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Study Abroad: Educational and Employment Outcomes of Participants versus Non Participants

James T. Posey Jr

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JAMES T. POSEY, JR.

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The members of the Committee approve the dissertation of James T. Posey, Jr. defended on Nov. 6, 2003.

Joseph C. Beckham
Professor Directing Dissertation

Peter B. Easton
Outside Committee Member

Jon C. Dalton
Committee Member

Robert A. Schwartz
Committee Member

Joy Gaston
Committee Member

Approved:

Carolyn D. Herrington, Department Chair, Educational Leadership & Policy Studies

The Office of Graduate Studies has verified and approved the above named committee members.

This dissertation is dedicated with love and appreciation to

Kimie Nishimura Posey, the truest Ph.D.

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ABSTRACT

Many educators and business people are awakening to the growing need to better equip students with an international perspective and understanding. One common method to promote these goals is accomplished via a variety of study abroad programs offered through colleges and universities. The most often cited gains or benefits related to study abroad participation are in the areas of maturity, language proficiency, increased knowledge of a specific culture, and global-mindedness. Existing theories of learning, student development, and human capital suggest that participation in study abroad could theoretically lead to increased psychological and skill growth, thereby leading to positive educational and employment outcomes.

Using archival Florida state system databases, this study investigated educational and employment outcome differences between study abroad participants and non participants. The study found common characteristics among gender, race, and high school academic achievement for study abroad participants. Although claims of causality cannot be made between study abroad and various outcomes, several significant associations were found particularly for educational outcomes. For example, 93.2% of study abroad participants received some type of degree compared to only 64% of the non study abroad group. The study abroad group also had a higher mean college GPA of 3.19 compared to the 2.74 for the non study abroad group. The non study abroad group was found employed in Florida at higher rates; however, the data was limited to those found employed only within Florida and did not account for those who might have found employment in other locations. The non study abroad group also had a higher mean wage than the study abroad group. However, when controlled by degree program and study abroad location, this wage difference dissipated suggesting degree program is the stronger indicator of wage outcomes.

Implications for policy development and future study include more detailed examination of the study abroad experience as a recruitment tool, as well as a retention/graduation best practice. Institutions should also examine methods to increase minority participation in study abroad.

CHAPTER I
INTRODUCTION

Overview

With the emergence of the "global village" in the 20th century highlighting our increasing interdependence, many educators and business people alike are awakening to the growing need to better equip students with an international perspective and understanding. International management experts posit that for companies to compete successfully in an increasingly global market it is necessary to develop a workforce whose values and ways of thinking transcend ethnocentric frameworks (Pucik, Tichy, & Barnett, 1992). Concurrently, the increased global tensions marking the start of the 21st century have served to highlight and deepen the need for greater international understanding and appreciation for diversity. One common method to promote this international perspective and understanding is accomplished via a variety of study abroad programs offered through colleges and universities. Study abroad programs are today offered around the globe and have clearly developed into a major industry within higher education.

There is an abundance of research describing individual programs and purposes, as well as student and faculty perspectives about the influence of a study abroad experience on participants. In particular, the most often cited gains or benefits related to study abroad participation are in three areas: maturity, language proficiency, and increased knowledge of a specific culture (Anderson, 1996; Terehoff, 2000). Additionally, comparative studies of participants versus non-participants of study abroad have shown enhanced intellectual growth, personal development and global mindedness (Bates, 1997). Often participants in follow-up surveys claim that study abroad was a worthwhile investment in their future and that the program had a substantial effect on their lives. Indeed, a study abroad experience can be an "eye-stopper" on a resume setting a student apart from others (Toncar & Cudmore, 2000). According to Lundstrom, White,

and Schuster (1996) research supports that an international business internship is now rated as highly as foreign language training among marketing professionals.

However, one of the problems with the claims of growth attributed to study abroad is that many of the investigations into study abroad are qualitative and/or descriptive in nature consisting of questionnaires, follow-up surveys and case studies concerning personal or language growth. A review of the literature reveals a lack of well-designed, quantitative studies that attempt to measure long-term results of study abroad participation, particularly in the realm of professional outcomes. Studies are often based on small sample sizes, are not comprehensive or longitudinal in scope, and are rather dated.

On the other hand, there are existing theoretical frameworks that suggest study abroad could lead to positive outcomes. Pascarella and Terenzini (1994), stated this possibility quite succinctly: "Real quality in undergraduate education resides more in an institution's educational climate and in what it does programmatically…One must look at factors such as: 1) the nature and cohesiveness of students' curricular experiences; 2) their course taking patterns;…5) the nature of their peer group interactions and extracurricular activities."

Further, the psychosocial outcomes and growth often attributed to study abroad participation are seemingly reinforced and paralleled by various applicable learning theories such as Gagne's conditions of learning, Roger's experiential learning, Lave's situated learning, Bandura's social learning theory, and transformational learning as introduced by Mezirow (Bandura, 1971; Gagne, 1985, Lave, 1988; Rogers, 1969; Mezirow, 1978). These learning theories appear to add credence to the position that study abroad should facilitate positive learning outcomes, as many of the conditions and attributes that learning theories are based on are contained within the objectives of study abroad programs. For example, the Study Abroad Worldwide organization claims that the study abroad experience will "contribute to the development in all students the skills, habits, motivation, and desire for learning that will make it possible for them to educate themselves for the rest of their lives." (http://www.studyabroadworldwide.com/index.html).

Student development theory also seems to suggest possible links between study abroad participation and psychological and skill growth. In today's literature, one can find over 20 theories or models defining how college affects change or development in students (Pascarella & Terenzini, 1991). Many of these theories, ranging broadly from psycho-social, cognitive-structural, typological, and person-environment fit could be argued to have some relationship to the study abroad experience, as study abroad is one component of postsecondary education. One theory that serves well as a model to this argument are the seven vectors of student development as posited by Arthur Chickering in 1969. In particular are the attributes of "increased competence in skills and social relations, as well as increased tolerance and respect for those of different backgrounds, habits, values, and appearance" (Evans, Forney, and Guido-DiBrito, 1998). These vectors of Chickering's theory correspond highly with claimed benefits of study abroad participation, e.g., the outcomes of study abroad participation stated by the College Consortium for International Studies on their web page (http://www.ccisabroad.org) claiming increased understanding of other cultures and the opportunity to sharpen interpersonal and communication skills through interacting with people from different backgrounds. Theories of retention also suggest that successful integration manifests satisfaction that thereby enhances commitment and positively influences a student's decision to persist at a particular institution (Tinto, 1993). Because students commonly claim what a powerful and beneficial experience study abroad was, and because the literature shows the influence of powerful and positive experiences on retention, it seems worthwhile to explore study abroad in relationship to retention and graduation rates.

Exactly what are the attributes ascribed to study abroad that link it with the above theories? These attributes can be found within the stated goals and purposes of study abroad programs and the expressed outcomes stated by participants in previous studies. The FSU International Programs claims as a purpose: "collegiate education enriched by the unique resources of other nations." This stated purpose suggests the provision of a learning, developmental environment based within immersive, situational and socially encompassing parameters that strongly parallels Bandura's Social Learning Theory and self-efficacy. The International Programs further state that students come home transformed with a new sense of self-reliance, cooperative spirit, world perspective, and

increased passion for learning (FSU, 2001). These stated outcomes clearly claim a transformative experience that soundly corresponds to transformative learning theory that declares such learning changes the way people see themselves and their world. Again, there is little empirical evidence to verify the accomplishment of these stated goals, purposes, and outcomes via study abroad; however, it is the purpose here simply to make the connections between learning and student development theory and the corresponding similar claims made by study abroad programs and participants.

In addition, the theory of human capital furnishes educators and economists with a framework to study the relationship between education and income. Certainly there are many criticisms of human capital theory that place caveats in the theory's ability to accurately calculate the rate of return on investment - including and seemingly applicable to study abroad - the difficulty of distinguishing between investment or consumption during the education process. Additionally, a large part of earnings may be due to ability rather than education, and as the screening hypothesis alternatively clarifies, possession of a degree may be what creates higher income rather than being more productive (Wilkes, 2003). However, given these criticisms of human capital theory, a large quantity of research on this concept has confirmed significant connections between education and productivity and consequently income (Hansen, 1970). Human capital theory offers the perspective that students might choose to invest in education and training as an investment in their future (Becker, 1993). Here again, this income via education, or rate of return human capital theory, with all its criticisms, seems worthy of study in its applicability to the investment and participation in study abroad.

Conceptual Framework

Therefore, a theoretical framework concerning study abroad participation can be formed by comparing the stated goals and benefits of study abroad with the existing theoretical frameworks of learning theory, student development theory, and human capital theory. One might reasonably expect to see the various claims that have been made about the positive influence of study abroad manifested into positive differences in the academic and professional lives of former participants. In other words, the immersive, intensive, situational, experiential, transformative, socially encompassing, self-chosen,

time consuming and often expensive curricular activity of study abroad is a condensed, intensified, contextual collegiate experience encompassing many of the benefits often attributed with attending college that could result in positive psychosocial and skill development, which correspondingly could be reflected in greater academic and professional growth.

Statement of the Problem

Given the emphasis on, and growth of, study abroad programs currently offered within higher education, and the amounts of money being invested by individuals and institutions, there is a need to further study the validity of claims of positive outcomes in terms of actual empirical evidence. Study abroad has a well-developed and distinguished history in American colleges and universities; however, it also has a reputation as little more than an extracurricular activity. It is therefore important that more research be conducted in the field of study abroad to better assess how to both improve programs and to identify outcomes associated with them.

Statement of Purpose

This study investigated educational and employment outcome differences between students who participated in study abroad and students who did not participate. The study was a quantitative study of empirical outcomes drawn from a rich dataset of existing archival databases, with data that included multiple variables of pre through post-collegiate education and post-collegiate employment data. The purpose of this study was to assess differences between educational and employment outcomes of Florida State University's (FSU) International Program's study abroad participants and non-participants of the 1993, 1994 and 1995 FSU entering cohorts.

Research Questions

The research questions for this study were designed to provide a better understanding of the educational and employment outcomes of study abroad students, as analyzed by demographic, ability and educational profiles. Comparisons were drawn between students who participated in study abroad versus non-participants of the FSU

entering classes of 1993, 1994 and 1995. Educational outcomes were defined as GPA, rate of graduation, time to graduation, program of study, and the highest degree attained. Employment outcomes were defined as rate of employment, earnings, and industry of employment. All employment outcomes were limited to those found employed in the State of Florida.

Differences in outcomes were assessed based on the independent variable of who participated in FSU's International Programs and who did not participate. The independent variable of participation was subcategorized by location of study, as well as by gender and race.

Therefore, the three research questions of interest were:

1. What are the demographic and pre-college characteristics of study abroad participants and are there differences versus non-participants?
2. What are the educational outcomes of study abroad participants versus non participants and are there differences between the variables of program of study, rates of graduation, time to graduation, college GPA, and highest degree attained?
3. What are the employment outcomes of study abroad participants versus non participants and are there differences between the variables of industry of employment, rate of employment, and earning levels?

Research Hypothesis

The research hypothesis of this study was that there could be differences or correlations in educational and employment outcomes as a function of participation in study abroad programs when compared to non-participants.

CHAPTER II
REVIEW OF RELATED LITERATURE

History of Study Abroad

Study abroad within American higher education dates back to the earliest days of the first nine colonial colleges in the 1600's. Most participants, similar to most college students of the day, were wealthy and often went to Europe to study (Brubacher & Rudy, 1976). In the 1920's, many east coast institutions initiated the popular "junior year abroad" model that continues to be popular today (Bowman, 1987). The federal government began to get involved with funding of study abroad in the 1950's. At this time two distinct types of programs emerged: participation in foreign institutions' programs, and secondly, transplantation of the American institutions' curriculum overseas (Walker, 1999). In the 1990's, study abroad exploded as institutions began placing greater emphasis on programs to improve language skills, to enhance cross cultural understanding, and to internationalize curricula (Pickert, 1992). Today, government and academe seem to agree that study abroad can play an important role in the development of skills that students need to compete in an increasingly interdependent world.

Current Study Abroad Sponsors

There are many institutions large and small involved in promoting and providing service for international exchange within higher education. Below is a listing of a few of the major players in this field.

Institute of International Education (IIE)

The Institute of International Education, (www.iie.org), publishes an annual descriptive guide entitled "Academic Year Abroad" that provides information on over 2600 study abroad programs. A comprehensive listing of additional websites and publications concerned with study abroad can be found in the back of "Academic Year Abroad", p.xxvii. In addition to publishing the reference guides, the IIE claims to be the largest sponsor of international students at US universities, and it's membership includes 600 higher education institutions in the US as well as abroad. With offices worldwide and more than 75 years of experience in the field of international exchange, the IIE is a leader in promoting international exchange among students, faculty, and institutions. By forging partnerships between the public and private sector, the IIE administers 250 programs that it claims benefit 18,000 men and women from 175 countries each year (Academic Year Abroad, 1999, p. vi). The IIE also administers the Fulbright program, the U.S. government's well-known public diplomacy initiative that was initiated in 1946. The Fulbright program annually offers fellowships to U.S. and foreign students and educators to participate in international exchange (http://www. iie.org/fulbright/).

American Institute for Foreign Study (AIFS)

Founded in 1964, AIFS (http://www.aifs.org/2index.htm) is a privately owned corporation that arranges cultural exchange programs for more than 50,000 high school and higher education students annually. In affiliation with 18 international universities and 500 U.S. colleges and universities, AIFS study abroad college division (http://www.aifs.org/college/index.htm) sponsors academic year and summer term programs around the world for 5,000 higher education students annually (http://www.aifs.org/java/US/about.htm).

College Consortium for International Studies (CCIS)

CCIS (http://www.ccisabroad.org).is a consortium of more than 160 accredited public, private, two-year, and four-year U.S. colleges and universities offering higher education students a choice of over 40 study abroad programs in 28 countries. Single semester, academic year, and summer term programs are offered with academic credit.

Council on International Educational Exchange (CIEE)

CIEE (http://www.ciee.org/isp/) is an academic consortium of 185 member institutions of American colleges and universities, and a small number of non-U.S. institutions. CIEE offers study abroad opportunities of two basic types. Study Centers provide a wide range of more traditional study abroad programs covering diverse fields of study and duration. The second program, Direct Enrollment, offers an opportunity for students to experience an overseas university on its own terms.

Department of State – International Information Programs

The Bureau of Educational and Cultural Affairs (ECA) and the United States Information Agency (USIA) (http://usinfo.state.gov/) are government organizations designed to foster mutual understanding between the United States and other countries through international educational, training, and cultural programs. They promote personal, professional, and institutional ties between private citizens and organizations in the United States and abroad.

National Science Foundation (NSF)

The NSF (http://www.nsf.gov) promotes educational exchanges in science and engineering with the hope that future generations of U.S. scientists can gain valuable experience from international cooperation in educational and research environments.

Study Abroad Worldwide

Study Abroad Worldwide (http://www.studyabroadworldwide.com/index.html) is a collaborative marketing effort of some of the leading international education providers in the United States. This website offers a single portal to their respective offerings.

Other Study Abroad Information Sources

"Peterson's Study Abroad" is also an annually updated comprehensive guide providing descriptions of over 1,700 overseas academic programs including descriptors for country and city, field of study, program sponsors, host institutions, and internship programs. Many other books on international programs are in print as well; however, because they are not up-dated annually they are of questionable value as current reference guides.

Another source for locating information on international exchange programs is to go directly to the source, or the sponsoring institution. The Internet or World Wide Web

has made access to institutional home pages around the world readily accessible to anyone with access to a computer and an Internet connection. Many American universities now include information on their respective exchange programs on these web pages.

Study Abroad Demographic and Descriptive Profiles

Participant Demographics

Participation in study abroad programs by U.S. students is increasing. During the twelve years from 1985 – 1997, the number of students going abroad to study and receiving academic credit increased substantially, doubling from just under 50,000 students to a current total of approximately 100,000. This pattern shows no signs of abating as the last two years have shown percentage increases of 5.7% and 11.4% respectively (Academic Year Abroad, 1999, pgs. 642-644). Although the number of students choosing to study abroad is increasing, this still represents less than 1% of the total number of higher education students (Hayes, 1998).

The traditional junior year abroad model is still popular among U.S. students, with 41.3 percent of study abroad participants choosing to go during their junior year of undergraduate study. The senior year is second in popularity garnering a percentage of 18.3 % in 1996/1997. Unspecified graduate and master's students total only 7.5% of the students going abroad (Academic Year Abroad, 1999, p. 648).

Sex distribution among students studying abroad is clearly unbalanced, as females outrank males almost 2 to 1, with 65 % of study abroad students being female. This ratio has continued since the 1980s (Academic Year Abroad, 1999, p. 648).

Race or ethnicity is also unbalanced among study abroad students. White students accounted for 83.9% of study abroad students in 1996/1997. Hispanic-American and Asian-American students each had about 5% of the population, with African –Americans placing a distant fourth with 3.5% of the total (Academic Year Abroad, 1999, p. 648). One study conducted with 1,139 students to determine why minorities have lower participation in study abroad found several possible reasons including high attrition rates among minorities in the freshman and sophomore years, which can influence study abroad rates as most students participate in study abroad in their junior year. Other

influences were economic concerns, fear of travel to unknown places, fear of discrimination, and language difficulties (Hembroff & Rusz, 1993).

Program Classifications

There are a wide variety of diverse options available to higher education students when choosing a study abroad program. However, there appear to be three major classifiers that enable one to begin to categorize programs. These are: 1) location/destination, 2) duration and time of year of the program and 3) the emphasis or purpose of the program and field of study.

Destinations

The leading destination for study abroad students from the U.S. remains Europe, however, other areas around the globe are gaining favor. The percentage of students going to Europe has fallen from 79.6% in 1985/1986 to a low of 64.5% in 1996/1997. Another region declining in popularity as a study abroad location is the Middle East with percentages falling from 4.0% to 1.9%. Conversely during the same time period, Africa has risen from 1.1% to 2.6%, Oceania has gone from 0.9% to 4.4%, and Latin America has increased from 7.0% to 15.3%. Another concept that has shown notable increase is that of students choosing to study in multiple regions rather than in a single location, with percentages rising from 1.0% to 4.6%. Asia and North America have remained consistent over the years with Asia showing a small increase in students from 5.4% to 6.1% and North America registering percentages of 0.9 in 1985/1986 and 0.7 in 1996/1997 (Academic Year Abroad, 1999, p. 643).

The most recent top ten receiving countries in order are: 1) United Kingdom – 22.9%, 2) Italy, 3) Spain, 4) France – each about 9%, 5) Mexico – 6.9%, 6) Australia – 4%, 7) Germany – 4%, 8) Costa Rica –2%, 9) Japan –2%, 10) Ireland – 2%. It can be noted from these statistics that the top four countries as well as six out of the top ten countries of choice for study abroad students are in Western Europe (Academic Year Abroad, 1999, p. 644).

Duration and Time of Year

The variety in duration of program is quite extensive. In "Academic Year Abroad" (1999) and "Vacation Study Abroad", (1999), programs range from one week to one calendar year in duration, and are divided into the following increments: 1) Fewer

than 8 weeks, 2) One quarter, 3) January term, 4) Summer term, 5) One semester, 6) Two quarters, 7) Academic year, 8) Calendar year, and 9) Other.

There has been a noticeable trend over the last twelve years favoring a shorter duration of time studying abroad. In 1996/1997, over 54% of study abroad students spent one semester or less in the host country. Summer term programs were the second-most popular garnering 32% of study abroad students. Only 10% of the study abroad population spent an entire academic year abroad. Over the twelve year period studied, yearly trends appear to correlate to these statistics, with programs of one semester or less and summer term showing gradual increases, while programs of more than one semester show a gradual decline (Academic Year Abroad, 1999, pgs. 645 - 646).

Field of study

The diversity of program content and focus is also quite comprehensive; there is a wide range of choice in study options abroad. Adult courses, art studios, directed field study, freshman courses, graduate courses, independent study, internships, music lessons, practical training, pre-college programs, professional courses, student teaching, study tours, teacher courses, volunteer/service, and workshops are the special option categories listed in Academic Year Abroad (1999). Within these categories of options, the directed field of study itself is another classification separator in terms of program purpose. Programs can be found in a multitude of fields including but certainly not limited to, humanities, business, language, arts, sciences, and education.

Humanities and social sciences continue to be the leading programs of study for students going abroad with a percentage of 34%. However, these fields are showing a small decrease in popularity. Business study is increasing slowly, showing a rise to 13.9% in 1996/1997. However, Engineering, Math and Computer Science combined registered only 3.4% of the total students. (Academic Year Abroad, 1999, p.646).

