

## **ABSTRACT**

HENDRICKSON, MELISSA LEWIS. Global Mindedness and Perceptions of Study Abroad Among Agriculture Students Pursuing Associate's and Bachelor's Degrees at North Carolina State University. (Under the direction of Elizabeth B. Wilson.)

The value of study abroad programs for graduate and undergraduate students has been well researched. Far less work has been done at the associate's degree level to determine the value of study abroad programs and the perceptions of those involved in helping students with this decision-making process. This research investigated associate's degree and bachelor's degree agricultural student perceptions of the value of study abroad programs, factors that would affect their participation in study abroad, sources of funding they perceived to be available for study abroad program costs, and their perceptions of whether or not they would participate in a study abroad program. Additionally, this research looked at the level of global mindedness of each group to see what their perceptions were about global issues and to see if there were differences in the level of global mindedness for associate's degree students compared to bachelor's degree students.

Although there are numerous benefits and outcomes identified in the research literature on study abroad, not much is known about the perceptions that agriculture students have of the value of study abroad programs which are embedded in associates or bachelors programs. Though often neglected, internationalizing the curriculum is still important in producing work-ready students. There is "a strong belief in the value of internationalization initiatives, but the implementation remained limited" (Wattiaux, 2013, p. 83). This research adds to the scholarship on the issues of study abroad and global mindedness by specifically addressing these issues from the perspective of agriculture students.

Results of this research were that associate's degree students exhibit a lower level of global mindedness than bachelor's degree students in disciplines of agriculture.

Additionally, global mindedness can vary by other demographic characteristics including age, gender, country of birth, second language ability, and whether a student had already participated in an international program in the past. Students were able to identify benefits of studying abroad including cultural skills enhancement, improved academic skills, enhanced employability, improved communication skills, and others. They also identified key factors that would affect their participation in study abroad including program cost, integration into their degree plan, program goals and administration, location, and others. Finally, students listed sources of funds to help pay for study abroad fees including themselves (savings, work effort, or fundraising), family (parents, grandparents, and others), scholarships, grants, and loans.

A model to predict whether a student intended to study abroad was generated through stepwise regression. The dependent variable was whether a student intended to study abroad and the dependent variables included global mindedness, gender, and significance of previous international experience. This model accounts for 40% of the variance in their intention to study abroad.

© Copyright 2015 by Melissa Lewis Hendrickson

All Rights Reserved

Global Mindedness and Perceptions of Study Abroad Among Agriculture Students Pursuing  
Associate's and Bachelor's Degrees at North Carolina State University

by  
Melissa Lewis Hendrickson

A dissertation submitted to the Graduate Faculty of  
North Carolina State University  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Education

Agricultural and Extension Education

Raleigh, North Carolina

2015

APPROVED BY:

---

Dr. Elizabeth Wilson  
Committee Chair

---

Dr. K.S.U. Jayaratne

---

Dr. Wendy Warner

---

Dr. Kelly Zering

## **DEDICATION**

This dissertation is dedicated to my family who have encouraged and supported me throughout my entire educational process.

## **BIOGRAPHY**

Melissa Lewis Hendrickson grew up in Hampstead, North Carolina on a subsistence farm. She and her three sisters participated in 4-H activities in a club led by her mom. In the year she graduated from high school, she and her dad started a commercial blueberry operation and became 50/50 partners in a farming business that continues to operate to this day. This business led to a desire for more formal business training, so she applied to NC State University and earned a bachelor's degree in Agribusiness Management. From there, she continued graduate studies at New Mexico State University earning a Master of Science in Agricultural Economics.

She began her career in education with an assignment as a special projects director in instructional materials development at the National Council for Agricultural Education in Alexandria, Virginia. She managed instructional materials projects in a variety of disciplines including turfgrass management, biotechnology, international agribusiness management, applied environmental science, rice production and marketing, and others.

After marrying, she began teaching economics courses for Campbell University and accepted a time-limited full time position at Richlands High School as an agriculture teacher. There she taught animal science and agricultural production and management.

She then began a Cultural Resources Management doctoral program at East Carolina University and completed one year of coursework before her first son was born. At the same time, she accepted a lecturer position in agribusiness management at North Carolina State University where she began teaching in the Agricultural Institute for associate's degree students and in the undergraduate agribusiness management program. At this point, it

became apparent that living in Wilmington, working in Raleigh and going to school in Greenville would not work so progress towards a doctorate degree ended.

After working for NC State for seven years, she decided to again pursue doctoral studies, choosing the Agricultural and Extension Education doctoral program. Fourteen years and four children span the beginning of the doctoral process and the completion of this degree. It will be nice to end the degree-seeking phase of my life and devote my time and energy to other pursuits.

## ACKNOWLEDGMENTS

First I'd like to thank my parents, husband, and children for enduring many long years of late classes, homework assignments, and study time that took away from my time with you. I also want to thank my mom and sisters for editing and reviewing many papers and assignments and my dad for encouraging me to complete my doctorate. I think this means almost as much to him as it does to me. Thank you all for the many hundreds of hours of babysitting, meals, and homework help with my children.

Next I would like to thank Dr. Beth Wilson for being a wonderful mentor and friend. I appreciate your work on my behalf as an instructor and as the chair of my committee. I also want to thank Dr. Jay for helping with the statistical analysis and for opening up the world of international extension to me. To Dr. Warner and Dr. Zering, thanks for serving on my committee and providing guidance and direction.

I appreciate my coworkers and my boss for supporting my educational needs as a part of my work life and for being willing to change things around so we could fit everything into a too tight schedule. I specifically want to thank Dr. Safley, Dr. Oltmans, Dr. Russ and Dr. Campbell and Jenny St. Jean for your support and your consideration. I appreciate what you have done for me.

And last, I thank my students for letting me learn and grow as an instructor by testing out new ideas on them and by having them provide feedback that changes the way my classes operate. I like your ideas, your creativity, and your problem solving skills! Keep up the good work.

## TABLE OF CONTENTS

<b>LIST OF TABLES</b> .....	x
<b>Chapter 1</b> .....	1
Introduction.....	1
Conceptual Framework.....	10
Need for the Study .....	15
Purpose of the Study .....	16
Definition of Terms .....	18
Assumptions.....	19
Limitations of the Study.....	20
Chapter Summary .....	20
<b>Chapter 2</b> .....	22
Theoretical Framework and Review of Related Research.....	22
Global Mindedness .....	24
Benefits of Study Abroad.....	29
Barriers to Participation in Study Abroad.....	34
Prediction of Participation in Study Abroad .....	41
Chapter Summary .....	44
<b>Chapter 3</b> .....	45

Methodology.....	45
Research Design.....	46
Sample.....	46
Instrumentation .....	47
Data Collection Procedures.....	49
Data Analysis .....	50
Chapter Summary .....	52
Chapter 4.....	54
Results.....	54
Profile of the Sample .....	54
What is the level of global mindedness of students? .....	58
Is There a Difference in the Level of Global Mindedness between Associate’s and Bachelor’s Degree Students? .....	59
Does Global Mindedness Vary by Demographic Characteristics of Students? .....	60
What Do Students Perceive as the Benefits of Studying Abroad?.....	61
Student Perceptions of the Factors That Would Affect their Participation .....	65
Student Perceptions about Funding Sources to Help Pay for Study Abroad .....	67
What student characteristics best predict study abroad participation? .....	70
Chapter Summary .....	72

Chapter 5.....	74
Conclusions, Implications, and Recommendations .....	74
Discussion about Research Question 1 .....	74
Discussion about Research Question 2.....	75
Discussion about Research Question 3 .....	76
Discussion about Research Question 4.....	78
Discussion about Research Question 5.....	81
Discussion about Research Question 6.....	84
Discussion about Research Question 7.....	86
Implications.....	89
Limitations .....	93
Future Research Possibilities .....	95
Chapter Summary .....	96
References.....	99
Appendix.....	109
Appendix A .....	110
A.1 Global Mindedness Survey Scale Authorization .....	110
A.2 Letter of Authorization for Global Mindedness Surveys (San Diego).....	111
Appendix B .....	112

IRB Exemption Letter.....	112
Appendix C.....	114
Global Mindedness Survey AGI.....	114
Appendix D.....	122
Global Mindedness Survey CALS.....	123

## LIST OF TABLES

Table 2.1	Global Mindedness Mean Scores by Field of Study.....	26
Table 3.1	Internal Consistency of the Global Mindedness Scale and its Subscales .....	48
Table 4.1	Types of Respondents .....	55
Table 4.2	Majors of Respondents (N=337).....	55
Table 4.3	Race & Ethnicity Categories.....	56
Table 4.4	Frequency and Percentage of Responses about Participation in Previous Study Abroad or Other International Sponsored Programs .....	57
Table 4.5	Descriptive Statistics of the Global Mindedness Scale Results .....	58
Table 4.6	Analysis of the Means for the 5 Factors of Global Mindedness .....	60
Table 4.7	Analysis of Means of Global Mindedness Total Scores by Select Demographic Characteristics.....	61
Table 4.8	Student Identified Benefits of Study Abroad (N=313) .....	62
Table 4.9	Student Identified Factors That Would Affect Participation in Study Abroad (N=308).....	65
Table 4.10	Student Identified Sources of Funding That Could Help Them Pay for a Study Abroad Program (N=294).....	67
Table 4.11	Best Fitting Predictive Model for Intention to Participate in a Study Abroad Program.....	71

## Chapter 1

### Introduction

Agriculture students can expect to work for companies that have a global presence either in buying inputs or selling outputs. In a world with changing borders, reduced trade restrictions, and growing populations, food mobility is expected to increase not only in volume but in diversity of products transported across borders. Global trade is the largest growth area in American agribusiness, and knowledge of international agribusiness markets is a primary qualification desired from college graduates entering the workforce (Parker, 2011). The agricultural industry is a culturally diverse workforce and the likelihood of working with people from other cultures is highly probable. Providing skills in interacting with people from cultures different from one's own and increasing students' knowledge about global issues and trends is an increasing role that universities can play in providing a well-rounded education to their graduates.

Morgan and King (2013) further elaborated "global impact is especially evident in agriculture where understanding agriculture and international issues is increasingly important for students throughout the world because international markets and trade of agricultural products play an important role to agricultural producers in the U.S."(p. 2).

Study abroad is one way to increase the global knowledge of students so they are better prepared to enter the workforce with a global perspective (Wingenbach et al., 2003). And from an academic perspective, "student engagement in education abroad experiences enhances global learning and development, which we argue should now become an important

and even the core of holistic student development, a goal of almost every undergraduate college or university” (Braskamp, 2009, p. 111).

The mission of NC State also recognizes the commitment to a global perspective when saying, in part, that “NC State promotes an integrated approach to problem solving that transforms lives and provides leadership for social, economic, and technological development across North Carolina and around the world” (North Carolina State University, 2011, p. 1). More specifically, one of the Five Core Strategic Themes for the College of Agriculture and Life Sciences (CALS) at North Carolina State University is “preparing students and stakeholders for leadership and success in the global workforce” (Stewart, 2013, p. 3).

The Agricultural Institute is an associate’s degree granting program with seven degrees related to agriculture housed within the College of Agriculture and Life Sciences at North Carolina State University. It is the only program of its kind in the state and was created to provide technical education for students interested in agricultural careers for which an associate’s degree would be appropriate. The mission of the Agricultural Institute (AGI) is to provide a technical education in agriculture and related areas leading to an Associate’s of Applied Science degree. The combination of general education and technical skills helps students develop both personally and professionally and prepares them to be productive leaders in society with the ability to adapt to an ever-changing agricultural sector (Agricultural Institute, 2014). North Carolina State University offers no other associate’s degrees beyond those offered through the Agricultural Institute. The Community College System in North Carolina has a mission to open the door to high-quality, accessible

educational opportunities that minimize barriers to post-secondary education, maximize student success, develop a globally and multi-culturally competent workforce, and improve the lives and well-being of individuals (North Carolina Community College System, 2008). While the Agricultural Institute is the solely focused on agriculture-related degrees at the associate's degree level, there are now community colleges within the state of North Carolina that also provide training in some of the areas related to agriculture, including agribusiness, turfgrass management, landscape and nursery management, and general agriculture. North Carolina students now have some choice on where to go for agriculture-related technical degrees, therefore information about community college offerings are included as a point of comparison of programs culminating in associate's degrees.

“A significant difference exists between students' perceptions that study abroad improved competitiveness in the global marketplace and their willingness to participate in study abroad programs” (Chang, 2013, p. 97). Because of this, colleges and universities should find ways to reduce the barriers to participation and increase the likelihood that students will participate through partnerships and reduced cost initiatives (Chang, 2013). Increasing the global content of agriculture programs allows current and future students to be more competitive, increases their global competencies, enhances their worldviews, increases their cultural awareness and acceptance of others (Chang, 2013). However, the perception challenge exists not only at the student level, there are also institutional challenges with the perceived value of internationalizing programs. Richard Linton (personal communication, November 5, 2014), Dean of the College of Agriculture and Life Sciences closed the CALS Office of International Programs citing budget constraints as the rationale. The email

indicated that the tasks that had been carried out by the CALS International Programs Office staff were still important but that they would be absorbed by other members of the administrative team within the college and leadership would be provided by the University Office of International Affairs.

After September 11, 2001, George W. Bush (2001) spoke out about study abroad during his International Education Week message:

We must also reaffirm our commitment to promote educational opportunities that enable American students to study abroad and encourage international students to take part in our educational system. By studying foreign cultures and languages and living abroad, we gain a better understanding of the many similarities that we share and learn to respect our differences. ...I call on schools, teachers, students, parents and community leaders to promote understanding of our nations and cultures by encouraging our young people to participate in activities that increase their knowledge of and appreciation for global issues, languages, history, geography, literature and the arts of other countries. (Bush, 2001, p. 1).

President Barack Obama (2009) echoed this sentiment in a speech to students in Turkey:

As President, I'd like to find new ways to connect young Americans to young people all around the world, by supporting opportunities to learn new languages, and serve and study. ...Simple exchanges can break down walls between us, for when people come together and speak to one another and share

a common experience, then their common humanity is revealed. (Obama, 2009, p. 1).

Chancellor Randy Woodson (2014) also weighed in on the study abroad issue in a statement published on the North Carolina State University Study Abroad website:

There are few experiences that are as transformative to the development of a student as study abroad. A full immersion in another culture heightens one's cultural sensitivities and opens our minds to the complexity of the world. And, if that is not enough, study abroad increases the competitiveness of our students as they seek employment upon graduation. (Woodson, 2014, p. 1)

The North Carolina Community College System includes global knowledge as a key tenet of their mission regarding the education of North Carolina's population. The Agricultural Institute has at its core the goal of educating students to be prepared for jobs in an ever-globalized agricultural marketplace. "Research shows that students in colleges of agriculture lack knowledge in global agricultural policies, practices, products, peoples and culture" (Morgan & King, 2013, p. 2). Based on the combination of all of this information, it appears that providing a mechanism for students to enhance their global knowledge at the associate's degree and bachelor's degree levels is aligned with the missions of the university, the College of Agriculture and Life Sciences, the Agricultural Institute and the North Carolina Community College System.

During the 2000-01 school year, 85 community colleges across the United States reported a total of 3,941 students participating in study abroad and during the 2005-06 school year, 114 community colleges reported 6,321 students studying abroad, a 60% increase from

2001 (Raby, 2008). During 2005-06, more than 223,000 U.S. students overall studied abroad for credit, a 150% overall increase in ten years (Raby, 2008). This growth is attributed to several key reasons, including a greater array of study abroad offerings by U.S. campuses, more government, private and corporate scholarship programs, and a heightened awareness of the value of study abroad in “preparing students for leadership in the global economy and an increasingly interconnected world” (Raby, 2008, p. 4). Community college student participation in study abroad rose 60% from 2001 to 2008 (Raby, 2008). However, John Niser (2010), in his 2008 pilot survey of 195 institutions on the roster of the Commission Institution of Higher Education of the New England Association of Schools and Colleges, of which 42 were community colleges, could find information showing that only five of these community colleges offered study abroad opportunities to their students.

With the shrinking of boundaries through globalization and increases in international travel and trade, there’s a growing need for greater understanding of international and cross-cultural competence among higher education students at all levels. Boggs and Irwin (2007) declare, “America’s community colleges, now educating nearly half of all undergraduate students, have a significant role to play in preparing students to live in an increasingly global society and economy” (p. 25). Geoffrey Bradshaw (2013) notes:

Community college graduates are now expected to be prepared to communicate with people from all over the world and to understand complex global economic changes, and they are told to expect even greater global integration throughout the course of their lifetimes. (p. 40)

The American Council on Education's *Mapping Internationalization on U.S. Campuses* (2012) echoes these needs and expectations, "Graduates must possess intercultural skills and competencies to be successful in this globalized world, and higher education institutions must commit to helping students achieve these outcomes" (p. 3). Study abroad is an ideal way of reaching these ends.

The March 2012 Institute for the International Education of Students (IES Abroad)'s Recent Graduates Survey of 1,008 IES Abroad study abroad alumni who received a four-year college or university degree in the United States between 2006 and 2011 is a rich source of information on study abroad alumni outcomes (IES Abroad, 2012). According to the data, IES Abroad alumni get jobs related to their major sooner than U.S. college graduates from the general population, and they earn a starting salary averaging \$35,000, which is on average \$7,000 more than their general college graduate counterparts. Ninety-five percent of IES alumni secured a job within one year of graduation compared to 49% of general U.S. college graduates, and 67% within two months of graduation and 89% within six months. Ninety percent of the alumni got into their 1<sup>st</sup> or 2<sup>nd</sup> choice of graduate or professional school and 84% "felt that studying abroad helped them build valuable job skills, such as language proficiency, cultural training, tolerance for ambiguity, adaptability, and communication" (Preston, 2012, p. 1).

IES Abroad's 50-year Alumni Survey, which examined the organization's alumni's perceptions on the long-term impact of study abroad on their careers, education and world views, is another abundant source of data on study abroad alumni outcomes (IES Abroad, 2012). IES Abroad's 50-year Alumni Survey shows impressive outcomes in the areas of

academics, cultural development, career impact and personal growth. According to the survey results, IES Abroad (2012) shows

- 86% reported a “reinforced commitment to foreign language study” (p. 1)
- 80% reported an “enhanced interest in academic study” (p. 1)
- 98% stated “the study abroad experience helped them to better understand their own cultural values and biases” (p. 1)
- 76% reported they “acquired skill sets while studying abroad that influenced their career path” (p. 1)
- 48% said they have “worked internationally or participated in volunteer activities since studying abroad” (p. 1)
- 97% reported studying abroad “served as a catalyst for increased maturity” (p. 1)
- 96% noted that it increased their self-confidence
- 95% indicated it had “a lasting impact on their world view” (p. 1)
- 89% stated it helped them “better tolerate ambiguity” (p. 1)

International education at community colleges has gone through four phases of maturation, from 1967, when international education was a minor part of community colleges, to the present, in which it is a key part (Valeau & Raby, 2007). In the first phase, the recognition phase (1967-1984), policymakers and administrators started seeing the importance of international education at community colleges. Some community colleges started offering study abroad programs. By 1977, three hundred community colleges stated that international education was an important part of college. In the second phase, the

expansion and publication phase (1980-1990), international education played an increasingly important part of community college education. Colleges received grants to internationalize their curriculums and consortia were developed and college offices opened supporting international education at community colleges. In the third phase, the augmentation phase (1990-2000), study abroad programs, international education and recruitment of international students increased at community colleges. In the current phase which began in 2000, the institutionalization phase, effort has been put forth to put international education in mission statements and state and national education policies, and study abroad continues to grow at community colleges. Study abroad, work abroad, international internships and volunteer programs are examples of off-campus internationalization strategies (Raby, 2007). Various reasons for the need for international education are given by scholars, including economic, political, humanistic and academic ones (Valeau & Raby, 2007).

