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**A Survey to Determine International Program Growth Areas and Needs to Guide a College of Agriculture International Programs Office**

Leslie D. Edgar  
Don W. Edgar  
University of Georgia

Olivia Caillouet  
Catherine Dobbins  
University of Arkansas

**Abstract**

*International programs (IP) continue to grow in importance. There is an increased demand from employers and communities for globally competent individuals, yet only 2.3% of Dale Bumpers College of Agricultural, Food and Life Sciences (Bumpers College) students studied abroad in an agriculture-related program during the 2014 and 2015 academic year. This study used descriptive survey methods with University of Arkansas undergraduate students enrolled in Fall 2017 Bumpers College courses (n = 1,758) to determine their perceptions of international experiences. These perceptions included identifying the most influential barriers and benefits to participation. The majority of students were interested in short-term faculty-led programs (n = 1,190, 72.1%), followed by international internships (n = 760, 46%). Students wanted to participate in an IP during summer I (n = 1,138, 69%), followed by summer II (n = 839, 50.8%). Based on a 5-point Likert-type scale, students reported “cost is too high” (M = 3.83, SD = 1.10) and being “too busy with school” (M = 3.27, SD = 1.18) as the most influential barriers to participating in an IP. Using the same Likert-type scale, students reported an IP being a “life-changing opportunity” (M = 4.49, SD = 1.75) and “sets me apart when applying for grad school/jobs” (M = 4.27, SD = 1.90) as the most influential benefits. The fact that 5.5% of the students surveyed had participated in an IP confirms that the Bumpers College requires more immersion in order to meet the University of Arkansas goal for 25% international participation by 2020.*

*Keywords:* agricultural education, international experiences, international programming, study abroad

### **Introduction**

According to the National Research Council (2009), colleges and universities should prepare students who will one day become employees, managers, leaders, policy-makers, and natural and social scientists to acknowledge and respond to the dynamic world around them. With that in mind, international programs (IPs) have grown in popularity and have increased in importance for colleges of agriculture (Graham, 2012). For the purpose of this study, IPs are synonymous with study abroad. Peterson and colleagues (2011) defined a study abroad as “an education abroad enrollment option designed to result in academic credit” (p. 13). These types of programs help students to become more globally competent, an attribute widely desired by employers today.

Benefits of participation in IPs are not limited to students alone; IPs hold significance for faculty members as well. Dooley, Dooley, and Carranza (2008) noted that faculty members who participated in a program in Mexico experienced the enhancement of academic, social, and cultural skills through internationalizing curricula and wanted to share these outcomes with their students. However, The Open Doors Report published by the Institute of International Education (IIE) with support from the U.S. Department of State’s Bureau of Educational and Cultural Affairs stated that only 2.5% of students who studied abroad were enrolled in an agriculture-related program during the 2015 and 2016 academic year (Institute of International Education, 2017). According to the National Research Council (2009), the term “agriculture” is limited to farming. However, the term means different things to different people and 21st-century agriculture is much broader, encompassing a range of disciplines such as forestry, nutrition, natural resources, environmental science,

and life sciences (National Research Council, 2009, p. 14). With that in mind, agricultural company leaders have stated that they need to have college graduates who are globally comfortable and confident (Place, Irani, Friedel, & Lundy, 2004). This presents the need for greater participation from collegiate agricultural students, as well as faculty, to be involved in IPs.

Although there is a need for more student involvement in IPs, barriers still exist. These barriers were categorized as external or internal to participation in IPs (Andreasen, 2003). External barriers included lack of time, lack of financial stability, and conflict with classes (Andreasen, 2003). Internal barriers included fear of lost opportunity, fear of different cultures, lack of desire, and lack of family support (Andreasen, 2003). In addition, Sammons and Martin (1997) stated that barriers to international involvement for graduate students at Iowa State University were lack of awareness, interruption of academic program, and financial considerations. Sammons and Martin (1997) expanded beyond IPs with the term “international involvement”, which included internationalization of agricultural curricula and participation in international activities. However, they explained that a sub-category of “international involvement” was study abroad programs. If colleges strive to see increased IP participation, it is crucial that these barriers be addressed.