The increase in business study seems to be changing as employers become more interested in students with international experience. Several schools now offer overseas internship programs for academic credit, making it more feasible for business students to pick up international experience (Saltzman, 1996). There can be career rewards attached to study abroad as more and more companies become international in scope and are looking for employees with international experience. Graduates of Boston University –

Brussels with an M..S. in management have a 100% job placement rate, securing jobs around the globe (Hayes, 1998).

Technical fields of study are also beginning to open up abroad. A consortium of academic and professional engineering organizations, Global Engineering Education Exchange, works to insure that students can study abroad and still receive academic credit for their efforts (Saltzman, 1996). A twenty year old U.S.–Japan exchange program sponsored jointly by the American Nuclear Society, Argonne National Laboratory, the University of Chicago, and the U.S. Department of Energy sends American students overseas to study and work in research institutions, while Japanese and European students come to America to study and work at Argonne. Projects include nuclear engineering, chemistry, materials science, and technology development (American Nuclear Society, 1997).

Study abroad internships are becoming more available as business schools move toward an increasingly global curriculum. However, although the Society for Experiential Education estimates a minimum of one-third of college students complete a traditional local internship, study abroad internships have been slow to respond to the need for more global placements. Students hoping for an internship abroad may have to settle for a placement with a local organization with some form of international involvement (Toncar & Cudmore, 2000).

Another major separator to be considered is whether or not the exchange program is offered for academic credit. Many programs do offer academic credit that can be used to fulfill requirements for undergraduate and graduate academic degrees.

At times the sponsoring institution may qualify the program emphasis, for example, a government sponsored program for foreign policy initiatives. Also, instruction may model the U.S. home institution and even be taught by faculty from the home campus, or conversely, students may be expected to follow the educational system of the host institution. Students may also choose from a variety of programs designed to foster professional training or career advancement. Housing accommodations, i.e., whether one is housed with a host family, in commercial facilities, or on campus of the host university, is also a separator to be considered in classification of programs (Anderson, 1996).

Goals of Study Abroad

There are a variety of expressed goals and intended outcomes for study abroad programs. Quotations from several of the leading players in the field help to clarify and define these goals. The IIE states on its web page: "Peace and prosperity in the 21st Century depend on increasing the capacity of people to think and work on a global and intercultural basis. As technology opens borders, educational and professional exchange opens minds." In addition, the Fulbright Program sponsored by IIE states: "the Fulbright Program aims to increase mutual understanding between the peoples of the United States and other countries, through the exchange of persons, knowledge and skills." (IIE, 2003).

The following intended benefits come from the AIF web page on their program in Beijing, China: "Studying abroad is all about absorbing and practicing the foreign culture…AIFS's program in Beijing, China would be the perfect jumping off point for you to begin your education of the Chinese culture and take advantage of China's new global situation…you will learn the fundamentals of the Chinese language…students will take a course that not only covers codes of behavior, but also gives you an overview of Chinese life, including education, religion, art, architecture, music, economic reform and Beijing' s history and culture."

The CCIS webpage lists a variety of reasons to study abroad including: "Gain an international dimension and a global perspective, develop a global resume, increase your understanding of other cultures and get a different perspective on your own culture, immerse yourself in the life of the host country, sharpen interpersonal and communication skills through interacting with people from backgrounds different than your own, achieve competence in a foreign language, enhance your sense of independence and self-confidence, and expand your career choices and clarify your personal goals."

The Study Abroad Worldwide website lists the following goals in their mission statement for the Florence, Italy program: "providing an educationally rewarding academic program in a friendly and safe foreign environment that inspires and encourages participation, exploration and a desire to embrace new cultures and international experiences; and contributing to the development in all students the skills,

habits, motivation, and desire for learning that will make it possible for them to educate themselves for the rest of their lives."

Although the above goals are only a small sampling of goals and intended outcomes of study abroad, one can clearly see the ambitious hopes that are tied to study abroad participation including academic and language gains, employment opportunities, and psychosocial growth and development in students.

Learning Theory as Applied to Study Abroad

Several learning theories add relevance to the claims of positive gain from study abroad participation. Although none of these theories were developed specifically for application to the study abroad experience, they do seem to suggest that there may well be some validity to the qualitative claims of positive gains from study abroad participation.

Gagne's Conditions of Learning Theory states there are five major categories of learning: verbal information, intellectual skills, cognitive strategies, motor skills and attitudes (Gagne, 1985). When examining the objectives and environments of study abroad programs in relation to these five categories, it is striking how all five are often associated with study abroad. Verbal information skills are obvious because of the foreign environment. In addition to improvement in intellectual skills received from the classroom aspect of the program, participants often claim that cognitive skills and attitudes, as well, have undergone major change as a result of the opportunity to face new problems that required new solutions.

Bandura's Social Learning Theory stresses the importance of observing and modeling other's behaviors, attitudes, and emotions. According to Bandura, observation and modeling of behaviors serves as a guide for future action. Bandura has expanded this theory more recently to include the concept of self-efficacy (Bandura, 1971, 1993). Again, this social learning theory and the observational learning that occurs because of environmental influences seems applicable to the conditions and claims made from study abroad.

DeBono's Lateral Thinking Theory posits that the generation of novel solutions to problems requires different ways of looking at things to encourage new ideas (DeBono,

1967). This concept also seems applicable to study abroad environments and comparable to expressed goals of study abroad. Vygotsky argues that all cognitive processes including language acquisition occur from social interaction (Vygotsky, 1978). Roger's Experiential Learning Theory suggests that applied knowledge or significant learning occurs when the subject matter is relevant to the personal interests of the student. Such experiential learning according to Rogers, is equivalent to personal change and growth (Rogers, 1969). The commitment to participate in study abroad would suggest self-initiation and personal involvement on the part of the participant, and clearly falls in the realm of experiential learning.

Functional Context Theory was developed originally for technical and literacy training in military programs, but it has implications for learning in general. Its main principle states that learning should be as meaningful as possible to the learner in terms of the learner's prior knowledge. It is important to make learning relevant to the experience of learners and their work context so that learning can be transferred from the classroom to the real world (Sticht, 1988).

Situated Learning Theory is a general theory of knowledge acquisition and argues that learning is a function of the context and culture in which it occurs. In other words, knowledge should be delivered in an authentic context and setting. Under this theory, learning also requires social interaction and collaboration. Situated learning is often unintentional rather than deliberate (Lave, 1988).

Transformative learning is a theory first introduced by Mezirow in 1975 that is recently gaining in attention. In fact, within transformational learning, Mezirow's cognitive-rational approach provides much of the empirical research in the literature. Transformative learning is said to occur when new experiences force us to change our frame of reference or discard a habit of mind (Mezirow & Assoc., 2000). According to Mezirow (1997): "transformative learners move toward a frame of reference that is more inclusive, discriminating, self-reflective, & integrative of experience". Whereas traditional informational learning suggests that much of what we learn is simply added onto what we know, transformative learning changes the way people see themselves and their world (Clark, 1993 as cited in Baumgartner, 2001). Transformational learning can occur gradually or from a sudden, powerful experience. This constructivist approach

states that knowledge is not "out there", but rather is created from interpretations and reinterpretations in light of new experiences (Mezirow, 1991 as cited in Baumgartner, 2001).

In summary, it is striking how all these learning theories appear highly appropriate and theoretically connected to the immersive situations of study abroad. In general, these learning theories all have in common particular aspects that relate to the often expressed goals and outcomes of study abroad: transformative, positive change as manifested in increased self-realization and personal development brought about by the immersive, culture-based, planned, self-applicable and challenging environment of a study abroad experience. Even though the individual purposes of the study abroad are diverse; the conditions for contextual, situational, experiential, and transformative learning are common to all.

Student Development Theory as Applied to Study Abroad

Although the literature is expansive and varied on the goals of higher education as they pertain to student development, similar and oft-quoted themes can be defined. According to the National Association of Student Personnel Administrators (NASPA) in their 1987 report entitled Points of View, the "traditional purposes of higher education are to preserve, transmit, and create knowledge; to encourage personal development; and to serve society. In addition, college and university programs help individuals cope with significant life transitions—from adolescence to adulthood, from dependence to personal autonomy, from one occupation to another." (NASPA, 1987, pg 9). Other experts site the aspects of cognitive learning, i.e., expanding knowledge and intellectual powers; affective development, i.e., enhancing moral, religious, and emotional interests; and practical competence, i.e., improving skills in citizenship, work, family and other practical daily life affairs. Contained within these goals is the pursuit of personal self-discovery and career choice. Here again, one can clearly see the similarity to expressed goals of study abroad participation.

The field of student development theory in general asks the basic question of how does college affect students? It explores the cognitive, affective, and behavioral aspects of student development from an individual, group, and institutional perspective. There

are several leading theorists who have developed conceptual frameworks as to how or why students change through the collegiate experience. The following are excerpts taken from several of these theories as applicable to intended study abroad goals and outcomes.

Chickering's Seven Vectors

Chickering's psychosocial theory encompassing seven vectors describes a maturational process that occurs more as a spiral or in steps than a straight line, and when taken cumulatively leads to identity development. The seven vectors are: achieving competence, managing emotions, developing autonomy, establishing identity, freeing interpersonal relationships, developing purpose, and developing integrity. Some attributes often assigned to these seven vectors include "increased competence in skills and social relations, as well as increased tolerance and respect for those of different backgrounds, habits, values, and appearance." (Evans, Forney, & Guido-DiBrito, 1998). These intended student development attributes are strikingly the same as expressed goals and outcomes of study abroad.

Environment and Development

There are several theories that stress the relationship of environment to development. Sanford (1966) was perhaps the first to see student development as an outcome of person-environment interaction. He stressed the importance of finding "optimal dissonance" based on balancing challenge and support. Astin later argued that the more active a student is in their environment, the more learning and growth will occur. Once again, the immersive environment of study abroad seems highly applicable to these student development theories. Schlossberg's Transition Theory describes transitions as events that result in changed relationships, routines, assumptions, or roles. Although this theory was developed as a mechanism to support interventions, study abroad appears to fit the definition of an anticipated transition that can lead to change. (Evans, Forney, & Guido-DiBrito, 1998).

Kolb's Experiential Learning

Another intriguing theory that fits into both student development and learning theory is Kolb's Theory of Experiential Learning. Kolb expounds a cycle of learning which flows from concrete experience to reflective observation to abstract conceptualization to active experimentation and back to concrete experience. Concrete

experience is defined as “full and unbiased involvement in learning experiences”; reflective observation as “contemplation of one’s experiences from various perspectives”; abstract conceptualization as “idea formulation and integration”, and active experimentation as “incorporation of new ideas into action.” (Evans, Forney, & Guido-DiBrito, 1998). One might be hard-pressed to design a more formidable set of learning objectives for a study abroad program.

Retention/Attrition

Lastly, there is a seemingly unexplored but intriguing connection between study abroad and the retention/attrition literature. Student retention is a complex variable interconnected with a variety of direct and indirect influences surrounding college and university attendance. Recent statistics show that only about 50% of those who attend college earn a bachelor’s degree (Journal of College Retention, 2001). Academic and social integration into the institution have traditionally been the most accepted and highly researched influences concerning retention/attrition. Academic integration can be defined as a student’s sense of normative congruence and affiliation with the academic systems and communities of the college or university (Tinto, 1975).

A relationship has been shown between classroom academic experiences and decisions to withdraw (Nora, Cabrera, Hagedorn, & Pascarella, 1996). Small scale social relationships like dyadic informal contact with faculty have been found to help integrate students into the institution (Tinto, 1975; Pascarella, 1980). Active learning, i.e., discussions, debates, role-playing, question and answer exchanges, has been shown to enhance student knowledge and understanding (Chickering & Gamson, 1987). Active learning may also facilitate the development of peer networks and friendships, thereby directly influencing social integration. Tinto’s 1997 study of a community college found that students who participated in cooperative learning communities reported greater involvement in academic and social activities, and greater perceived developmental gains, than did students who took courses from the regular curriculum. Cooperative learning students also reported significantly more positive views of the college, students, faculty, classes, and of their own involvement in college. These students also persisted at higher rates than other students in the following fall quarter, the following spring quarter, and in transferring to four-year institutions.

As a bottom line - given a multitude of variables known to effect retention/attrition rates including backgrounds, parental influences, race, academic preparation, economics, and institutional policies and characteristics - according to Tinto (1993) successful integration manifests satisfaction that thereby enhances commitment and positively influences a student's decision to persist at a particular institution. The overwhelming qualitative research stating how many students claim the study abroad experience to have been extremely positive makes a case to explore study abroad in terms of retention and graduation rates.

In summary, experts within the field of student development theory sometimes struggle to connect theory to practice; undeniably the theoretical concepts are difficult to measure. There does not appear to be an established framework that links student development theory to the practice of study abroad. However, this link does appear to be worthy of further exploration. In particular, designing study abroad programs based on a strong foundation of student development theory might be extremely beneficial. Clearly, student development theory serves as a theoretical foundation to highlight both potential pitfalls and difficulties of study abroad participation, as well as the opportunities for tremendous growth. The parallels between student development theory and study abroad objectives cannot be ignored; there is an unmistakable implication that development and positive outcomes can and does occur from study abroad participation.

Human Capital Theory as Applied to Study Abroad

The economic theory of human capital and rate of return generally states that the inventory of skills that a person possesses can explain pay differences between individuals. Under human capital theory, people "invest" in various experiences, education and training with the understanding that employers will pay more for skilled workers.

It is beyond the scope of this study to copiously apply all the economic equations of human capital and rate of return to study abroad participation. For example, the study of how the investment of study abroad is financed, e.g., by a gift from parents, by a loan, or by reduced consumption is an aspect of the theory that will not be explored in this study. In addition, there are criticisms of human capital theory itself such as the theory of

screening, which posit that human capital theory is incapable of optimally predicting the connection between resources and education because individuals might receive a wage that is different from their true marginal product (Stiglitz, 1975). Additional criticisms include the investment versus consumption argument that says it is difficult to determine true investment costs of education thereby understating rate of return; the nonwage benefit argument that states nonwage benefits of college education are often ignored and therefore rates of return are understated; and the ability problem that posits that much of a college graduates earnings may be due to ability rather than education thereby overstating rate of return (Wilkes, 2003). However, given these criticisms, it is reasonable to relate the expensive experience of participating in study abroad to human capital theory; and expect that the time, financial investment, and increase in skills and education might pay off in terms of future economic benefit.

One of the seminal authors of human capital theory, Gary Becker, has conducted several studies in the area of linking education and the distribution of earnings (Becker, 1993). In one of his earlier studies with Barry Chiswick, the equation was developed that the total earnings of a person after human capital investment is equal to the sum of the returns on the investment plus the earnings from any original human capital (Becker and Chiswick, 1966). However, the theory is founded on the concept of maximizing behavior, in other words, each person is supposed to invest only an appropriate amount in human capital that maximizes their economic welfare. In other words, the marginal rate of return may diminish from adding more extra human capital; which might be the case if one were to participate in study abroad simply as an extracurricular activity.

According to human capital theory, supply and demand will also play a role in the rate of return. In addition, the concept of "equality of opportunity" needs to be accounted for, i.e., equal supply of funds to everyone needs to be sufficiently offset. Inheritance of property income, distribution of abilities, and other human capital are also factors to be considered. Although the applicability of human capital theory to study abroad is clear, the warning signs are just as clear from this theory for the need to control for factors such as ability, background and equality of opportunity in any study exploring wage earnings.

The research is certainly clear that education can have a positive effect on individual growth, employment and earnings. Blau and Duncan (1967) established the

theoretical framework model pertaining to social mobility as an outcome of an individual's background and their subsequent experiences and achievements. In a 1977 study, Bowen concluded that a variety of individual and societal benefits can be attributed to educational attainment. In more recent studies, earning a college degree was found to produce greater gains in occupational prestige (Lin & Vogt, 1996). Several studies have linked a college degree to greater economic returns (Leslie & Brinkman, 1986; Grubb, 1996). Another study has shown that although initial enrollment in a two-year college versus a four-year college may have a direct negative effect on educational attainment, when educational attainment is held constant effects of occupational status and earnings become small and insignificant, again showing the value of education on earnings (Whitaker & Pascarella, 1994). There is also evidence that education plays an indirect role as a conduit by which an individual's resources such as ability and family background are converted into earnings and occupational status (Smart & Pascarella, 1986). However, this type of study also establishes the complexity of relating education to any occupational returns without controlling for extraneous factors.

Grubb's study examined the returns to postsecondary education with earnings measured at approximately age 32. An interesting aspect of this study is that the author, in an attempt to distinguish effects, subdivided the different types and components of postsecondary education into classifications such as fields of study and types of credentials. This seems somewhat relevant to study abroad as it is also another distinctive component of postsecondary education. Grubb found a significant and substantial advantage in wages with a baccalaureate degree for all specifications. However, the findings were mixed for certificates and associate degrees. Wage advantages associated with certificates and associate degrees were larger for women than men, however, in the case of both genders the effect seems more indirect in providing access to careers that provide more experience and on-the-job training than dead-end jobs. He concludes that programs of study leading to credentials, rather than individual courses, are what matter in obtaining well-paid employment (Grubb, 1996).

In spite of the limitations posed by extraneous factors surrounding human capital theory, a strong connection has been shown in the literature between education, productivity and income. As a form and component of higher education, study abroad

participation clearly falls within this realm of possibility, making human capital a relevant theory to the study of wages proposed in this study. However, based on previous literature, it becomes clear for the need to control as much as possible for factors such as ability and family social economic status when examining wages.

A few studies do connect study abroad to employment. However, they were not designed with the intention of statistically testing human capital theory. They were qualitative survey studies designed to measure participant responses. For example, one study found that 97% of respondents found their study abroad experience to be worth the extra cost, and 44% of them reported using their international expertise in their most recent job. Interestingly, in the same study 82% of non-participants in study abroad cited expense as a factor for non-participation (King & Young, 1994). Another study by the American Institute for Foreign Study (AIFS) found that 86% of the academic year participants felt that study abroad was a worthwhile investment in their future (AIFS, 1988).

Study Abroad Outcomes

Although there is an abundance of descriptive material on study abroad programs, the literature on the empirical outcomes of study abroad is limited and not always convincing. A profusion of evaluative studies conducted on study abroad programs is qualitative in nature and often focuses on case studies using small sample sizes. An extensive compiled source of research on study abroad can be found from the USC Center for Global Education at http://www.usc.edu/dept/education/globaled/ro/book_research_chao.htm (USC Center for Global Education, 2000). The site is divided into pre-1988 and post-1988 sources.

Most often study abroad participants relate some type of positive gain to the experience. The types of gains claimed in many of these studies include enhanced intellectual growth, personal development, increased global mindedness, cultural understanding and increased job skills (Bates, 1997; Thot, 1998). However, evaluation of study abroad appears to be often limited to individual satisfaction with the program and perceived gains. Some studies are comparative and distinguish between participants and non-participants. A common method of evaluation is the pre and post experience survey

measuring student satisfaction with the program content, housing, and personal growth (Walker, 1999). There appears to be minimal literature on quantitative research relating study abroad participation to empirical professional outcomes.

Psychosocial Development

Many studies claim increased knowledge of culture as a gain related to study abroad. However, many of these studies do not use a comparison group to ascertain any differences as compared to normal development among non-participants. One study by Carlson and Widaman (1988) conducted a comparative study of 304 participants and 519 non-participants and found that the study abroad participants showed higher levels of international concern, cross-cultural interest and awareness. Another comparative study of 353 participants over a 10 year period showed the greatest gains from participants in the area of increased appreciation of different cultures, followed by growth in independence, maturity and self-awareness (Cash, 1993). Still another study of 94 students concluded that a significant influence of study abroad participation was a more personalized view of other cultures, i.e., to conceive of other national groups in terms of character, instead of non-personal factors such as food, historical events, or geographic characteristics (Drews and Meyer, 1996). Evidence of the importance of experiential learning through study abroad was found in a dissertation study of 143 participants of study abroad and cross-cultural training where it was found that participants in study abroad differed significantly in terms of cultural sensitivity (Gingerich, 1988).

However, not all studies are in agreement with this claim. A study of study abroad participants from Wayne State in Spain found no statistically significant differences between participants and non-participants in their attitudes and perceptions of the host country (Bueno-Popkey, 1991). Another study with a sample of 54 students found no significant differences between pre-and post-test assessments of psychosocial development based on gender or cultural immersion (Herman, 1996).

Educational Outcomes

There again appears to be limited empirical evidence of academic gains caused by study abroad participation. In one comparative study of university records of 26,000 students with 250 students sent abroad each year, it was found that there was no significant difference in time to degree completion by study abroad participants versus

non-participants. In other words, study abroad did not negatively or positively influence either the time to degree or quality of academic coursework completed (Flash, 1999).