Late U.S. Senator and Honorary Co-Chair of the Strategic Task Force on Education Abroad, Paul Simon, pointed out that just over one percent of U.S. students ever study abroad for a semester or summer, and he raised the call for action, stating, "We need a Lincoln Fellowship available for 500,000 college students ... to study abroad for at least a summer or a semester with priority given to developing nations" (NAFSA, 2003, p. ii). NAFSA's (2003) report declared, "We strongly believe that the events of September 11, 2001, constituted a wake-up call - a warning that America's ignorance of the world is now a national liability" (p. iv), and added "It is time to launch a major national effort to ensure that every U.S. college student graduates with both an understanding of at least one foreign area and facility in at least one foreign language" (p. 3). To reach these ends, "... study abroad

must become the norm, not the exception, at higher education institutions in the United States” (NAFSA, 2003, p. 3). NAFSA (2003) calls for study abroad to become a key part of college students’ education and believes a national effort is required to achieve this, with support from federal and state governments, colleges and universities, and the private sector.

### **Conceptual Framework**

Students have many choices of how they spend their time during their university experience. These choices include decisions regarding courses, summer activities, internships, study abroad experiences, and student organization involvement, to name a few. While study abroad has been offered at universities and colleges for decades, the ability to participate in a study abroad program has only recently become possible for students in the Agricultural Institute. Given the newness of study abroad programs within the Agricultural Institute, Agricultural Institute students may or may not know the costs and benefits associated with participation. They may or may not know of the possibilities for securing funding to participate and they may not have an appreciation of the challenges and the process involved. A baseline is needed to determine the level of information available, student interest in study abroad, and whether demographics come into play with these issues. This information will be useful in creating a plan of action moving forward that will allow faculty and students to make informed and appropriate choices about study abroad programs.

During the 2005-06 school year, 76.1% of associate’s students who went on study abroad went on short-term programs (eight weeks or less), compared to 52.8% overall for all institution types, 23.5% went on mid-length study abroad programs (one semester, one or two quarters), compared to 41.7% overall, and 0.4% went on long-term study abroad

programs (academic or calendar year), compared to 5.5% overall (Raby, 2008). According to the IIE data reported, 66.3% of associate institute study abroad participants in the 2010-11 school year were female and 33.7% male (Institute of International Education [IIE], 2012a). In 2010-11, 75.5% of the participants were white, 12.9% Hispanic or Latino, 5.8% black or African American and 3.6% Asian, native Hawaiian or other Pacific islander. In terms of geographic regions, 59.7% of the participants who went on study abroad in 2010-11 went to Europe, 21.7% to Latin America and 9.6% to Asia. The top three study abroad destinations for these students were Italy (18.7%), the United Kingdom (13.8%) and Spain (9.6%). Community college students participating in study abroad represented a variety of majors, with humanities (15.9%), social sciences (11%) and business (9.3%) being the top three declared fields of study and 13.7% of these students not having a declared field of study (IIE, 2012a).

The results of the 2000 survey, in which 307 community colleges each answered 24 questions, when compared with data from the 1995 survey, provide important insight on some significant changes taking place at community colleges during this five-year period. Eighty-three percent of the colleges reported sponsoring activities to promote global awareness on campus and in the community in 2000 compared to 43% in 1995, 60% reported having international business programs in 2000 compared to 23% in 1995, more than 60% reported establishing exchange and study abroad programs in 2000, and 78% sponsor or partner with others to offer travel and exchange programs for study abroad, an almost 30% increase from 1995 data (Blair et al., 2001). A 2001 ACE survey, in which 233 community colleges responded, found that 38% administered study abroad programs (Green, 2007). On

the importance of study abroad at community colleges, Rosalind Raby (2008) states, “Community colleges are at a crossroads as they examine their role and function in preparing the next generation of students to live and work locally, but within a global economy,” (p. 8) and adds, “education abroad is directly aligned with the community college mission; contributes to credit transfer, career and technical preparation and community education; and is student-focused” (p. 8).

A wide range of sources provide a great range of positive outcomes of study abroad. While the bulk of study abroad research centers on students attending 4-year higher educational institutions, the benefits of study abroad confer to associate’s degree seeking students as well. “Students who participate in study abroad programs are more aware of and open to cultural diversity.” (Zhai, 2000, p. iii). “Benefits include change in perception and attitude toward global relationships; increased empathy for politics and social service; significant growth in interpersonal skills, academic performance, language, and cultural proficiency; greater self-confidence; and reduction of cultural stereotypes” (Raby & Sawadogo, 2005, p. 62). Isabel Bohrer (2013) points out the strengthening of the following skills through study abroad: foreign language fluency, international knowledge, cross-cultural communication, analytical skills, teamwork, flexibility, ability to manage finances and independence. “Internationalizing curricula leads to increased global competencies, enhanced worldviews and internationalization of different cultural concepts” (Chang, 2013, p. 97). Dr. Mary M. Dwyer, President and CEO of International Education of Students (IES) Abroad, further elaborates on the benefits of study abroad, “We believe that more and more employers are realizing the extraordinary benefits of study abroad, and are seeking out

graduates who have had study abroad experiences. Key jobs skills such as adaptability, global understanding and tolerance, leadership, and independence are directly fostered by learning and living abroad” (IES Abroad, n.d., p. 1). Students who participated in study abroad at Michigan State University reported that “opening my eyes to the world” was the most important reason for their decision to participate in a study abroad program (Peterson, 2003).

Many of these outcomes, and others, are well-supported by other literature on study abroad: foreign language acquisition (Carlson, 1991), (Du, 2013), cross-cultural sensitivity (Anderson, 2006), intercultural development (Dwyer, 2004), (Emert, 2007), (Hu, 2010), development of global perspective (McCabe, 1994), greater cross cultural skills (Parsons, 2010) (Raby, 2008), reduction of ethnocentric tendencies and positive growth in worldview (Emert, 2007) increased knowledge and understanding of host country and its history (Farrell, 2003) (Richardson, 2012), influence, improvement or advancement of participants’ career prospects (Williams, 1993), greater appreciation of the United States and its freedoms (Richardson, 2012), influence future professional and personal development (Smith & Curry, 2011), prepare students to effectively participate in an increasingly interconnected international community that demands cross-cultural skills and knowledge (Securing America's Future: Global education for a global age., 2003), enhanced interest in academic work and acquisition of important career skill sets (NAFSA, 2005) and foster self-confidence, independence, leadership qualities and growth personally, in interpersonal skills and academic performance (Raby, 2008).

Cross-cultural development, intercultural sensitivity, reduction of ethnocentric tendencies, growth in worldview, effective participation in an interconnected international community and others can be grouped together into a common theme of global mindedness. Global mindedness is the state of mind that allows one to see the world at large and oneself as not only connected to the greater world but, in part, responsible for its members as reflected by the one's attitudes, beliefs and behaviors (Hett, 1993). Global mindedness has five measurable dimensions. These include responsibility, cultural pluralism, efficacy, globalcentrism, and interconnectedness (Hett, 1993). Responsibility refers to the ethics of responsibility and care where global-minded people exhibit a personal concern for people in all parts of the world. This "manifests itself in a sense of moral responsibility for others and a commitment to the values of a community" (Hett, 1993, p. 89). With responsibility, people feel a need to try to improve conditions in some way. Cultural pluralism is where there is value in diversity and multiculturalism, a belief that everyone has something of value to offer, and an interest in learning more about people and cultures different from their own. Efficacy is a belief that an individual's actions matter and that we should not only be interested in national and international issues but we should be involved in them (Hett, 1993). Globalcentrism builds on the thought that people reflect their values and attitudes through their behaviors. In this context, globalcentric people would be those who engage in activities that benefit the world at large rather than themselves. For instance, they might volunteer for, or contribute money to, international aid organizations or environmental causes that transcend country boundaries. Globalcentrism is thinking more about what is good for the global community than what is good for oneself or one's own country (Hett, 1993).

Interconnectedness refers to the notion that globally minded people are aware of the connections between themselves and the rest of the world and recognize the complexity of these relationships. This also extends to a sense of belonging to the broader world community and a kinship with people from all over the world (Hett, 1993). Hett's Global Mindedness Scale is a measure that was used in this study to help gauge the global mindedness of agriculture students at North Carolina State University to see if this played a role in their perceptions of study abroad programs and their desire to participate in them.

Because study abroad experiences are so diverse and such a broad range of options fall under this category of experiential learning possibilities, a student may or may not experience a change in their level of global mindedness due to participation in them.

### **Need for the Study**

We need to understand students' perceptions of globalization, their desire to study abroad, and their knowledge of the apparatus in place to facilitate study abroad programs. Study abroad programs have been offered to Agricultural Institute students for four years because instructors have been willing to teach these courses. Many courses start with faculty interest and either terminate from lack of student involvement or waning faculty interest or flourish into long-term offerings. The next step in the progression of providing students with the right tools and learning experiences is to find out more about where they are in terms of their level of global mindedness and their interest in participating in study abroad. Gauging students' perceptions of their place in the world and the value they place on international experiences such as those gained through international field experiences will allow programs

to be developed in a way that makes sense based on where the students are with their world views and global connectedness.

This study investigates the global mindedness of incoming Agricultural Institute students and incoming undergraduates in agriculture-related majors. In addition, it attempts to determine if there is a correlation between a student's global mindedness, their demographic information, and their desire to participate in a study abroad program.

### **Purpose of the Study**

The purpose of this study was to determine the perceptions that agriculture students in the Agricultural Institute and in bachelor's degree programs within the College of Agriculture and Life Sciences have regarding global mindedness and factors surrounding study abroad.

Study abroad provides a means for immersing oneself into a culture different from one's own; it is an avenue toward increasing intercultural competence and knowledge of people and cultural customs different from one's own (Gates, 2014). There are several people involved in the decision making process when it comes to student participation in study abroad programs. The student's perception of the value of the programs is critical for participation. Where they get their information and encouragement is also an important factor in making this commitment of time and resources. Faculty advisers and instructors of the student population in question play a large role in providing information, encouragement and support throughout the process. This study is designed to expand the knowledge base surrounding perceived value of study abroad related to students pursuing degrees in agriculture-related fields.

While study abroad has been an important part of many universities' program offerings, there are considerably fewer study abroad opportunities available to students in associate's degree programs. There have been numerous studies that document the value of study abroad for university students who have participated in these programs. This study will focus on the perceptions of agriculture students at the associate's and bachelor's degree levels to see what their perceptions are related to study abroad and their level of global mindedness. There have been studies regarding global mindedness and study abroad, but far less is known about these issues as they pertain to students in disciplines related to agriculture, especially at the associate's degree level.

This research was guided by the following questions:

1. What is the level of global mindedness of the students?
2. Is there a difference in the level of global mindedness between Associate's and Bachelor's Degree students?
3. Does global mindedness vary by demographic characteristics of students?
4. What do students perceive as the benefits of studying abroad?
5. What do students perceive as factors contributing to their decision on whether to participate in a study abroad program?
6. What do students perceive as the sources of funds to pay for study abroad programs?
7. What student characteristics are the best predictors of students who are likely to participate in study abroad?

**Definition of Terms**

**AGI** – Agricultural Institute at North Carolina State University. This is the home of the Associate’s Degree of Applied Science with programs of study related to agriculture.

**Associate’s degree** – a two year degree where, upon completion, students are awarded an Associate’s Degree. In the Agricultural Institute, the degree is an Associate’s Degree of Applied Science. The other possibilities are Associates Degree of Arts and Associate’s Degree of Science.

**Bachelor’s degree** – a four year degree where, upon completion, students are awarded a Bachelor’s Degree of Science or a Bachelor’s Degree of Arts. Agriculture-related degrees are typically Bachelor’s Degrees of Science.

**CALS** – College of Agriculture and Life Sciences at North Carolina State University.

**Cultural pluralism** – people value diversity and multiculturalism and believe that everyone has something of value to offer. This is accompanied by taking pleasure in exploring and trying to understand other cultural frameworks (Golay, 2006).

**Efficacy** – a belief that one individual has the ability to make a difference in the world. Not only should we be interested in national and international issues, we should also be involved in them (Hett, 1993).

**Global mindedness** – “a world view in which one sees oneself as connected to the world community and feels a sense of responsibility for its members. This commitment is reflected in attitudes, beliefs, and behaviors.” (Hett, 1993, p. 176).

**Globalcentrism** – thinking more about what is good for the global community than what is good for oneself or one’s own country (Hett, 1993).

**Globalization** – The cultural and economic influences of all parts of the earth on local areas and cultures.

**(Global) Responsibility** – globally-minded people exhibit a personal concern for people in all parts of the world. This manifests itself in a sense of moral responsibility to try to improve conditions in some way.

**Interconnectedness** – refers to the notion that globally minded people are aware of the connections between themselves and the rest of the world and recognize the complexity of these relationships. This also extends to a sense of belonging to the broader world community and a kinship with people from all over the world (Hett, 1993).

**Study abroad** – any of a number of types of international opportunities available through an institution of learning that includes travel to a foreign country that incorporates study, research, service, and/or extension responsibilities for a short term spring break or summer (1-8 weeks), semester (9-20 weeks), or year-long program. Participants are typically given course credit for work performed during their program.

**Undergraduate** – Students working towards a bachelor's degree.

### **Assumptions**

There are several assumptions we need to make to be able to evaluate the results of this study.

1. Respondents understand the questions asked on the survey.
2. The respondents answered the survey questions truthfully.
3. The respondents did not discuss the questionnaire with their friends or colleagues before completing the survey or while completing the survey.

### **Limitations of the Study**

A person's score on the global mindedness survey is an indication of that person's perceptions at that point in time. Current events or other factors may affect a person's perceptions of their role in the world and, by translation, their score on the global mindedness scale. Ebola, a deadly virus with no known cure, was a hot topic in the news because of outbreaks in Sierra Leone, Guinea, and other places in West Africa. Additionally, Al-Quaeda, ISIL (Islamic State of Iraq and Levant), ISIS (Islamic State of Iraq and Syria), Islamic State are oft in the news as wreakers of terrorist havoc around the world. These safety concerns could have an impact on the desire to study abroad and on the factors that would affect study abroad participation.

This study was conducted using incoming Agricultural Institute students associated with the Associate's Degree programs at North Carolina State University and incoming freshmen in degrees housed in the College of Agriculture and Life Sciences at North Carolina State University. For that reason, the results may not be transferrable to other populations on campus or to other colleges or universities offering degrees in programs related to the industry of agriculture.

### **Chapter Summary**

This study is important because it looks at student interest in global issues and their perception of their role in the larger world as determined by their global mindedness scores. This study provides a basis for understanding their willingness to participate in study abroad opportunities available to them. Considering the globalization of the agricultural sector, do students perceive that availing themselves of opportunities to explore other cultures and areas

of the world and differing methods regarding agricultural production, marketing, education, and regulation as important building blocks in becoming prepared for jobs in today's agricultural marketplace? This study is needed to see where we are now in terms of global mindedness of our students to figure out how to proceed in the future in better preparing them for the global marketplace. It also allows us to add to the body of knowledge about the agricultural sector as it relates to globalizing education for college students at the associate's and undergraduate degree levels.

## Chapter 2

### **Theoretical Framework and Review of Related Research**

The purpose of this study was to determine student perceptions of study abroad and the motivation of students to participate in a study abroad program. This included getting a baseline on the global mindedness of the students, their perceptions about study abroad in general, their perceived limitations and concerns regarding participation in a study abroad program.

The conceptual framework was based on a review of literature surrounding motivational theory. There were several relevant theories that tie perceptions, motivations, and intentions to a student's ultimate decision on whether or not to participate in a study abroad program.

Over his entire career, Victor H. Vroom examined motivation from the perspective of why people choose particular behaviors and had several theories about motivation. By looking at Vroom's Expectancy Theory, it may be possible to understand how students could be motivated to participate in study abroad programs. Vroom's 1964 Expectancy Theory says that people act to increase their chances of expected behavior (Ajzen, 2011). Vroom's Expectancy Theory has three basic components. The first is valence. Vroom defines valence as "affective orientations toward particular outcomes" (Vroom, 1964, p. 15). He goes on to talk about outcomes and whether they are positive, neutral, or negative. According to Vroom, "an outcome is positively valent when the person prefers attaining it to not attaining it" (Vroom, 1964, p. 15). He also makes the point that expected satisfaction and actual satisfaction may not be the same thing. However, a person's decisions are based on their

expected satisfaction from their choices and not on the eventual satisfaction that they actually derive from them.

The second component of Vroom's Expectancy Theory is expectancy. In this case, expectancy is a person's estimate of the probability that effort they exert will lead to a successful (as determined by them) outcome. For instance, if a person expects that participation in a study abroad program will benefit them in the workplace and they decide to participate, then his/her expectancy will be high.

The final component is instrumentality. This is the probability that the person's performance will lead to the expected outcome. An example of this would be participant's thought that "if I interact with locals while I am in Italy, I will improve my networking skills".

When combining these concepts, you get the perception that if you expend the appropriate effort, this will lead to good performance. Follow that with the perception that good performance based on this effort will lead to the desired outcomes. Finalize this process by placing a positive value on the outcomes and you have a model for motivation and the basis for Vroom's Expectancy Theory. In other words, motivational force is the product of valence, expectancy, and instrumentality (Vroom, 1964). In reference to study abroad, if students believe that participation in study abroad programs leads to tangible positive benefits and if they believe that their own participation will generate these benefits for themselves and if they value these benefits then they will be motivated to participate in study abroad programs.

Students are motivated to participate in study abroad based on their perceived value of the program (Chang, 2013). Chang suggests that faculty and other advisers can play a major role in students' perceived value by the way they discuss and interact with students about study abroad programs. By discussing the benefits and the value of participation, faculty members can help shape students' opinions of study abroad participation. In addition, faculty members could encourage students to participate as a way to prepare themselves for interacting in a broader world as global citizens (Chang, 2013).

In determining how to look at the research surrounding the broad topic of study abroad, several avenues were considered. First, an analysis was made of the studies that included the level of global mindedness, though possibly called by different names, of various populations. The second step was to look at the benefits of study abroad. Following that are questions regarding barriers to participation in study abroad programs. And finally, can students' likely participation in a study abroad program be predicted? The review of literature is generally broken down into these broad categories: global mindedness; benefits of study abroad; concerns and barriers to participation; and prediction of participation.

### **Global Mindedness**

There are many labels for what here will be called global mindedness. Some include world mindedness, international mindedness, world view, global citizenship, and global perspectives. All include varying dimensions with regard to study abroad programs. Included in these key dimensions are social responsibility or the concern for society at large and for the environment; global awareness or the understanding and appreciation for oneself, one's place in the greater world, and of world issues; and civic engagement or active

engagement with community issues whether that community be local, regional, state, national, or international (Tarrant, 2013). Inherent in this structure is also the sense that one has a sense of obligation to the greater world around oneself, not just a passive role in it.

Holmes and VanAlstine used the term international mindedness to encompass these ideas (Holmes & VanAlstine, 2014). Characteristics of international mindedness include curiosity about, and interest in, the human and physical geography of the world; openness to different cultural approaches; inherent belief that the earth is valuable and common to everyone; awareness that people are interrelated; and respect for differing cultural backgrounds (Holmes & VanAlstine, 2014). Whether you use the term global mindedness, international mindedness, world view, or a different label, the basic premise is still the same. Thinking about the world and its peoples with an openness to the differences we bring to the table and valuing contributions from those different from ourselves.