Due to the internal and external barriers to study abroad participation explained by Andreasen (2003), it is imperative that more knowledge be gained relating to student preferences for agricultural IP lengths, types, and locations. The Dale Bumpers College of Agricultural, Food and Life Sciences (Bumpers College) International Programs Office (IPO) has a limited amount of funding, approximately \$25,000 annually, for grants supporting

faculty-proposed IPs. The funding provided through this grant program is intended to help reduce the overall financial burden for students. The grant helps faculty to establish IPs by lessening the program cost for students by covering faculty travel expenses such as lodging, meals, and transportation. If the proposed program is not a faculty-led IP, then funding may be used by faculty for an *exploratory trip* that helps with the development of an IP course syllabus, itinerary, as well as strong connections in country. To ensure funding has an adequate return on investment, it is important that funding proposals be selected based on student interests and needs as identified in this research.

Information regarding student program preferences can be used to develop programs that meet student needs and support students to overcome barriers to IP participation. Harder and Bruening (2008) stated that increasing student IP participation within colleges of agricultural sciences is an ongoing concern for professionals interested in developing these programs. Consequently, it is important to understand students' perceptions to promote these programs effectively (Harder & Bruening, 2008). There has been a shift from semester- and year- long programs to short-term programs for business students, which embraced advantages such as lower costs and shorter time commitments (Carley, Stuart, & Dailey, 2011). Previous research by Estes, Hansen, and Edgar (2016) found that students' enrolled in agricultural College courses were most interested in IPs that lasted 4 to 6 weeks in length. Additionally, Lukosius and Festervand (2013) reported numerous program decisions can help to lower the student cost, such as the program location which has a tremendous impact on total program cost.

Nevertheless, students recognized the benefits of IPs even though barriers to

study abroad participation existed (Chang et al., 2013; Edgar, Edgar, & Hansen, 2018). Benefits from study abroad experiences have been documented as personal and professional, which promoted changes from increased confidence to increased global competencies in the workplace (Chang et al., 2013; Edgar et al., 2018). Briers, Shinn, and Nguyen (2010) found that students were most motivated to participate in an IP based on how much the experience will contribute to their overall life experience. Zhai and Scheer (2004) found that agricultural college students that had contact with international people had a significant correlation for positive attitudes towards cultural diversity. They recommended that colleges of agriculture enhance their educational programs through study abroad experiences to increase student's global and cross-cultural competencies. Zhai and Scheer (2002) also found study abroad experiences had a positive impact on students' attitude towards cultural diversity and 78% of participants reported an increase in self-confidence. The most important motivating factors for students to participate in a study abroad program were personal interest, peer influence, desire for new experiences, along with timing and cost (Zhai & Scheer, 2002). Northfell, Edgar, Miller, and Cox (2013) stated that students enrolled in a three-week summer study tour in Ghent, Belgium experienced self-confidence levels that increased steadily throughout the study-tour. Harder and Bruening (2008) reported students' perceptions toward the importance of international issues and found that the "ability to function as a citizen in a global society" had the highest mean value, followed by the "ability to interact with people from other parts of the world" (p. 240). The contemplation of barriers as well as benefits plays an important role for students when deciding whether to participate in an IP. The benefits to IPs have

been documented across colleges of agriculture. However, student barriers to international involvement must be studied and addressed in order to increase IP participation.

When selecting an IP, students assess the pros and cons of participating before committing (Estes et al., 2016; Edgar et al., 2018). Universities should examine these decisions, based on advantages and disadvantages of participation, to provide opportunities and resources that align with students' interests. Understanding students' perceived barriers and benefits will enable greater focus on efforts to increase the number of students enrolled in IPs (Danjean, Bunch, & Blackburn, 2016). The Bumpers College has worked for the past five years to increase international education participation to keep up with the University of Arkansas goal of 25% international participation by 2020. Yet, Bumpers College has maintained about a 5% student international experience participation rate (Edgar, Edgar, & Hansen, 2018).

### **Theoretical Framework**

This research built on previous work conducted by Estes et al. (2016). Social Cognitive Theory (SCT) guided this and previous studies. Conner (2013) also used SCT to describe study abroad experiences. SCT focuses on human behavior perpetuated by continued motivation and regulation of self-influences (Bandura, 1991). Causal agents for SCT were forethought and self-regulation, which translated to incentives and guided purposive action (Bandura, 1991). The term *self-regulation* is a multi-faceted phenomenon of cognitive processes that included: (1) self-monitoring, (2) standard setting, (3) evaluative judgement, (4) self-appraisal, and (5) affective self-reaction (Bandura, 1991). SCT provides an explanation for learning by expressing that individuals should possess symbolizing and

forethought capability, as well as self-regulatory and self-reflective capabilities, when engaging in the learning process (Bandura, 1986). The symbolizing and forethought capabilities are especially important for students deciding whether to participate in IPs, they help the student assign meaning to an experience as well as think about potential consequences of actions before engaging in such behaviors (Estes et al., 2016).

