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An Examination of Pre-service Agricultural Science Teachers' Interest and Participation in International Experiences: Motivations and Barriers

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Abstract

The importance of creating global mindedness within pre-service agricultural science teachers through international experiences cannot be overstated. However, providing opportunities for international experiences and college students selecting to participate in these opportunities are two very different actions. Mechanisms must be put in place that can impact behavior and motivate participation. The theoretical framework for this study was based on the theory of planned behavior and motivation. Understanding why students do or do not participate in international experiences allows the development of programs to meet the targeted needs of students. The purpose of this descriptive study was to investigate pre-service agricultural science teachers' perspectives of and motivation for international experiences in order to facilitate the development of effective international experiences. The methodology employed mixed methods that included both an online survey and interviews. The total population consisted of 39 college students of whom 31 completed the online survey and of these seven were interviewed. Findings revealed a preference for travel to a developed country as a group as well as the importance of hands-on activities and advance planning. The data provides suggestions for program planning and program preferences for college students preparing to be agricultural science teachers.

Keywords: pre-service teachers, international experiences, interest, participation, motivation, agriculture

Introduction

The Institute of International Education (2013) reported that while the overall number of university students studying abroad is increasing, the number of agriculture students who participate in study abroad is continuing to decrease each year. Recognizing the importance of understanding the global world in which we live and a call for an increase in international exposure for agriculture students is not new. Multiple studies (Connors, 2004; Harder, Lamm, Roberts, Navarro, & Ricketts, 2012; Hunter, 2004; Wingenbach et al., 2003; Zhai & Scheer, 2004) have reported the need for students to gain international experience. Wingenbach et al. (2003) conveyed a need for providing "out-of-country learning experiences" (p. 25) for college students given study findings that revealed inadequate knowledge about international agricultural issues. Connors (2004) reported undergraduate students had not received exposure or instruction about international

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agriculture in high school and called for an increase in exposure to international agriculture in both secondary and post-secondary educational programs. Hunter (2004) pointed to the need for globally competent citizens. It is essential that schools prepare students to be successful when interacting with people of cultures other than their own (Anderson, Lawton, Rexeisen, & Hubbard, 2006). Harder, Bruening, Graham, and Drueckhammer (2009) reported that global and cultural competencies are a competitive advantage for both students and professionals. Spending time abroad provides students with the knowledge and skills necessary to gain global competence (Bunch, Lamm, Israel, & Edwards, 2013). Additional research has shown that employers look favorably at applicants with international and cross-cultural experiences (Bruening & Frick, 2004). Therefore, an international experience is a vital component of an undergraduate college education.

Studies regarding international experiences in the context of agriculture have included research focused on the impact of these experiences on faculty (Dooley, Dooley, & Carranza, 2008; Harder et al., 2012; Sandlin, Murphrey, Lindner, & Dooley, 2013), Extension educators (McClure, Danjean, Bunch, Machtmes, & Kotrlik, 2014), and students (Anderson, et al., 2006; Farrell & Suvedi, 2003; Foster, Rice, Foster, & Barrick, 2014; Hains, Ricketts, & Tubbs, 2012; Zhai & Scheer, 2004). We were particularly interested in the impact related to college students. An examination of college agriculture students' attitudes and perspectives towards cultural diversity revealed that students who had more interaction with international people had an increased global perspective and "more positive attitude toward cultural diversity" (Zhai & Scheer, 2004, p. 48). The study conducted by Hains, et al. (2012) revealed that college student engagement in an international setting has the potential to elicit emotional response which can facilitate the learning process. Anderson, et al. (2006) documented that a short term study abroad program can have a positive effect on the cross-cultural sensitivity of college participants. Farrell and Suvedi (2003) provided evidence of the positive impact that a study abroad experience can have on the lives of college participants. Results from this case study analysis documented that students' lives were in fact impacted through their participation in the study abroad program. The authors specifically documented impact on the "students' understanding, curiosity and appreciation" (p. 186) of not only culture but also human differences. Further, a study specifically focused on students preparing to be agriculture teachers revealed a gain in global competence due to an international experience outside the United States (Foster, et al., 2014). The results of these studies reveal a positive impact on perception and knowledge that can be obtained through direct experience in an international setting. However, in order for students to gain these experiences they must first make the decision to enroll and participate in them. Steps must be taken to encourage students to take part in international experiences.

Providing opportunities for international experiences and students selecting to participate in these opportunities are two very different actions. Bunch, et al. (2013) documented motivators and barriers related to undergraduate student participation in international experiences and reported that many undergraduate students in the college of agriculture studied were not highly engaged in these experiences. These authors recommended additional research that included qualitative interviews to further understand the barriers that exist to participation in an international experience. Only limited studies related to international experiences have been published specifically on college students preparing to be agricultural science teachers in the high school setting. These students are inherently different from other college agricultural students due to their career goals focused on teaching. Thus, focused study on this population was warranted.