The question becomes how to measure the global mindedness of an individual. E. Jane Hett (1993) defined global mindedness as a “worldview in which one sees oneself as connected to the world community and feels a sense of responsibility to its members” (p. 89). E. Jane Hett created the Global Mindedness Scale to measure global mindedness and its core dimensions. In it, she included five components of global mindedness which were responsibility, cultural pluralism, efficacy, global centrism, and interconnectedness. Hett’s scale consisted of thirty Likert type questions had answers along a five point scale. This means that the lowest score possible would be a 30 and the highest score would be 150 points. Higher scores indicate higher levels of global mindedness. In Hett’s study, after she created and validated the scale, she used it to determine the level of global mindedness

among college students from several colleges in California. One of the colleges had an international component to the curriculum and the others did not. Students who had spent more than nine weeks out of the country scored significantly higher than students who had never travelled outside of the country or who had only made one or two brief trips abroad (Hett, 1993). She also found a significant positive correlation between the number of global studies courses taken and global mindedness scores. In terms of overall scores by field of study, Hett found the following means in the Global Mindedness Scores:

Table 2.1 *Global Mindedness Mean Scores by Field of Study*

Field of Study	Global Mindedness $\bar{x}$
Arts	120.01
Engineering	112.43
Humanities	119.43
Science/Math	116.11
Social Science	118.14
Undeclared	115.43

For the purposes of Hett's study, agriculture majors were included with the Science/Math group. There was a statistically significant difference in the means between arts and engineering and humanities at the .01 level and a difference in engineering and social science at the .05 level (Hett, 1993). She also statistically significant gender related

differences with mean scores for women at 120.37 and for men at 113.32 with significance at the .001 level (Hett, 1993).

Research conducted at North Carolina State University evaluated the global mindedness of Agricultural Extension Agents as the target population. In that research, Smith evaluated data from 317 extension agents to determine their extent of international experience and what impact, if any, this had on them (Smith, 2008). In addition, he reported their Global Mindedness Scores. He found that 69.5% of extension agents had traveled outside of the United States. Of these, more than half (52.5%) had experiences lasting less than one month and 5.7% had experiences lasting over one year (Smith, 2008). He also found that 5% had previously participated in study abroad programs or Peace Corps work. Overall, the extension agents scored an average of 108.02 on the Global Mindedness Scale.

In 2006, Golay conducted research at Florida State University where she used the Global Mindedness Survey to see if there were differences in Global Mindedness Scores between study abroad participants and non-study abroad students. In that research she reported the differences in means between the two groups but not the overall scores of the students who participated (Golay, 2006). For this reason, results between this study and that of Smith or Hett are not comparable. Golay conducted a pre-test/post-test on the study abroad group and a pre-test on the non-study abroad group. The conclusions of her study were that there were significant differences in the total Global Mindedness Score and the subcategories of cultural pluralism, responsibility, and globalcentrism between the pre-test and the post-test scores and that female students had higher levels of global mindedness than male students (Golay, 2006).

Zhai conducted a study at the Ohio State University in 2000 that is particularly noteworthy because it looked at global perspectives and diversity issues as they relate to agriculture students. Because agriculture is a globalized industry, it is crucial for agriculture students to be more knowledgeable about other countries, their cultures, politics, and stance in world affairs (Zhai, 2000). To address these diversity issues, agricultural employers have called upon agricultural education professionals at the high school and university level to address diversity issues and to be proactive in including globalization into the curriculum. They contend that colleges of agriculture have the responsibility to prepare students for the globalized workplace and the diverse environment in which they will spend their careers (Zhai, 2000). Assessing students' global mindedness is one way to benchmark where we are on this issue. This will allow us to better understand and mold the campus environment and culture in an effort to develop a more open minded appreciation for globalization and diversity (Zhai, 2000). This study combined items from two scales to collect the information needed for this study. The Global Mindedness Scale by Hett and the Attitudes toward Cultural Diversity and Pluralism Scale by Stanley were the scales used (Zhai, 2000). Generalized results were similar. Female students scored higher on global mindedness than male students. Additionally, students with a higher Global Mindedness score also tended to have a more positive attitude towards diversity (Zhai, 2000). This suggests that intervention at the college level could have an effect on the global mindedness of students engaged in globalization activities.

## **Benefits of Study Abroad**

Benefits of study abroad are dependent on several things including length of program, faculty led versus independent study, immersion into the local culture, among others. With short term programs, the level of preparation and the activities while on the international experience meld to determine the overall educational, personal and professional benefits of the program. Cultural learning and enhanced communication skills are the most cited benefits to study abroad programs (It takes more than a major: Employer priorities for college learning and student success, 2013; Barkley, 2013; Chang, 2013; Coers, 2012; Gardner, 2009; Luo and Jamieson-Drake, 2015; Rice, 2014; Trooboff, Vande Berg & Rayman, 2007; Yu, 2008). Many other benefits have been identified. These include language development (Rice, 2014), improved academic performance (Barkley, 2013; Luo & Jamieson-Drake, 2015; Rice, 2014; Yu, 2008), foreign experience (Chang, 2013, Yu, 2008), personal development (Barkley, 2013; Smith, 2013; Yu, 2008), social interactions (Clarke III, 2009; Yu, 2008), and increased employability (Chang, 2013; Clarke III, 2009).

Lucas (2009) in a study of Michigan State University male students found that male students participate in study abroad at half the rate of female students. Using a mixed-methods approach, Lucas found that male students had four motivations for participating in study abroad programs including fun, cultural learning, resume-building, and career benefits (Lucas, 2009).

Luo and Jamieson-Drake (2015) used data collected by The Cooperative Institutional Research Program (CIRP) developed a survey of students that the University of California at Los Angeles and the American Council on Education jointly administer to collect information

on college students. Luo and Jamieson-Drake (2015) used the data collected from the cohort of students as entering freshmen and as exiting seniors at a mid-size private university in California. Their results found the benefits of undergraduate students studying abroad included understanding moral and ethical issues, enhanced communication skills, improved academic performance, and overall satisfaction with college (Luo & Jamieson-Drake, 2015).

In research conducted at The Pennsylvania State University with undergraduate agriculture students, Rice, Foster, Miller-Foster and Barrick (2014) found reflective journaling during the international experience created a mechanism for students to put their experiences into context when discussing how they grew personally, professionally, and globally. Their research looked at the gains of students participating in an embedded agricultural education course where the students met weekly during the semester and participated in a 10 day international experience to Korea to engage with Korean school-based agricultural education. With this research, the students were provided specific prompts each week during the coursework portion and daily during the international experience. The students identified several areas of growth. These included an increased awareness of global agriculture, language development, culture and the impact of history on the development of a country (Rice, 2014). Though the students identified global competencies and articulated how they grew personally, professionally and globally, the researchers were not confident that this expression of global competency by the students indicated a permanent paradigm shift (Rice, 2014). They believed that follow-up studies that looked at how the students behaved as teachers in agricultural education programs in incorporating global issues into

their classroom teaching would be the determining factor on whether the program delivered the results the students claimed to get (Rice, 2014).

At The Pennsylvania State University, research concluded that there are six motivating factors related to studying abroad. These include cultural learning, academic learning, foreign experience, personal development, pleasure, and social interactions (Yu, 2008). Texas A&M University and Tarleton State University students participated in a joint research project that showed their perceptions about study abroad. In this study, the students identified enriching their life experience, living in another country, enhancing their resume, and increased employability as their top motivating factors (Chang, 2013).

Similar research was conducted at the University of Florida. Though these researchers were part of the agricultural learning community, the learning framework they developed was not specific to agriculture programs as much as it was designed to create an experiential learning framework that could be used with any short term study abroad program. In their study, they defined journaling before the international experience as pre-reflection. By preparing students in advance, students are better prepared for the international experience and are prepositioned to learn in context, providing a framework for the learning that will take place (Roberts, 2013). They suggest that the pre-reflection include not only content learning but also team-building and cultural awareness and understanding, and should focus on the emotional needs of the students prior to departure (Roberts, 2013). Reflection during the international experience should be personal and collective, including instructor guided focus on key learning objectives and group reflection (Roberts, 2013). Finally, they concluded that post-experience reflection is necessary to tie the whole process

together, to meld the reflection with the onsite reflection in a way that ties the experience with the learning objectives (Roberts, 2013). Through this system of journaling and reflection, learning is enhanced and study abroad participants are better able to articulate their individual learning to others, thus the process is able to “make graduates better prepared for a global society” (Roberts, 2013, p. 34).

Additionally, the benefits of study abroad are well documented and wide spread in the literature. Not only have studies of all kinds been conducted over several decades, the overwhelmingly positive results of these studies attest to the fact that, in most cases, students’ perceptions of the world around them and the people in it change based upon experiences such as studying abroad. It was acknowledged in the literature that there are some instances where this may not hold true. For instance, Clark et al (2009) suggest that improved intercultural skills depend more on students interacting in the culture they are visiting rather than “mere participation in a SAP is not a sufficient condition” (p. 174). Additionally, Zhai (2000) found no significant changes in student’s attitudes towards diversity based on their participation in study abroad. It was also revealed that all study abroad experiences do not end in positive changes in global mindedness much the same way that all experiences at a home educational institution do not yield an improvement in the level of a student’s knowledge of a given subject.

Many students and parents believe that participation in study abroad will enhance their employability, thereby providing a benefit of participation (Chang, 2013; Clarke III, 2009). Educators, students, parents, and employers are able to identify benefits of student participation in study abroad programs. The perceptions of educators, employers and parents

do not exactly mirror the benefits seen by students of participation. The first group looks at long term gain in terms of employability and academic content learned. Students also include in their mix the factors of fun, lasting friendships, and personal contacts in addition to the extrinsic benefits. Overall, all groups can identify positive gains from participation. One of these employable skills is a greater openness to cultural diversity. Students participating in a semester long program in Belgium reported to like “being ‘challenged by different ideas,’ ‘thinking about things from a dissimilar perspective,’ ‘learning about unlike cultures,’ and ‘interacting with people of varied backgrounds’ (e.g. race, national origin, sexual orientation)” (Clarke III, 2009, p. 174). “Students who study abroad exhibit personal and professional attributes that are critical to success in the 21<sup>st</sup> century workplace. These include autonomy, open-mindedness, willingness to embrace challenges, tolerance for ambiguity and the ability to cope with diverse problems and situations” (Smith, 2013, p. 15).

Providing international opportunities and experiences for students offers them the opportunity to expand their skills and to develop a personal understanding of global citizenship (Coers, 2012). Barkley and Barkley corroborated and extended these observations in their study at Kansas State University. They were able to identify several marketable job skills gained through participation in their short term study abroad programs. These included “interacting with people who hold different interests, values or perspectives; understanding cultural differences in the workplace; adapting to situations of change; and gaining new knowledge from experiences” (Barkley, 2013, p. 150). Many studies show that the ability to articulate the marketable skills gained through international experience make

students more attractive candidates for hiring (Gardner, 2009; It takes more than a major: Employer priorities for college learning and student success, 2013; Trooboff et al., 2007).

### **Barriers to Participation in Study Abroad**

Internal and external barriers affect a student's participation in study abroad programs. Internal barriers include lack of cultural knowledge, language skills, family support and cultural bias (Irani, 2006). External barriers including financial constraints, time commitment, conflict with other classes, and a lack of opportunities are much more difficult to overcome (Irani, 2006). The most difficult constraint to overcome for short program participants is the financial constraint (Briers, 2010). Chang et al. (2013) also found financial concerns were the only "very important" barrier to participation. Briers also noted that for long term programs, the language barrier trumps financial concerns as the most important barrier to study abroad participation.

While study abroad programs first started appearing at community colleges in the late 1960s (Zhang, 2011), the overall participation of community college students in study abroad programs remains low. Factors which often inhibit community college students' participation in study abroad include work and family responsibilities and limited financial resources, and funding is the most common reason given as an obstacle toward the expansion of study abroad and international education in community colleges (Zhang, 2011). Grace Quimbata (1989) provides insight on the matter, "The benefits of a semester or year abroad have long been recognized, but frequently costs are prohibitive for two-year college students. These programs can be made more affordable when operated as student exchanges" (p. 3). Findings from a 2008 survey of 60 community colleges conducted by the Institute of International

Education (IIE) and California Colleges for International Education (CCIE) show cost as a major barrier toward expanding community college education abroad, with 83% of respondents stating costs and fees, 53% budget cuts and 53% limited staff/resources as significant challenges (Raby, 2008). Blair, Phinney and Phillippe (2001) also note time, funding and resources as obstacles in the way of implementing international programs at community colleges. The 2008 IIE/CCIE survey respondents also found the following as critical necessities: Ninety-two percent stated sufficient financial aid for under-represented students, 65% increased funding to develop/support study abroad and 60% increased funding to cover program costs.

#### Prohibitive Cost

Program costs, financial constraints, and availability of funding for study abroad should also be considered when documenting student perceptions about study abroad as this is the highest hurdle to study abroad participation across the board (Bobbitt & Akers, 2013; Briers, 2010; Chang, 2013; Coers, 2012; Irani, 2006; McDermott, 2011, Raby, 2008; Smith, 2013).

In a study conducted at Texas Tech University, student respondents to a survey indicated that cost and inflexibility of degree requirements were the two most limiting barriers to participation in study abroad programs (Bobbitt & Akers, 2013). Undergraduate agricultural students in Wisconsin identified program cost as the most important factor in deciding against study abroad participation (McDermott, 2011). Financial concerns, time commitment, and lack of perceived value of the experience are the primary barriers identified by University of Florida researchers in their evaluation of three international agricultural

experiences (Coers, 2012). Coers concludes that the “current generation of collegiate students has been raised in a culture that embraces globalization and connectedness; yet, true understanding of other cultures and practices is limited among students” (p. 60). The prohibitive cost is the most insurmountable barrier to participation in study abroad.

#### Insufficient Diversity in Study Abroad Participation

Though there has been significant growth in overall study abroad participation in terms of number of students studying abroad, the diversity of the students and the programs they choose is disproportionate to the population and the geographic variability of the opportunities that are available. “Students who study abroad continue to be overwhelmingly white (80%) and female (64%) and the majority (55%) picks Western Europe (primarily United Kingdom, Italy, Spain, France) as their destination of choice” (Smith, 2013, p. 16).

Although 4.7% of study abroad participants were African American, only 1.4% of African American students studying abroad were from disciplines within the field of agriculture (Smith, 2013, p. 16). Smith found that “lack of funds has been cited as the single most significant barrier” to participation by traditionally under-represented groups (Smith, 2013, p. 16). He goes on to say that financially disadvantaged students have a more difficult time in stepping away from work and other obligations. This barrier may be exacerbated for the under-represented population but it is also the most cited barrier for all students who want to participate in study abroad programs. Added to the financial and family pressures are the fears of racism and racial bias (Gaines, 2012). Gaines found that, whether real or imagined, fear of racism is a limiting factor to African American participation in study abroad. A sense of fear and reservation holds many African American students back (Gaines, 2012).

Additionally, “African Americans have had to struggle financially and educationally to even go to college: therefore, education abroad has not been a priority when considering higher education” (Gaines, 2012, p. 32).

The United States Congress is establishing a Senator Paul Simon Study Abroad Foundation through legislation that has passed both the House of Representatives (H. R. 1469, 2007) and the Senate (S 473, 2009) that includes a demographics goal (Roberts, 2013). This goal as stated in Roberts, Connor, and Jones (2013) says in part, “The demographics of study-abroad participation will reflect the demographics of the United States undergraduate population, including students enrolled in community colleges” (p. 28). Quoting several sources, they further contend that, in 2006, agriculture students comprise 0.3% of the overall student population but represent 1.4% of the students studying abroad (Roberts, 2013). This may be contradicted by information found by Chang, et al. (2013) that says that “between 2000 and 2010, 1.5% of agriculture students participated in study abroad programs, while students in the social sciences averaged 23%” (p. 97), information they obtained from the Institute of International Education.

The rate of male participation in study abroad programs is significantly less than that of females. This mirrors other indicators in higher education. College entry and completion rates of females are higher than that of male students. Mark Scheid addressed the male participation issue by suggesting that women have an easier time assessing a group and finding their niche than males because they have a lifetime of experience doing this. According to Dr. Scheid, college males are less likely to have these skills because they put on a fraternity hoodie and hang out at the local pub and that is sufficient for their social

integration; and many choose not to put themselves in the situation where they are outside of this social norm (Scheid, 2015).

#### Institutional Barriers to Studying Abroad

NAFSA: Association of International Educators' (2003) reported possible institutional barriers to study abroad to be overcome as "... a lack of leadership on the part of senior campus officials, faculty indifference, rigidities in the curriculum, anachronistic rules, ineffective enrollment management, program designs that are inaccessible for nontraditional students, and a lack of pre-departure preparation and reentry assistance" (p. 8). Fifty-two percent of the 2008 IIE/CCIE survey respondents cited the need for more administrative leadership as a necessity for the growth of education abroad programs and more than 80% noting that even one more part- or full-time employee would help the growth of their programs (Raby, 2008). A study of seven hundred students conducted by Coast Community College District, the Center for Global Education and California Colleges for International Education (CCIE) revealed that "... the primary barrier is institutional in nature; most community colleges do not offer education abroad opportunities or fail to adequately inform students about their programs" (Raby, 2007, pp. 62-63). All of these reasons contribute to a small percentage of students in associate's degree programs participating in study abroad.

Associate institutions' lagging commitment to internationalization is evidenced by data from the American Council on Education's (ACE) 2011 Mapping Internationalization on U.S. Campuses Survey in which a total of 1,041 higher education institutions responded, including 239 associate institutions. While 52% of all responding institutions reported international education or some aspect of internationalization to be among the top five

priorities in their current strategic plans, less than 40% of associate institutions reported so. ACE (2012) adds, "Given that approximately 40 percent of U.S. undergraduates attend associate institutions, developing and sharing successful internationalization models and strategies for these institutions should be a priority for the U.S. higher education community going forward" (p. 24). While associate institutions which offered institutional scholarships for student education abroad responding to ACE's survey rose from 19% in 2006, when 409 associate institutions responded to the survey, to 24% in 2011, this 2011 percentage is considerably lower than same year data reported from baccalaureate (63%), master's (61%) and doctoral (90%) institutions. Forty-four percent of associate institutions responding to ACE's 2011 survey reported administering their own undergraduate study abroad programs compared to 75% of baccalaureate, 85% of master's and almost 98% of doctoral institutions. ACE (2012) renders the following advice:

Institutions should think carefully about how students' education abroad experiences are incorporated into the curriculum ... By creating strategic programs and policies that focus on what students are learning from their international experiences and interactions with peers from other countries, institutions can maximize the impact of the resources they are devoting to student mobility and ensure that student learning, rather than such benchmarks as the quantity of international experiences, remains the focus of such activities. (p. 19)

In its 2005 report, *Global Competence & National Needs: One Million Americans Studying Abroad*, the Commission on the Abraham Lincoln Study Abroad Fellowship Program (2005) called on the United States to send one million college students abroad

annually by school year 2016-17 as a means of facing the challenges of a global society, adding, “Greater engagement of American undergraduates with the world around them is vital to the nation’s well-being. It is in the national interest of the United States to send at least one million undergraduates abroad annually to study other lands, languages, and cultures” (p. v). The Commission’s (2005) report presents three challenges standing in the way of reaching its goal of sending one million students per year to study abroad: the need for an increased commitment of institutional leadership to expand study abroad programs, increasing the diversity of students participating in study abroad, increasing the diversity of study abroad program offerings, and the reduction or elimination of financial barriers which many students face that prevent them from participating in study abroad programs, for example through increased fellowships and scholarships. The Commission established the Lincoln Award to address the funding needs of students. In addition, it lists several federal sources of scholarships designed for studying abroad. These include the Fulbright Program to encourage the exchange of students and scholars; Fulbright-Hayes which is a program specifically targeted towards current and future teachers; Benjamin A. Gilman International Scholarship Program which provides grants for low-income students; Foreign Languages and International Education Programs that specifically address graduate study in languages and international business but also reserve a small amount of money for undergraduates; National Security Education Act designed to support foreign language study and other subjects related to national security in exchange for a service obligation to a government agency with national security responsibilities; Student Financial Assistance through Title IV of the Higher Education Act which provides student aid that can also be used for study abroad;

Fund for Improvement of Postsecondary Education which has a small amount of money available for two-way student exchanges at the graduate and undergraduate level; and Federal TRIO (no explanation for the acronym could be found on the U.S. Department of Education website) which provides assistance to individuals with disadvantaged backgrounds and provides some funding for study abroad within this context (NAFSA, 2005).