In addition to SCT, theoretical models have been used to describe study abroad experiences by Booker (2001) and Peterson (2003), which were based on Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA). Both the TRA and SCT described by Bandura (1991) assumed that individuals were rational beings who used available information to make decisions, form evaluations based on possible outcomes, and ultimately arrive at decisions on the action in question (Minton, 2016). Fishbein and Ajzen (1975) stated TRA is when "a person's beliefs serve as the informational base that ultimately determines his attitudes, intentions, and behaviors" (p. 14). This research used these theoretical models to determine how IP characteristics and perspectives affect participation.

### **Purpose & Objectives**

The purpose of this study was to collect information from students enrolled in Bumpers College courses at the University of Arkansas that would inform and guide future IP experiences within the agricultural college. Furthermore, the purpose of this study was to gather information in regard to student preferences for IPs, such as location of program, length of program, type of program, time of year for program, and student demographics of those surveyed (college enrollment, major, minor,

classification, honors college status, and previous IP experience).

The following objectives guided this study: (1) describe students' perceived benefits to participating in an IP, (2) describe students' perceived barriers to participating in an IP, (3) describe students' preferences for IPs (program location, program length, program type, and time of year), and (4) describe survey respondents' demographics.

## **Methods**

### **Data Collection**

This study used descriptive survey methods with primarily undergraduate students enrolled in Fall 2017 Bumpers College courses. The survey population consisted of a random stratified sample of courses by academic level and department (Trochim, 2001). The courses were either large-enrollment or required by major. All freshman orientation undergraduate courses in Bumpers College were included in the sample as well. There were 1,758 students who completed the survey, but not every respondent answered every question. Students not present (no contact) were not calculated in the population because they were not present for the informational presentation therefore they were not able to be controlled for non-response. Students were allowed approximately 10 minutes to complete a paper-form instrument and were asked not to complete the survey more than once during the Fall 2017 semester. Survey administration began 23 August 2017, two days after the start of the Fall semester, and lasted approximately six weeks. The number of classroom visits varied per day with approximately 2,295 (potentially duplicate) undergraduate and graduate students enrolled in these 35 courses. Useable data collected from 1,758 students yielded a response rate of 78%. The survey was

administered to students either before, during, or after a PowerPoint presentation that described the IPs offered by Bumpers College. There was variation in when the survey was offered depending on the professor's classroom time allotment. Classroom participants ranged from 15 students per classroom to over 150. In general, larger class enrollments had a larger range in college majors than smaller classrooms.

### **Instrumentation**

Usable data were collected from students using a 13-question, multi-scale instrument modified from previous research by Estes et al. (2016). Participant responses on the five-point Likert-type scale ranged from "completely disagree" to "completely agree". Part I of the instrument was an open-response question that addressed students' preferred IP location(s). Part II addressed students' interest, knowledge, and motivation to participate in an IP. Part III addressed students' perceived costs for participating in an IP. Part IV addressed students' barriers to participating in an IP and Part V addressed students' benefits to participating in an IP. Parts II and III were not reported in this article, because they are a part of a multi-institutional assessment. The barrier options for this instrument were based on barriers used in research by Wingenbach et al. (2003) Edgar and Edgar (2009), and Estes et al., (2016). Last, Part VI addressed the amount students were willing to pay for an IP, previous IP experience, preferred IP type, preferred IP length, preferred time of year, and academic demographics. Face and content validity were deemed acceptable by the Bumpers College international programs faculty committee comprised of one individual from each academic department.

**Data Analysis**

Cronbach’s alpha was used to estimate the reliability for the benefits and barriers constructs, which was found to be reliable at .796 ( $N = 1,679$ ) and .971 ( $N = 1,642$ ), respectively. Data were analyzed using SPSS to determine frequencies, means, and standard deviations. The researchers calculated the open-response question that addressed students’ willingness to pay for an IP and sorted responses into one of 12 categories. The 12 cost categories were reviewed and determined appropriate for content-related validity by an expert panel.