Language gains from study abroad participation are a common claim. One study of 658 students in Russia found that a number of variables can influence language acquisition, including gender and previous language experience. Female students were found to gain less than males in listening and speaking skills, however, possible bias in opportunities, testing instruments, and initial sample selection were offered as possible reasons for the differences (Brecht, 1993). Additionally, a different study of 82 students participating in Russian language study abroad programs found that although study abroad leads to substantial gains in listening comprehension for all students, it also found that men were more likely than women to gain in listening and oral proficiency (Ginsberg, 1992).

Employment/Economic Outcomes

Here again, one finds limited empirical evidence of employment or economic gains caused by study abroad participation. One dissertation study conducted ten years after study abroad participation with 48 students found that participants generally viewed the experience as positive. Most of them reported that the study abroad had influenced their career selection, and enhanced their awareness and appreciation for international issues and other cultures (Wallace, 1999). In a study by the American Institute for Foreign Study (AIFS) eighty-five percent of the study abroad students were found employed, and 33% had international travel as a part of their job requirements (AIFS, 1988).

Combined Outcomes

One comparative study conducted in 1991 that collected data from questionnaires showed some academic gains among participants, but there was great variation in the extent to which the experience contributed to later career opportunities (Carlson, 1991). The questionnaires were distributed to 241 study abroad participants versus 157 non-participants. The results showed that the participants noted academic gains, social and personal development, as well as increased interest in culture and language. However, the same study in a follow-up of 76 participants from 5 to 20 years previous found no conclusive evidence of the study abroad contributing to later career experiences.

A study by the American Institute for Foreign Study (AIFS) found similarities and differences between the experiences of those participating in a summer program versus those in an academic year program. Students in the summer program cited gains in employment, foreign language proficiency, and knowledge of the culture. Students in the academic year program cited maturity, foreign language proficiency, and knowledge of the culture as what they gained from the experience. A full 100% of the participants felt that they had matured as a result of their experience (AIFS, 1988). A study of 150 students who participated in an intensive two to ten week immersion program in Mexico while living with Mexican families, found that improvements were made in personal adjustment, language acquisition, and culture learning (Jones and Bond, 2000).

Florida State University International Programs

Florida State University has been offering international study abroad program opportunities for 40 years (FSU, World of Travel, 2001). According to a study in the Chronicle of Higher Education, FSU ranked tenth in the country among research institutions in 1999-2000 with 1,154 students studying abroad (McMurtrie, 2001). However, a more recent ranking of the 2000-2001 school year from the Chronicle lists FSU fourth among the top 20 research universities with 1,464 students studying abroad, revealing growing interest (Chronicle of Higher Education, 2002). FSU's academic programs are offered in a variety of locations around the globe - East and West - including Vietnam, Switzerland, England, Italy, France, Russia, Spain, Costa Rica, and Panama. According to Dr. Jim Pitts, Director of International Programs, students can study in eighteen locations internationally. Some courses are offered for summers only while others are provided year round. Participants can choose from a wide variety of coursework that satisfies graduation requirements. The length of study generally ranges from short-term programs up to one month, to one semester, to one year. In some cases, FSU owns the facilities overseas and in others the facilities are borrowed. Classes are taught by both FSU faculty and host-country faculty (FSU, World is your Campus, 2001).

Information on programs offered can be found on the web at http://international.fsu.edu. General academic programs of year round study are offered in Florence, Italy; London, England; Valencia, Spain; and the Panama branch campus of

FSU. General academic programs for the summer session are offered in Paris, France; Moscow, Russia; Prague, Czech Republic; Oxford, England; Chalkidiki, Greece; Leysin, Switzerland; San Jose, Costa Rica; and Ho Chi Minh City, Vietnam. A new international business program in Tokyo, Japan has also been listed for 2003.

Specialized study programs are offered in London, England; Dubrovnik, Croatia, Prague, Czech Republic; Oxford, England; Bridgetown, Barbados, Islas Tigres, Republic of Panama, as well as a multi-location program in London, Paris, Brussels, and Milan.

Intended Goals and Outcomes of FSU's International Programs

According to FSU International Program guides, the purpose of the international programs is "collegiate education enriched by the unique resources of other nations." Brochures further state that there are a variety of intended goals and outcomes that can be obtained by participating in study abroad. For example, students can return with academic credentials for career or graduate school. It is also stated that students come home transformed with a new sense of self-reliance, cooperative spirit, world perspective, and increased passion for learning. Students see and experience diverse cultures and people. A further claim is that students become more independent and cohesive, they learn to navigate novel experiences, and they learn the importance of collaboration. Learning a foreign language is also an expressed goal of many programs (FSU, World is your Campus, 2001).

Application and Admissions Criteria

FSU's International Programs are open to not only FSU students but indeed students are recruited from throughout the State University System (SUS), as well as throughout the country. Priority is given to SUS students. Admissions priority is given to students with an overall grade point average of 2.5 or above, however, students below this standard may petition for admission. This clearly points out the need to control for GPA ability when comparing outcomes to non-participants.

A $200 application fee is required with the application, which is non-refundable if a student withdraws after being accepted. If not accepted, $150 is returned to the student. In addition, applicants are required to submit the application form with personal and academic information, along with an essay explaining reasons for desiring to participate

in the International Programs. Applicants who are not FSU students must also submit official transcripts (FSU International Programs, Summer 2000 – Spring 2001).

Program Fees

Although program fees are subject to change, they appear to range from roughly $2,200 up to $7,500 for programs up to one semester depending on location and provisions. The one and two year programs range from about $20,000 to $40,000.

Scholarships

Listed scholarships include honors travel scholarships available to FSU liberal studies honor students, minority scholarships available to FSU ethnic minority students, and scholarships available through the French division of the Department of Modern Languages (FSU International Programs, Summer 2000 –Spring 2001).

Financial Aid

All financial aid applicants are required to be registered as full-time students. Both FSU students and non-FSU students may qualify for financial aid, however, the application procedures are different. FSU students must file an application (Free Application for Student Financial Aid) with the FSU office of Financial Aid. Non-FSU students are required to contact their home school's financial aid department to make arrangements to receive aid while studying with FSU abroad. In most cases the home school will initiate a Consortium Agreement that will allow them to award financial aid. Awards may include tuition, out-of-state waivers, or college work study.

Increased aid for study abroad can be secured through several methods. The Perkins Loan, Stafford, Unsubsidized Stafford, and PLUS loans may be increased for study abroad programs. However, campus-based aid is better suited to be calculated originally with study abroad in mind. Florida Prepaid tuition and/or dorm benefits may be used to defer a portion of the International Program fees. FSU students cannot use tuition waivers for overseas study, and in general this applies to non-FSU students but depends on their respective home institution (http://international.fsu.edu, 2003).

Summary of Literature Review

Study abroad has a long and storied tradition within higher education. This tradition is growing, showing a renewed emphasis in the late 1990's and into the 21st

century with current yearly totals running over 100,000 U.S. students going abroad per year. There are currently over 2600 study abroad programs offered through a multitude of sponsors. These programs cover a wide range of purposes and locations throughout the world. The most highly recognized profile of a study abroad student is a white female majoring in the humanities going to Europe during her junior year, although this profile is showing signs of change.

The intended goals of study abroad are as wide as they are ambitious. Increasing understanding among citizens of the U.S. and other countries is a major goal. Included in this goal is the desire to teach U.S. students to be more culturally broad minded and how to think and work on a global and intercultural basis. Achieving competence in a foreign language, increasing employment opportunities, and furthering individual maturation and psychosocial growth are other objectives.

Described outcomes of study abroad often match the intended goals; however, there is little empirical evidence to justify such claims. Often the professed outcomes of study abroad come from qualitative follow-up survey samples of participants expressing their feelings and/or satisfaction with the study abroad experience. Even within these studies, there is conflicting evidence of the effectiveness of study abroad. Language gains, cultural learning and individual maturation are highly claimed outcomes. However, within the areas of educational and employment outcomes there is little evidence to show gains in either dimension.

A conceptual framework for the effectiveness of study abroad can be made by examining the existing theoretical frameworks for learning theory, student development theory, and human capital theory. These three theoretical frameworks appear to have parallel goals to study abroad contained within their respective models. For example, several learning theories combine to offer a framework that suggests that an environmentally and socially immersive, intensive, challenging, experiential, and contextual setting should lead to transformative and applicable knowledge and self-growth attainment. Many themes of student development theory within higher education are similarly evidenced within the goals and settings of study abroad. From the person-environment fit theories of Sanford and Astin that suggest active involvement in a challenging environment can lead to learning and growth, to the psychosocial theories of

Chickering and others that describe changes in maturation and increased competence in skills and social relations, these student development theories also seem highly appropriate to the study abroad experience. The often professed powerful experience of study abroad seems to fit well with retention theory, as well. And lastly, human capital theory describes well the link between education, productivity, and income. The investment in study abroad might certainly be seen as an investment in human capital. Although the connections can be complex and at times indirect, there is clear evidence that more education can have a positive effect on employment and earnings. However, the rate of return of certificate and special programs such as study abroad is less clear and somewhat difficult to study in isolation because of extraneous factors such as socio economic status, equality of opportunity, and distribution of abilities. However, there is ample evidence within the study of human capital to suggest this theory is worthy of further study in regards to study abroad participation.

Lastly, the International Programs at FSU, which provided the sample of students for this study, are generally representative of other programs around the country. They provide a variety of possible experiences both in terms of field of study and locations around the globe. The International Programs are also offered in short-term summer, semester, and yearly time frames. The stated goals of FSU's programs also match well with expressed goals of other programs around the country. International Program participation is expensive, ranging from $2,200 to $40,000 depending on location and timeframe. Some scholarships are available as well as financial aid. The high cost of study abroad clearly highlights the potential danger inherent in studying outcomes without accounting for the factors of equal opportunity and ability.

CHAPTER III
METHODS

Statement of Purpose

This study investigated educational and employment outcome differences between students who participated in study abroad and students who did not participate. The study was a quantitative study of empirical outcomes drawn from a rich dataset of existing archival databases, with data that included multiple variables of pre through post-collegiate education and post-collegiate employment data. The purpose of this study was to assess differences between educational and employment outcomes of Florida State University's (FSU) International Program's study abroad participants and non-participants of the 1993, 1994 and 1995 FSU entering cohorts.

Research Questions

The research questions for this study were designed to provide a better understanding of the educational and employment outcomes of study abroad students, as analyzed by demographic, ability and educational profiles. Comparisons were drawn between students who participated in study abroad versus non-participants of the FSU entering classes of 1993, 1994 and 1995. Educational outcomes were defined as GPA, rate of graduation, time to graduation, program of study, and the highest degree attained. Employment outcomes were defined as rate of employment, earnings, and industry of employment. All employment outcomes were limited to those found employed in the State of Florida.

Differences in outcomes were assessed based on the independent variable of who participated in FSU's International Programs and who did not participate. The independent variable of participation was subcategorized by location of study, as well as by gender and race.

Therefore, the three research questions of interest were:

1. What are the demographic and pre-college characteristics of study abroad participants and are there differences versus non-participants?
2. What are the educational outcomes of study abroad participants versus non participants and are there differences between the variables of program of study, rates of graduation, time to graduation, college GPA, and highest degree attained?
3. What are the employment outcomes of study abroad participants versus non participants and are there differences between the variables of industry of employment, rate of employment, and earning levels?

Study Design

Conceptual Framework

In comparing the intended outcomes of study abroad programs with the three existing theoretical frameworks of learning theory, student development theory and human capital theory, a conceptual framework for study abroad participation can be formed. There are clear parallels and similarities that can be distinguished between the intended outcomes of study abroad and the conceptual applications of the three previously discussed existing theoretical frameworks. Specific learning and student development theories suggest that participation in study abroad could contribute to psychological and personal growth and therefore positive educational outcomes such as higher G.P.A. and higher graduation rates. Human capital theory consequently suggests that these gains attributed to study abroad participation could then translate into greater productivity and thereby positive employment outcomes such as higher wages. This study was designed to measure if any of these educational or employment outcomes could be attributed to a sample of FSU's International Program participants.

Data Collection

Two database sources were used to collect data for all three of the research questions in this study. First, the State University System (SUS) FSU Data Files were utilized to provide the total sample base of admitted students in 1993, 1994 and 1995. These database files provided demographic as well as pre-college and college educational information. Study abroad participation was determined from this database by looking at the Student Course File transcript course credits. Second, the Florida Education and

Training Placement Information Program (FETPIP) database was utilized to determine the education and employment outcomes of students. This database provided current up-to-date employment information on those found employed within the State of Florida, including salary levels and industry of employment. A limitation of the study is that the data did not include out-of-state employment information.

SUS Data Files and Elements

Data files accessed from the SUS databases included the admissions file, student financial aid file, and student data course file.

Admissions file.

The data elements utilized from this file included a scrambled personal identification number (PIN), which are scrambled social security numbers (SSNs) that for privacy purposes allow for matching individual data across all files without requiring identification; institution of enrollment (all FSU); the admission application program category (classification associated with the degree program category for which the applicant is seeking admission); year of admission; type of student at time of application (for example first time in college, non-degree, transfer from community college); racial/ethnic group; gender; date of birth; county of residence (distinguishes all Florida counties and contains one element for non-Florida); high school code (distinguishes graduation by all Florida high schools, non high school graduates and GED recipients, non-Florida high schools, and home schooling programs); ACT score (a two-digit composite raw score assigned to the applicant by the American College Testing Program); high school grade point average (the high school grade point average upon which the student's application for admission is evaluated, based on a 4.0 grading system. A maximum of 5.0 was allowed for this element since it is possible to obtain this average with extra weights on a 4.0 scale); an element to define if other tests beside the ACT were used to determine admission; a scaled score for the quantitative portion of the admissions test; and a scaled score for the verbal portion of the admissions test.

Financial aid file.

In addition to the linking PIN numbers inclusive in all files, the financial aid file included elements for year of financial aid (1994-2001); residency code (Florida, non-Florida, resident/non-resident alien); whether student is dependent or independent of

parental financial assistance; family income (lists amount of parental adjusted gross income if dependent, student adjusted gross income if independent); and an element to determine if student is eligible for need based aid. This file helps in determining social economic status of students and parents. The income element was also recoded and categorized into seven categorical ranges to facilitate manageability and analysis.

Preliminary student data course file.

This file was used to obtain both pre-college and college information. In addition to the linking PIN numbers, elements included term and corresponding progress toward a degree; date of last attendance at the most recent educational institution; dual enrollment (whether a student undertook coursework in two separate institutions during the same term); CLEP accelerated program completion for English, mathematics, science, and humanities; college GPA; student nationality; degree level granted; term degree granted; national merit indicator; AP indicator (credit granted for demonstrated proficiency in a specific subject area on an advanced placement examination; and a CLAST flag for upper division undergraduates (satisfactory/unsatisfactory).

Student data course file.

Study abroad participation was determined from this database. In addition to the linking PIN numbers, the relevant elements from this file included year of course (93/94 – 01/02); the term in which the course was taken; a campus identifier for the course location (for example Florence or London); and program category (classification associated with the major emphasis of the course program category).

FETPIP Database Files

The Florida Education and Training Placement Information Program (FETPIP), administered by the Florida Department of Education, is a data collection system that obtains follow-up data on former students and others. The FETPIP website is at: (http://www.firn.edu/doe/weois/fetpip/fmain.htm). The information FETPIP assembles includes employment and continuing postsecondary education data. Wage records are obtained by FETPIP from the Agency For Workforce Innovation. These records are a part of the wage report system that is used to manage the State of Florida unemployment compensation program. These reports are basically quarterly employer payrolls from throughout Florida. Because this is an official record for the State of Florida, anyone not

listed as employed is assumed to be not employed within the State of Florida. A limitation of this study is that someone may be employed in another state or internationally and would not be listed in this database.

The FETPIP database files were used in this study as a first source to determine employment and wage records, and as a second source to confirm educational advancement levels. The FETPIP file provided, in addition to the linking PIN numbers, total wages earned (total amount of wages aggregated from all job records per individual for a year); and both a three and a six-digit NAICS code (North American Industry Classification System that identifies the industry of employment).

Privacy Protections

A Buckley Amendment confidentiality and privacy agreement was signed to document purpose, cooperation and confidentiality of all data used for this study. The SUS database file elements were compiled first by the Florida Department of Education staff and then provided to the FETPIP director. The FETPIP director then combined the SUS data with the FETPIP files by matching social security numbers (SSN's). The SSN's were then scrambled into new PIN numbers, thereby facilitating the retention of data validity and record linkage without releasing confidential information. It was the data with scrambled PINs that was made available for this study. In addition, all data analyses from this study will only be released in aggregate form to ensure confidentiality and individual privacy. Lastly, after data compilation and analyses, all individual data used for the study will be destroyed.

Study Abroad Sample

Data were obtained for the entire FSU entering classes of 1993, 1994 and 1995, whether they participated in study abroad or not. Study abroad participants were culled from the above cohorts by selecting those students who participated in the Florida State University International Programs. These data were acquired from the Student Data File Course records listing campus locations of all courses. All FSU study abroad programs were included and were distinguished by one of three classifications: Florence campus, London campus, or all other non-USA campuses.

Non-participant Sample

The non-participant sample consists of those students from the above cohorts who did not participate in an FSU International Program. This was determined by those students who did not have an international campus listed on their course transcript records.

Database File Merge

It was first necessary to create one single large, merged database from the several database files. This was done in SPSS by first using the transpose function to unique all records by individual PINs for each original database file. Then, all files were sorted by ascending PIN in order to ensure proper matching functions between files. Once the PINs were uniqued and sorted, it was then possible to merge databases by using the merge file, add variable function.

General Analyses

Descriptive statistics, frequencies, means and standard deviations from the means were calculated on respective variables as applicable per research question. Chi square tests were run on cross tabulations of categorical variables to test for significance. Correlations were also run for scale variables to test for significant relationships. Multiple regressions were run as a method of analysis on questions #2 and #3 in order to test for significant $R^{2,}$ and to allow for the use of statistical control in estimating the unique effects of the independent variable of study abroad on each of several dependent variable outcomes to see if a predictive model could be established. However, because the model accounted for so little of the variance, the regression results were inappropriate for this study. Lastly, ANOVAs were run to test for significant relationships using multiple independent variables with a single dependent variable.

Limitations

Because this research is an ex-post-facto causal-comparative study, the independent variable of study abroad was not manipulated; it had already been determined if students had participated in study abroad or not. Therefore, relationships or associations were established in this study; however, they may not necessarily be causal connections. There is always the possibility that some other important variable beside study abroad is the real cause for any outcome differences.

Another limitation is that the FETPIP data was limited to those found employed within the State of Florida. This makes the wage data a good comparison of those remaining in Florida but paints an incomplete picture of total wage comparisons without knowing out-of-state earned wages. Additionally, the relatively short amount of time the three cohorts have been out of school and employed may prevent either high wage earners or late returnees to school from being included in the study. This limits the obtainment of an accurate description on rate of return for education.

Validity

Validity is concerned with the issue of accurately measuring the predictors and outcomes operationally defined for a study. In this study the general predictor variable was participation in study abroad. Participation in the FSU International Programs was the determinant used to define and measure study abroad participation. The fact of participation did not come from hearsay or survey sample, but rather this information was derived from the SUS Student Data File. Additionally, further predictor variables such as gender, race, GPA, and academic major were taken from the SUS Student Data file as well as the FETPIP database. The data for these variables are officially recorded, quantitative, empirical measures.

Therefore, the face validity is demonstrated by the fact that experts continually agree on the validity of these measures, as evidenced by the fact that these data are collected for measurement by educational institutions and state government agencies. The sampling content validity is evidenced by how directly the database records match the defined outcome variables. Construct validity is similarly evidenced. For example, the outcome variable of GPA is not meant to measure academic achievement but rather to measure GPA itself. All of the predictor and outcome variables were also directly matched.

A further measure taken to increase validity involved the use of a preliminary analysis. A preliminary analysis consisting of missing subject and data analysis, case analysis, and assessment of violations of assumptions was conducted on the initial data. All observations were reviewed for outliers and excessive influence on analysis results. Subjects with missing data or questionable data that appeared to be due to data entry errors were deleted from the sample as per listwise deletions techniques.

Violations of statistical assumptions were studied, and if found, compared to existing literature for robustness. All parametric tests have four basic assumptions that must be met for the test to be accurate: 1) normally distributed data, 2) homogeneity of variance, 3) interval data, and 4) independence (Field, 2000, p. 37).

Reliability

Reliability describes the extent to which two sets of measurements of the same characteristic duplicate each other. In other words, how often will the same result be obtained? The first methodology in this study designed to increase reliability was the use of multiple databases to provide the data for analysis. Many of the variables were crosschecked with data in the other database files. This established a high degree of internal consistency because of the crosschecking, as well as the fact that these are empirical data that are well recorded and verified by respective institutions.