Associate's students made up only 0.9% of the 154,168 U.S. study abroad students in 2000-01 and a mere 0.2% in 2010-11 (4,566 of 273,996 students overall), with a high overall percentage of 2.7 % during this period in each of the school years 2004-05, 2005-06 and 2006-07 (Institute of International Education [IIE], 2012b). In comparison, the top institution of any type of school with students participating in study abroad during the 2010-11 school year, New York University, itself sent almost as many students abroad, 3,799 students, as all associate's institutions combined (IIE, 2012b). Low participation in study abroad at the associate's degree level reveals an unmet need, with core groups of students including non-traditional students, minorities, students with significant financial need and first-generation college students being underrepresented in study abroad (Raby, 2008).

### **Prediction of Participation in Study Abroad**

Motivational theories suggest that there are many factors that play into a decision on whether to take action in a given situation. Some of the factors that students would consider when making a decision to study abroad include cost, financial feasibility, relative ease or difficulty of fitting the study abroad into their program of study, perceived faculty/campus support, foreign language proficiency, major, age, existence of a limiting disability, family or

personal relationships, perception of reward in the job market from participation, family expectations, administrative support, openness to new experiences, ability to combat personal fears, tolerance for ambiguity and many others (Deviney, 2014).

Chang (2013) asked Texas A&M students about their willingness to participate in study abroad programs. In this study, the researchers suggest that motivation to study abroad is directly linked to the perceived benefits derived from studying abroad. There was a direct correlation between a student's willingness to study abroad and their perceived positive benefit from doing so (Chang, 2013). Those students who did not see a benefit were more likely to decline participation and vice versa. The researchers suggest that faculty and program directors "should emphasize potential values to increase students' motivation to participate in study abroad" (Chang, 2013, p. 100).

Judy Bates (1997) conducted a similar study at Lander University where she evaluated the differences in global mindedness among students who did and did not participate in study abroad programs. She found no differences based on age, gender, or race. However, she did find a difference based on class of student (freshman, sophomore, junior, senior) (Bates, 1997).

Bobbitt and Akers (2013) found "students' attitude towards studying abroad was the most important linear predictor of their intention to study abroad" (p. 25). In this study, undergraduate students in the College of Agricultural Sciences and Natural Resources at Texas Tech University participated in a study to determine if a prediction could be made about their intention to study abroad. This study used the Theory of Planned Behavior as their theoretical framework (Bobbitt & Akers, 2013). Their model used intention as the

dependent variable and attitude toward performing the behavior, subjective norms and perceived behavioral control as the independent variables. Their results showed that this model was able to predict 54% of variance in a student's intent to study abroad by looking at the linear relationship between the independent variables (Bobbitt & Akers, 2013). Like students in the Texas A&M study, students at Texas Tech suggest that the perceived benefit drives the desire to participate in study abroad programs. Both research results suggest that changing perceptions may be the way to improve participation rates for agriculture students.

A study by Luo and Jamieson-Drake (2015) in California looked at student intentions to study abroad when they entered college and then asked those same students in their graduation poll if they studied abroad. The freshman survey and the senior survey were long-standing requirements at the university in question. The freshman survey asked about intentions and perceptions of multiple aspects of student life, including study abroad. The senior survey asked students what they participated in and their perceptions of those activities. The surveys were linked to the enrollment data for each student, so they were able to cross-reference what the individual student said upon entering the university with their exit survey and their academic qualifications before and during their tenure at the university. This study found that gender, race or ethnicity, major, involvement in college activities, aspirations to earn advanced degrees, time spent socializing with friends, artistic ability, seeking to improve understanding of other countries and cultures, expectations of joining a fraternity or sorority, being satisfied with college, and participation in student clubs or groups all positively affected whether a student intended to participate in study abroad (Luo & Jamieson-Drake, 2015). Those factors that negatively affected a student's intent to study

abroad included mathematical ability and a student's desire to help promote racial and cultural understanding (Luo & Jamieson-Drake, 2015).

### **Chapter Summary**

Agriculture students, like students in other disciplines, participate in study abroad. Associate's degree and bachelor's degree students have access to programs for which they would be qualified and eligible to participate, though there are fewer choices for students at the associate's degree level than there are for bachelor's degree students. More and more, students are turning to short term programs to meet their study abroad needs, citing cost, flexibility to work the program into their degree plan, and the ability to leave their time to degree completion undisturbed as the primary reasons for the choice of this type of program.

Though there are some dissenters, there is a wealth of research that shows educational, personal, and professional benefits of participation in study abroad programs for participants. The length of the program may affect the magnitude of the benefit, but well-developed and well-implemented programs have measurable benefits to students as noted in many research studies in this area.

Some work has been done to attempt to predict whether students will choose to participate in study abroad, but more work needs to be done in this area to refine the models and to determine the appropriate independent variables to include in the models.

Many students cite cost as the primary limiting factor in their ability to participate in study abroad. Others also cite time to degree considerations, the applicability of the program to their major, the timing, logistics, and location as additional contributing factors.

## Chapter 3

### Methodology

The population for this study was the fall semester 2014 incoming class of students in the associate's degree and bachelor's degree programs within the College of Agriculture and Life Sciences at North Carolina State University. The sample included all students enrolled in the AGI 101 Introduction to the Agricultural Institute course or in the ALS 103 Freshmen Transitions and Diversity in the College of Agriculture and Life Sciences. The AGI 101 course was specifically designed for incoming Agricultural Institute students and the ALS 101 course was specifically designed to be taken by incoming baccalaureate CALS students. Both classes were required first semester courses for incoming students. This study created the baseline global mindedness factors for this population so we can better understand their perspectives on globalization and their desire to participate in transformative learning such as study abroad programs. In surveying these groups, we hoped to gain a baseline of attitudes towards global mindedness.

This chapter outlines the methods used to answer the following research questions:

1. What is the level of global mindedness of the students?
2. Is there a difference in the level of global mindedness between Associate's and Bachelor's Degree students?
3. Does global mindedness vary by demographic characteristics of students?
4. What do students perceive as the benefits of studying abroad?

5. What do students perceive as factors contributing to their decision on whether to participate in a study abroad program?
6. What do students perceive as the sources of funds to pay for study abroad programs?
7. What student characteristics are the best predictors of students who are likely to participate in study abroad?

### **Research Design**

This descriptive research attempted to explain the global mindedness of Agricultural Institute students and Bachelor's degree seeking students at North Carolina State University. The study utilized a global mindedness instrument originally developed by E. Jane Hett in 1993 but which was modified slightly to incorporate the additional research questions related to this study. Quantitative measures were used to collect information needed to answer the research questions. Hett provided 30 Likert type items that equate to the calculation of a global mindedness score that has been replicated several times in other research projects. These provide the basis for the quantitative information gleaned from the students.

### **Sample**

There were 125 students enrolled in the AGI 101 Introduction to the Agricultural Institute course and according to university records, there were 125 new incoming associate's degree students in the fall 2014 semester (NCSU UPA, 2015). According to the same site, there were 320 new incoming undergraduate freshmen in the same semester (NCSU UPA, 2015).

All students in the Intro to Agriculture courses for both the associate's and bachelor's degree students were surveyed during the course of this research. There were three sections of the introductory course for the Agricultural Institute students that had a combined total of 125 students and five sections of the introductory course for the undergraduate students that had a combined total of 261 students. The Agricultural Institute course was broken down into three sections, however they all met on the same day at the same time. This allowed the three classes to join together for several presentations during the semester. It was at one of the joint meetings that the survey was administered.

### **Instrumentation**

Hett's Global Mindedness Scale was created to gauge the attitudes and perceptions about globalization among college students. It has been used and replicated several times with students in various majors across several schools and agricultural extension agents. This scale is valid and reliable and can be used in pre-test and post-test operations to determine baselines and changes based on participation in various activities and learning opportunities. It is used in this study to examine attitudes and perceptions about globalization as they relate to agriculture students in associate's and bachelor's degrees.

The basic global-mindedness scale was developed using interviews with people who demonstrated an understanding of the construct of global mindedness through their personal, professional, or academic expertise (Hett, 1993). The results of the interview data was then combined with data obtained through extensive literature reviews and by comparing the instrument with existing instruments that measure some of the constructs of global mindedness (Hett, 1993). Through this retroduction triangulation process the scale was

created. It then underwent steps to establish content validity, internal consistency (Chronbach's Alpha of .90), reliability and stability through testing with a pilot study (Hett, 1993). Subscales were also tested for internal consistency. Table 3.1 shows the standardized item alpha for the scale and the subscales. The scale was also scrutinized by a four judge panel for content validity. Construct validity was verified using a variety of measures. These included factor analysis, mapping to existing instruments, analysis of variance (ANOVA) analysis comparing this scale to previous research, and through qualitative research (Hett, 1993) The resulting 30 question, Likert type scale was then used to measure global mindedness of a sample of college students in California. As described earlier, this scale measures the five factors of global mindedness including responsibility, cultural pluralism, efficacy, globalcentrism, and interconnectedness. It has also been replicated at least twice since it was published. Both of these produced useable data that was analyzed and added to the body of literature in this area.

Table 3.1 *Internal Consistency of the Global Mindedness Scale and its Subscales*

Subscale	Number of Items	Standardized $\alpha$
Responsibility	7	.80
Cultural Pluralism	8	.75
Efficacy	5	.72
Globalcentrism	5	.65
Interconnectedness	5	.70
<b>Total Scale</b>	<b>30</b>	<b>.90</b>

The 30 items developed in Hett's survey were incorporated into this survey to answer the first two research questions. Several additional questions were also included to address research questions 3 through 6 and demographics questions were included to create a prediction equation for intent to study abroad. The additional questions included items that asked about students' perceptions on the factors that affect study abroad participation, their perception on the benefits of study abroad and their perceptions on funding sources for study abroad. Demographic questions for students include gender, race, major, language proficiency, previous domestic travel experience, previous international travel experience, time spent outside of the country, and previous study abroad experience. In addition, open ended questions allow the students to expand on their thoughts about the value of study abroad programs.

The instrument was submitted to the North Carolina State University Institutional Review Board for review and approval for use in this study.

A pilot group of 60 students in a 300 level course were asked to take the survey and make readability comments. One of the demographic questions was changed to include additional response possibilities.

### **Data Collection Procedures**

To reach the entire sample for this study, the instrument was administered on October 24, 2014 to the AGI 101 Introduction to the Agricultural Institute class of students. This was the population of incoming freshmen for the associate's degree program. There are three sections of this course that meet at the same time but usually in different locations. On this date, the three sections met together in the same classroom in a combined session. During

this first combined session, the students were asked to complete the survey. Students signed in with a computerized identification card as they entered the class. All students who were present were informed about the research project and were asked to participate. All students were given the survey instrument. Any students who declined to participate was asked to turn in an uncompleted form when the other students turned in their forms. All students were asked to send their documents to the end of their row for collection. In this way, students' responses remained anonymous. Their identifying information was not recorded. After the class ended, a list of absent students was provided by the instructor. These students were asked to complete the instrument on the next class day. The instructor administered it to the students and returned the completed instruments to the research office.

During the following week, October 27-31, 2014, the instructors of the ALS 103 Freshmen Transitions and Diversity in the College of Agriculture and Life Sciences courses administered the survey to the incoming freshmen in the bachelor's degree programs. The instructors recorded the names of the students who were absent and administered surveys the following week. The surveys were then given returned to the research office. No names or identifying information was collected from this group of students.

### **Data Analysis**

The statistical analyses used to evaluate the research questions and interpret the data included descriptive statistics and correlational statistics. Descriptive statistics were used to determine the frequency, percentage of response compared to overall responses, mean, variance and its standard deviation of the perceptions of students towards the benefits of

study abroad, the barriers to participation in study abroad, and the funding opportunities for study abroad programs.

Multiple regression analysis was used to determine the best model for predicting whether a student would be likely to participate in a study abroad program. Stepwise elimination was again used to determine the best linear combination of the independent variables.

Student surveys data were keyed into an Excel spreadsheet by the investigator. Information was double-checked and then the data file was transferred to the Statistical Package for Social Science (SPSS) program for further analysis. Questions 4, 5, 9, 10, 16, 21, 25, and 29 on the Global Mindedness Scale were reverse coded in Excel prior to transfer to SPSS.

The answer to research question 1 about the level of global mindedness of students was determined by the results of the 30 questions in the Global Mindedness Scale. The answers to the questions ranged from 1 to 5, so the overall scores range from 30 to 150, with higher scores indicating higher levels of global mindedness (Hett, 1993). Descriptive and summary statistics were used to address this question. The minimum score, maximum score, mean score, median score and standard deviation were reported. Descriptive statistics, including high and low scores, mean, range, standard deviation, N, t-value, and significance level were used to evaluate the results.

Research question 2 asked if there was a difference in the global mindedness score based on whether the respondent was an associate's degree or a bachelor's degree student.

Independent samples t-tests were used to determine whether there were differences between these two groups.

Research question 3 is about whether demographics is a factor in the global mindedness score of the students. Correlation and multiple regression was used to evaluate the data related to this question. The Global Mindedness Score was used as the dependent variable. Independent variables included the demographic factors of gender, undergraduate major, race, level of degree, prior international experience, and age.

Research question 4 asked what benefits students could identify in studying abroad. Question 5 asked students to identify barriers to their participation in a study abroad program. Research question 6 asked if students could identify funding to help pay for study abroad programs. All of these questions were open-ended and responses were qualitative in nature. However, students' responses were grouped together into themes and frequencies of responses within themes were reported, converting the items to quantitatively measured data.

To evaluate research question 7, can we predict if a student is likely to participate in a study abroad program, correlation and regression analysis was used to evaluate these responses. The dependent variable was the response to the student's intention to study abroad. The independent variables included the Global Mindedness Score, gender, major, race, level of degree, prior international experience, and age.

### **Chapter Summary**

Students were surveyed to gauge their attitudes towards global mindedness, their perceptions about study abroad, including benefits and barriers, and their current level of international experience. This information was then evaluated to determine a student's

likelihood of participating in a study abroad program during their tenure as a student. The entire population of the freshman orientation class for both the associate's degree and the bachelor's degree programs were asked to participate in this research. In the associate's course, there were 100 usable surveys out of a total population of 125 students. In the bachelor's courses, there were 238 usable surveys out of the total population of 261 students. Descriptive statistics and correlational statistics were used to interpret the data.

A pilot test of associate's and bachelor's degree students taking the agricultural law classes in the fall of 2014 was used to measure readability of the instrument and to determine if changes needed to be made. One minor change was made to the answer choices of one question based on the recommendations of the pilot group.

Utilizing the global mindedness scale with associate's degree and bachelor's degree agricultural students is a way of extending the knowledge base surrounding this issue. It expands on the agricultural dimension previously investigated and it plows new ground in the investigation of perceptions and attitudes towards globalization and cultural diversity in this newly visited population.

## Chapter 4

### Results

This chapter summarized the findings of the study and provides appropriate statistical analysis of the data collected in an attempt to derive meaning from it.

### Profile of the Sample

The students in all three sections of the AGI 103 Introduction to the Agricultural Institute course provided the associate's degree population for this study. Out of the 125 registered students, 99 usable surveys were completed (79% usable instruments). The surveys were administered in the first combined lecture of the three classes, a day when all three sections of the course met in the same classroom.

The students in all five sections of the ALS 103 Freshmen Transitions and Diversity in the College of Agriculture and Life Sciences provided the bachelor's degree population for this study. The paper surveys were administered in each of the five sections during the same calendar week. Out of the 261 registered students, 238 usable surveys were completed (91% usable instruments).

To provide a profile of this group, participants were asked what type of degree they were pursuing, their major, age, gender, race/ethnic association, and several questions that revolved around their level of international experience. These demographic factors were used as independent variables in the prediction of global mindedness and in the prediction of intent to participate in study abroad.

Of the total respondents, 29.4% of them were in the associate's degree program and 70.6% were bachelor's degree seeking students as displayed in Table 4.1 below.

Table 4.1 *Types of Respondents*

		<i>f</i>	%
Valid	AGI	99	29.4
	CALS	238	70.6
	Total	337	100.0

Majors were varied across both the associate's degree program and the bachelor's degree programs. Table 4.2 displays total numbers of each type of major and percentage of students in that major compared to all majors within associate's degree or within the bachelor's degrees.

Table 4.2 *Majors of Respondents (N=337)*

Degree Type	Majors	<i>n</i>	%
Bachelor	Agricultural and Environmental Technologies	7	2.9%
	Agribusiness Management	23	9.7%
	Agricultural Science	7	2.9%
	Animal Science	139	58.4%
	Biochemistry	1	0.4%
	Biological Engineering	1	0.4%
	Bioprocessing Science	5	2.1%
	Extension Education	1	0.4%
	Food Science	15	6.3%

Table 4.2 Continued

Associate	Horticultural Science	12	5%
	Natural Sciences	1	0.4%
	Plant Biology	2	0.8%
	Poultry Science	9	3.8%
	Turfgrass Science	1	0.4%
	Agribusiness Management	39	39.4%
	Agribusiness Management- Horticulture Option	3	3%
	Field Crop Technology	17	17.2%
	General Agriculture	8	8.1%
	Livestock and Poultry Management	14	14.1%
	Ornamental and Landscape Technology	11	11.1%
	Pest Control Urban Option	1	1%
	Turfgrass Management	9	9.1%

Of those responding, 43% were male and 56% were female; 86% were self-described as white/Caucasian and between 18 and 19 years old. An additional 6.2% were between the ages of 20 and 21 years. Table 4.3 shows the race/ethnicity categories.

Table 4.3 *Race & Ethnicity Categories*

	<i>n</i>	%
African American	12	3.6
American Indian/Alaskan	5	1.5

Table 4.3 Continued

Asian	11	3.3
Hispanic/Latino	10	3.0
White/Caucasian	288	85.5
Total	330	97.9
Missing	7	2.1

Level of international experience encompassed several different areas. Questions were asked about extent and duration of travel, language proficiency, international lodging choices, and prior study abroad or mission work. Out of the total number of students responding, 98% have traveled outside of the state of North Carolina, 92% indicated they were born inside the United States, 87% said they have not previously participated in a study abroad program or other international sponsored program such as missionary work in another country, and 76% said they could not speak a language besides English as presented in Table 4.4 below.

Table 4.4 *Frequency and Percentage of Responses about Participation in Previous Study Abroad or Other International Sponsored Programs*

		<i>f</i>	%	Valid Percent
Valid	Yes	39	11.6	11.7
	No	294	87.2	88.3
	Total	333	98.8	100.0
Missing	System	4	1.2	

### What is the level of global mindedness of students?

Overall, when all students who participated are grouped together, there were 337 participants. The minimum global mindedness score was 46 and the maximum score was 143. As a comparison, the minimum possible score was 30 and the maximum possible score was 150 on the global mindedness scale. The range of scores by students varied nearly as much as the scale would allow. This means that we have some students at both extremes along the global mindedness scale. The mean score was 106 and the standard deviation was 13.9 for the combined group. When the students were broken out into associate's degree and bachelor's degree categories, their results were slightly different. Table 4.5 shows the descriptive statistics of the groups.