**Findings & Results**

Students who reported their classification ( $n = 1,758$ ) included: 15.8%

freshman, 38.4% sophomores, 33.4% juniors, 8.8% seniors, and 3.6% were either graduate students or chose not to respond to this question. Some participants reported they had previously participated in a University of Arkansas international programs ( $n = 93$ , 5.5%), while others had not ( $n = 1,607$ , 94.5%). There were 86.7% non-honors students ( $n = 1,464$ ) and 13.3% honors students ( $n = 224$ ). The majority of students were interested in short-term faculty-led IPs ( $n = 1,190$ , 72.1%), followed by international internships ( $n = 760$ , 46%), international exchanges ( $n = 490$ , 29.7%), University of Arkansas Rome Center campus program ( $n = 365$ , 22.1%), international independent study ( $n = 304$ , 18.4%), and international research ( $n = 285$ , 17.3%) (see Figure 1).

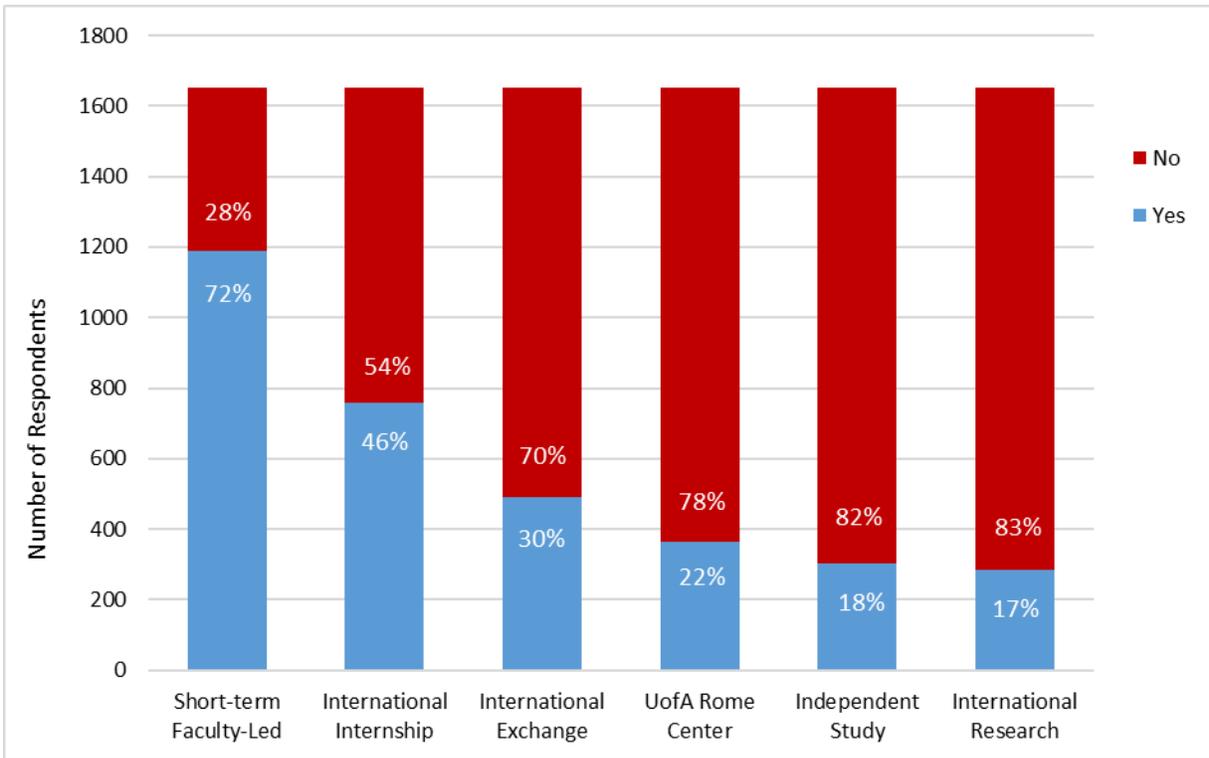


Figure 1. Preferred program types for international participation. (Note: Students could choose multiple program types.)

The majority of students wanted to participate in an IP during summer I (first 5-week summer session) ( $n = 1,138$ , 69%).

This response was followed by their second choice being a summer II (second 5-week summer session) ( $n = 839$ , 50.8%). The least

preferred participation time was the fall semester ( $n = 322$ , 19.5%) (see Figure 2).