Next, the high sample size used in measuring participants and non-participants in study abroad adds to the reliability. Additionally, the measurement of three separate academic cohorts across time (1993, 1994 and 1995) further added to the reliability by providing a second and third large sample as well as a temporal comparison.

Research Question #1

What are the demographic and pre-college characteristics of study abroad participants and are there differences versus non-participants?

Data Constructs

The combination of data files and respective elements from the SUS database provided the total sample base of admitted students in 1993/94, 1994/95 and 1995/96. Research for this question entailed study of background demographic and high school or pre-college information. Demographic data included race and gender. High school information included high school GPA and ACT scores. Pre-college data included financial aid and parental income. Specific SUS files accessed included the Admissions File, Student Financial Aid File, and Student Data Course File.

File Elements

Elements utilized for this question included: a scrambled personal identification number (PIN); institution of enrollment (all FSU); the admission application program category; year of admission; type of student at time of application; racial/ethnic group;

gender; high school GPA; date of birth; ACT scores; financial aid status; parental income; residence at time of admission; and study abroad campus identifier.

Data Management

The software program SPSS was utilized to manage and analyze the data. First, the study abroad participants were determined from the course records variable that indicates if a student received credit for an international program course at a non-USA campus. Using this variable, study abroad participants were determined for all three entering cohorts of 1993/94, 1994/95, and 1995/96. Unfortunately, a limitation of the available data restricted identification of study abroad participants to three categorical locations of London, Florence, and a general category of all other study abroad programs. A new independent variable was coded first by whether or not a student participated in study abroad, thereby creating two main comparison groups of study abroad versus non-study abroad. Those who participated were coded 1 and non-participants were coded 0. The study abroad participants were already coded into subgroups of independent variables that were defined by Florence, London, or all other study abroad programs.

In order to determine the correct percentages of study abroad participants from the total sample, the PIN numbers from the student course file needed to be uniqued. In other words, a single individual will appear in the database several times as a study abroad participant if they received credit for more than one course. Therefore, the first step in this analysis was to identify all study abroad participants and then assign only a weighted value of one to that PIN regardless of the number of study abroad credits that person received. However, another variable was also created that aggregated into a total all study abroad credits received per individual.

Additional recoding and creation of new variables was also necessary for many of these variables to facilitate analysis. For example, gender was coded as 1 for female, 0 for male. Race was also coded substituting numbers for word descriptions. Where necessary, ranges or groupings were created and number values assigned to facilitate data management. For example, ACT scores were grouped into 100 point ranges to create manageable groups for comparison, and parental income was grouped into seven categories.

Data Analysis

First, frequencies of all relevant variables were calculated in order to best understand subject demographics. These frequencies included race, gender, study abroad program, degree seeking status, state of residency upon FSU enrollment, Florida high school code, type of high school, financial aid status, parental income, high school GPA, and ACT scores. Then the 1993, 1994 and 1995 cohorts were compared separately by the independent variable of whether or not they participated in study abroad, as well as in combined frequencies. In addition, cross tabulations – including chi-square tests for significance - were run among several of the categorical descriptive frequencies; for example, a descriptive breakdown of participants/non-participants by race and gender. Means ($\sum y \div N$), standard deviations ($y - \hat{y}$) and correlations were calculated comparing participants versus non-participants on the scale dependent variables of high school GPA and ACT scores.

Research Question # 2

What are the educational outcomes of study abroad participants versus non participants and are there differences between the variables of program of study, rates of graduation, time to graduation, college GPA, and highest degree attained?

Data Constructs

In answering this question, time to graduation was defined as the number of years after admission required to obtain the associate degree, baccalaureate degree, masters degree, or law or specialist degree; rate of graduation was defined as a comparison of numbers and percents of participants versus non-participants attaining any level of degree; level of degree was measured as associates, bachelors, masters, law, specialist, or doctorate; and college GPA was measured as total GPA upon exiting or graduating from FSU.

Data Management

The combined database with the newly coded variables that were created for question #1 was utilized for this research question as well. However, for this question the focus was on comparing the study abroad participants against non-participants by exploring educational variables of interest. The educational dependent variables included college GPA, rate of graduation, time to graduation, highest degree held, and major

program discipline. Before analysis could occur, recoding of new variables was necessary. In order to determine rates of graduation, those who graduated with any degree were coded 1 and those who did not graduate were coded 0. For time to graduation, a new variable was created with each cohort scaled in identical fashion. For example, those students who were admitted in any of the three cohort years of 93/94, 94/95, or 95/96 that graduated in three years were assigned a 3; those who graduated in four years assigned a 4, and so on. The year of admission was defined as the fall term, for example the 93/94 cohort were defined as admitted in 1993. This year was then subtracted from the year the degree was granted to arrive at the time to degree.

A new variable was also created for levels of highest degree received in order to rank degrees for analysis. Non graduates were coded 0, associates 1, baccalaureates 2, masters 3, law or specialists 4. There were no doctoral recipients in the sample. Lastly, degree program disciplines were coded at both a two-digit CIP level for broader analysis as well as the six-digit level for more detail.

Data Analysis

First, frequencies were calculated including graduation rates, highest degree received, length of time to graduation, degree program discipline, and college GPA. The GPA variable needed to be calculated as it was not a preexisting variable in the original database. The formula used to calculate college GPA derived from four preexisting variables: (total GPA hours + term GPA hours / total grade points earned + term grade points earned). The reason for this calculation is that the variables of total GPA hours and total grade points earned did not include the last term, thereby requiring that the last term be added to these variables in order to calculate GPA. Also, GPA's were not calculated but left as system missing if the total grade points earned was zero.

Descriptive statistics were utilized to determine the means and standard deviations from the means for the educational dependent variables in the two comparison groups of study abroad and non study abroad. In addition, cross tabulations for means and standard deviations – along with chi square tests for significance - were run among several of these categorical descriptives; for example a descriptive breakdown of participants/non-participants by race and gender by highest degree held. Correlations were run to test significance for the scale variables.

For inferential statistics, first, the overall relationship or correlation of each scale dependent variable and the independent variable of study abroad participation was assessed by testing the model R^2 and determining the adjusted R^2.

The two-tailed t-test for independent samples was utilized to determine if any differences between the means of variables between groups was statistically significant. In other words, to measure if any difference in means between the comparison groups was greater than what would be expected to occur by chance. Statistical significance was defined as $\alpha < .05$. Although it is the hypothesis that study abroad should have some effect versus non participants, the two tailed test was used because there was not sufficient evidence found in the literature to predetermine which direction that effect may take. For example, it may be possible that study abroad might either slow down time to graduation or speed it up.

Next, the independent variable of study abroad participation was further analyzed by subcategories of location of program. The non study abroad group was coded zero and served as the control group. Florence was coded 1, London 2, and all other study abroad programs 3. Because multiple groups were now involved, analysis of variance (ANOVA) was employed and an F-ratio computed to determine if there was significant difference among the means of multiple groups. This analysis was used because it is more efficient to perform one ANOVA than to perform several t-tests, and it keeps the error rate under control. Somewhat similar to the t-test, the f-ratio determines whether the variance between groups differs from the error variance by more than what would be expected by chance. If a significant f-ratio was found ($\alpha < .05$) than the null hypothesis was rejected. However, because the f-ratio only states that a significant difference exists but does not reveal where among the multiple means the difference is found, a multiple comparison technique also needed to be applied. Similar to the rationale for applying the two-tailed test, a post hoc test - instead of a planned comparison - was utilized because there was no specific directional hypothesis. The Tukey test, a posteriori test, was used because it is appropriate for making any and all comparisons involving a set of means. This test calculates an F-ratio for each mean comparison. The Games-Howell procedure was also run because of the uncertainty of knowing whether population variances were equivalent.

Research Question #3

What are the employment outcomes of study abroad participants versus non participants and are there differences between the variables of industry of employment, rate of employment, and earning levels?

Data Constructs

Again, the combined, merged SUS/FETPIP database with the newly coded variables for questions #1 and #2 was utilized with an emphasis for this question on employment data from the original FETPIP database. Employment outcomes were defined as earning levels, rate of employment, and industry of employment on those found employed within the State of Florida. Earning levels were taken from FETPIP data for those found employed within the state of Florida and were based on full time quarterly averages. Rate of employment was defined as the percentages found employed within Florida. Industry of employment was taken from NAICs codes and applied as to the industry within which subjects were employed. It was a limitation of this study that accessible data was limited to only those found employed within the State of Florida and therefore did not include employment data for either participants or non-participants employed out-of-state.

Data Management

The employment dependent variables included rate of employment, industry of employment, and wage earnings. A rate of employment variable was created by assigning a 1 to those found employed and a 0 to those not found employed in the State of Florida. For industry of employment, three-digit NAICs codes were coded for broader analysis, and a variable for six-digit NAICs codes was also used to help analyze the data in more specific detail.

The wage variable also required several recoding steps. First, the data was based on quarterly total wages. However, the total wage earnings may not be in a linear progression increasing year by year. It is possible for a wage earner to make less in a later year than an earlier year. It was therefore decided to create an average total wage for each subject by adding all total wage reports for all years and dividing by the number of years reported. This provided a wage mean that could be compared fairly to other means. In addition, for the purposes of this study it was decided to measure only fulltime wage

earnings in order to provide consistency. The inclusion of part time earnings greatly skews the results. Therefore, the formula used to calculate only fulltime earnings included only those who appeared to be working full-time for a full quarter (i.e. earned at least minimum wage of $5.15 x 40 hours x 13 weeks = $2,678 for the quarter). Therefore, all quarterly wages above $2,677 were used to compute the mean wage for each subject.

Data Analysis

First, descriptive statistics were calculated to understand and describe each relevant employment dependent variable in the two comparison groups. Frequencies included those found employed in Florida, full time wages, and industry of employment. In addition, cross tabulations were run among several of these categorical descriptives; for example a descriptive breakdown of participants/non-participants by race and gender, as applicable to salary levels. Means and standard deviations were also calculated for wages on a cross tabulation basis, such as mean wages by gender and race for study abroad participants and non-participants. Again, chi square tests were run on the cross tabulations to test for significance.

For inferential statistics, the overall relationship or correlation of each dependent variable and the independent variable of study abroad participation was assessed by testing the model R^2 and determining the adjusted R^2.

The two-tailed t-test for independent samples was utilized to determine if any differences between the means of variables between groups was statistically significant. In other words, to measure if any difference in means between the comparison groups was greater than what would be expected to occur by chance. Statistical significance was defined as $\alpha < .05$.

Lastly, the independent variable of study abroad participation was again analyzed by subcategories of location as in question #2. Again, analysis of variance (ANOVA) was employed and an F-ratio computed to determine if there was significant difference among the means of multiple groups. If a significant f-ratio was found ($\alpha < .05$) than the null hypothesis was rejected. Again, the Tukey multiple comparison technique and the Games-Howell procedure were applied to calculate an F-ratio for each mean comparison and to calculate significance.

CHAPTER IV
FINDINGS AND ANALYSIS

Introduction

The purpose of this study was to investigate educational and employment outcome differences between students who participated in study abroad and students who did not participate. The study was a quantitative study of empirical outcomes drawn from a rich dataset of existing archival databases utilizing data that included multiple variables of pre through post-collegiate education and post-collegiate employment information. The total sample used for this study consisted of three FSU entering cohorts from 1993/94, 1994/95, and 1995/96. The computer software, SPSS – version 11.5 – was used to run all statistics and corresponding tables.

Descriptive statistics on the total sample taken from the admissions files, including study abroad participants and non-participants combined, revealed a total sample for the three cohorts of 11, 467 students: 3630 in 93/94, 3964 in 94/95, and 3,873 in 95/96. Of the total sample over three years, 58.6% were female, 41.4% male. Race/ethnicity totals revealed percentages of 79.4% White, 11% Black, 6.5% Hispanic, 2.4% Asian, 0.5% Non-resident Alien, and 0.3% American Indian. Of the total sample, 9,310 or 81.2% were Florida residents and 2,157 or 18.8% were non-Florida or non-USA residents. Seventy-six percent of the total sample, or 8,756 students, received some type of financial aid during their collegiate career. The top two degree programs applied for at time of admissions for the total sample were general business (15.8%) and general biology (11.7%).

There were three questions that constituted the underlying research for this dissertation. The results and analysis of each question follow below. First, however, it should be noted that multiple regression analyses for the educational and employment dependent variables in questions #2 and #3 were conducted. The Forward stepwise method was used so that variables were entered into the equation based on the

mathematical criterion of searching for the best predictors first. The predictors utilized were study abroad, gender, race, HS GPA, parental income, ACT scores, and program category. However, because the models only accounted for 28.5% to 48% of the variance and the study abroad R was so small in all cases, regression analyses were not further pursued for this study nor analyzed in the results. It was felt that more variables were needed in order to define a model that would account for more variance among the dependent variables.

Research Question #1

Question

What are the demographic and pre-college characteristics of study abroad participants and are there differences versus non-participants?

Study Abroad Demographic Overview

First, the study abroad participants were identified from the student course file. Again, a limitation of this study occurred due to insufficient recording of study abroad data in FSU databases prior to the year 2000. Study abroad participants were only able to be distinguished individually by the London program and the Florence program. All other programs were lumped together only identifiable as study abroad participants without identifying the specific location.

Test for Normality Assumption

A test for the assumption of normality was performed by running summary statistics of relevant score frequencies. Linearity and a normal curve can be seen for the pre-college ability variables of high school GPA and ACT scores, thereby satisfying this assumption. Although the parental income does show some variance from the normal curve with outliers at the higher end of the income scale, this is true of both groups and to be expected. These variables all use interval data and it is common sense that the data from different subjects are independent from one another. The relatively small standard deviations as compared to the means for all these variables indicate that the means represent the data well and are a good fit.

Table 1: Pre-college Ability

Statistics: Pre-college ability

		ACT_SCORE	HS_GPA	STUDYABR	FINAID	INCOME.1
N	Valid	6276	11467	11467	11467	6544
	Missing	5191	0	0	0	4923
Mean		23.98	3.3795	.08	.76	50241.51
Median		24.00	3.4000	.00	1.00	44989.50
Mode		24	4.00	0	1	0
Std. Deviation		3.662	.54839	.267	.425	33365.938
Variance		13.410	.30073	.071	.181	1.113E+09
Skewness		.133	.945	3.167	-1.241	1.472
Std. Error of Skewness		.031	.023	.023	.023	.030
Kurtosis		-.339	10.528	8.030	-.460	4.976
Std. Error of Kurtosis		.062	.046	.046	.046	.061
Range		24	8.50	1	1	314703

Number of Participants

After assigning a single weight to each participant regardless of the number of study abroad credits they received or locations they studied at, the total number of study abroad participants combining all three cohorts equaled 886, or 7.7% of the total sample of 11, 467. This ratio is higher than the 1% national average found in the literature (Hayes, 1998). The London program garnered 421 of these students (47.5%), Florence 157 (17.7%), and all other programs had 308 participants (34.8%).

The entire study abroad sample of 886 participants included 656 females and 230 males, or 74% female and 26% male. Whites comprised the highest number of the 886 participants at 763 or 86.1%, followed respectively by 71 Hispanics at 8.0%, 39 Blacks at 4.4%, 12 Asians at 1.4 %, and 1 American Indian at 0.1%. Zero non-resident aliens participated in study abroad from this sample.

Next, there were also 29 occurrences of students studying at more than one location. When these students were added in order to calculate percentages by campus, the total came to 915 students that studied at all locations. Of these, 18.1% studied at the Florence location, 47.4% at the London location, and the remaining 34.5% were found at all other locations. Florence appears to have been the beneficiary of the students choosing

to study at more than one location as the percentage there increased when adding in the multiple location participants.

Participants by Admission Year

The sample was next analyzed by individual cohort year. The 1993/94 cohort had 264 study abroad participants, or 7.3% of the total cohort. The 1994/95 cohort had 288 participants or also 7.3% of the total cohort. The 1995/96 cohort had 334 study abroad participants, or 8.6% of the total cohort. This reveals a slight percentage increase in the later year which is consistent with the literature showing increasing participation in study abroad.

Degree Seeking Program

At the time of admission, the top two degree seeking programs were the same for both the study abroad participants and the non-participants: general business and general biology. However, differences were found among the remaining three categories in the top five. For study abroad participants, the third, fourth, and fifth degree seeking programs at the time of admission were dramatic arts (5.5%), mass communications (5.0%), and general psychology (4.6%). On the other hand, the third, fourth, and fifth positions among non-participants were found to be general psychology (5.3%), telecommunications (5.2%), and education (4.8%).

Scholastic Year of Study

A limitation in the available data was a lack of a variable to classify class standing, i.e., freshman, sophomore, junior, or senior. It was therefore necessary in order to assess the year of study abroad participation to first divide the study abroad participants into the three yearly admission cohorts. The year of study was determined by matching the term of the participants first study abroad course against the year of admission. The results were then determined by the amount of time since enrollment. Given that many students no longer graduate in four years, it can be said that there may be overlap between the third and fourth year after admission, including some sophomores in the third year after admission as well as some juniors in the fourth year.

The 1993/94 cohort had the most study abroad participation in the third year after admission (38.2%), followed by the fourth year at 26.9%, and then the second year at 18.6% for a total of 83.7% study abroad participation during one of these three years.

The 1994/95 cohort had somewhat similar percentages with 40.7% in the third year after admission; however, a difference was found with the second year garnering the next largest percentage at 23.0%, and the fourth year showing 22.2% of the first time study abroad participants. The three years totaled 85.9% of the cohort.

The 1995/96 cohort revealed a similar pattern to the previous year cohort with the largest percentage (46.7%) participating for the first time in the third year after admission, and the next largest percentages found in the second year (24.0%) and the fourth year (17.7%). Again these three years garnered 88.4% of the participants.

In a comparison of the three cohort patterns, there is a growing percentage of students going abroad each year in the third year after admission. When looked at as a whole with all three cohorts combined, the third year averaged 41.9%, the fourth year 22.3%, and the second year 21.9%. These totals are quite similar to national averages reported in the literature with 41.3% of students going abroad during the junior year (Academic Year Abroad, 1999, p. 648).

Study Abroad Courses and Credits

Ninety-six percent of study abroad participants received credit for between one and five courses abroad. The remaining four percent of participants received credit for a range from six to 16 courses abroad. The largest percentage of study abroad participants, 36.7%, received credit for two courses. The next largest percentage at 23.4% received credit for four courses abroad. The average number of courses taken by all participants equaled 2.9 or almost three courses per participant. This was calculated by dividing the 2,584 courses taken at all locations by the 886 participants.

Study abroad credits ranged from one to fifty credits with the average at 8.96 credits per study abroad participant. The largest concentration was 32% of the students who received six credits and the next largest concentration were the 16% who received 12 study abroad credits.

When analyzed by the total course credits received by the 886 participants, 21.7% of the course credits were registered at the Florence location, 45.4% at the London location, and 32.9% at all other locations.

There was no significant correlation found between the number of study abroad credits and any of the pre-college variables of HS GPA, ACT score, or parental income.

Study Abroad Course Program Category

The study abroad course program category is defined by SUS as: "classification associated with the major emphasis of the course program category." When viewed by all study abroad locations the top five program categories at the six-digit CIP level respectively were: 1. Dramatic Arts (9.4%); 2. Spanish (9.0%); 3. General English (8.3%); 4. Art History and Appreciation (8.2%); and 5. Humanities (7.0%). However, differences in course program category were found when viewed by study abroad location.

The top five course program categories for Florence were: 1. Italian (25.0%); 2. Art History & Appreciation (24.2%); 3. Studio/Fine Art (14.1%); 4. Humanities (13.2%); and 5. General English (7.0%).

The top five London course programs were: 1. Dramatic Arts (20.4%); 2. General English (14.1%); 3. Humanities (8.2%); 4. Textiles and Clothing (5.8%); and three programs tied for the fifth spot each garnering 5.5%: General Social Sciences, Motion Picture/TV/Recording Arts, and Music Performance.

The top five course program categories of the all other study abroad location category were: 1. Spanish (27.3%); 2. Hospitality Administration/Management (15.8%); 3. Law (14.1%); 4. French (10.6%); and 5. Music Performance (4.1%).

Comparisons of Study Abroad Participants versus Non-participants

Demographic

Gender

The entire study abroad sample of 886 participants included 656 females and 230 males, or 74% female and 26% male. This compared to 57.3% female and 42.7% male for the total sample of non-participants. The higher ratio of females participating in study abroad is quite consistent with the existing literature. However, the FSU ratio of 74% female reveals an even higher percentage of females than the national average of 65% (Academic Year Abroad, 1999, p. 648). From another perspective, study abroad females made up 9.8% of the total female sample, while study abroad males constituted 4.8% of the total male sample.

Chi square tests confirmed that gender has a significant association at the .05 level with study abroad participation (.000).