International experiences for pre-service teachers are critical due to the impact that these individuals will have on youth. As stated by Marx and Moss (2011), in the context of pre-service teachers in general, "study abroad programs can be powerful vehicles in teacher educators' efforts to prepare pre-service teachers for work with culturally diverse students" (p. 45). One study cited the importance of international experiences due to their expanded impact on an individual's home and workplace, which can include family, colleagues and students (Place, Vergot, Dragon, & Hightower, 2008). Hurst, Roberts, and Harder (2015) reported that low numbers of secondary

agriculture teachers have travelled abroad. Individuals carry with them the experiences they gain and these experiences can transfer to those with whom they interact. "Teacher education faculty represent a critical link in structuring educational experiences that assist their students to reach out to the international community" (Cushner, 2007, p. 37).

As early as 1994, research (Ibezim & McCracken, 1994) has pointed to the need for "integration of international agricultural concepts in the secondary schools" (p. 47). This early study also pointed to the fact that teachers with more cultural awareness would be more likely to incorporate international concepts. In more recent years, Elliot and Yanik (2004) reported that continued effort is needed to incorporate international elements into the high school agriscience curriculum in order to meet student needs. A study of high school students revealed that students had a positive attitude towards international issues but needed better instruction regarding international agriculture and expressed the need to continue to strive to incorporate international concepts into the high school curriculum (Radhakrishna, Leite, & Domer, 2003). The importance of encouraging a global perspective of agriculture for youth is also expressed in the FFA mission (National FFA Organization, 2014).

The incorporation of international concepts into the high school setting can be accomplished via opportunities provided to teachers. A case study reported by Sharp and Roberts (2013) revealed that it was possible for a pre-service agriculture education teacher to bring an international experience to the secondary classroom via the development of curriculum. This case revealed that high school students' knowledge of the international location increased through this exposure. If professional development for teachers impacts student achievement as reported (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007), what does that mean for activities that enhance the pre-service teacher? The need to provide and encourage international experiences for pre-service agricultural science teachers is critical.

Global or world mindedness has been defined as a worldview where the "individual perceives his or herself as connected to the world community and is aware of his or her responsibility for its members" (Hett, 1993). World mindedness is "the extent to which individuals value global perspectives on various issues" (Douglas & Jones-Rikkers, 2001, p. 55). A person who is world-minded recognizes and appreciates cultural differences and can see viewpoints apart from their own vantage point (Boatler, 1992). Boatler also found that employees with increased world mindedness were better equipped for a changing corporate environment and in managing a diverse workforce. Similarly, Cox (1993) cited that world mindedness leads to increased levels of organizational effectiveness. Study abroad has been documented as a good avenue to increase world mindedness (Douglas & Jones-Rikkers, 2001).

What can be done to assist future agricultural science teachers in gaining world mindedness? How can educational experiences be enhanced in such a way that prepares college students to further share this perspective within the secondary curriculum they teach? Participation in an international experience during their college career would be a first-step. However, the challenge is impacting college students' behavior and motivating them to participate in an international learning activity. This study addressed two priority areas of the National Research Agenda: Priority 3 – "Sufficient Scientific and Professional Workforce That Addresses the Challenges of the 21st Century" (p. 9) and Priority 5 – "Efficient and Effective Agricultural Education Programs" (Doerfert, 2011, p. 10). Student participation in international experiences has the potential to both improve agricultural education programs and enhance the workforce.

Theoretical Framework

The theoretical framework for this study was based on the theory of planned behavior and motivation as these concepts provide a means of understanding students' decisions to act and can allow the development of programs to meet targeted students' needs. The concepts of this theory were first articulated by Fishbein and Ajzen in 1975 in which an approach to understanding

intentions and behaviors was outlined. The theory of planned behavior evolved out of this early work and "provides a useful conceptual framework for dealing with the complexities of human social behavior" (Ajzen, 1991, p. 206).

Given that intentions precede behavior, the theory of planned behavior (Ajzen, 1991) presents a model that depicts the influences on intention. Ajzen (2006) explains that individuals act on behavioral decisions based upon "behavioral beliefs," "normative beliefs," and "control beliefs." Each of these beliefs translates into an "intention" to act on a "behavior." Ajzen (2006) describes each of these beliefs as follows. Behavioral beliefs relate to what one thinks the consequences/outcomes of a behavior can be and result in a favorable or unfavorable attitude. If the attitude is favorable, there is a higher likelihood that the person will engage in the behavior. For this study, behavioral beliefs relate to the benefits or drawbacks to participating in an international experience. Normative beliefs relate to what other people think about the behavior and could result in social pressure or influence. For this study, normative beliefs would include opinions and experiences of peers and family members as they are perceived by the student. Control beliefs relate to factors that facilitate or discourage the behavior and result in a perception of control over the behavior. For this study, control beliefs are factors such as students' understanding of academic degree plans, financial constraints, or personal obligations.

