7929	.40529	----
Attitude toward literacy scale	scale measuring the degree of student's positive attitude toward literacy	.0000	1.0000	.680 (6 items)
HS Involvement scale	scale measuring degree of student's high school involvement in activities that might increase social or cultural capital	.0000	1.0000	.598 (6 items)
Openness to diversity scale	scale measuring student's openness to diversity	.0000	1.0000	.831 (7 items)
Institution: Research	institutional data indicating the student attends a research I institution	.2644	.44110	----
Institution: Regional	institutional data indicating the student attends a regional public institution	.1650	.37129	----
Institution: CC	institutional data indicating the student attends a community college	.0420	.20072	----
Major: Business	student intends to major in business	.1223	.32770	----
Major: Education	student intends to major in education	.0612	.23965	----
Major: STEM	student intends to major in a STEM field	.7290	.44456	----
Major: Social Sciences	student intends to major in a social science fields	.1115	.31485	----
Major: Undecided	student is undecided about major choice	.1817	.38568	----
Major: Other	student's intended major is not listed	.0132	.11417	----
Student-faculty interaction scale	scale measuring quality of non-classroom interactions with faculty	.0000	1.0000	.854 (5 items)
Course-related diversity scale	scale measuring the degree of course-related diversity experiences	.0000	1.0000	.684 (3 items)
Positive peer interactions scale	scale measuring degree of positive peer interactions	.0000	1.0000	.871 (8 items)
Diverse interactions scale	scale measuring the amount and quality of diverse experiences	.0000	1.0000	.841 (11 items)
Integration scale	scale measuring student's integration of ideas, information, and experiences	.0000	1.0000	.755 (9 items)
Co-curricular involvement scale	number of hours per week student spends participating in co-curricular activities	.0000	1.0000	-----

Table 2. Results from our logistic regression model of intent to study abroad

	Parameter estimate	Standard Error	Odds ratio	Delta-P
Constant	0.818 ***	0.051	2.226	
ACT/SAT	0.026	0.136	1.026	
Federal grant	-0.472 ***	0.110	0.624	-0.111
Institutional grant	-0.082	0.099	0.921	
Loan	0.132	0.090	1.142	
Male	-0.362 ***	0.217	0.697	-0.083
African American	-0.008	0.170	0.992	
Asian Pacific Islander	-0.595 ***	0.198	0.551	-0.143
Latino	0.153	0.408	1.165	
Other race	-0.425	0.047	0.654	
Parental education	0.199 ***	0.206	1.220	0.045
More than 4-year	-0.098	0.049	0.907	
Attitude toward literacy	0.230 ***	0.046	1.259	0.052
HS Involvement	-0.093 *	0.047	0.911	-0.021
Openness to diversity	0.398 ***	0.123	1.488	0.090
Institution: Research	-0.542 ***	0.134	0.582	-0.127
Institution: Regional	-0.514 ***	0.181	0.598	-0.121
Institution: CC	-1.217 ***	0.120	0.296	-0.295
Major: Business	0.198	0.185	1.219	
Major: Education	-0.101	0.183	0.904	
Major: STEM	0.239	0.162	1.270	
Major: Social sciences	0.403 *	0.119	1.496	0.086
Major: Undecided	0.771 ***	0.317	2.162	0.159
Major: Other	0.627 *	0.048	1.872	0.126
Student-faculty interaction	0.073	0.048	1.075	
Course-related diversity	0.042	0.048	1.043	
Peer interactions	-0.083	0.054	0.921	
Diverse interactions	0.207 ***	0.053	1.231	0.047
Integration	-0.099	0.046	0.906	
Co-curric. involvement	0.110 *	0.153	1.116	0.025
-2 Log likelihood	3442.02			
% correctly predicted				
Intend	75.5			
Do not intend	54.9			
Total	66.2			
Pseudo-R <sup>2</sup>	0.221			

Note: \*p<.05, \*\*p<.01, \*\*\*p<.001

Delta-p is the change in probability of intending to study abroad resulting from a one-unit change in the independent variable. See Long and

Freese (2003) for details.

Table 3. Predicted probabilities from simulations exploring the effects of college capital accumulation

SES	Pre-college Capital	College Capital		
		Low	Average	High
Low	Low	0.31	0.38	0.45
	Average	0.43	0.51	0.59
	High	0.56	0.64	0.71
Average	Low	0.46	0.54	0.62
	Average	0.60	0.67	0.74
	High	0.72	0.78	0.83
High	Low	0.51	0.59	0.67
	Average	0.64	0.71	0.77
	High	0.75	0.81	0.85

Note: We create “ideal types” (see Long and Freese, 2003, for a detailed description of ideal types) for students from different backgrounds and different levels of capital accumulation. Socioeconomic status (SES) is determined by parental education and whether a student receives federal aid. Low SES students received federal aid and their parents’ education is one SD below the mean. Average SES students have both parental education and federal aid set equal to the mean. High SES students are those who do not receive federal aid and whose parents’ education is one SD above the mean. High school capital combines students’ attitude towards literacy, high school involvement and openness to diversity.

Students who score one SD above the mean on all three measures of pre-college capital accumulation have high pre-college capital, while students who score one SD below the mean on all three measures have low pre-college capital. Average pre-college capital students have scores all three measures set equal to the mean.

College capital categories are based on the variables diverse interactions while in college and co-curricular involvement. Students scoring one SD below the mean on both measures have low college capital; students who are one SD above the mean have high college capital. Average college capital students have scores on both measures set equal to the mean.