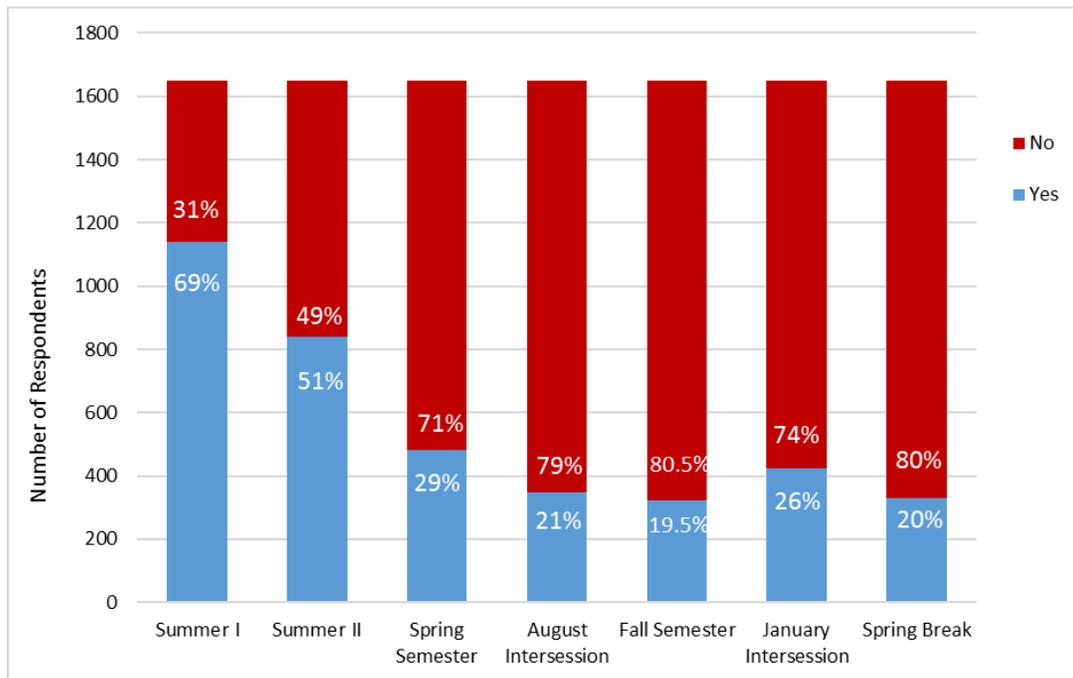


Figure 2. Preferred time of year for international program participation.

(Note: Students could choose multiple times of year for programs.)

In addition to the preferred time of year, the researchers also determined that most students preferred a program that was 4-6 weeks in length ( $n = 922$ , 55%). The second most commonly preferred program length was 2-3 weeks ( $n = 874$ , 52%). The least preferred program length was two semesters or more ( $n = 117$ , 7%) (see Figure 3).

Based on open responses, the top 10 countries students were interested in

attending from most to least included: (1) Italy, (2) Australia, (3) Spain, (4) France, (5) Greece, (6) England, (7) New Zealand, (8) Germany, (9) Ireland, and (10) Scotland. A map was generated to display the countries that University of Arkansas students preferred attending (see Figure 4). Being an open response, preferred countries were recorded and cities, towns, etc. were changed to their respective country for coding purposes.