Table 2: Study Abroad by Gender

GENDER * STUDYABR Crosstabulation

			STUDYABR		
			Non Study Abroad	Study Abroad	Total
GENDER	F	Count	6067	656	6723
		% within GENDER	90.2%	9.8%	100.0%
		% within STUDYABR	57.3%	74.0%	58.6%
		% of Total	52.9%	5.7%	58.6%
	M	Count	4514	230	4744
		% within GENDER	95.2%	4.8%	100.0%
		% within STUDYABR	42.7%	26.0%	41.4%
		% of Total	39.4%	2.0%	41.4%
Total		Count	10581	886	11467
		% within GENDER	92.3%	7.7%	100.0%
		% within STUDYABR	100.0%	100.0%	100.0%
		% of Total	92.3%	7.7%	100.0%

Race

The entire study abroad sample of 886 participants revealed slight differences in race composition when compared to the 10,581 non-participants from the three year sample. Whites garnered the highest study abroad percent at 86.1%, followed respectively by Hispanics at 8.0%, Blacks at 4.4%, Asians at 1.4 %, and American Indians at 0.1%. Zero non-resident aliens participated in study abroad from this sample. This compared to race/ethnicity percentages for non-participants of 78.8% White, 11.5% Black, 6.3% Hispanic, 2.5% Asian, 0.5% Non-resident Alien, and 0.4% American Indian. These results reveal a higher percentage of Whites and Hispanics participating in study abroad than the general population, and smaller percentages of Blacks, Asians, American Indians, and Non-resident Aliens.

Table 3: Study Abroad by Race/Ethnicity

RACE * STUDYABR Crosstabulation

			STUDYABR		
			Non Study Abroad	Study Abroad	Total
RACE	Asian	Count	265	12	277
		% within RACE	95.7%	4.3%	100.0%
		% within STUDYABR	2.5%	1.4%	2.4%
		% of Total	2.3%	.1%	2.4%
	Black	Count	1217	39	1256
		% within RACE	96.9%	3.1%	100.0%
		% within STUDYABR	11.5%	4.4%	11.0%
		% of Total	10.6%	.3%	11.0%
	Hispanic	Count	669	71	740
		% within RACE	90.4%	9.6%	100.0%
		% within STUDYABR	6.3%	8.0%	6.5%
		% of Total	5.8%	.6%	6.5%
	American Indian	Count	39	1	40
		% within RACE	97.5%	2.5%	100.0%
		% within STUDYABR	.4%	.1%	.3%
		% of Total	.3%	.0%	.3%
	Non-resident Alien	Count	52		52
		% within RACE	100.0%		100.0%
		% within STUDYABR	.5%		.5%
		% of Total	.5%		.5%
	White	Count	8339	763	9102
		% within RACE	91.6%	8.4%	100.0%
		% within STUDYABR	78.8%	86.1%	79.4%
		% of Total	72.7%	6.7%	79.4%
Total		Count	10581	886	11467
		% within RACE	92.3%	7.7%	100.0%
		% within STUDYABR	100.0%	100.0%	100.0%
		% of Total	92.3%	7.7%	100.0%

These results are somewhat similar to national study abroad averages shown in the existing literature (Academic Year Abroad, 1999, p.648). For example, Whites garner 84% of study abroad participants on the national level compared to FSU's 86%. Similar to FSU, Hispanics generally have higher percentages than Blacks on a national level. One difference, however, appears to be the lower number of Asian participants at FSU then nationally (1.4% versus 5% respectively).

The gender ratio of roughly 75% female to 25% male study abroad participants also held up across races with the exception of Blacks where the female percentage

increased to 85% and the male percentage dropped to 15%. White males had the highest percentage among males with 26.6%.

When comparing percentages within each race/ethnicity, Hispanics at 9.6% of the Hispanic sample and Whites at 8.4% of the White sample had higher than the 7.7% average study abroad participation rate. All other races were below this average percentage with Asian at 4.3%, Blacks at 3.1% and American Indian at 2.5% (one person) of their respective races.

In terms of preference of study abroad location, Asians preferred London (66.7%), Blacks also preferred London (46.2%) but other locations was a close second with 43.6%, Hispanics preferred other locations at 56.3%, and Whites preferred London (49.7%). The lowest percentages by race and location went to Blacks in Florence (10.3%), Hispanics in London at (21.1%), and Asians at all other locations (16.7%).

Chi-square tests on gender/race cross tabulations by study abroad participation showed significance for all, with the exception that the American Indian population's significance does not meet the assumption of an expected count greater than 5 and therefore should be ignored. These significant results mean that there is an association between race and gender as to whether or not a student participates in study abroad.

Pre-college Factors

High School GPA

The high school grade point averages of study abroad participants and non-participants were compared for differences. The study abroad participants were found to have a higher mean high school GPA (3.50) than the non-participants (3.37). The higher GPA for study abroad participants held up across all races except for Hispanics, in which case non-participants had a higher mean high school GPA than study abroad participants.

A histogram of both study abroad participants and non participants shows a standard bell curve for non-participants, however, there is somewhat of a non-normal curve for study abroad participants in that a relatively high 29% of them had a high school GPA of 4.0 or higher, as compared to 18.6% of the non participants.

Some of the difference in GPA may be explained by the fact that females constitute 74% of the study abroad participants and females in the total sample had a higher mean high school GPA (3.45) than males (3.28). However, the mean GPA for all

study abroad participants (3.50), which includes males, is higher than the GPA for all females (3.45) suggesting that the higher study abroad GPA is not attributable only to gender. And in fact, when controlling for gender, GPA for female study abroad participants (3.53) was higher than female non-participants (3.44). The same was found for males with study abroad male participants having a mean GPA of 3.42 and non-participant males a mean GPA of 3.27.

A partial correlation test between study abroad participation and high school GPA, controlling for parental income showed a small positive correlation (.072) that was highly significant (p=.000).

ACT Score

The mean ACT score of study abroad participants was compared to the mean ACT score of non-participants. First, all code 99 scores signifying scores that were not reported were deleted. This left a total of 6,276 students that divided into 511 study abroad participants and 5,765 non-participants. The mean ACT score of study abroad participants (24.98) was higher than that of non-participants (23.89). The valid range of ACT scores is 3 – 36. The low standard deviations as compared to the means as well as strong adherence to linearity and the normal curve show the tests to be a good fit.

In controlling for possible gender influence in the higher ACT scores, it was found that in fact males in the sample had a higher mean ACT score (24.46) than females (23.71), thereby eliminating this as a possible explanation of the higher study abroad ACT scores because there were twice as many females in the ACT sample as males. The higher ACT scores for the SA group also were seen across all race/ethnicities.

Similar to high school GPA, the ACT scores also showed a positive correlation to study abroad participation (.089) that was highly significant (p=.000), while controlling for parental income.

Residency

Residency at the time of enrollment did not seem to make much difference on study abroad participation, however, non-Florida residents did participate in study abroad at a higher rate (8.3%) than Florida residents (7.6%). Stated another way, although non-Florida residents made up only 18.8% of the total sample, they constituted 20.3% of the

study abroad participants. When residency was further analyzed by Florida county no large differences were found between participants and non-participants.

Chi square tests also revealed no significance between residency and study abroad participation.

Public versus Private High School

Study abroad participation was also analyzed by whether students attended a public or non-public Florida high school. Of the total 9310 Florida residents in the total sample, 7,762 or 83.4% attended a public high school and the remaining 16.6% attended non-public. However, of the total 706 Florida residents in the study abroad participant sample, higher rates of non-public participants were found at 22.8% of the sample. Chi square tests showed the public/private school factor as a significant association (.000).

Financial Aid

Very little difference was found in financial aid ratios between the total sample and study abroad participants. It was found that 76.4% of the non-participants received some type of financial aid compared to 75.6% of the study abroad participants who received some type of financial aid. A limitation is that data were not available to determine if a student received financial aid specifically for the study abroad participation. No significance was found between financial aid and study abroad participation in chi square tests.

Income

Parental income was also analyzed for differences between study abroad participants and non-participants. Of the 6,544 valid records reporting parental income, 6.7% of the records were for study abroad participants providing a sample size of 417 for study abroad participants and 6,127 for non-participants. The study abroad group had a higher mean pre-college parental income ($55,533) compared to the non study abroad group ($49, 881). The median income levels also reflect an advantage toward the study abroad participants ($49,540) as compared to the non study abroad group ($44,596). The relatively low standard deviations (compared to the mean) for both groups suggest that the mean is a good fit to the data. However as might be expected, both groups show some departure from the normal curve with many cases bunched in the lower income brackets and a variety of outliers toward the higher income scales.

To facilitate management of the data, eight yearly income categories were created: 0 = not reported; 1 = $1 - $5000; 2 = $5001 - $10000; 3 = $10001 – $20000; 4 = $20001 – $40000; 5 = $40001 – $60000; 6 = $60001 – $80000; 7 = $80001 +. Clearly, the largest percentages of study abroad participants came form the income categories over $20,000. However, when viewed as a percentage of all the parental income categories, the highest percentages for study abroad participants were found in both the low and high end, with 12.3% of those in the $1 - $5000 category participating in study abroad and 8.9% of those in the $80,000 + range participating in study abroad. All other income ranges had study abroad participant ratios of less than the 7.7% general average of study abroad participants from the total sample. Whereas the low and high income brackets only comprised 18.6% of the non-participant sample, these two brackets comprised 28.8% of the study abroad sample.

Chi Square tests on income brackets versus study abroad showed a significant relationship of .000 for income to study abroad participation. Additionally, a Pearson correlation also showed a small positive correlation between income and study abroad (.041) that was highly significant (.001). However, in a partial correlation test controlling for high school GPA and ACT score, significance was not found between study abroad and parental income suggesting that high school academic ability maybe a stronger predictor of study abroad than parental income.

Table 4: Income Categories

INCCAT.1: Income categories * STUDYABR Crosstabulation

			STUDYABR		
			Non Study Abroad	Study Abroad	Total
INCCAT.1: Income categories	Not reported	Count	4454	469	4923
		% within INCCAT.1: Income categories	90.5%	9.5%	100.0%
		% within STUDYABR	42.1%	52.9%	42.9%
		% of Total	38.8%	4.1%	42.9%
	1-5000	Count	193	27	220
		% within INCCAT.1: Income categories	87.7%	12.3%	100.0%
		% within STUDYABR	1.8%	3.0%	1.9%
		% of Total	1.7%	.2%	1.9%
	5001-10000	Count	240	7	247
		% within INCCAT.1: Income categories	97.2%	2.8%	100.0%
		% within STUDYABR	2.3%	.8%	2.2%
		% of Total	2.1%	.1%	2.2%
	10001-20000	Count	614	36	650
		% within INCCAT.1: Income categories	94.5%	5.5%	100.0%
		% within STUDYABR	5.8%	4.1%	5.7%
		% of Total	5.4%	.3%	5.7%
	20001-40000	Count	1655	96	1751
		% within INCCAT.1: Income categories	94.5%	5.5%	100.0%
		% within STUDYABR	15.6%	10.8%	15.3%
		% of Total	14.4%	.8%	15.3%
	40001-60000	Count	1431	86	1517
		% within INCCAT.1: Income categories	94.3%	5.7%	100.0%
		% within STUDYABR	13.5%	9.7%	13.2%
		% of Total	12.5%	.7%	13.2%
	60001-80000	Count	1042	72	1114
		% within INCCAT.1: Income categories	93.5%	6.5%	100.0%
		% within STUDYABR	9.8%	8.1%	9.7%
		% of Total	9.1%	.6%	9.7%
	80000+	Count	952	93	1045
		% within INCCAT.1: Income categories	91.1%	8.9%	100.0%
		% within STUDYABR	9.0%	10.5%	9.1%
		% of Total	8.3%	.8%	9.1%
Total		Count	10581	886	11467
		% within INCCAT.1: Income categories	92.3%	7.7%	100.0%
		% within STUDYABR	100.0%	100.0%	100.0%
		% of Total	92.3%	7.7%	100.0%

Summary of Question 1

There is a significant association between gender and race determining if one will participate in study abroad. Females participate in study abroad at much higher rates than

males as well as the average female population. These results also show that Hispanics and Whites participate in study abroad at greater rates than their average populations, while Asians, Blacks, and American Indians participate in lower rates than their average populations. There is also a significant association between income and study abroad participation, with those in income brackets over $20,000 in parental income participating in study abroad at higher rates than those below $20,000 in parental income. However, when controlling for high school ability factors of GPA and ACT scores, no significance is found in parental income. All of this suggests that gender, race, and high school academic achievement might be the strongest determinants of study abroad participation.

Question #2

Question

What are the educational outcomes of study abroad participants versus non participants and are there differences between the variables of program of study, rates of graduation, time to graduation, college GPA, and highest degree attained?

Educational Overview of Total Sample

The variables of interest for this question included an analysis of college GPA, time to graduation, rates of graduation, highest degree received, and program discipline. Before conducting a comparison of study abroad participants versus non-participants, the total sample was analyzed on these same variables for overall descriptive purposes.

Data were obtained from the Student Data File that was compiled for all students admitted in 93/94, 94/95, and 95/96. The course records accessed ran from 1993/94 through 2001/02 for all of the 11, 467 students in the sample. These student course records were merged with the initial admissions files using SPSS by matching on unique PIN numbers. Therefore, any graduations or course records in 2002/03 would not be included in this study.

Of the total sample of 11, 467 students, a total of 7,574 students or 66% received some type of degree classified as Associate, Bachelor, Master, Law and Specialist. Of those, 58.4% or 6,702 students admitted in one of the three years obtained a baccalaureate degree. Masters degrees were obtained by 480, or 4.2% of the sample,

while 3,861 or 33.7% did not receive a degree. Of the remaining students, 301 (2.6%) obtained an associate degree, 90 students (0.8%) received a Law, LLB or JD degree, and one received a specialist degree.

The most common program disciplines among degree receivers from the total sample were General Communications, General Biology, General Business, General English, Criminal Justice Studies and General Psychology.

The average GPA for the entire sample was 2.78 while the mean GPA for only the degree recipients was 3.02. Female degree recipients had a GPA of 3.07 while males had a mean GPA of 2.95.

Comparison of Study Abroad Participants versus Non-participants

Highest Degree

The sample was analyzed by the dichotomous grouping of study abroad participants versus non-participants for the highest degree attained at FSU up through 2001/2002. In general, a wide discrepancy was found in favor of study abroad participants. Of the 886 study abroad participants in the sample, 826 or 93.2% received some type of degree, with 80.8% receiving a baccalaureate degree. This can be compared to the 6748 or 64% of non-participants who received some type of degree, and the 56.6% who received the baccalaureate. Further analysis by degree level percentages revealed that although study abroad participants constituted 7.7% of the total sample, they were a whopping 45.6% of the Law graduates, 12.5% of the master degree recipients, and 10.7% of the bachelor's degrees. Chi square tests also revealed a significant association (.000) between study abroad and receiving a degree.

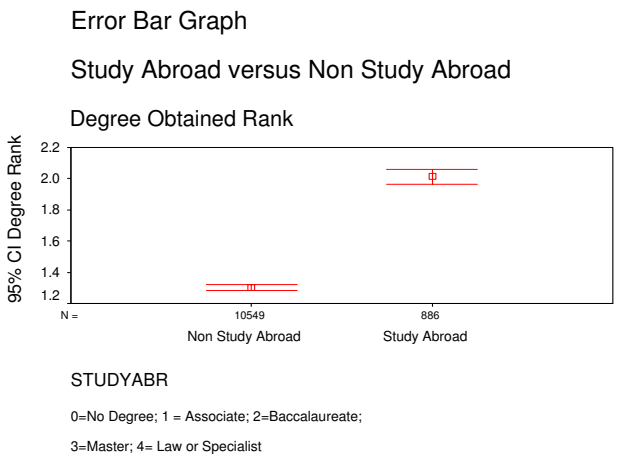
As another means of analysis, degrees were recoded into numerical categories as follows: No degree = 0, Associates = 1; Bachelor =2; Master = 3; Law or Specialist = 4, with the higher degrees assigned the higher numerical value. The non study abroad group had a mean rank of 1.3 (between associates and bachelors) while the study abroad group had a mean rank of 2.01 (just over bachelors degree) as an average. An error bar chart also revealed no overlapping between the study abroad (SA) group and the non study abroad (NSA) group with 95% confidence levels for the SA group between 2.0 and 2.1 and for the NSA group between 1.25 and 1.35.

Table 5: Highest Degree Attained

DEGREE_I.1: DEGREE_INF * STUDYABR Crosstabulation

			STUDYABR		
			Non Study Abroad	Study Abroad	Total
Highest Degree		Count	32		32
		% within DEGREE	100.0%		100.0%
		% within STUDYABR	.3%		.3%
		% of Total	.3%		.3%
	Associate	Count	292	9	301
		% within DEGREE	97.0%	3.0%	100.0%
		% within STUDYABR	2.8%	1.0%	2.6%
		% of Total	2.5%	.1%	2.6%
	Bachelor	Count	5986	716	6702
		% within DEGREE	89.3%	10.7%	100.0%
		% within STUDYABR	56.6%	80.8%	58.4%
		% of Total	52.2%	6.2%	58.4%
	Law	Count	49	41	90
		% within DEGREE	54.4%	45.6%	100.0%
		% within STUDYABR	.5%	4.6%	.8%
		% of Total	.4%	.4%	.8%
	Master	Count	420	60	480
		% within DEGREE	87.5%	12.5%	100.0%
		% within STUDYABR	4.0%	6.8%	4.2%
		% of Total	3.7%	.5%	4.2%
	No Degree	Count	3801	60	3861
		% within DEGREE	98.4%	1.6%	100.0%
		% within STUDYABR	35.9%	6.8%	33.7%
		% of Total	33.1%	.5%	33.7%
	Specialist	Count	1		1
		% within DEGREE	100.0%		100.0%
		% within STUDYABR	.0%		.0%
		% of Total	.0%		.0%
Total		Count	10581	886	11467
		% within DEGREE	92.3%	7.7%	100.0%
		% within STUDYABR	100.0%	100.0%	100.0%
		% of Total	92.3%	7.7%	100.0%

Figure 1: Error Bar for Degree Rank



This confirms that the two groups are likely to be from different populations. An independent t-test comparing means also revealed significance between the NSA mean degree rank of 1.3 and the SA mean degree rank of 2.01.

The creation of a degree rank also allowed for correlations to be run revealing a small positive correlation between degree attainment and study abroad (.187) that was highly significant (.000). This high significance (p=.000) was still seen in a partial correlation while also controlling for college GPA.

An ANOVA test comparing the highest degree attained for non study abroad to the three different study abroad categories of Florence, London, and all other programs revealed a higher degree rank for all three SA categories than the NSA group with the all other program group having the highest degree rank at 2.21 followed by London at 1.94, and Florence at 1.83. These ranks compared to the NSA group with a mean of 1.30. The mean differences of -.91, -.64, and -.53 were all significant at the .05 level when compared to the NSA group.

Figure 2: Degree Rank by Campus

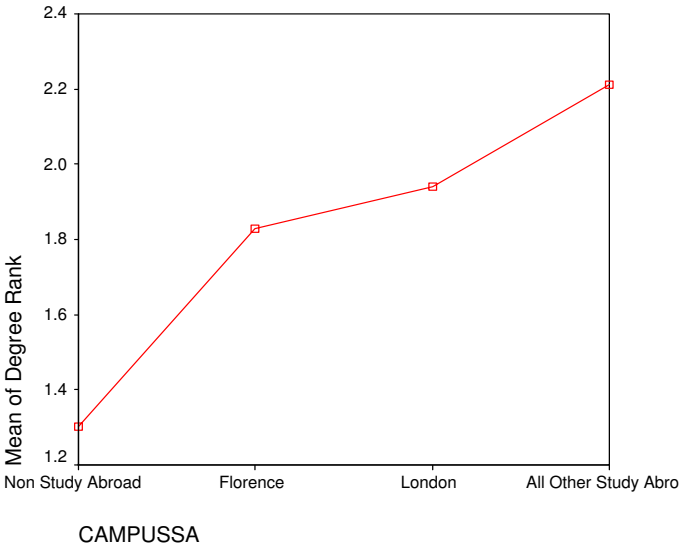


Table 6: Degree ANOVA by Campus

Multiple Comparisons

Dependent Variable: Degree Rank
Tukey HSD

(I) CAMPUSSA	(J) CAMPUSSA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non Study Abroad	Florence	-.53*	.080	.000	-.73	-.32
	London	-.64*	.050	.000	-.77	-.51
	All Other Study Abroad	-.91*	.058	.000	-1.06	-.76
Florence	Non Study Abroad	.53*	.080	.000	.32	.73
	London	-.11	.093	.624	-.35	.13
	All Other Study Abroad	-.38*	.098	.001	-.63	-.13
London	Non Study Abroad	.64*	.050	.000	.51	.77
	Florence	.11	.093	.624	-.13	.35
	All Other Study Abroad	-.27*	.075	.002	-.46	-.08
All Other Study Abroad	Non Study Abroad	.91*	.058	.000	.76	1.06
	Florence	.38*	.098	.001	.13	.63
	London	.27*	.075	.002	.08	.46

*. The mean difference is significant at the .05 level.