Ajzen and Fishbein (2005) explain that there are two distinct types of attitudes – "general attitudes toward physical objects" (p.173) and "attitudes toward performing specific behaviors with respect to an object or target" (p. 174). The authors express that one's behavior is a result of beliefs, attitudes, and intentions. Given that attitudes impact beliefs, it is critical to understand the attitude and perception of our audience if we are to impact their intention to participate in international experiences.

Motivation is a key aspect to all educational endeavors. Learners must be motivated to engage in, participate in, and internalize experiences from educational activities. Fazio (1990) contributed to the literature focused on attitudes and behavior through his introduction of the MODE model which focused on the influence of motivation and opportunity. "MODE is an acronym for [M]otivation and [O]pportunity as [DE]terminants of whether the attitude-to-behavior process is primarily spontaneous or deliberative in nature" (Fazio & Olson, 2003, p. 301). The authors assert that in order to encourage an attitude-behavior process a person must "be both motivated to engage in the necessary cognitive effort and have the opportunity to do so" (p.302). Motivations can be both internal and external. Understanding motivation can enable elements to be put in place that would not only encourage participation but enable greater gain from participation. Keller (1987) provides a framework for motivation related to instructional design that includes four areas: attention, relevance, confidence, and satisfaction. The Keller model "is grounded in expectancy-value theory which derives from the work of Tolman (1932) and Lewin (1938)" (Keller, 1987, p. 2). Given that the development of international experiences are in fact intended to be educational endeavors, the Keller model was used as a means of understanding how international experiences could be designed to best motivate participation and engagement. Further, Eccles and Wigfield (2002) articulate the need to not only focus on the rational/cognitive aspect of motivation but also study the affective processes that can impact motivation. Thus, we were particularly interested in personal preference and attitudes toward international experiences.

The planning, development, and implementation of international experiences directly impact the ultimate participation of agricultural science pre-service teachers in these programs. Only through an understanding of attitudes and perspectives can we meet the needs of students as we consider behavior and motivation. Encouraging participation in these programs is not sufficient; activities that occur before, during, and after the programs are all critical in the process in order to encourage a change in behavior, meet motivation needs, and enable learning.

Purpose and Objectives

The purpose of this descriptive study was to investigate pre-service agricultural science teachers' perspectives of and motivation for international experiences in order to provide guidance for the development of effective international experiences that meet student needs while increasing global mindedness of participants. Specific objectives included (a) document past participation in international experiences, (b) identify preferences for program characteristics (i.e., beliefs), (c) document motivation for participation in international experiences, and (d) identify aspects that would encourage or discourage participation (i.e., motivation).

Methodology

The methodology employed mixed methods and followed a "sequential explanatory design" (Creswell, Plano Clark, Gutmann, & Hanson, 2003, p. 178). This design was selected in order to "use qualitative results to assist in explaining and interpreting the findings of a primarily quantitative study" (p.178). An online survey was utilized to collect quantitative data and individual interviews were employed to collect qualitative data to enable a rich understanding of the quantitative data.

The researcher developed survey was based upon the work of Briers, Shinn, and Nguyen (2010) and modified to include questions to capture beliefs, motivation, and personal experience. The survey included questions related to participation in international experiences, preference for various characteristics of these experiences, motivation for participation, importance placed on various characteristics, foreign language ability, and time living outside of the state and country. Basic demographic questions were also included in order to describe the respondents and also gain a better understanding of financial issues that could impact participation. A combination of multiple-choice, ranking, short answer response, and Likert-type questions were utilized. The interview protocol consisted of open-ended questions designed to encourage respondents to share opinions regarding international experiences in general and aspects that would encourage or discourage participation. Identification of countries as developed or undeveloped utilized United Nations' (2012) classifications. Interview questions encouraged pre-service agricultural science teachers' to share their perspective related to the importance of international experiences and their own personal future plans. Interviews were an extension of the online survey. For example, motivation factors were listed in the survey and students were provided the opportunity to further explain their motivations in the interview. Both the survey and interview protocol were reviewed by a panel of experts for face and content validity. Adjustments were made based upon recommendations prior to data collection. Questions were treated as independent statements and frequencies and percentages were reported. Interview notes were compared with individual responses on the survey to determine if responses were consistent. Careful review of responses revealed that the students interviewed answered strategically placed questions the same in the interview as they did in the online survey.