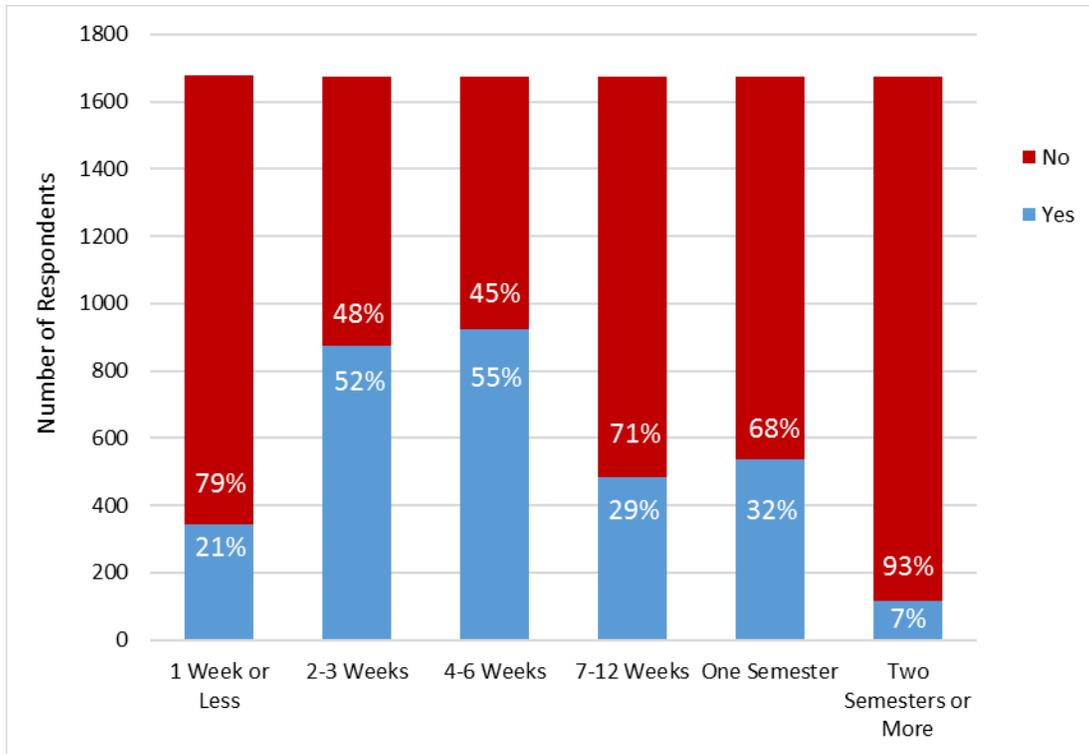


Figure 3. Preferred length for international program.  
 (Note: Students could select multiple program length choices.)



Figure 4. The blue shaded area represents the top 10 preferred international program locations and the pins represent active Bumpers College 2018 program locations.

Table 1

*Perceived Barriers to Participating in an International Program (IP) (N = 1,758)*

Barrier	<i>M</i>	<i>SD</i>
Cost is too high	3.83	1.10
Too busy with school	3.27	1.18
There are not enough funding opportunities	3.09	1.15
I do not have the language skills needed to be successful abroad	3.00	1.27
Too busy with work	2.99	1.32
IP courses do not fit into my degree plan	2.69	1.26
An IP will not have an impact on my future career	2.27	1.15
Academic department does not encourage IP participation	2.27	1.10
I do not have parental support to participate in an IP	2.21	1.23
I do not have academic advisor support to participate in an IP	2.16	1.10
I do not have friend/peer support to participate in an IP	2.15	1.12
I do not have the skillsets needed to be successful in an IP	2.12	1.00
I have a fear of traveling outside of the U.S.	1.76	1.15
<i>Grand Mean</i>	2.59	1.70

Note: Scale: 1=Completely Disagree, 2=Somewhat Disagree, 3=Neutral, 4=Somewhat Agree, and 5=Completely Agree.

Participants were asked their perceived barriers to participating in an IP. Based on a 5-point Likert-type scale (1 = *completely disagree* to 5 = *completely agree*), students reported “cost is too high” ( $M = 3.83$ ,  $SD = 1.10$ ), being “too busy with school” ( $M = 3.27$ ,  $SD = 1.18$ ), and “not enough funding” ( $M = 3.09$ ,  $SD = 1.15$ ) as the most influential barriers from participating in an IP (see Table 1). The least reported barrier was having “a fear of traveling outside the U.S.” which garnished a relatively low rating ( $M = 1.76$ ,  $SD = 1.15$ ).

Using the same Likert-type scale, students reported characteristics of IPs, such as a “life-changing opportunity” ( $M = 4.49$ ,  $SD = 1.75$ ), “sets me apart when applying for grad school/jobs” ( $M = 4.27$ ,  $SD = 1.90$ ), and providing an “opportunity to work/live abroad” ( $M = 4.25$ ,  $SD = 1.95$ ) as the most influential benefits (see Table 2). Grand means were determined for benefits and barriers to IPs. Benefits to IPs ( $n = 1,730$ ) resulted in a grand mean of 4.24 ( $SD = 1.72$ ). For barriers, there were 13 individual statements compressed ( $n = 1,735$ ) for a grand mean of 2.60 ( $SD = 1.70$ ).