Gender

When controlling for gender, the higher study abroad percentages held up with 92.2% of the study abroad males receiving a degree and 92.6% of the study abroad females receiving a degree. Study abroad males constituted 40% of the Law degree recipients, 10.5% of the master‘s degrees, and 6.8% of the bachelor’s degrees even though they only made up 4.8% of the male sample. Although females only constituted 9.8% of the female sample, they received 50% of the Law degrees awarded to females, and 13.4% and 13.3% respectively of the master’s and bachelor’s degrees.

Race

Once again, the highest degree attained ratios favored study abroad participants when analyzed by race. A full 100% of Asian, Black, and Indian (one person) study abroad participants received some type of degree. Whites maintained a 93.3% degree recipient rate while Hispanics had the lowest ratio at 87.3%.

These figures are compared to highest degree attained rates among non-participants of 61.5% for Asians, 62.7% for Blacks, 57.4% for Hispanics, 48.7% for American Indians, and 64.7% for Whites.

The race/ethnicity analysis also showed that where all the other races had an 80%-90% baccalaureate attainment rate as the highest degree, study abroad Blacks had a full

1/3 of the participants (33.3%) receive either a Law or Masters graduate degree. This is compared to a 4.6% rate for non study abroad Blacks.

Time to Degree

The time to degree variable was created by subtracting the year of admission from the year the highest degree was awarded. For example, when the admission year was 93/94 then 1993 was used as the admission year. The range for all students in the sample was from two years to nine years to receive the baccalaureate degree. The two year time frame can be explained by advanced placement and early enrollment programs. The time to degree for master's degrees ranged from four to nine years, and for Law degree recipients from five to nine years. When comparing all degrees received, the average time to degree for the study abroad group (4.41 years) was slightly longer than the non study abroad group (4.32 years). This difference was significant at the .044 level in an independent t-test for comparing means. However, this may simply reflect the higher concentration of advance degrees among the SA participants. Therefore, a more telling statistic was to run the time to degree by comparable degrees received.

There was a small difference found in time to degree in comparing study abroad participants versus non-participants who received the bachelor's degree as the highest degree, however as suspected above, in this case the SA group took slightly less time to complete the degree at 4.13 years compared to 4.27 for the NSA group. This was shown to be significant (.000) in an independent t-test to compare means.

The study abroad participant ratio who required four years to obtain the degree was 69.4% while the non-participant ratio for four years was 64.0%. However, when adding the four and five year categories together, the two groups were almost equal with study abroad participants who required either four or five years at 83.8% and non-participants requiring either four or five years at 83.3%.

This relationship transposed for the variable of time to receive the Master's degree, with the SA group taking 5.98 years to graduate and the NSA group only requiring 5.79 years. However, this was not significant in an independent t-test. The closeness of these results was also seen with the statistic that 71.7% of study abroad participants received the master's degree within five or six years and 68.3 % of non study abroad students also required five or six years. A slight difference was seen here in the

percentages receiving the master's degree in four years after admission, with only two of the study abroad participants doing so (3.3%) and 35 (8.3%) of the non-participants doing so. The time required to go abroad might be a possible explanation for this difference.

Furthermore, there was no significant correlation found between the number of study abroad credits and time to degree.

An ANOVA test comparing means of study abroad by location to non study abroad participants showed mixed results. Both the Florence and London programs required overall less time to the degree than the NSA group. However, this mean was not significant. On the other hand, the all other programs mean time to degree was significantly longer than the NSA group at 4.72 years compared to 4.32 for the NSA group. However, when analyzed by bachelor's degrees only, all three SA programs had a quicker time to degree than the NSA group; however only the London program was significant at the .05 level with a time to degree of 4.08 years compared to the NSA group at 4.27 years.

Degree Program Discipline

Of the 826 study abroad participants who received a degree, the top five program disciplines at the six-digit level were: 1) General Communications, 2) General English, 3) Law, 4) International Relations, and 5) Dramatic Arts.

In comparison, the 6748 non study abroad students who obtained a degree also had the same top two disciplines of 1) General Communications and 2) General English, however the next popular degree programs were: 3) General Finance, 4) Business Administration and Management, and 5) Criminal Justice Studies.

In order to account for the possibility that the higher degree attainment rates on the part of study abroad participants might be due to different or perhaps "easier" degree programs, an analysis was run comparing the same top two programs for both groups, General Communications and General English. The higher rates for study abroad participants held up in both of these degree programs with study abroad participants garnering 13.6% of the bachelor's degrees and 19.6% of the master's degrees in General Communications (as compared to study abroad participants comprising 7.7% of the total sample), and 14.6% of the bachelors degrees and 16.7% of the masters (n of 1) in General English.

When analyzed by the broader two-digit CIP classification, as well as by campus location for the three study abroad categories and one general non study abroad category, wider differences were seen in degree program. The top five degree programs at the two-digit CIP level for the NSA group were: 1) Business Management and Administrative Services (20.8%); 2) Education (9.2%); 3) Social Sciences (8.1%); 4) Biological Sciences/Life Sciences (7.8%), and 5) Communications (6.4%).

In comparison, the top five degree programs at the two-digit CIP level for the SA group as a whole were: 1) Visual and Performing Arts (16.9%), 2) Business Management and Administrative Services (16.0%), 3) Social Science (13.1%), 4) Communications (9.5%), and 5) English Language and Literature Letters (7.6%).

In a further breakdown by study abroad location at the two-digit CIP level, the top programs for the London program were: 1) Visual and Performing Arts (25.7%); 2) Social Science (12.1%); 3) Communications (10.7%); 4) Education (9.7%); and 5) English Language and Literature/Letters (8.8%).

The top degree programs for the Florence program were: 1) Visual and Performing Arts (20.4%); 2 and 3) Business Management and Administrative Services & Social Sciences tied at 14.0%; 4) Communications (11.5%); and 5) Education (7.6%).

The top degree programs for the all other study abroad program locations were: 1) Business Management and Administrative Services (26.9%); 2) Social Sciences (14.0%); 3) Law and Legal Studies (12.7%); 4) Foreign Languages and Literatures (9.4%); and 5) both Communications and English Language and Literature/Letters (6.8%).

An analysis was also performed to compare the degree program with the initial degree sought category at admission. A new variable, degree change, was created by assigning a value of 1 to all subjects that had matching degree programs and degree sought programs. Those who did not match were assigned zero. The non match subjects also included those who were recorded as 000000 or no degree sought at admission. The analysis showed that only 20.4% of the study abroad participants matched the degree sought with the degree received, while 32 % of the NSA group matched the degree sought with the degree received. This statistic reveals that although study abroad participants changed initial major at a higher rate than the non study abroad sample, the study abroad participants were still able to obtain the baccalaureate degree in less time.

Grade Point Averages (GPA)

The college Grade Point Average (GPA) was calculated from the student course files by adding the total GPA hours plus the term GPA hours and dividing this total by the sum of the total grade points earned plus the term grade points earned (total GPA hours + term GPA hours / total grade points earned + term grade points earned).

There were a total of 11,326 valid GPA's for the total sample. This total was split into 886 for the study abroad sample and 10,440 for the non study abroad students.

The mean GPA was then calculated for both groups. The study abroad group had a higher mean GPA at 3.19 compared to the non study abroad group at 2.74. When controlling for gender, female study abroad participants also had a higher mean GPA (3.20) compared to female non-participants (2.82). Similarly, male study abroad participants had a higher mean GPA (3.16) than the non study abroad male group at 2.64. The higher GPA also held up across all races for the study abroad participants. Additionally, when analyzed by degree recipients only, the SA group still had a higher mean GPA at 3.22 as compared to 3.00 for the NSA group. These higher GPAs for the study abroad participants can be contrasted to the original high school mean GPA difference of 3.50 for the study abroad sample versus a mean GPA of 3.37 for the non study abroad sample.

Chi square tests showed a significant association between GPA and study abroad (.000); however, the Pearson coefficient was small at .175. In addition, a partial correlation test for study abroad and college GPA, controlling for high school GPA and ACT scores, revealed a positive correlation of .150 with a significant p value of .000. An error bar chart showed differing means with no overlap with a 95% confidence interval (CI) for the SA group between 3.15 and 3.25, and a 95% CI between 2.7 and 2.8 for the NSA group. An independent t-test to compare means also found significance (.000) between the means of the two group's GPAs.

An ANOVA test was run using the non study abroad group as the control. The three study abroad locations of Florence, London, and all other programs were coded uniquely for the ANOVA. Using the Tukey procedure, significance was found at the .05 level in all three study abroad categories in comparison to the non study abroad group.

There was a mean difference in GPA of -.46, -.51, and -.35 for the Florence, London, and all other programs respectively as compared to the non study abroad group.

Table 7: College GPA ANOVA

Multiple Comparisons

Dependent Variable: GPA

	(I) CAMPUSSA	(J) CAMPUSSA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Non Study Abroad	Florence	-.4624*	.05430	.000	-.6020	-.3229
		London	-.5128*	.03357	.000	-.5991	-.4266
		All Other Study Abroa	-.3521*	.03904	.000	-.4524	-.2517
	Florence	Non Study Abroad	.4624*	.05430	.000	.3229	.6020
		London	-.0504	.06315	.855	-.2127	.1119
		All Other Study Abroa	.1104	.06623	.341	-.0598	.2806
	London	Non Study Abroad	.5128*	.03357	.000	.4266	.5991
		Florence	.0504	.06315	.855	-.1119	.2127
		All Other Study Abroa	.1608*	.05064	.008	.0307	.2909
	All Other Study Abroa	Non Study Abroad	.3521*	.03904	.000	.2517	.4524
		Florence	-.1104	.06623	.341	-.2806	.0598
		London	-.1608*	.05064	.008	-.2909	-.0307
Games-Howell	Non Study Abroad	Florence	-.4624*	.03923	.000	-.5643	-.3606
		London	-.5128*	.02218	.000	-.5700	-.4557
		All Other Study Abroa	-.3521*	.02764	.000	-.4234	-.2807
	Florence	Non Study Abroad	.4624*	.03923	.000	.3606	.5643
		London	-.0504	.04404	.662	-.1643	.0635
		All Other Study Abroa	.1104	.04703	.090	-.0111	.2319
	London	Non Study Abroad	.5128*	.02218	.000	.4557	.5700
		Florence	.0504	.04404	.662	-.0635	.1643
		All Other Study Abroa	.1608*	.03413	.000	.0729	.2487
	All Other Study Abroa	Non Study Abroad	.3521*	.02764	.000	.2807	.4234
		Florence	-.1104	.04703	.090	-.2319	.0111
		London	-.1608*	.03413	.000	-.2487	-.0729

*. The mean difference is significant at the .05 level.

Summary of Educational Data

Although claims of causality cannot be made between study abroad and various educational outcomes due to the possible influence of confounding variables, several significant associations were found between study abroad and educational outcomes when comparing means to those of non study abroad participants. For continuing education levels and highest degree received, 93.2% of study abroad participants received some type of degree compared to only 64% of the non study abroad participants. In

addition to the baccalaureate degree, SA participants also received Masters and Law or specialist degrees at a higher rate than the NSA counterparts. Differences were also found between the three SA location categories with the all other SA program group showing the highest level of degree attainment, followed by London, and then Florence. The higher degree attainment ratios also held up for SA participants for both sexes and across all races.

There were both similarities and differences seen in the degree program disciplines. At the six-digit CIP level, the SA and NSA groups had the same top two programs of General Communications and General English, however, differences were then found in the remaining ranks. At the two-digit CIP analytical level, wider differences were seen not only between SA and NSA but also between SA locations. The top program for both the NSA group and the all other SA program group was Business Management, while the top program for both London and Florence was Visual and Performing Arts.

There were small differences seen in average time to degree when comparing the SA group to the NSA group combining all degrees, with the SA group requiring slightly longer at 4.41 years as compared to 4.32 years for the NSA group. However, when analyzing only the Bachelor degree recipients, the SA group took slightly less time to receive the degree at 4.13 years compared to 4.27 for the NSA group.

The SA group had a higher mean college GPA at 3.19 compared to the NSA group at 2.74. The higher mean GPA for SA participants also was found for both sexes as well as across all races. When analyzed by degree recipients only, the SA group retained a higher mean GPA at 3.22 as compared to 3.00 for the NSA group. The higher mean GPA was also found for all three SA location categories when compared to the NSA group.

Question #3

Question

What are the employment outcomes of study abroad participants versus non participants and are there differences between the variables of industry of employment, rate of employment, and earning levels?

Employment Overview of Total Sample

The variables of interest for this question included an analysis of earnings, rates of those found employed in Florida, and a comparison of industries of employment. The FETPIP wage file was utilized in order to analyze these questions. Once again, the PIN numbers of the entire sample were matched in order to merge the FETPIP file with the SUS files. A limitation of this aspect of the study is that data was limited to only those found employed in the State of Florida.

The FETPIP wage files provide quarterly wage information for each subject. However, a review of the data revealed that the highest quarterly wages were not always earned in the latest quarter. This could be due to a variety of reasons such as changing jobs or going to part-time employment. It was therefore decided to use an average wage for each subject including all earned wages above minimum wage. This reflects a more accurate full-time wage scale. The formula used to calculate full-time wages was to include only those who appeared to be working full-time, full quarter (i.e. earned at least minimum wage of $5.15 x 40 hours x 13 weeks = $2,678 for the quarter). Therefore, all quarterly wages above $2,677 were used to compute the mean wage for each subject.

Using the methodology of quarterly wages > $2677 as employed, the percentage of the 11, 467 found employed in Florida was 71%, or 8,139 of the total sample. Again, a limitation of this data was the lack of employment data outside of Florida.

The mean wage for the total sample found employed was $6,306.86 per quarter ($25,227.44 yearly) for the 8,139 valid wage records from the total sample using the above formula of all fulltime wages.

The top industries of employment for the 8,139 found employed fulltime in Florida by three-digit North American Industry Classification System (NAICS) were: 1) Professional, Scientific, and Technical Services (13.3%), 2) Educational Services (12.7%), 3) Administrative and Support Services (9.8%), 4) Food Services and Drinking Places (6.5%), and 5) Credit Intermediation and Related Activities (3.5%).

Comparison of Study Abroad Participants versus Non-participants

Rate of Employment

Using the above mentioned methodology for fulltime employment, the non study abroad sample was found employed in Florida at a higher rate (71.7%) than the study

abroad participants (62.4%). Again, this data does not reflect those who might have left the State of Florida to obtain employment. Chi square tests reflected this by showing a small negative correlation between study abroad and employment that was significant at .000

The lower rate found employed in Florida certainly may not reflect poorly upon the study abroad group in terms of overall employment. It certainly would be within reason to ascertain the possibility that those willing to travel abroad to study may also be inclined to relocate for employment. This would be an excellent follow-up study by including national (or international) employment data.

Gender

When analyzed by gender, the higher percentage found employed in Florida held up for the non study abroad group at 73.7% versus 64.0% for the study abroad participants. This was also maintained for males with 69.0% non study abroad found employed and 57.8% of the study abroad group found employed.

Race

When analyzed by race, the higher rates for the non study abroad group held up for Whites and Blacks, however, Asian study abroad participants were found employed at a higher rate (66.7%) than the Asian non study abroad group (63.0%). Although the Hispanic non study abroad group was also found employed at a higher rate, the percentage difference was of a much smaller magnitude at 79.5% for non study abroad and 76.1% for study abroad participants.

Industry of Employment

The industry of employment was again determined by using the NAICS codes. The top industries for the fulltime employed study abroad participants at the three-digit level were: 1) Professional, Scientific, and Technical Services, 2) Educational Services, 3) Administrative and Support Services, 4) Food Services and Drinking Places, 5) Executive, Legislative, and Other General Government.

The top five for the non study abroad group were exactly the same except for the number five spot: 1) Professional, Scientific, and Technical Services, 2) Educational Services, 3) Administrative and Support Services, 4) Food Services and Drinking Places, and 5) Credit Intermediation and Related Activities. Chi square tests revealed significant

association between study abroad and industry of employment, although 40% of the cells had n's below the required five.

However, when broken down into the six-digit NAICs, thereby providing more finite detail as to the industry, the percentages changed. The top industry for the study abroad group became Elementary and Secondary Schools at 8.1% followed by 2) Offices of Lawyers (6.5%), 3) Full-Service Restaurants (5.6%), 4) Employee Leasing Services (4.9%), and 5) Colleges, Universities, and Professional Schools (4.0%).

The top industry by six-digit NAICs for the non study abroad group was also Elementary and Secondary Schools at 8.6% followed by 2) Full-Service Restaurants (5.1%), 3) Employee Leasing Services (4.7%), 4) Colleges, Universities, and Professional Schools (2.9%), 5) General Medical and Surgical Hospitals (2.7%).

Sample sizes at the six-digit level were too small to run chi square tests.

Gender

When analyzed by gender the only change for the study abroad group was that Offices of Lawyers fell out of the top five to number six, while General Medical and Surgical Hospitals moved into the top five.

For males, although percentages changed, the top five industries remained the same as for the total study abroad group.

Race

When analyzed by race some differences were found in the top five industries of employment. For example, Blacks had three of five top industries the same as compared to the total study abroad sample (Elementary and Secondary Schools, Employee Leasing Services, and Universities, and Professional Schools) however; Temporary Help Services and Administration of Public Health Programs moved into the fourth and fifth spot respectively for Black study abroad participants. A unique program appearing in the top five for Asians was Computer Systems Design Services at number four. A unique program for Whites was General Medical and Surgical Hospitals also in the fourth position. Hispanics maintained the same top five as the general study abroad population, although in different percentages and order.

Study Abroad Location

The industry of employment analysis would not have been complete without a look at differences by study abroad location. The top industry of employment at 12.6% for the London participants was Educational Services, followed by Professional, Scientific, and Technical Services (11.2%), and Administrative and Support Services (10.2%). The top industries for the Florence program were Professional, Scientific, and Technical Services (16.6%), Administrative and Support Services (11.5%) and Educational Services (11.5%). The top programs for the Other locations were Professional, Scientific, and Technical Services (14.0%), Food Services and Drinking Places (11.4%), and Educational Services (9.7%). The same three industries were responsible for 34% of the London Program and 39.6% of the Florence program.

Wages

The same methodology was used to calculate wages for the study abroad versus non study abroad groups as was used above for the total sample. Surprisingly, the non study abroad sample of 7,585 full time employed had a higher mean quarterly wage ($6,315.40) than the 553 employed study abroad group ($6,020.33). Chi square tests also reflected this as a small negative correlation between study abroad and wages (-.024) that was significant (.029) A partial correlation test also showed a negative correlation between study abroad and wages (-.060) that was significant (p=.000), while controlling for degree rank. An error bar chart confirmed that these are most likely two distinct populations as it also showed no overlap between the two groups and a 95% CI for the NSA group between $6,250 and $6,400, and a 95% CI between $5,800 and $6,250 for the SA group. The SA group clearly had a wider range. An independent t-test to compare means of the two groups also showed significance (.029).

Gender

When analyzed by gender, both sexes in the non study abroad category still maintained a higher mean wage than the study abroad participants, however, females were closer in range ($6,163 versus $6,059) than males who showed a wider gap in earnings ($6,564 versus $5,897). Noteworthy in these statistics is the fact that study abroad males under earned when compared to females of either category. Stated another

way, although the traditional wage premium in favor of males held up for the non study abroad group, study abroad females out earned their male counterparts.

Race/Ethnicity

The wage advantage also held up across race/ethnicities for the non study abroad group, with the notable exception of Hispanics where the study abroad group out earned the non study abroad group $6,741 to $6,206. When viewed by race within the category of study abroad, Hispanics had the highest earnings followed by Whites, American Indians (n=1), Blacks, and Asians. However, a difference was seen in this ranking for the non study abroad group with American Indians first, followed by Whites, Hispanics, Asians, and Blacks.

Industry

In order to accurately understand the true significance of the disparity in wages, it was necessary to analyze and compare wages by industry of employment. The first step was to eliminate all NAICs that did not have n's for both study abroad and non study abroad. This was done on the three-digit NAICs level. The results of this analysis also showed higher wages for the non study abroad group ($6,342) compared to the study abroad group ($5,989).

However, when analyzed individually by three-digit NAICs codes, study abroad participants did out earn non-participants in certain industries. Some industries had such a small n of 1 or 2 however, it would be difficult to attach any value to those. The industries with larger n's (five or greater) where study abroad participants out earned non-participants were: Special Trade Contractors 236, Wholesale Trade 424, Clothing and Clothing Accessories Stores 448, General Merchandise Stores 452, Publishing Industries 511, Credit Intermediation and Related Activities 522, Food Services and Drinking Places 722,and Justice, Public Order, and Safety Activities 922.