A census was conducted with spring and fall 2014 student teachers enrolled in a course at Texas A&M University. These individuals were in the process of completing an agricultural teacher certification program. The population was limited to this group to enable an in-depth study of an intact group. After completion of the survey, all participants were invited to participate in an interview. The total population consisted of 39 students of whom 31 completed the online survey and of these seven were interviewed.

Completion of the online survey required, on average, eight minutes to complete. Data collected via the online survey was analyzed using a statistical software program (i.e., SPSS). Interviews were conducted in person and respondents were coded R01 through R07 to maintain confidentiality. Each interview lasted approximately 30 minutes. In addition to interview notes recorded during the interview, the researcher maintained a reflection log in which overall thoughts

and impressions were recorded after each interview. Following the completion of four interviews, a peer debriefing was held to identify themes and determine if additional interviews were necessary. The review of interview notes resulted in a recommendation to conduct additional interviews; three additional interviews were conducted. A second peer debriefing was conducted and it was determined that data saturation had been reached. Triangulation was accomplished through a comparison of respondents' responses within the context of the interview to responses to the online survey, along with a comparison of research findings to the researcher's reflection journal. Triangulation "is not the simple combination of different kinds of data but the attempt to relate them so as to counteract the threats to validity identified in each" (Berg, 2009, p. 6). An audit trail was implemented through the use of coding to ensure that statements could be connected with themes and sources (Erlandson, Harris, Skipper, & Allen, 1993) during data analysis. The constant-comparative method (Glaser & Strauss, 1999) allowed themes to emerge and provided a descriptive picture to support and further explain the survey findings. The journal and documentation of the audit trail increased trustworthiness and credibility. Trustworthiness and credibility were further strengthened through the review of interview notes by three researchers who confirmed categorization during additional peer debriefing sessions. Institutional review board approval was received to conduct the study.

Findings

The following findings are based upon the responses from the population studied. Due to the qualitative methods and the purposive sample, we cannot infer to a larger population; however, the results inform practice and add to the theory base. It is recognized that there are limitations to this study due to the small sample size.

Description of the Population

The population consisted of students enrolled in the agricultural science education program at Texas A&M University who were pursuing teacher certification (see Table 1). Of the responding students, 55% (n=17) hold cumulative GPAs of 3.00 or higher, 74% (n=23) were female and 26% (n=8) were male, all of whom were 20 years or older. The majority of the students have lived only in Texas and only 6% (n=2) have lived outside of the United States for more than a year. The ethnic origins of the respondents were 94% (n=29) Caucasian and 6% (n=2) Hispanic or Latino. Furthermore, only 3 students (9%) indicated being conversational in a language other than English; two in Spanish and one in Japanese.

In order to better understand our population, questions were asked regarding how students were paying for college. Over 70% (n=23) of the respondents reported having a full or partial scholarship; 13% (n=4) and 61% (n=19) respectively. Furthermore, 74% (n=23) of respondents have a loan through a governmental or non-governmental source. Additionally, 71% (n=22) of students receive some kind of financial assistance from family, while 39% (n=12) use money saved from their previous work and 45% (n=14) currently work to assist in financing their education.

Participation in International Experiences

Of the responding students, 42% (n=13) reported no international experience. Of these students, 21% reported they were interested in pursuing an international opportunity, 58% said they were not able, and 21% had no interest in gaining an international experience in college (see Table 2). For the 58% (n=18) of students with previous international experience, 56% were interested in pursuing an opportunity, 22% said they were not able, and 22% had no interest in pursuing an international experience in college.

Table 1
Summary of Demographic and Scholastic Characteristics of Respondents

Demographic/Scholastic Characteristic	*f*	%
Gender		
Male	8	26
Female	23	74
Ethnic Origin		
White only	29	94
Hispanic or Latino of any race	2	6
Language(s) spoken other Than English		
Spanish	2	6
Japanese	1	3
None	28	91
Age		
20 years	1	3
21 years	13	42
22 years	11	35
23 years or older	6	19
Cumulative Grade Point Average		
4.00	2	6
3.50-3.99	9	30
3.00-3.49	6	19
2.50-2.99	12	39
2.00-2.49	2	6
Residence(s)		
Lived only in Texas	22	71
Lived outside of Texas for 1-9 years	6	19
Lived outside of Texas for more than 10 years	3	10
Lived only in U.S.	29	94
Lived outside of U.S. for 1-9 years	1	3
Lived outside of U.S. for more than 10 years	1	3

Note. $N = 32$.