Table 2

*Perceived Benefits to Participating in an International Program (IP) (N =1,758)*

Benefit	<i>M</i>	<i>SD</i>
Life-changing opportunity	4.49	1.75
Socially/Culturally learn more about a host country	4.46	1.75
Sets me apart when applying for grad school/jobs	4.27	1.90
Opportunity to work/live abroad	4.25	1.95
Enhance employment prospects	4.23	1.92
Positive impact on my future career	4.22	1.91

IPs are very effective in building career skills	4.18	1.92
Learn more about my academic field	4.08	1.04
Experience the local nightlife (clubs, bars, etc.)	3.85	1.21
<i>Grand Mean</i>	4.24	1.72

Note: Scale: 1=Completely Disagree, 2=Somewhat Disagree, 3=Neutral, 4=Somewhat Agree, and 5=Completely Agree.

Students were also asked an open response question: “If cost is the only barrier keeping you from participating in an international program, what is the most you would be willing to pay for an IP?”. Responses varied among the total number of respondents ( $n = 1,195$ ). Some students stated they needed more information in order to answer this question such as the

program length, program location, program type, etc. ( $n = 219, 18\%$ ). Students also stated they would be most willing to pay less than \$1,000 ( $n = 191, 16\%$ ), followed by \$1,501 - \$2,000 ( $n = 177, 15\%$ ). Sixteen individual responses were excluded, because they stated other barriers to IP participation other than funding, which was outside of the scope of the question (see Figure 5).

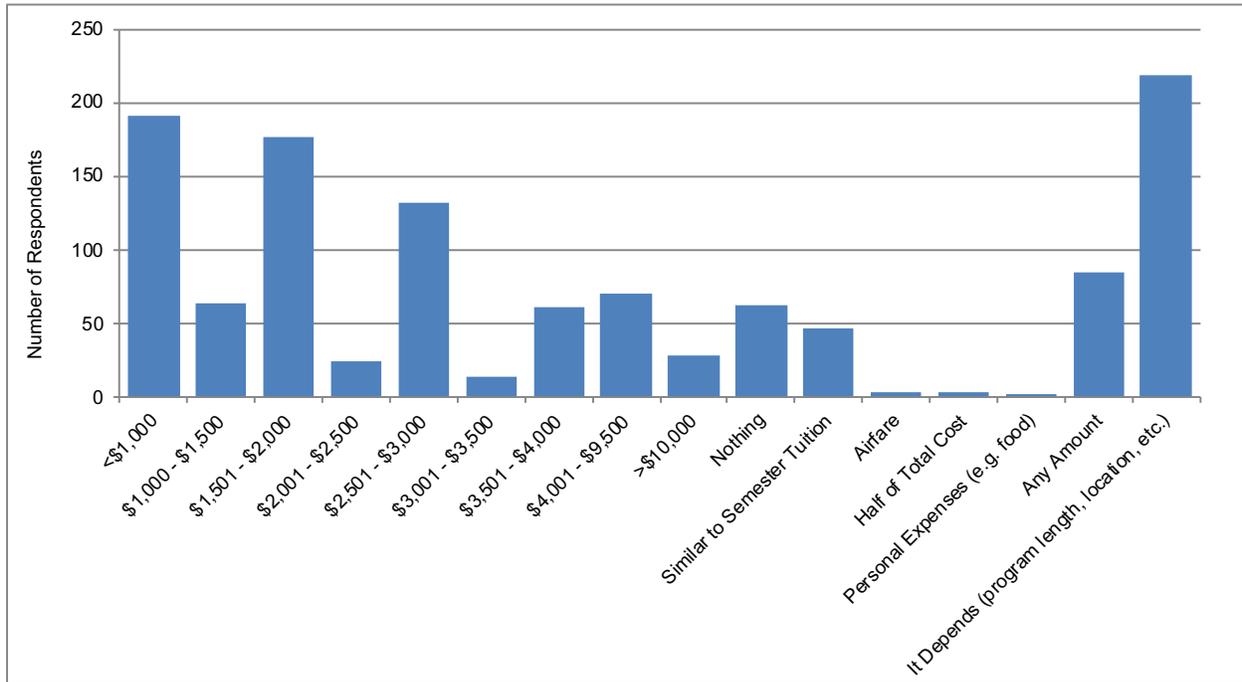


Figure 5. Amount respondents were willing to pay to participate in an IP experience.