However, these eight three-digit industries where study abroad participants out earned non-participants were overshadowed by the 18 three-digit industries (with n's greater than five) where non-participants out earned participants.

Study Abroad Location

The results of wage earnings became clearer when analyzed by study abroad location. In fact, a wide difference in mean wage earnings was found according to

location of the study abroad program. The Florence participants indeed had a higher mean wage at $6,376.05 than the non study abroad participants at $6,315.40. The all other SA participants had a fairly similar mean wage of $6,254.75 and the London participants had an extremely lower mean wage of $5,675. 62. It became clear from this analysis that the London participants lower wage earnings brought down the study abroad group overall wages, whereas the other program and Florence participants compared somewhat equally in wages. An ANOVA test showed the close mean wages between the NSA group and the Florence and the all other program groups to be not significant. However, the wide disparity between the NSA group and the London participants ($639.78/quarter) was significant at the .05 level.

Table 8: Wages ANOVA

ANOVA: Total Wages

TOTWAG_1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non Study Abroad	7585	6315.3984	3042.30628	34.93214	6246.9218	6383.8751	2678.00	51675.00
Florence	101	6376.0451	3305.34309	328.89393	5723.5289	7028.5613	2780.71	27382.00
London	245	5675.6192	2346.49178	149.91186	5380.3327	5970.9057	2697.00	16109.50
All Other Study Abroa	207	6254.7473	2877.46023	199.99731	5860.4433	6649.0514	2681.00	18722.40
Total	8138	6295.3474	3024.50879	33.52710	6229.6257	6361.0691	2678.00	51675.00

Table 9: Wages

Multiple Comparisons

Dependent Variable: TOTWAG_1

Tukey HSD

(I) CAMPUSSA	(J) CAMPUSSA	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Non Study Abroad	Florence	-60.6467	302.80297	.997	-838.7180	717.4246
	London	639.7792*	196.23138	.006	135.5504	1144.0081
	All Other Study Abroad	60.6511	212.96583	.992	-486.5780	607.8802
Florence	Non Study Abroad	60.6467	302.80297	.997	-717.4246	838.7180
	London	700.4259	357.47259	.204	-218.1223	1618.9742
	All Other Study Abroad	121.2978	366.92552	.988	-821.5404	1064.1360
London	Non Study Abroad	-639.7792*	196.23138	.006	-1144.0081	-135.5504
	Florence	-700.4259	357.47259	.204	-1618.9742	218.1223
	All Other Study Abroad	-579.1282	285.39701	.177	-1312.4737	154.2174
All Other Study Abroad	Non Study Abroad	-60.6511	212.96583	.992	-607.8802	486.5780
	Florence	-121.2978	366.92552	.988	-1064.1360	821.5404
	London	579.1282	285.39701	.177	-154.2174	1312.4737

*. The mean difference is significant at the .05 level.

Degree program

As reported for question #2, there was a consistency between the overall SA group and the NSA group in the top two degree disciplines; General Communications and General English. Therefore any difference in wages in this regard would have to be explained in the lower percentage degree programs. However, due to a lack of adequate sample size in the smaller percentages it was not possible to run a chi square test for significance.

However, in analyzing the disparity between London and the NSA group, in question #2 it was found that there was a difference in terms of degree program categories. The top five degree programs for the London group at the two-digit CIP level were: 1) Visual and Performing Arts (50); 2) Social Science (45); 3) Communications (09); 4) Education (13); and 5) English Language and Literature/Letters. In comparison the top five degree programs for the NSA group were: 1) Business Management and Administrative Services (52); 2) Education (13); 3) Social Sciences (45); 4) Biological Sciences/Life Sciences, and 5) Communications. The top degree program of Business

held 20.8% of the NSA degree recipients, while the Performing Arts garnered 25.7% of the London degree recipients. The category of Business Management had a mean wage of $7,366.30 versus a mean wage of $5,343.64 for the Visual and Performing Arts degree category which was the top degree program for the London participants. This statistic suggests that it is degree program rather than industry of employment that has the largest effect on wages. And in fact, an ANOVA test for wages and degree program revealed a significant relationship at the .05 level between the Business Management degree and Performing Arts with a mean difference of $2,022.66 per quarter, as well as significance with English Language and Literature/Letters with a mean difference of $1,674.60.

However, degree program alone did not explain all the wage differences. A further analysis by wage and degree program revealed that SA participants out earned the NSA group in seven two-digit degree programs, however, the NSA group still out earned the SA group in 13 two-digit degree programs. Programs where the SA group out earned the NSA group were: Computer & Information Science; Education; Foreign Languages; Physical Sciences; Protective Services; Health Professions; and Business Management.

The two-digit CIP degree programs within which the NSA group out earned the SA group were: Area, Ethnic and Cultural Studies; Communications; Home Economics; Law and Legal Studies; English Language and Literature; Liberal Arts, General Studies, and Humanities; Library Science; Biological and Life Sciences; Philosophy and Religion; Psychology; Public Administration; Social Sciences; Visual and Performing Arts.

Highest Degree

An analysis of wages by type of degree showed significance in an ANOVA at the .05 level only for the no degree category as compared to all other degree categories: Associate, Bachelor, Master, and Law or Specialist. Although there were small differences in mean wages among the types of degrees received, the differences were small and no significance was found in wages among the varying degrees received.

When controlling wages for only those who received some type of degree, again significance was found at the .05 level only between the London program and the non study abroad group.

Summary of Employment Data

As with the educational dependent variables, regressions were run on the dependent variable of wages; however, the model again explained only a very small percentage of the variance and therefore was not used in analysis.

The NSA group was found employed in the State of Florida at a higher rate than the SA group, 71.7% versus 62.4% respectively. However, it is necessary to recall that the data does not account for those who might have found employment outside of Florida. Therefore, this statistic may be a reflection of mobility as much as employment, as there may be more propensity for those willing to travel abroad to also relocate for employment. The higher rates of employment within Florida also were found for both sexes of the NSA group, as well as for all races except Asians. Study abroad Asians were found employed in Florida at a rate of 66.7% versus 63.0% for the NSA group.

The industry of employment comparisons were fairly similar for both the SA and NSA groups, particularly at the broader three-digit NAICs level. Professional, Scientific, and Technical Services were followed by Educational Services and then Administrative and Support Services for both groups. At the more specific six-digit NAICs level, both groups also had the same top industry of Elementary and Secondary Schools, however, differences then appeared in the following rankings. By gender, few changes were seen except that SA females replaced the Offices of Lawyers category with General Medical and Surgical Hospitals. Some uniqueness of industry of employment was also seen by race. Unique industries for study abroad Blacks were Temporary Help Services and Administration of Public Health Programs, for SA Asians was Computer Systems Design Services, and for Whites was General Medical and Surgical Hospitals. Industry of employment was also generally similar by SA location with minor differences.

Wages were a complicated set of interactions. The overall NSA group had a higher mean quarterly wage at $6,315.40 versus the overall SA group at $6,020.33. This was also reflected for both sexes, with a notable statistic that study abroad males under earned not only NSA males but also both NSA and SA females. The higher wages were also seen across races for the NSA group with the exception of Hispanics where the SA group out earned the NSA group $6,741 to $6,206. However, when analyzed by industry of employment, SA participants out earned the NSA group in eight three-digit industries,

while the NSA group out earned the SA participants in 18 three-digit industries. The most telling statistic however, could be seen when wages were analyzed by SA location. The Florence participants had a higher mean wage at $6,376 than the NSA group at $6,315 and the all other SA program group was just slightly below the NSA group. The only significance in wages was found between the NSA group and the London participants. A rationale for the lower SA London group mean wages was found in comparing the degree program categories. The top degree program for the NSA group was Business at 21% and the top degree program for the London group was Performing Arts at 26%. A significant difference was found between the means wages of graduates of these two programs with a difference of $2,023 per quarter. This suggests that degree program is a more telling indicator of wages than the other factors including gender, race, industry of employment, highest degree received, as well as study abroad participation. And in fact, for the highest degree received analysis, a significant difference was found only between no degree students and all of the degree recipients. There was no significance in mean wage differences when controlling for only those who received any type of degree.

However, degree program alone did not explain all the wage differences. A further analysis by wage and degree program revealed that SA participants out earned the NSA group in seven two-digit degree programs, however, the NSA group still out earned the SA group in 13 two-digit degree programs.

CHAPTER V
CONCLUSIONS

Summary of Dissertation

Perhaps the most important question to answer in undertaking any study is the "so what?" question of importance. Why is the study of interest and to whom? This particular study on the demographic profiles and educational and employment outcomes of study abroad participants can answer that question quite easily. Given the difficult international relations of today's world as we launch into the 21st century, it should be abundantly clear to anyone with an interest in the successful future of our planet that effective strategies and skills to cope with international relations is becoming increasingly more and more important in both social and business interactions. And with American colleges and universities producing the leaders and citizens who will be charged with the task of shaping future international relations, it is important that students of higher education receive and internalize skills and knowledge in this regard. And what better method to provide immersive, transformative and powerful lessons in international understanding than the promotion of study abroad opportunities for students?

It is true that historically study abroad has at times been viewed by some as nothing more than an extracurricular activity designed more for fun and enjoyment than practical purposes. However, as the "global village" paradigm continues to make our world more interconnected, more educators and business people are understanding the potential value and important role that study abroad can play in the overall development of a student.

And yet, research into the field of study abroad is limited at best. So many studies concentrate on satisfaction levels with study abroad programs and/or feelings and attitudes about the significance of the study abroad experience and the influence it may or may not have had. So many other areas within higher education have been the beneficiary of multiple and well designed studies that empirically measure results and outcomes. And

yet, the field of study abroad seems to have been largely ignored in this regard. Perhaps this is due to a perception of non significance attached to study abroad, or perhaps it is due to the difficulty of quantitatively measuring outcomes associated with study abroad.

Additional research is needed in developing a better understanding of the study abroad experience. First, a well developed conceptual theoretical model that fits study abroad needs to be developed in order to facilitate research. This dissertation is a small step in attempting to find such a model. Within the combination of learning theory, student development theory, and human capital as expounded in this dissertation are many educational and employment theories that appear well suited to study abroad. However, it was beyond the scope of this dissertation to build and test such a model. That task clearly seems extremely apropos to a future study focused only on developing such a model. As no such model for study abroad existed at this time, it was the intent in this dissertation to preliminarily show the feasibility - based on existing theories of learning not specifically developed for study abroad - that study abroad can be more than simply an extra curricular activity for pleasure.

Next, the development of a predictive model for study abroad would be extremely beneficial in gaining more understanding of the experience. However, such a model of causality would require access to much more data than was available for this study. Therefore, the main focus of this dissertation was to examine quantitative empirical evidence culled from existing databases to explore educational and employment outcome differences that might be associated with study abroad participation. Most certainly, the difficulty of establishing a predictive model - with limited pre-ability data - for study abroad outcomes was encountered in this study as well, as all multiple regression R^2 results comparing study abroad participation to the dependent variables were all extremely small. And yet, this study can serve as an example that descriptive statistics as well as significant correlations and associations among study abroad participation and various outcomes can be discovered and discussed quantitatively. And perhaps this can lead to future studies that might have access to more detailed pre-ability information that can be set in a model of causality.

Discussion of Findings and Conclusions

Sample Overview

The total sample for the study consisted of 11,467 entering FSU students from three separate cohorts from 1993-1995. The demographic breakdown of the sample contained no surprises and matched well with published reports of the total FSU student populations during this period. For example, the 58.6% female ratio and the racial ratios of 79.4% White, 11% Black, and 6.5% Hispanic students were in line with published demographics. This provided some degree of validity that the selected sample base was representative of the total FSU population.

Question #1

There were both expected and unexpected results in the analysis of the first question concerning demographic profiles and high school and pre-college abilities. It was somewhat of a disappointment that study abroad participants could not be identified across all the International Programs for a more detailed analysis by program; however, the ability to identify three study abroad categories did provide suitable information for analysis. Although programs previously were not recorded accurately by program in the FSU databases, it was stated from International Programs and the Registrar's Office that since the year 2000 the database records have kept the more detailed information. This suggests that any future studies should have access to more detailed program information.

Participation Statistics

The 7.7% study abroad participant rate in the FSU International Programs was a surprise as that ratio is quite higher than the 1% rate found in the national literature. This reflects positively on the International Programs suggesting that they are doing a good job of marketing and advertising the benefits of study abroad to the FSU student population. And in fact, they have been ranked consistently in the top tiers nationally for study abroad programs. This in fact would be a good future study to determine why some institutions have higher study abroad rates and what factors encourage students to participate in study abroad.

The growing numbers participating in study abroad over the three consecutive years is also in line with the national literature showing increasing interest in study abroad. The 47.4 % rate choosing to go abroad to London was also in line with the

national literature, including the 17.7% Florence students constituting a total of 65.2% choosing to study abroad in Europe. Again it would have been useful if possible to discern where the other 34.8% chose to study abroad; however, this high percentage also suggests a growing trend in the national literature to study at locations outside of Europe.

The number of study abroad participants by year showed a slight increase that again is consistent with what one would expect to find based on the literature. The year of participation was also consistent with the literature with the heaviest concentration on the third or junior year. Although an actual class standing was not available with the data, the calculation of subtracting the year of admission from the year of the study abroad participation gave an accurate portrayal of the number of years after admission, and therefore a good approximation of class standing. The data did reveal a trend in the later two cohorts for increased study abroad participation in the second year. Again, rationales for the timing of study abroad participation would make another worthwhile study, although some reasons can be guessed at from the current literature. For one, the increased time to degree with many students now requiring five or six years to graduate - rather than the traditional four - suggests that more students would have junior class status later rather than earlier in their collegiate career. However, the earlier study abroad trend goes against this rationale, suggesting that perhaps there is an increased awareness as well as interest in study abroad, as is reflected in the increasing numbers of participants.

The number of study abroad courses and credits did not reveal much significance beyond the fact that over one-third of study abroad participants took two courses abroad. However, the nearly one-quarter who took four courses shows an interest in more sustained study abroad. However, there was no significance found in any demographic profile or educational or employment outcome associated with the number of study abroad credits received.

Race and Gender

The gender breakdown of 74% female and 26% male for the study abroad group was also in line with national literature showing that females tend to study abroad at much higher rates than males. However, the FSU International Programs ratio was even higher than the national average of 65% female. The 74% female ratio was significantly

higher than the 57.3% ratio of females for the NSA group. This reveals that for whatever reasons females still are more attracted to study abroad than males. This as well would be a worthwhile future study to research in more detail why this occurs.

The race demographics revealed some differences between the study abroad group and the NSA group with higher percentages of Whites and Hispanics participating in study abroad than the NSA control group; and fewer percentages of Blacks, Asians, and American Indians. The higher percentage of Whites and Hispanics compares to findings in the national literature, however, the low percentage of Asians was somewhat distinct from the national statistics. It is not possible to interpret what might cause the low percentage of Asian participation at FSU without further study.

When analyzed by race and gender for study abroad participation, it was found that Hispanic women had the highest participation rates at 13.1% of the Hispanic woman population, and that Black males had the lowest participation rate at 1.5% of the total Black male population. This clearly reveals a wide gap in study abroad participation that needs to be further analyzed as to cause; whether it be attitude, financial concerns, program offerings, or perceptions or realities of positive rewards and outcomes attributable to study abroad. It should be pointed out here in general – and will be discussed in more depth within the question #3 analysis – Hispanics appear to gain the most financial rewards from study abroad participation and Blacks the least when comparing wage data. Hispanic study abroad participants showed a mean wage gain of $534.64 per quarter and Black study abroad participants showed a mean loss of $767.78 per quarter, as compared to their respective non study abroad counterparts. Low percentages of Black participation have been reported and discussed in other study abroad articles. Purported reasons run from financial to safety concerns. The low Black male participation rate of 1.5% of the Black male population should be a concern for all administrators and worthy of future study to determine methods to increase this percentage. Certainly, a more in-depth look at beneficial outcomes of study abroad by race would be a useful follow-up study.

The study abroad location of choice by race/ethnicity did not show much discrepancy. Asians, Blacks, and Whites all preferred London; however, Hispanics' location of choice was all other locations. Without knowing the specific location, one can

only offer conjecture, however, it could be within reason that many Hispanics may have chosen to study in the Costa Rica program as the second ranked program of study overall was Spanish at 9% of the study abroad population, and yet Spanish garnered 27.3% of the course program listed for the all other study abroad category.

Pre-college Factors

The study abroad participants were found to have a higher mean GPA than the NSA group at 3.50 compared to 3.37. Additionally, the mean ACT score of the SA group was higher (24.98) than the NSA group (23.89). The combination of these two suggests a higher pre-college academic aptitude for the SA participants. Interestingly, these higher GPAs and ACT scores held up by gender as well as by race except in the case of Hispanic GPAs. Although certainly no causal claim or connection could be made to higher high school achievement leading to study abroad, just as surely there is strong evidence here that those who participate in study abroad have stronger high school academic records than the non participants. Again, this would be a future study in itself to determine why this might be. Perhaps those who show more academic success in high school are more aware of alternative academic opportunities.

The lack of correlation to financial aid and study abroad was somewhat of a surprise. After all, study abroad is a relatively expensive proposition. However, a possible explanation for this lack of correlation is the high rate of financial aid for the entire sample at roughly three out of four students. With such a high rate of financial aid, it would be necessary to have data for specific uses of the financial aid – in particular study abroad – in order to show whether this factor has significance or not.

Parental income comparisons did provide a more complete financial picture, however. Not surprisingly, the SA participants had a higher level of parental income than the NSA group and showed a small positive correlation that was significant. Without knowing how much of the study abroad was paid for by parents, one can only speculate that parents were larger contributors than students themselves and that this would by reason have a positive correlation, i.e., the wealthier the parents the easier for a student financially to study abroad. However, the relatively high percentage of study abroad participants found in the lowest parental income category (12.3% under $20,000 per year) was a surprise worthy of further analysis. This statistic shows that it is possible for those

of lower parental income to participate in study abroad. Again, without knowing how study abroad was financed, one can only speculate; however it seems reasonable that poorer parents may both qualify students for more financial aid and perhaps poorer parents may place a higher premium on alternative and fuller academic experiences for their children.

Question #1 Summary of Conclusions

One can conclude from the evidence in this study that race, gender, parental income, and high school academic ability all play a combined role in determining the chance of a student participating in study abroad, or who is most likely to study abroad. A future study using logistic regression to build a model based on a more complete set of pre-college data would be a useful study in this regard, particularly in order to help build more representation among underrepresented populations. Nevertheless, what can be concluded from this study is that clearly there are distinguishable differences among those who tend to participate in study abroad and those who do not. This study's sample did not widely detour from the standard study abroad model of the white female in her junior year majoring in the humanities going to Europe to study abroad.

Question #2

This question dealt with the educational outcomes associated with study abroad as compared to non participants. The highest degree obtained, degree program disciplines, time to degree, and GPA were the variables of interest that were explored from gender, race, and study abroad location perspectives.

Highest Degree Received

An extensive gap was found in the rate of degrees received that highly favored the study abroad participants over non participants. Degrees received were classified as Associate, Bachelor, Master, Law and Specialist. There were no Doctoral degree recipients in the sample. In an analysis that included all or any of these degrees combined, SA participants received some degree at the rate of 93.2% as compared to 64% of the NSA group. This constitutes nearly a 30% advantage in favor of the SA group. Additionally, this advantage was seen across all degree levels for the SA group except at the Associate level. In fact, only nine students of the 886 SA sample (1%) stopped at the Associate level as compared to 2.8% of the NSA group. When analyzed

only by bachelor's degree, 80.8% of the study abroad participants received a bachelors while only 56.6 % of the NSA group did so. Another revealing perspective is that although the SA sample only comprised 7.7% of the total sample, they comprised 10.7% of the Bachelor's degrees, 12.5% of the Master's degrees, and an incredible 45.6% of the Law or Specialist degrees.

The gender balance among SA degree recipients was also impressive with 92.2% of the SA males receiving a degree and 92.6% of the SA females receiving a degree. This compares to 60.3% of the NSA males and 66.3% of the NSA females. When analyzed by race, the higher degree attainment was found across all race/ethnicity; with a full 100% of the Asian and Black SA participants receiving a degree (as well as the one American Indian participant). In addition, the one-third of Black SA participants that went on to receive an advanced degree is also an impressive statistic, as compared to the 4.6% rate for the Black NSA group.