Table 4.5 *Descriptive Statistics of the Global Mindedness Scale Results*

Group	<i>n</i>	Min	Max	$\bar{x}$	s
<b>Overall Group</b>	<b>337</b>	<b>46</b>	<b>143</b>	<b>105.56</b>	<b>13.887</b>
<b>AGI (associate's degree)</b>	<b>99</b>	<b>46</b>	<b>120</b>	<b>93.23</b>	<b>12.149</b>
Responsibility	99	11	31	22.16	3.9967
Cultural Pluralism	99	19	40	25.83	4.4745
Efficacy	99	9	23	15.51	2.8416
Globalcentrism	99	7	19	13.36	2.4927
Interconnectedness	98	5	22	16.12	2.6331
<b>CALS (bachelor's degree)</b>	<b>238</b>	<b>68</b>	<b>143</b>	<b>105.03</b>	<b>13.089</b>

Table 4.5 continued

Responsibility	238	13	35	24.35	4.1503
Cultural Pluralism	238	19	40	30.15	4.1184
Efficacy	238	9	25	17.49	3.2358
Globalcentrism	238	7	23	15.53	3.4405
Interconnectedness	238	10	35	17.51	2.7540

### **Is There a Difference in the Level of Global Mindedness between Associate's and Bachelor's Degree Students?**

Research question two asked if there was a difference in the level of global mindedness between associate's degree and bachelor's degree students. To answer this question, an independent samples t-test was calculated between the groups to see if there was a significant difference between these student groups. The average global mindedness score for associate's degree students was 93.23 and for bachelor's degree students, 105.03 was the average score. The mean difference between the AGI students and the CALS students was 11.797 points with a standard deviation of 1.487. The t value was -7.934 with 196.522 degrees of freedom and a significance level of .000 for the P-value. This means there is a significantly lower score for associate's degree students than for bachelor's degree students on the global mindedness scale.

From here, the analysis continued by comparing the means for the five factors of global mindedness (responsibility, cultural pluralism, efficacy, globalcentrism, and interconnectedness). For each factor, the mean of the associate's degree students was

statistically lower than the mean of the bachelor's degree students ( $P = 0.000$ ). The results are displayed in Table 4.6 below.

Table 4.6 *Analysis of the Means for the 5 Factors of Global Mindedness*

Factor	$n=AGI$	$n=CALS$	$AGI \bar{x}$	$CALS \bar{x}$	$\rho$
Responsibility	99	238	22.2	24.4	0.000
Cultural Pluralism	99	238	25.8	30.1	0.000
Efficacy	99	238	15.8	17.5	0.000
Globalcentrism	99	238	13.4	15.5	0.000
Interconnectedness	99	238	16.1	17.5	0.000

### **Does Global Mindedness Vary by Demographic Characteristics of Students?**

Research question three asked if global mindedness varied by demographic characteristics of students. To answer this question, independent samples t-tests were used to see if there were statistically significant differences in the means of the global mindedness score based on several demographic factors. The demographics that were tested included gender, race, foreign language capability, birthplace, type of degree program, and major. Results are displayed in Table 4.7 below. For minority status, there was not a significant difference in the means of the global mindedness score. There were statistically significant differences in the level of global mindedness based on gender, language and birthplace, foreign language ability, age, and previous international program participation. Males

demonstrated lower global mindedness than females with an average of 96 on the global mindedness scale compared to 106 for females. Students who could not speak a language besides English scored an average of 101 while students with additional languages have a higher level of global mindedness (average of 105 on the global mindedness scale). And students who were born in the United States tended to have lower global mindedness than those born outside the United States (an average of 101 compared to 109 on the Global Mindedness Scale).

Table 4.7 *Analysis of Means of Global Mindedness Total Scores by Select Demographic Characteristics*

Type of Respondent	$\bar{x}_1$	$\bar{x}_2$	$t$	$df$	$\rho$
Degree Program AGI/CALS	93.23	105.03	-7.934	196.522	0.000*
Gender Male/Female	95.92	106.07	-7.124	314.742	0.000*
Age $\leq$ 21 years / $>$ 21 years	102.31	96.58	2.574	42.366	0.014*
Non-Minority/Minority	100.97	105.08	-1.913	65.068	0.060
Second Language/English Only	104.81	100.53	2.385	130.222	0.019*
Prev. Int'l Program Participation	108.67	100.70	3.717	51.539	0.000*
Born in US/Born outside US	100.98	108.80	-2.815	28.304	0.009*
*Statistically significant at $\alpha < 0.05$ level.					

### **What Do Students Perceive as the Benefits of Studying Abroad?**

Research question four asked what the students perceive as the benefits of studying abroad. This survey question provided no prompts, just a blank space for students to write

down their thoughts on the question. Out of the 338 surveys, 313 students provided an answer for this question. Their comments were grouped into themes of similar ideas. Most student who responded provided more than one answer. This allowed for 760 separately identified responses from the 313 respondents. Table 4.8 shows the frequencies of each theme and the percentage of that theme compared to the total number of independent responses and compared to the total number of students who provided a response.

Table 4.8 *Student Identified Benefits of Study Abroad (N=313)*

Factor	<i>n</i>	%
Cultural Learning or Skills	253	80.8%
Personal Growth	190	60.7%
Academic Growth	84	26.8%
Job Related Skills	63	20.1%
Communication Skills	57	18.2%
Increased Global Mindedness	45	14.4%
Fun	15	4.7%
Language Development	13	4.2%
None, Not Sure	13	4.2%

Culture was the largest theme that was identified in the student responses, with over 80% of the students identifying a culture-related benefit. This included everything from observations about culture to immersion in culture to incorporating different cultures back in

the United States. Some comments in this section include “become involved in different cultures,” “being exposed to people and lifestyles that are different,” “broaden cultural experiences,” “education in a different culture,” “expanding my understanding of how things are run day to day outside America (expectations, morals, etc.),” “experience different cultures and be truly immersed in it,” “increase knowledge of different cultures and be truly immersed in it,” “increase knowledge of different cultures, habits and traditions,” “see other cultures and try to incorporate them back in the USA,” “become more diverse,” and “discover how large and diverse the world is.”

Personal growth was the second most identified theme, with over 60% of students identifying an item within this category. Some of the student comments related to personal growth include “broaden mind,” “better understanding of what it means to be human,” “enrich my life,” “become more comfortable with unfamiliar situations, people, and places,” “develop a humble attitude,” “self-enrichment,” “ability to live in someone else’s shoes,” “gain experience not possible at home,” “get to know yourself,” “gets you out of your comfort zone,” “grow as a person,” “humbling yourself,” “learn about yourself,” “open my mind to other issues,” and “understanding that the world is bigger than the town that I grew up in.”

Just over 26% of the students identified benefits in the area of academic growth. Some of the comments that students had in relation to academic growth include “get new ideas from people in another country,” “hands on learning,” “learn from some of the greatest professors outside of the United States,” “learn in a different environment,” “experience with

other countries way of learning,” “learning in a different perspective,” and “learn something you wouldn’t otherwise be exposed to.”

Job related skills were identified by just over 20% of the students as benefits of study abroad. Some of the comments from students in this area related to resumes and others to job skills. Comments included “broader experiences help get better paying jobs,” “resume appeal,” “resume builder,” “looks good on job applications,” “professional experience in your field may be vastly different from what you’re used to,” “and “diversifying myself from others who did not study abroad.”

Students commented about developing communications skills and networking around the world. Some comments include “meet people that can help with career goals,” “expanding my network,” “connections all over the world,” “develop connections and other skills that are desirable worldwide,” “gives you a connection with others who go on the trip,” “global connections,” “global friends,” “meet new people of a different culture,” and “network around the globe.”

Global mindedness was the next theme identified in the student responses. Some comments in this category included “understanding the world better,” “provides a different view of the world we live in,” “help me understand the world better,” “see how things impact others on a global level,” “grasp a global understanding,” “gain a better understanding of world issues,” “become more worldly,” and “world view.”

“Have fun,” “cool experiences,” and “lower drinking age” were also lumped together into a theme called fun. These comments were identified in about five percent of the surveys. Likewise, language development comments were a theme that surfaced in about

four percent of surveys. The “not sure,” “don’t know” and “There are none, you can get a great education in the United States” comments were grouped together in a category together. These were responses from about four percent of the students.

### **Student Perceptions of the Factors That Would Affect their Participation**

Research question five asked what students perceive as factors contributing to their decision on whether or not to participate in a study abroad program. This survey question provided no prompts, just a blank space for them to write down their thoughts on the question. Out of the 338 surveys, 308 students (91% response rate) provided hand-written responses to this question. Those answers were then grouped in themes of similar ideas. Most students who responded provided more than one factor but no students ranked their factors in terms of importance to the decision-making process. Several themes emerged and are identified in Table 4.9 below. The percent of total displayed is the number of times that theme was identified divided by the total number of themes identified. This tells the relative importance of that theme compared to the other themes identified. The percent of students displayed is the number of times that theme was identified divided by the number of students responding. This gives the percentage of students who identified that theme as important.

Table 4.9 *Student Identified Factors That Would Affect Participation in Study Abroad (N=308)*

Factor	<i>n</i>	%
Cost/Money/Financial Feasibility/Affordability/Funding/Price	203	65.9%
Duration of Program/Timing/When/Length of Program	151	49.0%

Table 4.9 continued

Location/Country/Destination/How Far Away	112	36.4%
Degree Program/Benefits Major/Classes Offered/Credits Available	89	28.9%
Details of the Program/Who Leads It/Purpose/Mission/What is Provided	63	20.5%
Safety/Danger/Health/Vulnerability/Standard of Living/Persecution	33	10.7%
Fears/Being Away From Home/Flying/Leaving Home/Going Alone	29	9.4%
Responsibilities/Family/Work/Relationships/Military Commitments	22	7.1%
Language/Language Barriers/Language Taught In	14	4.5%
All Others Combined	12	3.9%

Cost and other factors related to cost including financial feasibility, availability of financial aid, affordability of the program and other wording that fell into this category, were the most identified factor that would affect a student's decision on whether or not to participate in study abroad.

The next four themes are different but connected to each other. Duration of the program, timing, when the program runs, how long the program is, its location, how far away that is from home, the benefits of the program to my degree, the benefits to my professional interests, the benefits to my major, what courses are offered, how many credits it would include, the purpose of the program, who leads it, who teaches the classes, what the mission is, who the student group would include, and what is included in the program were all entries

that were categorized into four themes: duration, location, integration into degree plan, and details of the program. The combination of these themes account for 55.2% of the factors associated with making a study abroad decision, and the theme would be relevancy. Making the program relevant to students, in all of the ways a program can be relevant, is actually more important to students than the cost of the program. However, without addressing the cost issue, relevancy is immaterial since students would not perceive that participation would be possible.

Of minor importance, but identified by students as factors, were language barriers, language the courses would be taught in, networking possibilities, communication access, climate, convenience, history of the location, tourism possibilities, interesting, fun, culture, and curiosity.

### **Student Perceptions about Funding Sources to Help Pay for Study Abroad**

In research question six, student were asked to list sources of funding that could help them pay for a study abroad program. There were no prompts, just a blank space for them to provide their perceptions on funding. Out of the total of 338 surveys, 294 contained hand-written responses (87% response rate). These responses were broken down into themes and frequency of theme were tabulated. These themes are displayed in Table 4.10 below.

Table 4.10 *Student Identified Sources of Funding That Could Help Them Pay for a Study Abroad Program (N=294)*

Source Identified	<i>n</i>	%
Scholarships, all sources	210	71.4%
Work/Student Internships/Work Study/Summer Job	64	21.8%

Table 4.10 continued

Financial Aid	56	19.0%
Parents	56	19.0%
Myself/Personal Funds/Personal Savings/Savings	41	13.9%
Grants	40	13.6%
Fundraising/Online Fundraising/Crowd Sourcing	36	12.2%
Loans	32	10.9%
Donors/Sponsors	15	5.1%
No Idea/Uncertain/None Available/???	15	5.1%
Friends	6	2.0%
All Others	41	13.9%

Students perceived scholarships to be the most likely source of funding for study abroad programs. Many just used the general term scholarships, however some identified specific types of scholarships for which they might apply. These included scholarships offered through CALS (College of Agriculture and Life Sciences), AGI (Agricultural Institute), Farm Bureau, the Study Abroad Office, NCSU, their department, Caldwell Scholars program, external scholarships, private scholarships, outside scholarships, local scholarships, and scholarships from local businesses. Overall, 71.4% of students who responded to this question indicated that they considered scholarships a significant funding source for paying for a study abroad program.

The second most frequent source of funding cited by students was work effort on the student's part. They identified work in general, summer work, internships, international

internships, and work study as integral to fund study abroad programs. If you add these 21.8% of the students to the theme of personal savings of the student at 13.9%, then 35.7% of the students identified either student work or student savings as funding sources for their program. Then if you further add in fundraising on the part of the student at 12.2%, the students identified themselves in a variety of ways in 47.9% of the funding sources. Included in fundraising was crowd sourcing and online fundraising, both of which are newer sources of revenue that have come about through the use of the Internet.

Parent contributions emerged as the next category of funding. If you add the 19% of parent contributions to the 10% from other family members including grandparents, 38% of student anticipate funding would need to come from parents or other family members.

Grants, donors and sponsors were lumped together into a category. Those students who listed grants totaled 13.6% of all respondents. Combined, donors and sponsors were listed in 5.1% of the students' responses. The total of these two categories is 18.7% of suggested sources of funding.

Particularly noteworthy was that only 10.9% of the student who responded indicated loans were a viable option for funding a study abroad program. Additionally, 15 students responded with an "I don't know" or other words that meant the same thing. This amounted to 5.1% of the respondents. This means that 1 in 20 students have no idea how to go about paying for a study abroad program.

One odd item of note is that 19.0% of the students identified financial aid as a source of funding. However, most of the students who identified financial aid also listed specific

sources of financial aid as well. Those fell into the other themes of scholarships, grants, and loans.

### **What student characteristics best predict study abroad participation?**

Research question seven asked what student characteristics are the best predictors of students who are likely to participate in study abroad? Multiple regression was used to determine the best model for explaining the characteristics of students who are likely to participate in a study abroad program. The dependent variable used was whether a student intended to participate in a study abroad program. The independent variables included age, race or ethnicity, gender, major, type of degree program, language proficiency, previous international travel, previous international program experience, lodging choices for previous international travel, and the student's overall global mindedness score.

Stepwise regression was used to determine the multiple regression model that best explained the dependent variable, how likely a student is to participate in a study abroad program. To begin the process, regression with the intention to participate in a study abroad program was the dependent variable and one independent variable per model was calculated. The variances of these single independent variable models were recorded and ordered greatest to least. Global Mindedness Score was the single variable model with the highest adjusted  $R^2$  so it became the base model. Then additional variables were added one by one to the model, according to their individual level of  $R^2$  in their original regression equation. As each variable was added, the  $R^2$  coefficient of the new equation was recorded. This continued until the additional variance explained by the addition of a new variable was reduced to less than .01 difference in the adjusted  $R^2$  value. The best fitting model consisted

of five dependent variables: global mindedness score, perception that previous international experience was significant, and gender. This model had a total adjusted  $R^2$  of 0.405, accounting for over 40% of the variance in a student's intention to participate in a study abroad program. Table 4.11 shows the variances of the predictive models.

Table 4.11 *Best Fitting Predictive Model for Intention to Participate in a Study Abroad Program*

Model	$R$	$R^2$	Adjusted $R^2$	$\sigma_{\bar{x}}$
Model 1	.537	.289	.287	1.20429
Model 2	.579	.335	.318	1.07977
Model 3	.653	.427	.405	1.00883
<i>Note.</i>				
Model 1 Factors: Global Mindedness Score				
Model 2 Factors: Global Mindedness Score, Perception that Previous International Experience was Significant				
Model 3 Factors: Global Mindedness Score, Perception that Previous International Experience was Significant, Gender				

When we look at the actual model that this regression generated, it includes the dependent variable of intent to participate in study abroad and the dependent variables global mindedness score, gender, and significant prior international experience. The equation is as follows:

$$\text{Intent to Study Abroad} = -1.199 + 0.024 \beta_1 + 0.899 \beta_2 + 0.290 \beta_3$$

In this equation,  $\beta_1$  is Global Mindedness Score,  $\beta_2$  is gender, and  $\beta_3$  is significant previous international experience that the student claims to have had. This model shows that the biggest factor affecting a student's perception on whether they will participate in a study

abroad program or not is their level of global mindedness. For each 1 point increase in the student's global mindedness score, their intention to study abroad goes up by 0.024 points. The scale for global mindedness ranged from 30 to 150 points. The scale for intention to study abroad ranged from 1 to 5 points, with a higher number indicating a stronger intention to study abroad. The higher their global mindedness, the more likely they are to want to participate in study abroad. If a student had traveled previously as part of an organized program, either through study abroad, missionary work, or another type of internationally sponsored program and if they perceived that this experience was significant to them, this perception had a positive effect on the prediction of whether they would choose to study abroad in college. Finally females are more likely to participate in study abroad programs than male students, which was the final factor added to the equation to explain the variance of the students in their perception of whether they would participate in a study abroad program while in college. This model is the best predictive model that could be derived from the collected information.

### **Chapter Summary**

The seven research questions were evaluated using the information collected in the surveys that were administered to incoming freshmen in the associates program and bachelor's degree programs.

The level of global mindedness for both groups of students was calculated. The global mindedness score for the associate's degree students averaged 93 compared to 105 for the bachelor's degree students. This was as statistically significant difference as determined by an independent samples t-test.

There were statistically significant differences identified based on demographic characteristics that ranged from 3 points to 10 points based on gender, foreign language skills, and previous international experience.

Students were able to identify benefits of study abroad. These included benefits identified into the following themes: cultural, personal growth, academic, job related skills, communication skills, global mindedness, language development, and fun.

The students shared their perceptions of factors that would affect study abroad participation. These included cost, duration of the program, location of the program, interference with degree progress, who leads the program, safety concerns, fears, responsibilities at home, and language barriers.

Students also identified sources of funding for study abroad. These included scholarships, work effort on the part of the student, personal savings, fundraising, parents and other family members, grants and loans.

Finally, a linear model designed to predict a student's intentions to study abroad was created using stepwise regression. This model, using the dependent variable "how likely are you to participate in study abroad," incorporated independent variables of global mindedness score, perceived significance of prior international experience, and gender. The model, using these variables, accounts for 41% of the variance in the likelihood of participation in study abroad.

## **Chapter 5**

### **Conclusions, Implications, and Recommendations**

This study was designed to compare associate's degree students and bachelor's degree students in agriculture programs to figure out if their perceptions about various aspects of study abroad were similar and to determine whether they would be likely to participate in a study abroad program. To achieve this goal, the global mindedness of students was also analyzed.

#### **Discussion about Research Question 1**

This study first posed the question, "What is the level of global mindedness of the students? The Global Mindedness Scale was used to determine the level of global mindedness of the students. Overall, the entire group of students who were evaluated averaged 102 on the Global Mindedness Scale. Broken out into type of student, the associate's degree students averaged a score of 93 compared to 105 for the bachelor's degree students. This difference was statistically significant at 0.01 probability level. The lowest recorded value for an associate's degree student was 46 compared to 68 for the bachelor's degree group. The highest global mindedness score for the associate's degree group was 120 compared to 143 for the bachelor's degree group. For each subscale within the instrument, the associate's degree students scored lower than the bachelor's degree students.