**Conclusions & Recommendations**

The fact that only 5.5% of the students surveyed had participated in an IP confirms that more research needs to be done for Bumpers College programs if the University of Arkansas plans to meet the goal for 25% international participation by 2020. The majority of students surveyed

were interested in short-term faculty-led programs during summer I. Respondents noted they “agreed” or “completely agreed” with all nine IP benefit statements ( $M = 4.24, SD = 1.72$ ), except participating in an IP “to experience the local nightlife (clubs, bars, etc.)” ( $M = 3.77, SD = 1.25$ ). Students noted that IPs can serves as a “life changing

opportunity” and can help them “socially and culturally learn more about a host country”. However, there was more variability in responses to the 13 IP barriers statements. This research supports previous work by Estes et al. (2016) and Edgar and colleagues (2018) noting the pros and cons to participating in an international learning experience as reported in barriers and benefits constructs.

When evaluating the findings of this study through the lens of SCT plus TRA and assuming individuals are rational beings (Bandura, 1991) information must be provided to make decisions. Because only a small percentage had participated in an IP the question that begs to be answered is did participants have enough information to determine barriers or benefits? This thought is enlightened by the statement that the informational base held (by individuals) determines attitudes, intentions, and behaviors (Fishbein & Aizen, 1975). It could be argued that cost, funding opportunities, and school schedules being held as top barriers are beliefs which may be short term oriented because the benefits were led with the belief of a “life-changing opportunity”. Thus, TRA and SCT align with the top benefits found in this study because of the ability to form evaluations based on possible outcomes of an experience that change lives due to IP participation. The barriers of cost and time seem most appropriately reasoned due to decisions on the needed action in questions regarding IP experiences.

Understanding students’ perceived barriers and benefits will enable universities and colleges to improve efforts focused on increasing the number of participating students (Danjean et al., 2016). This research is a step toward using data to guide Bumpers College IP development. Data gathered will provide IP leaders and administrators with information that will help address barriers and benefits found.

Based on TRA and SCT, information will be provided with costs so students who do believe this is a life changing experience can plan and make educated decisions. With shrinking institutional budgets and the desire to serve students in all educational areas, it is important to focus international programming areas on specific student needs and interests.

### **Implications**

These results have highlighted the need within Bumpers College to direct efforts toward particular program types, program durations, and program locations. Salisbury, An, and Pascarella (2013) stated that the public has demanded greater accountability documenting and demonstrating the educational value from higher education institutions, while policy makers have emphasized the importance for funding decisions to be made from rigorous research studies. The broader implications of this research were to gather information about Bumpers College programs and use that information for program development. This study determined that students were most interested in short-term, faculty-led programs ( $n = 1,676$ , 72%) that have a duration between 2 and 4 weeks ( $n = 1,676$ , 52%) or 4 and 6 weeks ( $n = 1,676$ , 55%). This changed from 2016 when 13.5% of Bumpers College students ( $n = 773$ ) reported they were interested in faculty-led programs (Estes et al., 2016). However, similar to findings in this study Estes et al., (2016) stated that in 2016 and 2017 Bumpers College students reported the greatest interest to participate in IPs during the summer, followed by the spring semester. Furthermore, previous experiences and preferred IP experiences were identified in Europe, which remained consistent in this research. There were commonalities between findings by Estes et al. (2016), Edgar et al. (2018) and findings from this

study; however, the differences in responses confirmed the need to continue IP research in response to the dynamic and continually changing needs of students. Perhaps looking at longitudinal data would assist with deeper program understanding and development.

This research can be used to guide Bumpers College IPs by funding proposals that align with program length, locations, and types in which students were most interested. Findings about costs students enrolled in Bumpers College were willing to pay to participate in an IP as well as preferred program lengths, program types, and preferred time of year will assist in the decision-making process for funding. The alteration of program lengths has attempted to address the external barriers Andreasen (2003) described as lack of time and conflict with classes. Although this study is limited to Bumpers College, other universities should use this study as a model for evaluating the needs of students at their respective institution to create programs that are specific to their students' needs. Additionally, future research needs to be conducted to gain more knowledge about the external barriers described by Andreasen (2003) as lack of financial stability. Research could determine how students would like to learn about funding opportunities and more accurately assess how much funding is needed depending on the program length, program location, and program type. Also, it may be useful to include a multiple choice quantitative question to evaluate students' willingness to pay for IP experience in addition to an open response question. Future research efforts could also focus on the internal barriers stated by Andreasen (2003) such as fear of different cultures and lack of desire that were not directly evaluated through this study.

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