Respondents interviewed included two males and five females with a variety of experiences. Four respondents interviewed had international experience but only one of these had gained the experience as a part of college. The other three individuals had gained their experiences in secondary school (R04), lived overseas (R01) or participated in a cruise (R05). It is important to note that interpretation of an international experience was the act of being outside of the United States. Thus, from the perspective of the student, a cruise would be an international experience if they were outside the United States. Three of the respondents interviewed reported no international experience. The majority (five of the seven) of the respondents interviewed had friends or family members who had travelled internationally.

Preferences Related to Program Characteristics

Of the top 10 countries self-identified by respondents, seven of them are located in Western Europe (making up almost three-fourths of respondent preference within the top 10 countries), two were part of Oceania, and one in South America (see Table 3). All of these countries are classified by the United Nations (2012) as having developed economies. This finding was further supported by qualitative data which revealed that students had a definite preference for developed countries. As one respondent stated, "I would hesitate to go to an undeveloped country" (R03). However, almost

all respondents interviewed indicated that distance did not impact their participation – in fact, the one respondent who referred to distance stated, "Going further might be more exciting" (R06).

Table 2
Respondents' Participation and Willingness to Participate in International Experiences Outside of the United States

International Experience or Willingness	*f*	%
Have you participated in any international experiences that involved travel outside of the United States (for school or personal)?		
Yes, and it was very satisfying	15	48
Yes, and it was OK	3	10
Yes, but it was not satisfying	0	0
No, I have not participated in any international programs	13	42
Would you consider participating in an international experience in college?		
Yes, I am interested	13	42
No, I am not interested	6	19
No, I am not able	12	39

Most respondents indicated they would prefer an international experience either via a Texas A&M University study abroad program or through an internship. Sixty-five percent (n=20) and 52% (n=16) ranked these programs as their first or second choice, respectively. Moreover, most respondents ranked an international experience via enrollment in a foreign university or a non-Texas A&M University study abroad program the lowest. Over 80% (n=25) also ranked an international experience through a service-learning or volunteer program (e.g., church) as two, three, or four out of six. Comments received during interviews further supported and clarified these preferences. Students (R01, R02) reported that an internship would have greater value to them than merely a trip to a foreign country or participation in a study abroad.

Table 3
Top 10 Countries of Preference Among Respondents

	1st Choice (*n* = 30)		2nd Choice (*n* = 29)		3rd Choice (*n* = 27)		4th Choice (*n* = 26)		
Country[a]	*f*	%	*f*	%	*f*	%	*f*	%	Total
Australia	6	20	1	3.4	2	7.4	3	11.5	12
England	4	13.3	5	17.2	0	0.0	1	3.8	10
Italy	3	10	4	13.8	3	11.1	1	3.8	11
Scotland	3	10	0	0.0	1	3.7	2	7.7	6
Germany	2	6.7	5	17.2	0	0.0	2	7.7	9
France	2	6.7	1	3.4	6	22.2	0	0.0	9
Brazil	2	6.7	3	10.3	1	3.7	0	0.0	6
New Zealand	2	6.7	0	0	1	3.7	3	11.5	6
Spain	1	3.3	2	6.9	2	7.4	0	0.0	5
Ireland	0	0.0	0	0.0	5	18.5	3	11.5	8

Note. Top 10 were selected based on total number of participants' placing in the top 4.
[a] Countries are organized by frequency in the 1st Choice category.

Students revealed that they would most prefer an international program that lasted 1-6 weeks; 39% (n= 12) preferring 1-2 weeks and 42% (n=13) preferring 3-6 weeks. While most

students (n=22) ranked the 1-6 week range as their first and second preference, 7-14 weeks was mostly the third or fourth preference.

Fifty-five percent (n=17) of respondents ranked 15 or more weeks as their lowest preference for an international experience. These findings were confirmed during the interviews. All the respondents interviewed indicated that length of stay would impact their decision to participate. The suggestions varied from two weeks to two months. There was both an indication of making sure the program was long enough to experience the culture but not so long that it interfered with other obligations.

Motivation for Participation in an International Experience

Most respondents selected increased employability, the opportunity to live in another country, the enhancement of life experiences, and a boost to their résumé as attributes that definitely would motivate them to take part in an international experience (see Table 4). Means and standard deviations were provided to allow easier comparison of responses. Other factors that the majority of respondents determined to be motivational (either probably or definitely) included the learning of a new language, the importance of international experiences pertaining to their personal development, the enhanced knowledge of their academic specialization, and obtaining a graduate degree. The factor that participants deemed as the least motivational, though there was a broad array of results, was the opportunity to work in another country after completing their current degree.