According to Hett (1993), global mindedness corresponds to certain desirable attributes and revolve around the themes of personal attributes, political attitudes, concern, knowledge and prejudice. These include traits such as flexibility, openness to others, and sensitivity to cultural differences as well as a connection to the greater world, opposition to

prejudice, attitudes regarding war and immigration, concern for people in other countries, knowledge about economic and political systems, concern for the global environment, racism, and ethnocentrism (Hett, 1993). Higher levels of global mindedness imply a higher degree of caring about these types of issues.

The global mindedness scores of associate's degree and bachelor's degree students were comparable to, but slightly lower than, the score of 108.02 for agricultural extension agent scores Smith (2008) found in his research. This suggests that some intervention between entry into college and completion of a degree could lead to increased levels of global mindedness by students in agriculture degrees. The students in this study and the extension agents that were evaluated by Smith both scored lower than the students that Hett (1993) evaluated. Hett's students in science and math degrees, of which she included agriculture, averaged a score of 116.11 which was low compared to Humanities (119.43) and Arts (120.01) students in her study (Hett, 1993).

### **Discussion about Research Question 2**

The second question this study posed was, "Is there a difference in the level of global mindedness between associate's and bachelor's degree students?" This data showed the answer to this question is yes. Average associate's degree global mindedness score was 93.23 and average bachelor's degree global mindedness score was 105.03. These were found to be statistically different at the  $P= 0.00$  level using an independent-samples t-test.

To interpret this result, it could be argued that associate's degree students are concerned about the world larger than themselves, but not to the same degree that bachelor's degree students are. For each of the subscales: responsibility (moral responsibility to try to

improve conditions in some way), cultural pluralism (diversity and multiculturalism), efficacy (individual actions matter), globalcentrism (thinking more about global community than oneself), and interconnectedness (aware of interconnections between oneself and the rest of the world), the associate's degree students displayed a lower level of global mindedness than the bachelor's degree students.

In the theoretical framework section, Vroom's Expectancy Theory was used to explain motivation. In that framework as it relates to study abroad, valence was identified as a student's belief that global mindedness is important. Based on the results of the global mindedness scale, it appears that there are varying degrees of positive association with global mindedness, depending on the student and their particular character traits. This is not surprising as all people are different. However, it appears that the overall positive association that associate's degree students have with global mindedness may be less than that of bachelor's degree students. Therefore, the valence portion of Vroom's Expectancy Theory would better predict study abroad behavior among bachelor's degree students than associate's degree students in disciplines of agriculture.

### **Discussion about Research Question 3**

The third question posed was, "Does global mindedness vary by demographic characteristics of students?" The data showed that the answer to this question was yes for all categories of demographic tested with the exception of race/ethnicity. To address this question, the level of global mindedness was compared based on demographic groups of gender, race/ethnicity, age, major, birthplace, language ability, and previous international experience to ascertain if there were differences within the various subgroups.

First, gender was evaluated. Male respondents scored an average of 95.92 compared to 106.07 for females. This difference of just over 10 points between these groups was significant at the 0.01 probability level when the independent samples t-test was performed. These results mirror what other studies have found that females have higher levels of global mindedness than males exhibit (Gillan, 1995; Golay, 2006; Hett, 1993; Smith, 2008; Zhai, 2000). However, this was a different result than Bates (1997) who found no significant differences based on gender.

Age was also evaluated. Students were grouped into two categories: 21 years of age and younger or over 21 years of age. The younger group scored 5.7 points higher than the older group at a 0.014 rate of significance. This result was corroborated by previous research using this demographic (Gillan, 1995; Smith, 2008). However other research had differing results stating that age did not produce a statistically significant difference (Bates, 1997).

The next demographic evaluated was race/ethnicity. Students were grouped into two categories: minority and non-minority. Then the independent samples t-test was performed to see if there was a difference in the means of these two groups. There was a 4 unit lower score for the minority group, however the significance level was 0.06 which does not meet the significance requirement. Therefore, there was no statistical difference between students based on race/ethnicity. This was a similar finding to other studies that included this demographic (Bates, 1997; Hett, 1993; Smith, 2008).

Students were asked to identify if they could speak a language in addition to English. Students with a second language scored on average 7 points higher than students with only English-speaking skills. This was a statistically significant result with 0.019 significance

level. This was a different result from that which Smith found in his study among agricultural extension agents where there was no statistically significant difference based on language ability (Smith, 2008). Hett also included language proficiency in her study. She found that there was only a statistically significant difference if the respondent claimed additional language fluency rather than a language skill at a degree less than fully fluent (Hett, 1993).

Previous participation in an international program was the next item investigated. Students were asked if they had previously participated in any type of an international program (missionary, school-related, or other). Results showed an 8 point increase in global mindedness based upon previous participation compared to students who had no previous international program experience. This result was significant at the 0.01 probability level and was similar to that of other studies (Gillan, 1995) (Hett, 1993) (Moriba, 2011).

Students were then evaluated on their country of birth. Students born inside the United States scored 7.8 points lower than students born outside of the United States. This was significant at the 0.009 level, but differed from the results of other studies that did not find birthplace to be significant to the level of global mindedness (Hett, 1993; Smith, 2008).

Again, those students with higher global mindedness scores, no matter which demographics category they fit into, would be more positively valent than those students with lower scores.

#### **Discussion about Research Question 4**

The fourth question posed was, “What do students perceive as the benefits of studying abroad?” The benefits identified by students included improved cultural skills,

personal growth, academic growth, increase in job related skills, improved communication skills, increased global mindedness, and language development. To address this question, students were given blank space on the paper below the question to respond in whatever manner and quantity they deemed appropriate. Most students created a list of items that fell into this category. These were sorted and grouped into like categories and were analyzed for frequency. The most frequent response related to cultural learning or enhancing cultural skills. This response was seen in 33.3% of the all responses and was an item on over 80% of the students' surveys. Culture enhancement included education in a different culture, about a different culture, from a different cultural perspective, learning to humble yourself, walking in other's shoes, and similar concepts. These benefits fall within the realm of cultural pluralism which encompasses an interest in diversity and multiculturalism and a belief that all cultures have something of value to offer. Barkley (2013); Chang (2013); Coers (2012); Gardner (2009); Luo and Jamieson-Drake (2015); Rice (2014); Trooboff et al. (2007); Yu (2008) also found cultural skills as a primary benefit of study abroad programs.

The second most prevalent benefit that emerged from this process was personal growth. This category encompassed an assortment of skills including to learning about yourself, opening one's mind to other issues, humbling yourself, and seeing the world as a bigger place than one's hometown. These skills dovetail nicely with the factors of interconnectedness where people see the world as a place larger than themselves and globalcentrism where they consider making decisions that benefit the greater good rather than self-interests. This result adds to the literature on the topic of benefits of study abroad because it is not a prevalent category in the literature on the subject. Rather, these skills are

typically included within other categories of benefits and have not emerged as a primary theme.

The third and fourth themes identified by students as benefits of study abroad were academic growth and job related skills. These are different, but complementary. Items in this category include hands-on learning, learning from a different perspective, learn something or from a perspective that you wouldn't get at your home institution, and build experience that you couldn't get at home. Barkley (2013), Luo and Jamieson-Drake (2015), Rice (2014), and Yu (2008) identified the theme of academic growth in their research. Resume enhancement, hands-on experiences and interview talking points are included in increased employability which was a theme identified by Chang (2013) and Clarke (2009).

The fifth theme of communication skills was identified by a number of students as a benefit of study abroad included expanding their personal network, meeting people of different cultures, networking around the globe, enhanced language skills, and the like. These are similar to benefits found by Barkley (2013), Chang (2013), Coers (2012), Gardner (2009), Luo and Jamieson-Drake (2015), Rice (2014), Trooboff et al. (2007), and Yu (2008) in their research.

Theme six, global mindedness, was the final theme of importance. This theme included such items as gaining a better understanding of world issues and an opportunity to provide community service outside of your local community. These play to a lesser extent into the global mindedness factors of responsibility or the moral responsibility to try to improve conditions in some way and efficacy that says a person's individual actions matter and that small contributions can make a significant difference in the lives of others.

The one overarching way this work contributes to the scholarship on the benefits of studying abroad is by linking it to the factors of global mindedness. Many studies identify the benefits of study abroad as cited above, and most of those have results similar to the findings in this study. Other studies look at the changes in global mindedness based on participation in study abroad and they show that many study abroad experiences increase the global mindedness of the participants. However, these two types of studies are separate and apart from each other. This study links the skills gained through experiences with study abroad with the factors of global mindedness in a way that shows how identified study abroad skills contribute to enhanced global mindedness factors of cultural pluralism, globalcentrism, interconnectedness and to a lesser degree, responsibility and efficacy.

In Vroom's Expectancy Theory, belief that participation in study abroad will lead to expanded global mindedness was categorized as expectancy. Likewise, the belief that their own participation will generate these benefits for themselves was described as instrumentality. Clearly from these results, there is a high degree of expectancy and/or instrumentality when several factors are considered. First, the skills for which information was collected that directly relate to global mindedness include cultural skills, communication skills, global mindedness, and language development. Over 80 percent of the students identified at least one of these skills as characteristics that could be improved upon by participation in study abroad programs.

#### **Discussion about Research Question 5**

The fifth research question posed was, "What do students perceive as factors contributing to their decision on whether to participate in a study abroad program?" The

factors students identified were cost, duration or timing of the program, location of the program, how the program integrated into their degree plan, details of the program including the leader and purpose, safety concerns, fears, responsibilities at home, and language barriers. In the survey instrument, students were asked to identify factors that would contribute to the decision on whether to participate in study abroad. They were given a blank space with no prompts and were allowed to answer the question in whatever manner they deemed appropriate. Most students provided a bulleted list of items that they considered instrumental to this decision-making process. Some provided more items than others. The responses were separated into individual items, grouped into like themes and frequencies were calculated.

Results conclusively found that program cost was the most identified factor in this decision, with 65.9% of the students listing some version of cost as an item. The different labels included cost, money, financial feasibility, affordability, funding, and price. This result is very similar to that found in other research on the barriers to study abroad (Bobbitt & Akers, 2013) (Coers, 2012) (Irani, 2006) (McDermott, 2011) (Raby, 2008) (Smith, 2008). In fact, Chang et al. (2013) found that financial concerns were the only “very important” barrier to participation. Briers, Shinn and Nguyen (2010) found that the financial constraint is the most difficult constraint for short program participants to overcome. Though many, if not all, research on the topic identifies cost as a significant barrier for student participation in study abroad, there have been relatively few solutions to this challenge.

The second most common theme is related to the length of the program. Comments in this category included duration of program, timing, when the program runs, and length of

the program. This theme was identified by 49% of the students who provided responses.

This also aligns with previous research in the area (Coers, 2012) (Irani, 2006).

Location was the third theme that emerged. Items included in this category included location, country, destination, and how far away the program was. This theme was identified by 36.4% of the students in the study. This theme was not identified in previous research as a stand-alone category.

The next two themes are related to each other. They were related to the details of the course. The first category was how the study abroad program fit into, or related to, their degree program and what credits were offered. The following theme was related to the details of the specific program, who leads it, the purpose of the program, its mission, and what was provided with the program. How the study abroad program fits into the degree program of a student is of concern to many students across many studies. Lack of integration into the degree program has been identified as a factor in determining not to participate in study abroad (Bobbitt & Akers, 2013). Irani, Place and Friedel (2006) found that students were concerned that the study abroad programs would conflict with other classes. Similarly, students in another study suggested that a lack of perceived value of the program would be considered a deterrent to participation (Coers, 2012).

Safety concerns, fears of various types (flying, going alone, being away from family, homesickness), family and work responsibilities, and language barriers were also identified by students as potential factors of consideration, though to a much lesser degree than the above mentioned themes (Deviney, 2014). Of these, family and work responsibilities and language concerns were previously identified as barriers to participation (Irani, 2006)

(Deviney, 2014). Safety concerns may have arisen because of the state of unrest over much of the Muslim world and the EBOLA outbreak in Africa this academic year. Incidents of this sort can increase a student's fears about leaving the safety of home. The associate's degree students also wanted to have a friend or someone they knew to be part of the program with them so that they would not feel that they were going away alone.

### **Discussion about Research Question 6**

The sixth question posed was, "What do students perceive as the sources of funds to pay for study abroad programs?" Students were asked to identify sources of funds for paying for study abroad. They were given space but no prompts to guide them. Students identified various sources that they could use to pay for study abroad should they choose to pursue this activity. These items were grouped into like items and the frequencies that emerged were calculated.

The number one identified source of funds was scholarships. According to the results of this study, over 71% of the students expect that scholarships would be a source of funds they could use, or would have to access, to pay for a study abroad program. Some just identified scholarships in general but others were more specific. Sources identified include local businesses, North Carolina State University, outside scholarships, private scholarships, study abroad office scholarships, the Agricultural Institute Office, and Farm Bureau. The question then becomes, "How available are scholarships to students for the purpose of study abroad?" Then the follow up question becomes, "Are students aware of scholarships that apply to study abroad program fees?" The Lincoln Commission addressed this issue in their report. The report identified the known federal scholarship programs available at that time

and it recommended expanding funding for scholarships at least through educational year 2011-12 (NAFSA, 2005).

The second most significant source of funds identified by the student was personal funds. They identified themselves in the following ways: myself, personal funds, personal savings, refund check, work study, savings account, stipend, work, internship, paid international internship, part time job, and summer work. These sources were identified by over 35 percent of the students who responded to this question. Arguably, fundraising could also be attributed to the students though this was a separate theme in the results. If students are providing the labor for the fundraising, then it is work effort on their part. Fundraising, online fundraising, and crowdsourcing constituted an additional 12.2 percent bring student contributions towards their study abroad program costs up to 47 percent.

Third, and closely behind student funds, the students selected parents and extended family as the next source of funds. Parents constituted 19 percent of the total while family and grandparents added an additional 10 percent to create a combined extended family contribution of 29 percent.

The fourth most prevalent theme was financial aid. The generic term “financial aid” was listed on 19 percent of the surveys. In addition to this, 13.6% identified grants as a source of funds and 10.9% suggested loans could be used to pay for study abroad. Donations, online donations, and online charity websites were listed by just over five percent of the students as sources and an additional two percent of students suggested asking friends to help pay for study abroad.

No research could be found that evaluated student's perceptions of funding sources for study abroad. Plenty of articles listed the challenge of funding, some addressed the funding available, such as the Lincoln Commission report, but none addressed the student perceptions of funding sources that might be available to them. Therefore, this work contributes to the scholarship on the perceptions of funding study abroad because it lays the groundwork for this piece of the puzzle.

### **Discussion about Research Question 7**

The final research question that was posed was, "What student characteristics are the best predictors of students who are likely to participate in study abroad?" To address this question, the students were asked how likely they were to participate in a study abroad program. This question was used as the dependent variable. All other information collected in the quantitative items of the survey were considered as potential independent variables that may have some predictive effect on the decision on whether to participate in a study abroad program. Each item was evaluated separately as an independent variable. The item with the most singular predictive effect was the Total Global Mindedness Score. Translated, students with higher levels of global mindedness were more likely to indicate they intended to participate in a study abroad program. In this case, this one independent variable, global mindedness, predicted 28.7% of the variance in the student's likelihood of participating in a study abroad program.

In a stepwise manner, one additional variable was added to the model to see if a combination of variables increased the predictive ability of the model. In this case, the variable with the second highest singular predictive ability was gender. The addition of this

variable to the equation generated a model with an adjusted  $R^2$  of 32.6 which means that the combination of the student's degree of global mindedness and the student's gender could predict 32.6 percent of the variability in the likelihood that the student would participate in study abroad.

The final addition to the equation allowed the predictive ability to increase to 40.5 percent. This variable was related to a student's previous international experience. Students were asked if they had previously participated in an international program (missionary work, sponsored international program, prior study abroad, etc.). A follow-up question asked those students who indicated that they had participated in an international program how significant their experience was. This follow-up question provided significant predictive ability to the question of whether a student perceived that they would participate in a study abroad program in the future. So, if a student had a previous international experience and if the student felt that their previous international experience was significant to them, then they would be much more likely to choose to participate in study abroad than students who did not fall into this category. Additional variables were added to the equation, but this model resulted in the highest predictive ability on the intent to study abroad.

Luo and Jamieson-Drake (2015) created a linear regression model to predict the intention to study abroad. In this study, they evaluated freshmen and then matched these responses to the senior survey of the same students to see if the students' intentions as freshmen matched their actions during their tenure at the university. In the predictive model, there were many variables displayed and claims made that women, Caucasians, and non-Asian minority students were more likely to intend to study abroad. On the negative side,

natural sciences and engineering majors, students with mathematical ability, and students with a desire to help promote racial and cultural understanding were less likely to intend to study abroad. This study did not provide the  $R^2$  or adjusted  $R^2$  scores for the model so it is difficult to compare the predictive ability of Luo and Jamieson-Drake's model with the one developed in this study. The Luo and Jamieson-Drake Model supports some of the results that the model created through this study found and it refutes other data. For instance, the Luo and Jamieson Model showed that race played a factor in intention to study abroad, but that was not found to be statistically true for agriculture students. However, their prediction that gender and major plays a role in intention to study abroad and the model created through this study also found this to be the case.

Deviney, Vrba, Mills and Ball (2014) found when asked about their willingness to participate in study abroad, women were more likely to respond with yes or maybe and men were more likely to respond with a definitely not.

Chang et al. (2013) found a significant correlation between a student's willingness to study abroad and their perception that studying abroad would improve their competitiveness in the job market. Chang's (2013) findings are parallel to the results found in this study that showed a correlation between a student's previous 'significant' international experience and their perception that they would participate in study abroad. Both groups of students could see a personal benefit from the activity of study abroad.

In review of Vroom's (1964) Expectancy Theory as it relates to this study, students would be motivated to participate in a study abroad program if they believe that global mindedness is important, if they believe that there are benefits to participation, and if they

believe that they personally will gain these benefits from participating. The students were asked to identify their level of global mindedness, their thoughts about the benefits of participation in study abroad and whether they intended to participate in a study abroad program. Just over 50 percent of the students said they had moderate to strong intention to study abroad. Based on this theory, the weakest link is the belief about the importance of being globally minded. If student's perception on the benefits changed in such a way that they begin to believe that being globally minded will be beneficial to them in the future then there might be a better likelihood that they would participate in a study abroad program.

### **Implications**

The level of global mindedness of students can vary by major, gender, second language ability, and previous significant international experience. This information could be useful to academic coordinators and instructors within programs with students who trend towards lower global mindedness because it could be an opportunity to provide additional instruction or application in an effort to increase the awareness of global issues, the importance of understanding the world around us, the value that different people and cultures can bring to the table, and an appreciation of those differences. Reducing prejudice and stereotypes leads to reduced ethnocentrism, or increased globalcentrism, and an improved ability to relate to others. Even if students do not choose to participate in study abroad, the courses they take at North Carolina State University could better prepare them for the global marketplace by incorporating global issues into existing courses (associate's degree level) or by having a global knowledge component (bachelor's degree level) to a course within their degree program. Wingenbach et al. (2003) found "an implication exists that formal

education can be used in limited ways to increase students' international knowledge by making stronger connections in 'real world' events and classroom discussions of international agricultural issues" (p. 33).

Comparisons between the Agricultural Institute students and the undergraduate agricultural students allowed us to see how the students are similar and how they have differing needs and attitudes towards international programs. The results of this study also show that there were significant differences in the level of global mindedness between the two groups. Most instructors who teach associate's degree courses also teach bachelor's degree courses. The information that there is a difference in the level of global mindedness of the students from one level of the class to the next could help instructors decide what or how to teach material of a global nature. It could also provide the basis for instructors to spend a little more time on developing the need for the globalized knowledge within the lessons for the associate's degree students.