On the surface, this statistic appears to reflect extremely favorably on the SA participants. However, one possible explanation of the high study abroad graduate rates may be linked to the fact that many participate in study abroad in the third and fourth year thereby attributing to a greater chance of graduation; as the literature shows that attrition rates are highest in the freshman and sophomore years. On the other hand, this would not appear to account for all of the difference, and indeed the higher SA rates in the second year work somewhat against this explanation. Additionally, the SA group had higher than average representation for those who did receive a degree among the Bachelor, Master, and Law/Specialist degrees recipients. Certainly, one could not claim from this study that SA leads to higher degree attainment; however, a compelling case is made for future study to better understand this incredible statistic of such a high degree attainment rate among study abroad participants. As more institutions are looking for methods to increase graduation, and for methods to increase minority retention rates, this statistic makes a powerful statement that all administrators concerned with attrition/retention might want to further explore.

Degree Program

Although the degree programs were analyzed at both the two-digit and the six-digit CIP level for depth of analysis and insight, it is arguably the two-digit CIP level that

provides the best overview for this study as the n's in these samples are more significant because of the broader base. In addition, the two-digit level gives a more compact and comprehensive summary by discipline as it groups all disciplines into easily distinguishable categories. For example, for the purposes of this study it is important to know the numbers of students majoring in business versus humanities, and the two-digit CIP level more easily provides this insight.

And noticeably, perspective of analysis changes depending on whether one is looking at the two-digit level or the six-digit level of CIPs. For example, the top two programs for both the SA and the NSA groups were the same at the six-digit level (General Communications and General English), however these two programs combined only accounted for 17.1% of the study abroad group and 11.0% of the NSA group. In contrast, the top two programs for the SA and NSA groups at the two-digit level were different; Business Management and then Education for the NSA group (total 30%), and Visual and Performing Arts and then Business Management (total 32.9%) for the SA group. These two analyses of the same data at different CIP levels paint different pictures. It is clear that the top two categories comprise a much higher percentage at the two-digit CIP level as well as revealing different program concentrations. Looking only at the six-digit level, an analysis could easily miss the Business concentration that is found within both the SA and the NSA group. The high percentage of Business degree majors participating in study abroad at 16% of the total study abroad sample suggests somewhat of a trend away from the humanities and into business for study abroad participants.

Relevant differences were also found in the degree program analyses at the two-digit CIP level in that participants appeared to choose different study abroad locations based on their particular degree pursuits. A heavy concentration in Visual and Performing Arts was found for both the London and Florence program suggesting that those study abroad programs are seen as beneficial to students in those programs, while Business Management was the top degree program for the all other locations category.

Time to Degree

A wide scope was found in time to degree ranging from two to nine years after admission for obtaining the baccalaureate degree, with the average for the SA group at

4.13 years compared to the slightly longer 4.27 years for the NSA group. Almost 70% of the SA group attained the bachelor degree in four years as compared to 64% of the NSA group. However, this variable showed to be of little significance in that roughly the same percentage of students (83%) received the Bachelor degree within either four or five years for both groups. One can conclude from this statistic that study abroad in effect has little consequence on time to degree. This finding is in concurrence with the Flash study cited earlier in the literature review.

It was of interest to note that the SA group had a greater degree of change in degree program from the initial degree sought to the last degree program registered at FSU than the NSA group. However, in analyzing this factor by only those who received a degree, the opposite was found, suggesting that those who change degree program after admission might be less likely to graduate. As earlier discussed in time to degree for Bachelor degrees only, the SA group took less time to degree (4.13 years) as compared to the NSA group at 4.27 years. Fittingly, the NSA group had a higher percentage of degree change (85.2%) as compared to the SA group (80.6%) for all degree recipients. In initially conducting this study, it seemed within the realm of possibility that a study abroad experience might contribute to a student changing degree programs, and this study confirms that SA participants did change initial degree sought more frequently. However, the lower degree change ratios for the SA degree recipients suggests that students going abroad do so with a purpose in mind as directed toward their major. Additionally, the longer time period required for SA participants to receive a Masters degree versus those NSA students who received a Masters degree was not reflected in a greater change of degree program, as both the SA and the NSA groups had high percentages of degree change in this regard, 91.7% and 91.9% respectively.

G.P.A.

The calculated mean GPA scores for the total sample of SA participants was 3.19 as compared to the NSA group at 2.74. This higher GPA was also found for both male and female SA participants as well as across all race/ethnicity. When analyzed by degree recipients only, the SA group still had a higher mean GPA at 3.22 as compared to 3.00 for the NSA group. Without exception in all of these cases the study abroad group maintained a higher GPA. Once again, although it is not possible to say that study abroad

is a cause of higher GPA due to an abundance of confounding variables, it most certainly can be stated - just as in degree received ratios and advanced degrees – that there is clearly a favorable educational outcome associated with study abroad participants in terms of higher GPAs.

Summary of Question #2 on Educational Outcomes

In summation, it was found that study abroad participants had a higher rate of graduation, a higher percent of advanced degrees attained, a shorter time to graduation for the Baccalaureate degree, fewer degree changes after admission for degree recipients, and a higher overall grade point average as compared to the non study abroad group. Adding to the strength of this positive evidence for study abroad participants was the fact of applicability across both race and gender. With the caveat that a causal relationship can not be claimed without further study that includes more data on confounding variables that might produce higher R^2s, the results of this study reflect extremely favorably on study abroad participants in terms of educational outcomes.

These positive outcomes seem to concur with the learning and student development theories suggesting that a study abroad experience could lead to growth and gains. Given the breath and width of these positive outcomes associated with study abroad participants, the study abroad experience as a possible tool for increasing retention and graduation rates seems worthy of future study and exploration. Certainly, the timing between attrition (heaviest during the freshman and sophomore years) and study abroad (heaviest during the junior year) will account for some of the positive retention and graduation rates seen in this study. However, as also seen in this study, that does not account for all of the difference. There is strong evidence that the study abroad experience is a positive piece of the academic experience because those who participate have such strong graduation rates. It would therefore be worthy of future study to measure how much the goal, dream or aspiration of study abroad participation might lead to greater retention rates, as well as the actual experience itself.

Question #3

This question dealt with employment outcomes associated with study abroad participation versus non participation. The variables of interest were rate of employment, industry of employment, and wages. Again, a limitation of this study was that the data

was limited to those found employed within the State of Florida. A decision was made to analyze the data only at the fulltime employment level. Because students work such a variety of part-time jobs, it was deemed necessary to eliminate those wages in order to gain a better understanding of employment outcomes. The mean fulltime wage found for the entire sample was $25,227.44 per year.

Rate of Employment

The non study abroad group was found employed in Florida at a higher rate than the SA participants, 71.7% compared to 62.4% respectively. However, the compelling factor about this statistic is that it actually raises more of a question than it answers. Does this mean that NSA students are truly employed overall at a higher rate, or does it suggest that study abroad participants are more likely to leave Florida after graduation to seek employment? Unfortunately, without access to more nationwide employment data, the answer to this question can only be speculated. Certainly, it is an intriguing question, and the positive educational outcomes associated with the SA group in question #2 can reasonably lead one to speculate that study abroad participants may well be leaving the state to find desired employment. If this is the case, this study is limited not only in rates of employment but in overall wage data as well, as other state salary scales invariably rank differently from Florida. This is indeed a study worthy of future follow-up to determine what is happening to the students who leave Florida after graduation.

A striking exception to the employment rate was seen among Asians, with the Asian SA participants found employed in Florida at a higher rate than the NSA group. In addition, Hispanic SA participants were employed at almost an equal rate to the Hispanic NSA group. The Hispanic employment can be speculated about in terms of availability of employment for Spanish speaking, business majors in south Florida. However, the higher Asian employment rate within Florida for the study abroad group does not offer an easy explanation.

Industry of Employment

At the three-digit NAICs level, there was not much difference seen between the SA and NSA groups in the industry of employment, and in fact there was quite a bit of similarity between the overall groups. It was not until the SA participants were analyzed by study abroad location that some differences became apparent. The top industry for

London was Educational Services, whereas for Florence and all other programs it was Professional, Scientific, and Technical Services. From these statistics, one can conclude that industry of employment is not a variable of difference between study abroad and non study abroad students. There are two readily apparent limitations in this study in this regard. First, it becomes clear there is a necessity to research data by particular job and job description, rather than industry, in order to gain a more meaningful insight into employment outcomes. For example, two students may be employed within the General Medical field, however, one may be an international surgeon and the other employed as a low skill maintenance worker. The job description would clearly offer more of a distinguishing variable than the industry of employment. Second, given the wide range of categories available, the size of the n's at the more detailed six-digit level are too small to be reliable. A much larger sample would be required in order to have adequate sample size among each of the six-digit NAICs levels.

Wages

The initial run of mean wage data comparing study broad participants to non participants revealed a wage premium in favor of the NSA group at $6315.40 to $6020.33, respectively. And in analyzing the wage data controlling only for those who received a degree, the gap widened even more in favor of the NSA group, with mean wages of $6791 for the NSA group compared to $6070 for the SA participants. Given the positive educational outcomes seen in question #2 this seemed somewhat surprising. Adding to the surprise, was the finding that study abroad males actually under earned when compared to both SA and NSA females. The wage advantage held up by race/ethnicity as well except for Hispanics where the study abroad group out earned the NSA group $6741 to $6206 respectively. These findings lead one back to Becker's caveat in human capital theory stating that rate of return may diminish from adding extra human capital, as well as his emphasis on the importance of equality of opportunity.

However, further analysis shed more light on the intricacies of the wage data. For example, when analyzed by the three-digit NAICs codes, study abroad participants did out earn the NSA group in eight industries, as compared to 18 industries where the NSA group out earned the SA group. This finding possibly might be explained by the supply and demand aspect of human capital theory. However, while possibly offering some

explanation, these two tangents within human capital theory still did not address completely why the NSA group seemed to be so significantly out earning the SA participants.

Therefore, the next logical step was to analyze the wage data by study abroad location. And sure enough, a wide discrepancy was found by study abroad location. In fact, the Florence participants had a higher mean wage at $6376.95 than the overall NSA group. Additionally, the all other study abroad program group had a similar mean wage as the NSA group at $6254.75. It was revealed that the London study abroad participants had a very low mean wage of $5676, which in turn brought down the mean wage for the total study abroad population.

It then became necessary to discover why the London group had such a low mean wage as compared to the others and the most logical place to look was at the degree programs and the type of degree received. The answer clearly lay within this realm. The top degree program for the London participants at 26% of the London group was Performing Arts, whereas the top degree program for the NSA group was Business Management at 21% of their total. An analysis of wage data by degree program then revealed that Business Management had a mean wage of $7366 compared to a mean wage of $5344 for Performing Arts.

It was then necessary to examine the Florence group to see if the degree program would again explain the wage discrepancy, this time in favor of the Florence participants. It was found that the Florence participants had Visual and Performing Arts majors (20%), however, this percentage was lower than the London group. Additionally, the Florence group had large percentages in other higher paying programs such as 14% in Business Management, as well as 14% in the Social Sciences. The All Other Program group also had a high percentage in Business Management at 27%.

This somewhat explained the wage discrepancy found; and suggests that it is degree program rather than any of the other variables that strongly influences wage levels. However, clearly, degree program alone did not explain all the wage differences. A further analysis by wage and degree program revealed that SA participants out earned the NSA group in seven two-digit degree programs; however, the NSA group still out earned the SA group in 13 two-digit degree programs. The degree programs in which one

group out earned the other did not appear to be any logical pattern. Perhaps this is why a strong regression model with significant outcomes was not found for the wage data.

For example, a striking contrast could be seen in the fact that the NSA group out earned the SA group in the degree program of Visual and Performing Arts, which is the category so popular in both London and Florence. This statistic also helps to explain the lower London mean wage. This begs the question of why those participating in study abroad in this particular degree program would end up making less in wages than the non-participants. Equally striking in this regard were the higher wage results for non-participants in Area, Ethnic and Cultural Studies; Communications; Home Economics; Law and Legal Studies; English Language and Literature; Liberal Arts, General Studies, and Humanities; and Philosophy and Religion. Many of these disciplines have been traditionally linked to study abroad participants and are therefore areas were one might expect to see some benefit from study abroad applicable to the work environment.

The flip side of this conundrum were the surprising areas in which the SA participants out earned the NSA group. Perhaps most striking here were the disciplines of Business Management, Physical Sciences, and Computer & Information Sciences; all areas that are not traditionally associated with study abroad. Conversely, it does not seem surprising that the SA group out earned the NSA group in the disciplines of Foreign Language and Education. In fact, except for these latter two disciplines, it somewhat appears that study abroad has a more beneficial wage effect in non traditional study abroad disciplines than in the traditional disciplines. This possibility presents an intriguing question for future study as to possible reasons and rationales why study abroad might lead to greater economic outcomes among students of non traditional study abroad majors.

Summary of Question #3 Employment Outcomes

The results of this question on employment outcomes were not as clearly positive for study abroad participants as the educational outcomes seen in question #2. In fact, this study may have raised more questions in this regard than answered. The lower rate of employment within Florida for the SA participants suggests that any wage study needs to include nationwide data in order to gain an accurate understanding. The industry of employment also did not show much distinction suggesting that future studies need to

concentrate more on particular job descriptions in order to gain better understanding of employment outcomes. The combined findings of positive educational outcomes but less clear employment outcomes is in agreement with the findings of the Carlson study cited earlier in the literature review.

And lastly, the wage data did reveal some relevant and insightful information; however, the picture was quite convoluted and did not clearly reveal a strong model to determine study abroad employment outcomes. One can conclude from this data, that a variety of confounding variables determine employment data, and that study abroad by itself is not a powerful determinant. However, some interesting patterns were found suggesting that it is degree discipline that may determine, albeit with a small effect, the greatest wage impact for study abroad participants. This finding would be in agreement with Grubb's finding that program of studies rather than individualized courses are what matter in employment wages. As a follow up to this, a more detailed look at the pattern of higher wages for study abroad participants in what can be considered non traditional study abroad major programs is worthy of future study.

Implications for Institutional Policy

There are several implications for developing institutional policies concerning study abroad. One implication is the feasibility of looking at study abroad as a recruitment tool in admissions. The high study abroad participation rate at FSU in combination with the high national ranking of the International Programs might suggest that some students choose to attend FSU because of the availability of a well developed study abroad program. Targeting and marketing to students interested in international affairs, language, or study abroad could be an effective recruiting strategy. Additionally, if study abroad programs were tied more directly to major disciplines and promoted as such, this might also serve as an excellent recruitment tool in specific areas of study.

Clearly, the high graduation and degree attainment rate exhibited by the study abroad participants in this study should be of premium interest to all administrators. The question should be asked as to what would happen if students were strongly encouraged or even required to participate in study abroad as part of their undergraduate studies? Of course, this would further require policy implementations concerning financing of the

study abroad to make it readily available to all students. The question should be further examined and researched as to whether a study abroad opportunity is a powerful enough factor to motivate a student to stay in school until the study abroad experience, or conversely if the experience itself is so positive as to motivate a student to complete graduation after participation, or to perhaps even continue on to graduate school. Certainly, the high graduation and post-baccalaureate rates of minorities in this study should be of interest to administrators looking to increase minority graduation rates. If an institution could market itself as a trendsetter in establishing study abroad as an integral part of a comprehensive undergraduate education, would this not be of interest to both parents and students? And if the high GPA's, graduation rates, and quicker time to graduation found in this study can be duplicated in further studies, would that not be of interest to administrators and legislators alike?

Conversely, the somewhat ambiguous wage and employment results might impel some to question the employment value of the study abroad experience. However, the lack of national data in this regard should diffuse any concerns in this regard until further study can be conducted on a national level to see if the study abroad experience is prompting students to leave the state for employment elsewhere. There is certainly an implication in this study that study abroad participants are leaving the state in greater percentages than non study abroad students for employment elsewhere. As a possible avenue for policy development, administrators might want to look at connecting the study abroad programs and experiences more directly to employment opportunities within the state.

Recommendations for Further Research

Study abroad is an educational experience that is gaining in popularity, significance, and in appeal including among nontraditional participants. It is therefore becoming increasingly meaningful to research as a field of study. One problem in this regard is that by itself study abroad may not show strong correlations to specific outcomes, as it is relationally often a small part of the total collegiate experience. It is therefore difficult to ascertain the effect of study abroad without taking into consideration a multitude of confounding variables, and even at that it may show only a small effect as

compared to other variables. Therefore building a regression model for study abroad is complicated and requires large amounts of controlling data.

However, this should not prevent more research into study abroad from occurring. This study has shown that patterns and associations can be distinguished within study abroad participant demographics and within educational and employment outcomes. There are many positive outcomes associated with study abroad in this study. These are surely worthy of future study and collaboration.

There were many areas brought out by this study suggesting the benefits and need for future study. First, a future study using logistic regression to build a prediction model for those who might be likely to participate in study abroad - based on a more complete set of pre-college data - would be useful in order to help build more representation among underrepresented populations. And secondly, a combination of qualitative survey data along with the quantitative empirical data would allow for a more complete understanding of pre-college ability, attitudes, and intentions in determining controlling variables and effects for study abroad participants. One possibility in this regard would be to combine the Higher Education Research Institute (HERI) and the Cooperative Institutional Research Program (CIRP) surveys with a state database system such as used for this study. Other qualitative surveys would also be useful, such as a survey to measure why a student chooses to study abroad, and why they go at a specific time to a specific location. Additionally, such a survey could address why females and Whites are more attracted to study abroad.

Certainly, any follow up studies will have access to more detailed study abroad location information, which would allow for more detailed analysis by program. It would also be valuable to try to measure why some institutions and study abroad programs have greater appeal than others.

A more detailed look at outcomes by race/ethnicity could help gain understanding of lower participation among certain populations. And indeed, if future study could collaborate the findings in this study that the study abroad experience might be linked to greater higher education retention and graduation rates, this would be beneficial knowledge for all race/ethnic student populations.

And lastly, one limitation of this study was the lack of data on financing of the study abroad experience that made any determination of return on investment minimal at best. Therefore, a more complete economic study focusing solely on the financing aspects of study abroad as applied to feasibility and opportunity to participate in study abroad, as well as future return on investment from the study abroad experience would be worthwhile.

APPENDIX

BUCKLEY AGREEMENT

Division of Colleges & Universities
Florida Board of Education

BUCKLEY AGREEMENT

Requesting Agency: DCU - Academic & Student Affairs
Date: July 26, 2002
File: Student Data Course File 1993/2001
Hours to Degree File 1997/2001
Admissions File 1993/2001
College Prep File 1995/2001
Financial Aid File 1993/2001

Purpose/Use: FSU Study Abroad Program

Public Law 93-380--Privacy Rights of Parents and Students, commonly known as the "Buckley Amendment," limits the availability of personally identifiable records of students. Educational institutions conducting studies for the purpose of improving instruction are permitted access to these records "if such studies are conducted in such a manner as will not permit the personal identification of students and their parents by persons other than representatives of such organizations and such information will be destroyed when no longer needed for the purpose for which it is collected". Access to these records or copies of these records may not be given by you to any other person or agency.

It is under this justification and these restraints that these records are made available to you. Acceptance and subsequent use of the records will constitute recognition of and adherence to the above limitations regarding use of these records.

I understand the above limitations and agree to adhere to them.

Signature James T. Posey Title [Title of Signer] RESEARCH ASSISTANT

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325 W. Gaines Street
Tallahassee, Florida 32399-1950

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BIOGRAPHICAL SKETCH

JAMES T. POSEY, JR.

EDUCATION

2000- 2004 **The Florida State University, Tallahassee, Florida**
Doctor of Philosophy in Educational Leadership & Policy Studies

1997-1999 **Southern Illinois University, Carbondale, Illinois**
Master of Arts in Interactive Multimedia

1969-1974 **University of New Mexico, Albuquerque, New Mexico**
Bachelor of Science in Education

PROFESSIONAL EXPERIENCE

2001 – April 2003 **Florida Dept. of Education, Tallahassee, Florida**
Senior Database Analyst - Office of Education Information & Accountability

Research Assistant - Researcher for Vice-Chancellor and Chancellor for the Division of Colleges and Universities

2000-2001 **Florida State University, Tallahassee, Florida**
Coordinator – Beyond Borders Cultural and Service Exchange Program

1993-1997 **Direct Connections, Kawasaki, Japan**

President - Direct Connections was an import/wholesale marketing company for educational and consumer products in Tokyo, Japan

Honorary Trade Representative for the State of New Mexico in Japan

1990-1992 **University of Rio Grande Japan, Tokyo, Japan**
Director of Studies – Administration of three Japan campuses for URGJ

1985-1990 **Posey Enterprises, Albuquerque, New Mexico**

President/Owner - East Mountain Telephone Directory
- Golden Memories Bookmarks
- Highland Swing Miniature Golf

1979-1985 **Albuquerque Public Schools, Albuquerque, New Mexico**
Classroom Teacher -Harrison Middle School grades 6-8 Math