Table 4
Ratings of Motivational Factors for International Experience(s) Among Respondents

	1 DWN	2 PWN	3 N	4 PW	5 DW	M
Factor	*f*	*f*	*f*	*f*	*f*	SD
Enhance my life experience	0	0	6	9	16	4.32 0.79
Increased employability	0	3	3	11	15	4.19 0.98
Looks good on a résumé	2	4	3	6	17	4.00 1.34
Opportunity to live in another country or culture	2	1	6	9	14	4.03 1.31
Important stage in my personal development	1	2	9	11	9	3.81 1.05
Enhance knowledge of my academic specialization	1	5	5	12	9	3.74 1.33
Get a graduate degree	1	8	6	11	6	3.45 1.15
Learn another language	4	4	7	10	7	3.42 1.31
Importance placed by academic advisor or department	2	8	7	11	4	3.26 1.15
Opportunity to work in another country after completing current degree	8	5	6	8	5	2.90 1.47

Note. Factors organized by highest mean. DWN = definitely will not motivate. PWN = probably will not motivate. N = neutral. PW = probably will motivate. DW = definitely will motivate.

All respondents interviewed indicated that participating in an international experience would be beneficial. They expressed awareness that they would gain a new perspective (R03, R06, R05), learn about a new culture (R02, R04, R05, R07), and meet new people (R01). As one respondent stated, "It would heighten my ability to extend what I know" (R02).

Aspects that Encourage or Discourage Participation in an International Experience

No listed factor on the survey was, by a large number, considered to be very unimportant or not important at all in regard to participation in an international experience; however, a small number (n=7, 23%) noted weather conditions/climate as not important and a majority selected having friends with them as neither important or unimportant (see Table 5). Means and standard deviations were provided to facilitate comparison of responses. Aside from having friends with them on a study abroad, every other factor was considered important by the majority. Cost and subject matter of the program were revealed as extremely important factors both within the quantitative data and the qualitative data. With the exception of the country, subject matter, costs, cultural attractions, and weather/climate, at least 10 respondents chose neither important nor unimportant for all factors (seven out of ten). Qualitative findings support those displayed in Table 5. Interviewees indicated that the financial aspect directly impacts their participation. Safety was recognized as important, but as shared by one student, "I trust the university" (R07). Only one interviewee indicated program type as non-influential; each of the others said this would impact their participation. Respondents indicated an interest in an experience as a group (R05, R07) with the focus on experience rather than academics (R05).

Respondents interviewed varied in regard to the importance of connecting an international experience with course credit. Some (R03, R07) felt strongly that the experience should be connected with course credit, while others (R04, R05) felt strongly that the experience should not be connected with course credit. Students revealed in the survey a mixed opinion regarding the role that language spoken in the country would play in their decision to participate; this was also exhibited during the interviews. Five respondents interviewed (R01, R02, R03, R05, R07) indicated that the language of the country could impact their decision to participate. However, of these one stated, "We could use cheat sheets of phrases" (R02) and another stated, "We could use translators" (R03). These statements reveal that the language spoken may not have the same level of impact on their decision as one might think. Given that the majority (91%) of the students reported no second language, this concern is understandable. Surprisingly, the quality of accommodation during an international experience was shared as an important aspect to the respondents interviewed (R01, R02, R05, R06, R07). Respondents interviewed were split on the role that climate would play in their decision to participate with some (R01, R02) indicating that the nature of agriculture itself could impact the success of the trip based on climate. "Seasons play a role in agriculture … it can affect what you can see and not see" (R02). Weather was also mentioned in the context that "Freezing cold weather would not be enjoyable" (R06). All interviewees indicated that program reputation would impact their participation decision. Comments included: "The goal [of the program] is important" (R04). "What people say [about the program] would have an impact" (R07). "[Program reputation] would ease my mind" (R05).

Table 5

Important Factors for Respondents When Selecting an International Experience While in College

Factor	1 NI *f*	2 VU *f*	3 N *f*	4 VI *f*	5 EI *f*	M SD
						4.13
Cost	0	2	6	9	15	0.96
						4.03
The subject matter of the program	0	3	6	9	14	1.02
						3.94
The country itself	0	3	7	11	11	1.00
						3.87
Accessibility to and from the U.S.	0	2	10	11	9	0.92
The reputation of the foreign university	0	3	10	9	10	3.84 1.00
The reputation of non-Texas A&M University organizing the program	1	1	10	12	8	3.77 0.99
						3.77
Cultural attractions in the area	1	4	6	13	8	1.06
The language spoken in the country	1	3	10	10	8	3.61 1.05
For Texas A&M University programs, the reputation of the specific program	0	3	11	13	5	3.61 0.88
						3.42
Weather conditions/climate	1	6	9	10	6	1.12
Having friends on the study abroad with me	2	4	14	4	8	3.35 1.20

Note. Factors organized by highest mean. NI = not at all important. VU = very unimportant. N = neither important nor unimportant. VI = very important. EI = extremely important.