Global mindedness can vary by demographic characteristics of students. For instance, female students are more likely to exhibit higher levels of global mindedness than male students. Likewise, animal science and nutrition students exhibit higher levels of global mindedness than agricultural business or field crop technology or turfgrass students. It might be useful for instructors in these areas to know that these differences exist so that they can tailor their instruction on global issues accordingly.

Students can clearly articulate the benefits of study abroad participation. The students in this study identified benefits across the spectrum from personal growth to improved

employability to cultural skills enhancement to communication skills. These skills are also noted in much of the previous research related to the benefits of study abroad.

While students can identify benefits of studying abroad, they can also see challenges with factors that may affect their ability to participate in a study abroad program. Some of these factors include program cost, integration into degree plan, purpose and goal of the program, location, safety, and others. The students in this study did not identify new themes in this regard, but reiterated those found in previous research on the topic.

Students do have the ability to see the big picture when asked to look at study abroad from multiple perspectives. They were able to identify benefits and challenges to participation, but also solutions to the largest obstacle. The majority of students (95%) were able to identify sources of funding they could use to pay for study abroad. Further efforts could be expended to match the students' expectations of available funding to specific sources of those types of funds for which they would qualify. The students are also aware that the selection of the appropriate program is crucial for integration into their degree plan to keep them on track for graduation. With the increasing number of study abroad offerings, including long and short programs, there are more choices for students to find the program that works for them.

The results of this study will provide a basis for being able to draft a plan and goals for how to proceed in the future in terms of study abroad program offerings, on-campus training, incorporation of international topics into existing courses, crafting how we discuss international topics, soliciting financial resources to help a broader range of students participate in international experiences and more.

Finally, students were asked how likely they are to participate in a study abroad program. This information was regressed against other data collected from the students at that time. Based on the statistical analysis, the best predictors of intent to study abroad are the level of global mindedness, gender, and whether students had already participated in a significant international experience in the past. Global mindedness is the independent variable with the most predictive power. Global mindedness given that it accounts for over 28% of the variance in the response of students on their likelihood of participating in study abroad. If the level of student global mindedness increases, then it follows that study abroad participation would increase. If study abroad participation is desirable and if it is important to increase the participation level of students in study abroad, then increasing their global mindedness would be one way to address this issue.

Other models have been created that predict intention to study abroad. Bobbitt & Akers (2013) derived a model that was able to predict 54% of the variance in the student's intentions to study abroad. They directed their research at the issue from a different angle, focusing on attitudes about study abroad, perceived student control over the process, and (positive) peer pressure were the factors that led to an intention to study abroad (Bobbitt & Akers, 2013).

Luo and Jamieson-Drake (2015) derived a model of intention to study abroad that included many factors including race, gender, major, age, parental income, mathematical ability, involvement in college activities of multiple types, and others. This model would be difficult to replicate given the quantity of data collected and the results were not displayed in a way that showed the total predictive ability of the model. For this reason, it is difficult to

compare the Luo and Jamieson-Drake model to other models predicting intention to study abroad. However, the Luo and Jamieson-Drake (2015) study provides an insight into the demographic characteristics of students that affect their level of global mindedness and this is useful.

The implications of this study on the prediction of study abroad intent is mixed. While it gives a second vehicle for working towards increased study abroad intent, the predictive ability of the model is not as robust as the model by Bobbitt and Akers. This model expands the scholarship of predicting intention to study abroad by allowing faculty and administrators to work towards increasing the intention to study abroad by incorporating lessons, activities, and discussions that would lead to an increased level of global mindedness among students. It is also a relatively simple process to administer the Global Mindedness Scale instrument that determines the level of global mindedness of students.

### **Limitations**

The Global Mindedness Scale was administered to students in October of 2014. World events at that time may have influenced the results. Ebola, a deadly virus with no known cure, was a hot topic in the news because of outbreaks in Sierra Leone, Guinea, and other places in West Africa. Additionally, Al-Qaeda, Islamic State of Iraq and Levant (ISIL), Islamic State of Iraq and Syria (ISIS), Islamic State are oft in the news as wreakers of terrorist havoc around the world. These safety concerns could have an impact on the desire to study abroad and on the factors that would affect study abroad participation.

This study was conducted using incoming students as the subjects. The predictive model on whether a student intended to study abroad is the first step in the process. There

are many factors that could affect a student's actual participation in study abroad, regardless of their intention to do so. As Bobbitt and Akers (2013) noted, "it is important to examine both intention and behavior in a single study" (p. 26).

Likewise, this study focused on students in the College of Agriculture and Life Sciences (CALs) which may not mirror the populations of students in other disciplines or at other institutions. Therefore, the results might not be comparable to the results from other population groups given that demographics may be a factor in those results.

There is one confounding factor that needs to be addressed. When the surveys were administered, the courses identified as the introductory courses were AGI 101 for the associate's degree students and ALS 103 for the bachelor's degree students. Since all students are required to take the introductory course during their first semester, this study was designed as a population study. The students in these classes were surveyed and the data was collected and analyzed. Then after the semester was completed, it came to light that there was an alternative for some students. Students in the agricultural and extension education department could take AEE 101, Introduction to Career and Technical Education to fulfill this requirement. During the fall semester of 2014, the enrollment for this class was 25 students. The final option was for biochemistry students who could take BCH 103 Introduction to Biochemistry. There were two sections of this course offered with a total of 60 students registered in the 2014 fall semester. Because of the lack of data from these three sections, this study was converted from a population study to a sample study. This is also the reason that there was no consideration for random selection of students. Due to this post-data collection change that resulted in non-randomization of subjects, there may be an issue

comparing these results with other studies. The caveat to this is that the data that was collected for all majors with the exception of biochemistry, agricultural education, extension education, and agricultural science are based on the population of students for those majors.

### **Future Research Possibilities**

This research was conducted by surveying incoming freshmen in both the associate's program and the bachelor's program to determine their level of global mindedness and their attitudes towards international programs. A logical extension of this work would be to conduct the same study with graduating seniors to see if they participated in study abroad or not and to see if there were differences between those students who chose to participate and those who did not. Also, having a pre-test, post-test with this same group of students when they are nearing graduation would help us see if there was a change in the student's global mindedness scores based on college attendance with study abroad and college attendance without study abroad. This might show how a student would grow through maturation compared to how they grow through experience based learning.

Additionally, students who participate in study abroad could be tested prior to beginning the study abroad course and then upon completion of their international experience to see if there were changes based on participation. Likewise, this study abroad group could be compared to a non-study abroad group of students in the same program to see if any differences identified in the study abroad group also existed in the non-study abroad group. This would answer the question of whether maturation or the international experience caused the changes.

It would be interesting to see if the Expectancy Theory model derived in this study and the Theory of Planned Behavior model that Bobbit and Akers (2013) used could be merged to create a model that provides a better predictive result on the intention to study abroad.

Another tact could be to evaluate instructors within CALS to determine their level of global mindedness. It might be that increasing the global mindedness of instructors could affect their ability to increase the global mindedness of their students.

Likewise, evaluating students at other land grant institutions to see if the level of global mindedness of their agriculture students was similar to those found in this study would make these results more applicable across a larger population.

Figuring out how to address the factors that affect student participation in study abroad would go a long way towards allaying concerns about those factors and could pave the way for increased participation in study abroad. Additionally, it is not only important to address these factors but to find a way to share that information with students so they can make informed decisions about their ability to overcome these challenges. Assistance and support from university (and college) administration is needed to fulfill this goal. Given that the most significant challenge that students face is program cost, keeping costs down and finding sources of funding support for students is critical to expansion of opportunities for students to participate.

### **Chapter Summary**

This study found that the level of global mindedness of entering agriculture students in associate's and bachelor's degree programs is less than that of other disciplines including

humanities, arts, and education. Associate's degree students, on average, have lower global mindedness levels than bachelor's degree students in agricultural disciplines. There were also differences in global mindedness based on gender, major within agricultural disciplines, age, country of birth, second language ability, and prior international experience.

Students were able to identify benefits to studying abroad including improved cultural skills, personal growth, enhanced employability, improved academic skills, and increased global mindedness. Additionally, they were able to identify factors that would affect their decision on whether or not to study abroad. These included program cost, duration of the program, compatibility with their degree program, goals and administration of the program, location, and safety concerns. Through further consideration, the students were able to identify sources of funds that could be used to help pay for a study abroad program. These included themselves through savings or work effort or fundraising; their parents, family or grandparents; scholarships; loans; grants; and others. The challenge is to convert the generic scholarships, loans and grants into specific sources of potential funds that would be applicable to study abroad program fees and for which students in our programs would qualify.

A model was created to predict a student's intention to study abroad based on their level of global mindedness, gender, and perceived significance of previous international experience. This model accounts for 40% of the variance in the intent to study abroad and can be useful in predicting study abroad intentions moving forward.

This study began the process of looking at global mindedness and study abroad of agriculture students. The results could have been complicated by world events including

heightened terrorist activity and health concerns due to the Ebola outbreak in West Africa. It could be extended by evaluating students as freshmen and then again as seniors to see if their intentions matched their actions in regards to study abroad. It could also be extended by looking at agriculture students at other land grant institutions and evaluating their global mindedness and intention to study abroad to see if there are similarities across institutions. In the end, study abroad is a vehicle to improving global mindedness. Whatever actions we take at the institution level to improve the global mindedness of our students allows them to be better prepared to enter the global marketplace and enhance their appreciation for the value of the multicultural dimensions of our communities.

## References

- 2012 Mapping Internationalization on U.S. Campuses.* (2012). Retrieved from American Council on Education: <http://www.acenet.edu/news-room/Pages/2012-Mapping-Internationalization-on-U-S--Campuses.aspx>
- Agricultural Institute.* (2014, April 4). Retrieved from Agricultural Institute: <http://harvest.cals.ncsu.edu/aginstitute/>
- Ajzen, I. (2011). The theory of planned behavior: Reactions and reflections. *Psychology & Health, 26*(9), 1113-1127. doi:10.1080/08870446.2011.623995
- Anderson, P. L. (2006). Short-term study abroad and intercultural sensitivity: A pilot study. *International Journal of Intercultural Relations, 30*(4), 457-469.
- Anonymous. (2013). It takes more than a major: Employer priorities for college learning and student success. *Liberal Education, 99*(2), 22-29.
- Barkley, A. a. (2013). Long Term Knowledge from Short Term Study Abroad in Brazil and South Africa: Facilitating Effective International Experiences. *NACTA Journal, 146-152.*
- Bates, J. T. (1997). *The effects of study abroad on undergraduates in an honors international program.* (Order No. 9815480). Available from ProQuest Dissertations & Theses Full Text. (304366514). Retrieved February 23, 2015, from <http://search.proquest.com/docview/304366514?accountid=12725>
- Blair, D., Phinney, L., & Phillippe, K.A. (2001). *International programs at community colleges.* (Report No. AACCC-RB-01-1). Washington, DC: American Association of Community Colleges. Retrieved February 23, 2015, from

- <http://www.aacc.nche.edu/Publications/Briefs/Documents/01012001internationalcc.pdf>
- Bobbitt, R. & Akres, C. (2013). Going Global: Study Abroad Intentions of Agriculture and Natural Resource Students. *NACTA Journal*, 21-27.
- Boggs, G. R., & Irwin, J. (2007). What every community college leader needs to know: building leadership for international education. *New Directions for Community Colleges*, 13, 25-30. doi:10.1002/cc.278
- Bohrer, I. E. (2013, October). *Study abroad increases professional job prospects: Never more so than in times of crisis*. Retrieved April 4, 2014, from Transitions Abroad: <http://www.transitionsabroad.com/listings/study/articles/study-abroad-increases-professional-job-prospects.shtml>
- Bradshaw, G. W. (2013). Internationalization and faculty-led service learning. *New Directions for Community Colleges*, 161, 39-53. doi:10.1002/cc.20047
- Braskamp, L. B. (2009). Assessing progress in global learning and development of students with education abroad experiences. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 18, 101-118.
- Briers, G. S. (2010). Through student eyes: Perceptions and aspirations of College of Agriculture and Life Sciences students regarding international educational experiences. *Journal of International Agricultural and Extension Education*, 17(2), 5-20.
- Bush, G. W. (2001, November 13). *International Education Week 2001 Message*. Retrieved from The Center for Global Education: <http://globaled.us/now/fullstatementbush.html>

- Carlson, J. S. (1991). *Study abroad: The experience of American undergraduates in Western Europe and the United States*. New York, NY: Council on International Educational Exchange.
- Chang, C. P. (2013). Agriculture Students' Interests, Preferences, Barriers and Perceived Benefits of International Educational Experiences. *NACTA Journal*, 97-103.
- Clarke III, I. F. (2009, August). Student Intercultural Proficiency From Study Abroad Programs. *Journal of Marketing Education*, 31(2), 173-181.  
doi:10.1177/0273475309335583
- Coers, N. R. (2012). Examining the Student Impacts of Three International Capstone Experiences. *NACTA Journal*, 55-62.
- Deviney, D. V. (2014, September). Why some students study abroad and others stay. *Research in Higher Education Journal*, 25, 1-14. Retrieved from <http://proxying.lib.ncsu.edu/index.php?url=/docview/1561993559?accountid=12725>
- Du, H. (2013). The development of Chinese fluency during study abroad in China. *Modern Language Journal*, 97(1), 131-143.
- Dwyer, M. M. (2004, March/April). *Transitions Abroad*, 37(5). Retrieved April 4, 2014, from <http://www.transitionsabroad.com/publications/magazine/0403/>
- Emert, H. A. (2007). Expanding the vision of international education: Collaboration, assessment, and intercultural development. *New Directions for Community Colleges*, 138, 67-75. doi:10.1002/cc.283
- Farrell, P. &. (2003). Studying abroad in Nepal: Assessing impact. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 9, 175-188.

- Gaines, N. (2012). *Exploring the perceptions of study abroad among black undergraduates at historically black colleges and universities*. (Order No. 3510805). Available from ProQuest Dissertations & Theses Full Text. (1022175649). Retrieved from <http://search.proquest.com/docview/1022175649?accountid=12725>
- Gardner, P. S. (2009). Translating study abroad experiences for workplace competencies. *Peer Review, 11*(4), 19-22.
- Gates, L. (2014). The Impact of International Internships and Short-Term Immersion Programs. *New Directions for Student Services, 33-40*. doi:10.1002/ss.20088
- Gillan, K. J. (1995). *A measure of global-mindedness at the university of northern colorado: An assessment of students, faculty and administrators*. (Order No. 9544361). Available from ProQuest Dissertations & Theses Full Text. (304225233). Retrieved from <http://search.proquest.com/docview/304225233?accountid=12725>
- Golay, P. (2006). *The effects of study abroad on the development of global-mindedness among students enrolled in international programs at Florida State University*. dissertation, Florida State University. Retrieved April 16, 2014, from <http://search.proquest.com/docview/305332853?accountid=12725>. (305332853).
- Hett, E. J. (1993). *The development of an instrument to measure global-mindedness*. Retrieved from ProQuest Dissertations and Theses: <http://search.proquest.com.prox.lib.ncsu.edu/pqdtft/docview/304111701/abstract/76B0FC0316B64863PQ/1?accountid=12725>

- Holmes, A. & VanAlstine, S. (2014). From I to International: Toward International Mindedness through Interdisciplinary Music Instruction. *Music Educators Journal*, 45-50.
- Hu, J. A. (2010). A collaborative international community health nursing: Clinical experience in China. *Home Health Care Management Practice*, 22(7), 499-506.  
doi:10.1177/1084822310375505
- IES Abroad. (2012). *50-year Alumni Survey Results*. Retrieved from IES Abroad:  
<http://www.iesabroad.org/study-abroad/why/alumni-survey-results>
- IES Abroad. (n.d.). *Why study abroad*. Retrieved April 4, 2014, from Institute for the International Education of Students: <http://www.iesabroad.org/study-abroad/why/why-study-abroad>
- Irani, T. P. (2006). Beliefs, attitudes, perceptions and barriers toward international involvement among College of Agriculture and Life Science students. *Journal of International Agricultural and Extension Education*, 13(2), 27-37.
- Linton, R. (2014, November 5). Email Communication. Raleigh, NC, USA.
- Lucas, J. M. (2009). *Where are all the males?: A mixed methods inquiry into male study abroad participation*. Michigan State University. (Order No. 3381358, Michigan State University). ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/304949857?accountid=12725>. (304949857).
- Luo, J. and Jamieson-Drake, D. (2015, February). Predictors of Study Abroad Intent, Participation, and College Outcomes. *Research in Higher Education*, 56(1), 29-56.

- McCabe, L. T. (1994). The development of a global perspective during participation in Semester at Sea: A comparative global education program. *Educational Review*, 46(3), 275-286.
- McDermott, J. L. (2011). *Examining undergraduate agriculture students' attitudes and decisions regarding study abroad*. Edgewood College. (Order No. 3481544, Edgewood College). ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/907104537?accountid=12725>. (907104537).
- Morgan, A. & King, D. L.. (2103). Improving Undergraduates' Exposure to International Agriculture through Experiential Learning. *NACTA Journal*, 2-7.
- Moriba, S. (2011). *Investigating the international awareness and global competence of students meeting their international dimension requirement through course offerings in a college of agricultural sciences and natural resources: A descriptive and comparative study*. (Order No. 3486957). Available from ProQuest Dissertations & Theses Full Text. (911991750). Retrieved February 23, 2015, from <http://search.proquest.com/docview/911991750?accountid+12727>
- NAFSA. (2005). *Global competence and national needs: One million Americans studying abroad*. Retrieved from Commission on the Abraham Lincoln Study Abroad Fellowship Program: <http://www.nafsa.org/resource/library/Default.aspx?id=16035>
- Niser, J. C. (1987). Study abroad education in New England higher education: a pilot survey. *International Journal of Educational Management*, 24(1), 48-55.
- North Carolina State University. (2011, June 10). *University Mission*. Retrieved from North Carolina State University Mission Statement: <http://oirp.ncsu.edu/univ/miss>

- Obama, B. (2009, April 7). *Remarks of President Barack Obama at Student Roundtable*. Retrieved from The White House Briefing Room Speeches & Remarks: [http://www.whitehouse.gov/the\\_press\\_office/Remarks-Of-President-Barack-Obama-At-Student-Roundtable-In-Istanbul](http://www.whitehouse.gov/the_press_office/Remarks-Of-President-Barack-Obama-At-Student-Roundtable-In-Istanbul)
- Parker, F. (2011, May 13). ARE 494 CALS Course Action. *CCCC Course Actions*. Raleigh, NC, USA: NCSU Internal Document.
- Parsons, R. L. (2010). The effects of an internationalized university experience on domestic students in the United States and Australia. *Journal of Studies in International Education*, 14(4), 313-334.
- Peterson, D. L. (2003). *The decision to study abroad: Contributing factors and implications for communication strategies*. (Order No. 3092192, Michigan State University). ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/305329574?accountid=12725>. (305329574).
- Preston, K. (2012, May). *Career Benefits of Study Abroad*. Retrieved February 26, 2015, from IES Abroad: [www.iesabroad.org/study-abroad/why/career-benefits](http://www.iesabroad.org/study-abroad/why/career-benefits)
- Quimbata, G. (1989). Internationalizing the Community College: Examples of Success. *ERIC Digest*, 1-4.
- Raby, R. L. (2007). Internationalizing the curriculum: On- and off-campus strategies. *New Directions for Community Colleges*, 138, 57-66. doi:10.1002/cc.282
- Raby, R. L. (2008). *Expanding education abroad at U.S. community colleges*. New York, NY: Institute for International Education.