In response to the question related to what one might lose through participation in an international experience, only one respondent reported nothing (R06). The remaining respondents interviewed expressed very specific items. Time with family being lost was expressed by multiple respondents interviewed (R01, R02, R04, R05). As one respondent stated, "Parents are expecting you to work on the farm during the summer ... or at least work and save money for college" (R01). Additional factors related to domestic job opportunities and experiences lost (R05, R06, R07) and impact on academic progress (R01, R07). One respondent shared that as a student serving on a competition team there was the potential to lose eligibility (R01). "Inability to complete internships" (R03) was shared as a specific factor. All respondents interviewed indicated an awareness of international experiences available at the university and within the department. Further, respondents interviewed revealed an understanding of the positive impact that participation in an international experience could have on their job opportunities. Expressing that an international experience would differentiate them from other students (R01, R06), make you appear more flexible (R03, R04), and in general increase your opportunities (R04, R05). Respondent statements included: "It shows you can be versatile" (R04); "Provides experiences that others do not have" (R06); and "[Shows] you can work well with others" (R03).

During the interviews, respondents were asked for their specific recommendations as to how the department could design a program that would meet their needs. Aspects including cost, timing, promotion, group travel, hands-on activities, academic scheduling considerations, and program focus were each mentioned by multiple individuals. A strong interest in an agricultural science focused experience was expressed (R04, R05, R07) which would contain hands-on activities (R02, R04, R07), and be conducted with pre-service teachers as a group (R06, R07). As one respondent shared, "If I had found a location and focus [that interested me], I would have figured it out cost wise" (R06). It was recommended that the experience be introduced at least a year in advance to allow planning (R05) in relation to both saving funds (R01) and adjusting their schedules (R04). They emphasized the impact that cost had on their participation and recommended strategies to be put in place that would allow them to set-aside funds in advance of their participation in an international experience as well as strategies that would enable group fund raising to defer costs for all students in the agricultural science area. As noted by respondents: "Cost is a real issue – group fund raising would help" (R02) and "[Participating in an international trip is] a double whammy, I am missing pay and paying money" (R07).

Conclusions

Participation in International Experiences

Given that 44% of respondents indicated having no international experience, it was concluded that there is a need to provide international experience opportunities. However, given that 12 (39%) students specifically indicated they would not be able to participate in an international experience it was also concluded that additional investigation would be needed to gain a better understanding of what would enable participation. Only six out of the 31 respondents (19%) indicated they were not interested in participating in an international experience revealing the potential for participation by the others. Given the high percentage (71%) of students who reported relying on financial assistance from family to pay for their education, it was concluded that the cost of an international experience could directly impact participation. Further, it was concluded that marketing potential international experiences and their benefits to students' families might also be beneficial in encouraging student participation.

Preferences Related to Program Characteristics

Given that a majority of the countries recommended by students both via the survey and in the interviews are classified by the United Nations (2012) as having developed economies, it was concluded that students have a preference for experiences with the comforts of the western or developed world. Anderson, et al. (2006) documented a "positive impact on intercultural sensitivity" (p. 467) for students who participated in a short-term study abroad to developed countries (i.e., England and Ireland); thus, it was concluded that programs should focus on developed countries. However, interviews did reveal openness for experiences in undeveloped countries as long as those experiences were safe, educational, and affordable.

Length of an international experience was a program characteristic that was identified as an aspect that could influence participation. Most respondents indicated a preference for a program that lasted 1-6 weeks. Thus, it was concluded that programs that are shorter in length would have a greater possibilities of encouraging participation.

Motivation for Participation in an International Experience

Students reported enhancing their knowledge of their academic specialization as a positive motivational factor and stressed the importance of hands-on activities as part of an experience; thus, it was concluded that the inclusion of hands-on activities may motivate pre-service agricultural science teachers to participate in international experiences. This compliments the literature that "teacher education study abroad programs can be transformative for pre-service teachers, leading them on a path toward worldview…" (Marx & Moss, 2011). Given responses to motivational factors, the data suggests that most students found the most motivation in a benefit for their own "premier leadership, personal growth, and career success," which are key components in the mission of the National FFA Organization (2014, p. 6) and agricultural education, which is their focus of study. While the quantitative data suggest that having a friend with them during an international experience was not a key factor in selecting an international experience, the qualitative data from the interview suggests otherwise. Several students made it known that having someone they knew with them during the experience was preferred. It was concluded that an international experience designed for agricultural science students as a group would be well received by these students.