- Raby, R., & Sawadogo, G. (2005). Education Abroad and Community Colleges. *NAFSA's Guide to Education Abroad for Advisers and Administrators*.
- Rice, L. F.-F. (2014). Discovering Global Competencies of Agriculture Education Students through Reflective Journaling. *NACTA Journal*, 324-329.
- Richardson, P. (2012). Teaching with a global perspective. *Inquiry*, 17(1), 43-50.
- Roberts, T. C. (2013). An Experiential Learning Framework for Engaging Learners During Study Abroad Experiences. *NACTA Journal*, 28-35.
- Scheid, M. (2015, February 4). Transformation, Applied. *Speech Presented at the Workshop on Intercultural Skills Enhancement and Conference*. Winston-Salem, NC, USA.
- Securing America's Future: Global education for a global age*. (2003). Retrieved from NAFSA: Association of International Educators:  
[http://www.nafsa.org/Resource\\_Library\\_Assets/Public\\_Policy/Securing\\_America\\_s\\_Future/](http://www.nafsa.org/Resource_Library_Assets/Public_Policy/Securing_America_s_Future/)
- Smith, D. B. (2008). *The Impact of International Experience on the Global Mindedness of Extension Agents Employed by the North Carolina Cooperative Extension Service*. dissertation, North Carolina State University, Agricultural and Extension Education. Retrieved April 16, 2014, from <http://www.lib.ncsu.edu/resolver/1840.16/4483>
- Smith, D. S. (2013). Traditionally under-represented students' perceptions of a study abroad experience. *NACTA Journal*, 15-20. Retrieved from <http://proxying.lib.ncsu.edu/index.php?url=/docview/1445180883?accountid=12725>

- Smith, K., & Curry, K. (2011). Is it worth it? Measuring the long-term effects of an international experience for nursing students in Equador. *Journal of Community Health Nursing*, 28(1), 14-22.
- Stewart, M. (2013). *Our Envisioned Future: The Strategic Plan for the College of Agriculture and Life Sciences at North Carolina State University*. Raleigh: North Carolina State University.
- Tarrant, M. R. (2013, May). The Added Value of Study Abroad: Fossting a Global Citizenry. *Journal of Studies in International Education*, 18(2), 141-161.  
doi:10.1177/1028315313497589
- Trooboff, S., Vande Berg, M. & Rayman, J. (2007). Employer attitudes toward study abroad. *Frontiers: The Interdisciplinary Journal of Study Abroad*, XV, 17-34.
- Valeau, E. J. and Raby, R. L. (2007).Editors' notes. *New Directions for Community Colleges*, 1-3. doi: 10.102/cc.275.
- Vroom, V. (1964). *Work and Motivation*. New York, NY: John Wiley and Sons.
- Wattiaux, M. a. (2013). Change in students' Self-reported Learning Gains and Worldviews in a Discussion-Driven International Livestock Agriculture Classroom. *NACTA Journal*, 83-90.
- Williams, T. (1993). China Nights, Vietnamese Days, Korea. *International Social Science*, 68(4), 170-189.
- Wingenbach, G. B. (2003). Students' knowlege and attitudes about international agricultural issues. *Journal of International Agricultural and Extension Education*., 25-35.

Woodson, R. (2014, October 17). *Study Abroad make the world your classroom*. Retrieved from North Carolina State University Study Abroad Website: [studyabroad.ncsu.edu](http://studyabroad.ncsu.edu)

Yu, H. (2008). *An examination of hte effects of participation in a college study abroad program*. The Pennsylvania State University. (Order No. 3336154, The Pennsylvania State University). ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/304495438?accountid=12725>. (304495438).

Zhai, L. (2000). The influence of study abroad programs on college student development in the coollege of food, agricultural, and environmental sciences at the ohio state university. *ProQuest Dissertations and Theses*, 1-208. Retrieved from <http://search.proquest.com/docview/304612455?accountid=12725>. (304612455).

Appendix

## Appendix A

### A.1 Global Mindedness Survey Scale Authorization



University of San Diego

---

School of Leadership and Education Sciences

28 September 1993

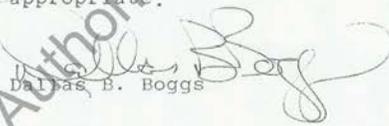
MEMORANDUM

For: Dr. Mary Scherr

From: Dallas Boggs

Subject: Doctoral Dissertation of Dr. E. Jane Hett

It is my pleasure to authorize you to share any or all portions of subject dissertation for educational and/or research purposes, as you deem appropriate.

  
Dallas B. Boggs

September 30, 1993

The above authorization is signed by Dallas Boggs, the husband of E. Jane Hett, who is now deceased.

Mary Woods Scherr, Ph.D.  
Dissertation Director

5998 Alcalá Park, San Diego, CA 92110-2492 619-260-4538  
www.sandiego.edu/soles

## A.2 Letter of Authorization for Global Mindedness Surveys (San Diego)

---



February 23, 2015

Melissa Hendrickson  
Agricultural and Resource Economics  
North Carolina State University  
Box 8108  
Raleigh, NC. 27695

Dear Ms. Hendrickson:

I want to extend my best wishes to you for much success with your dissertation. We are pleased you plan to use Jane Hett's Global Mindedness Scale. She was an excellent student fully committed to global peace.

Enclosed you will find a letter of authorization from Dallas B. Boggs, the husband of E. Jane Hett, who is now deceased.

Sincerely,

Beth Garofalo  
Associate Director of Leadership Programming

---

**Appendix B**

**IRB Exemption Letter**

**NC STATE UNIVERSITY**

Campus Box 7514  
Raleigh, North Carolina 27695-7514

919.515.8754 (phone)  
919.515.7721 (fax)

From: Jennifer Ofstein, IRB Coordinator  
North Carolina State University  
Institutional Review Board

Date: October 6, 2014

Title: Student Perceptions of the Value of Study Abroad Programs for Associate's  
Degree Students

IRB#: 5272

Dear Melissa Lewis Hendrickson,

The research proposal named above has received administrative review and has been approved as exempt from the policy as outlined in the Code of Federal Regulations (Exemption: 46.101. b.2). Provided that the only participation of the subjects is as described in the proposal narrative, this project is exempt from further review. This approval does not expire, but any changes must be approved by the IRB prior to implementation.

NOTE:

1. This committee complies with requirements found in Title 45 part 46 of The Code of Federal Regulations. For NCSU projects, the Assurance Number is: FWA00003429.
2. Any changes to the research must be submitted and approved by the IRB prior to implementation.
3. If any unanticipated problems occur, they must be reported to the IRB office within 5 business days.

Please forward a copy of this letter to your faculty sponsor, if applicable.  
Thank you.

Sincerely,



Jennifer Ofstein  
NC State IRB

**Appendix C**

**Global Mindedness Survey AGI**

## Global Mindedness Survey

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting in an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 1 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I generally find it stimulating to spend an evening talking with people from another culture.					
2. I feel an obligation to speak out when I see our government doing something I consider wrong internationally.					
3. The United States is enriched by the fact that it is comprised of many people from different cultures and countries.					
4. Really, there is nothing I can do about the problems of the world.					
5. The needs of the United States must continue to be our highest priority in negotiating with other countries.					
6. I often think about the kind of world we are creating for future generations.					
7. When I hear that thousands of people are starving in an African country, I feel very frustrated.					
8. Americans can learn something of value from all different cultures.					
9. Generally, an individual's actions are too small to have a significant effect on the global ecosystem.					
10. Americans should be permitted to pursue the standard of living they can afford if it only has a slight negative impact on the environment.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 2 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. I think of myself, not only as a citizen of my country but also as a citizen of the world.					
12. When I see the conditions some people in the world live under, I feel a responsibility to do something about it.					
13. I enjoy trying to understand people's behavior in the context of their culture.					
14. My opinions about national policies are based on how those policies might affect the rest of the world as well as the United States.					
15. It is very important to me to choose a career in which I can have a positive effect on the quality of life for future generations.					
16. American values are probably the best.					
17. In the long run, America will probably benefit from the fact that the world is becoming more interconnected.					
18. The fact that a flood can kill 50,000 people in Bangladesh is very depressing to me.					
19. It is important that American universities and colleges provide programs designed to promote understanding among students of different ethnic and cultural backgrounds.					
20. I think my behavior can impact people in other countries.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 3 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. The present distribution of the world's wealth and resources should be maintained because it promotes survival of the fittest.					
22. I feel a strong kinship with the worldwide human family.					
23. I feel very concerned about the lives of people who live in politically repressive regimes.					
24. It is important that we educate people to understand the impact that current policies might have on future generations.					
25. It is not really important to me to consider myself as a member of the global community.					
26. I sometimes try to imagine how a person who is always hungry must feel.					
27. I have very little in common with people in underdeveloped nations.					
28. I am able to affect what happens on a global level by what I do in my own community.					
29. I sometimes feel irritated with people from other countries because they don't understand how we do things here.					
30. Americans have a moral obligation to share their wealth with the less fortunate people of the world.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 4 Study Abroad Programs	Definitely Not	Somewhat Unlikely	Unsure	Somewhat Likely	Definitely
31. How likely are you to participate in a study abroad program?					

32. What are the (personal, educational, or professional) benefits of studying abroad?

33. What are some of the factors that would play into your decision on whether to participate in a study abroad program?

34. List sources of funding that could help you pay for a study abroad program.

## Part 5 International Experience

35. Were you born inside the United States?

Yes

No

36. Can you speak another language besides English?

Yes

No

37. Have you traveled outside of the state of North Carolina?

Yes

No

38. Please tell us about your combined experience outside the U.S. and Canada. Check the one that best applies to you:

I have not traveled outside of the United States or Canada.

I have traveled/lived outside of the U.S. or Canada for less than one week.

I have traveled/lived outside of the U.S. or Canada for one to two weeks.

I have traveled/lived outside of the U.S. or Canada for three weeks to one month.

I have traveled/lived outside of the U.S. or Canada for two to four months.

I have traveled/lived outside of the U.S. or Canada for five to seven months.

I have traveled/lived outside of the U.S. or Canada for eight months to one year.

I have traveled/lived outside of the U.S. or Canada for more than one year.

39. If you have traveled outside of the U.S. or Canada, where did you stay? Please check all that apply.

- I have not traveled outside of the United States or Canada.
- I stayed in a hotel.
- I stayed in the home of a local resident.
- I stayed in a college or university.
- I lived in a house or apartment.
- I stayed on a cruise ship.
- I lived in military housing/barracks.
- Other, please specify \_\_\_\_\_

40. Have you participated in a study abroad program or other international sponsored program? (For instance, missionary work in another country.) If so, briefly describe.

- Yes \_\_\_\_\_
- No

If you answered yes to question 40, please answer the following questions three questions. Otherwise skip to part 6.

Part 5 International Experience	Not Helpful	Mildly Helpful	Somewhat Helpful	Helpful	Very Helpful
41. How helpful was your international experience for you to grow personally?					
42. How helpful was your international experience for you to grow educationally?					

Part 6 Global Mindedness Scale	Not Significant	Mildly Significant	Somewhat Significant	Significant	Very Significant
43. If so, how significant was your international experience?					

44. Did any of your international experience change your world views?  Yes  No

## Part 6 Demographics

45. What is your major (check all that apply):

- |  |  |
|--|--|
| <input type="checkbox"/> Agribusiness Management                             | <input type="checkbox"/> Ornamental and Landscape Technology |
| <input type="checkbox"/> Agribusiness Management Horticultural Concentration | <input type="checkbox"/> Pest Control – Agricultural Option  |
| <input type="checkbox"/> Field Crop Technology                               | <input type="checkbox"/> Pest Control – Urban Option         |
| <input type="checkbox"/> General Agriculture                                 | <input type="checkbox"/> Turfgrass Management                |
| <input type="checkbox"/> Livestock and Poultry Management                    |  |

46. What is your gender?  Male  Female

47. What is your age category?

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| <input type="checkbox"/> Less than 18 | <input type="checkbox"/> 40-49   |
| <input type="checkbox"/> 18-19        | <input type="checkbox"/> 50-59   |
| <input type="checkbox"/> 20-21        | <input type="checkbox"/> 60-69   |
| <input type="checkbox"/> 22-29        | <input type="checkbox"/> Over 69 |
| <input type="checkbox"/> 30-39        |                                  |

48. How do you describe yourself?

- |  |   |
|--|---|
| <input type="checkbox"/> African American        | <input type="checkbox"/> White                            |
| <input type="checkbox"/> American Indian/Alaskan | <input type="checkbox"/> Native Hawaiian/Pacific Islander |
| <input type="checkbox"/> Asian                   | <input type="checkbox"/> Other                            |
| <input type="checkbox"/> Hispanic/Latino         |   |

Thank you for sharing your thoughts. Your insights will be helpful in determining how to proceed with our international program offerings in the Agricultural Institute.

**Appendix D**

**Global Mindedness Survey CALS**

## Global Mindedness Survey

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting in an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 1 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I generally find it stimulating to spend an evening talking with people from another culture.					
2. I feel an obligation to speak out when I see our government doing something I consider wrong internationally.					
3. The United States is enriched by the fact that it is comprised of many people from different cultures and countries.					
4. Really, there is nothing I can do about the problems of the world.					
5. The needs of the United States must continue to be our highest priority in negotiating with other countries.					
6. I often think about the kind of world we are creating for future generations.					
7. When I hear that thousands of people are starving in an African country, I feel very frustrated.					
8. Americans can learn something of value from all different cultures.					
9. Generally, an individual's actions are too small to have a significant effect on the global ecosystem.					
10. Americans should be permitted to pursue the standard of living they can afford if it only has a slight negative impact on the environment.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 2 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. I think of myself, not only as a citizen of my country but also as a citizen of the world.					
12. When I see the conditions some people in the world live under, I feel a responsibility to do something about it.					
13. I enjoy trying to understand people's behavior in the context of their culture.					
14. My opinions about national policies are based on how those policies might affect the rest of the world as well as the United States.					
15. It is very important to me to choose a career in which I can have a positive effect on the quality of life for future generations.					
16. American values are probably the best.					
17. In the long run, America will probably benefit from the fact that the world is becoming more interconnected.					
18. The fact that a flood can kill 50,000 people in Bangladesh is very depressing to me.					
19. It is important that American universities and colleges provide programs designed to promote understanding among students of different ethnic and cultural backgrounds.					
20. I think my behavior can impact people in other countries.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 3 Global Mindedness Scale	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. The present distribution of the world's wealth and resources should be maintained because it promotes survival of the fittest.					
22. I feel a strong kinship with the worldwide human family.					
23. I feel very concerned about the lives of people who live in politically repressive regimes.					
24. It is important that we educate people to understand the impact that current policies might have on future generations.					
25. It is not really important to me to consider myself as a member of the global community.					
26. I sometimes try to imagine how a person who is always hungry must feel.					
27. I have very little in common with people in underdeveloped nations.					
28. I am able to affect what happens on a global level by what I do in my own community.					
29. I sometimes feel irritated with people from other countries because they don't understand how we do things here.					
30. Americans have a moral obligation to share their wealth with the less fortunate people of the world.					

Please select the appropriate response to indicate your level of agreement with each of the following statements by putting an X in the appropriate box.

Note: There are no right or wrong answers, just your honest thoughts on the issues.

Part 4 Study Abroad Programs	Definitely Not	Somewhat Unlikely	Unsure	Somewhat Likely	Definitely
31. How likely are you to participate in a study abroad program?					

32. What are the (personal, educational, or professional) benefits of studying abroad?

33. What are some of the factors that would play into your decision on whether to participate in a study abroad program?

34. List sources of funding that could help you pay for a study abroad program.

**Part 5 International Experience**

35. Were you born inside the United States?

Yes

No

36. Can you speak another language besides English?

Yes

No

37. Have you traveled outside of the state of North Carolina?

Yes

No

38. Please tell us about your combined experience outside the U.S. and Canada. Check the one that best applies to you:

I have not traveled outside of the United States or Canada.

I have traveled/lived outside of the U.S. or Canada for less than one week.

I have traveled/lived outside of the U.S. or Canada for one to two weeks.

I have traveled/lived outside of the U.S. or Canada for three weeks to one month.

I have traveled/lived outside of the U.S. or Canada for two to four months.

I have traveled/lived outside of the U.S. or Canada for five to seven months

I have traveled/lived outside of the U.S. or Canada for eight months to one year.

I have traveled/lived outside of the U.S. or Canada for more than one year.

39. If you have traveled outside of the U.S. or Canada, where did you stay? Please check all that apply.

- I have not traveled outside of the United States or Canada.
- I stayed in a hotel.
- I stayed in the home of a local resident.
- I stayed in a college or university.
- I lived in a house or apartment.
- I stayed on a cruise ship.
- I lived in military housing/barracks.
- Other, please specify \_\_\_\_\_

40. Have you participated in a study abroad program or other international sponsored program? (For instance, missionary work in another country.) If so, briefly describe.

- Yes \_\_\_\_\_
- No

If you answered yes to question 40, please answer the following questions three questions. Otherwise skip to part 6.

Part 5 International Experience	Not Helpful	Mildly Helpful	Somewhat Helpful	Helpful	Very Helpful
41. How helpful was your international experience for you to grow personally?					
42. How helpful was your international experience for you to grow educationally?					

Part 6 Global Mindedness Scale	Not Significant	Mildly Significant	Somewhat Significant	Significant	Very Significant
43. If so, how significant was your international experience?					

44. Did any of your international experience change your world views?  Yes  No

## Part 6 Demographics

45. What is your major (check all that apply):

- |  |   |
|--|---|
| <input type="checkbox"/> Agricultural and Environmental Technologies | <input type="checkbox"/> Food Science           |
| <input type="checkbox"/> Agricultural Education                      | <input type="checkbox"/> Horticultural Science  |
| <input type="checkbox"/> Agribusiness Management                     | <input type="checkbox"/> Natural Resources      |
| <input type="checkbox"/> Agricultural Science                        | <input type="checkbox"/> Nutrition Science      |
| <input type="checkbox"/> Animal Science                              | <input type="checkbox"/> Plant and Soil Science |
| <input type="checkbox"/> Biochemistry                                | <input type="checkbox"/> Plant Biology          |
| <input type="checkbox"/> Biological Engineering                      | <input type="checkbox"/> Poultry Science        |
| <input type="checkbox"/> Bioprocessing Science                       | <input type="checkbox"/> Turfgrass Science      |
| <input type="checkbox"/> Extension Education                         |   |

46. What is your gender?  Male  Female

47. What is your age category?

- |                                       |                                |                                  |
|---------------------------------------|--------------------------------|----------------------------------|
| <input type="checkbox"/> Less than 18 | <input type="checkbox"/> 22-29 | <input type="checkbox"/> 50-59   |
| <input type="checkbox"/> 18-19        | <input type="checkbox"/> 30-39 | <input type="checkbox"/> 60-69   |
| <input type="checkbox"/> 20-21        | <input type="checkbox"/> 40-49 | <input type="checkbox"/> Over 69 |

48. How do you describe yourself?

- |  |   |
|--|---|
| <input type="checkbox"/> African American        | <input type="checkbox"/> White                            |
| <input type="checkbox"/> American Indian/Alaskan | <input type="checkbox"/> Native Hawaiian/Pacific Islander |
| <input type="checkbox"/> Asian                   | <input type="checkbox"/> Other                            |
| <input type="checkbox"/> Hispanic/Latino         |   |

Thank you for sharing your thoughts. Your insights will be helpful in determining how to proceed with our international program offerings in the College of Agriculture and Life Sciences.