Aspects that Encourage or Discourage Participation in an International Experience

A review of both qualitative and quantitative data revealed that overall respondents are aware and open to an international experience, but that there are specific aspects that would encourage or discourage their participation. It was concluded that while cost is a critical factor in the decision process, it is not the only factor. Program focus and general safety concerns, as perceived by the student, are also very important. However, respondents were not in agreement regarding the influence course credit or language would have on their decision to participate. While some students indicated that it was critical for the experience to be connected with course credit, others indicated just the opposite. Regarding language of the country to be visited, many respondents shared potential solutions to addressing language barrier issues. Thus, it was concluded that factors such as the association of an international experience with course credit and the language of the country to be visited are not necessarily deciding factors for students. One factor that did appear to be an influencing element was their perception of what they would miss while participating in the experience. Aspects such as time away from family, missed job opportunities, and impact on academic program were all items that program planners should take into consideration.

Implications and Recommendations

Research reported by Bunch, et al. (2013) revealed that "many undergraduate students are not fully engaged in [international experiences]" (p. 217) and the authors' call for additional research to identify barriers and incentives to address this issue. The study reported here answers that call. Effective planning for an international experience requires an understanding of the target group for which the experience is being designed. It is not surprising that agricultural science teachers would prefer hands-on, applicable and immediately relevant experiences. The agricultural science classroom is by nature experiential and the importance of "learning by doing" (Dewey, 1938) is critical to these students; experiential learning must be an integral part of international experiences for this audience and the learning must be relevant (Keller, 1987).

Theory of planned behavior (Ajzen, 2006) explains that students' behaviors will be based upon their beliefs and thus we must understand their beliefs. While we might "think" that an experience in an undeveloped country would be a "good" experience for them – if the students "believe" that they do not want to travel to an undeveloped country – it is quite possible that they

will not sign up to participate in those programs. Thus, efforts should be made to design programs that match their beliefs in order to encourage global mindedness. It is possible that a trip to a developed country could lead to a trip to an undeveloped country in the future. In fact, prior research has documented this impact on students with international experiences in developed countries such as Scotland (Hains, et al., 2012) and England / Ireland (Anderson, et al., 2006).

Motivation is critical in encouraging participation. Keller (1987) shared the important role that satisfaction can play in motivation. Respondents (via the online survey and interviews) revealed a variety of aspects that would impact their decision to participate in an international experience. While the importance of receiving course credit for participation in international experiences was indicated as important for some, the importance of having friends and people they knew with them was indicated as important for others. Further, the concept of financial planning was expressed as critical. Each of these aspects can impact both a student's decision to participate and overall student satisfaction should they choose to participate. Based on these conclusions, the implication exists for an international experience to be designed and planned a year in advance specifically for pre-service agricultural science teachers that involve the entire group of teachers as a cohort. This approach could motivate students to actually participate in the international experience. Further, motivational factors identified could be used in the design of promotional material. It is possible that awareness of program characteristics that match these motivational factors could encourage participation.

As noted earlier, providing opportunities for international experiences and students selecting to participate in these opportunities are two very different aspects. Given that previous research has documented a positive impact on students' global competency due to an international experience (Foster, et al., 2014), it is critical that we investigate ways to encourage students to participate in these types of experiences. As noted by Hains, et al. (2012), planning is critical and will impact the outcome of the international experience. Given that so few respondents have participated in an international experience, we question whether or not the students truly understand the benefits of participating in these types of experiences. Though previous studies have documented benefits, the motivation to participate was not seen in the students studied. Faculty are encouraged to present an international perspective in classes and when advising students to better inform them of the documented benefits of participating in an international experience. The findings from this study reveal specific characteristics related to program planning that have the potential to impact agricultural science teacher participation in an international experience. Aspects including a cohort approach, hands-on activities, and advance planning were revealed. Findings provide suggestions for program planning and preferences for students studying to be agricultural science teachers.

Literature (Ibezim & McCracken, 1994; Marx and Moss, 2011; Radhakrishna, et al., 2003) points to the need for agricultural science teachers to bring international concepts and experiences into secondary schools. While our study looked at motivational factors that might encourage a pre-service teacher to participate in an international experience from an individual perspective, it did not address factors related to the impact an international experience could have on what and how an individual teaches once they become employed in a secondary school. Further research is needed to determine best practices for enhancing international knowledge and understanding for youth in secondary schools.

It is recognized that these study findings are limited to the population investigated given the size of the population studied. It is recommended that additional research be conducted with a larger sample to further describe motivations and barriers for pre-service agricultural science teachers' participation in international experiences. However, we believe the findings may provide ideas worthy of consideration for programs of similar type and size, and also adds to the theory base related to motivation and barriers for pre-service teachers' participation in international experiences.

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