

**A Typology of University Agriculture Students' Projected Motivations to Study Abroad:  
An Application of Q Methodology**

Richie Roberts  
Louisiana State University

Shelli D. Rampold  
University of Florida

Raegan Ramage  
Louisiana State University

Benita Komunjeru  
Louisiana State University

**Abstract**

*The study's purpose was to understand Louisiana State University freshman agriculture students' projected motivations to study abroad. To achieve this, we used a Q methodological approach. When viewed through the lens of the expectancy-value model of achievement motivation, findings suggested students' motivations could be interpreted through three typologies: (1) Goal-Oriented Students, (2) Social-Oriented Students, and (3) Learning-Oriented Students. In particular, the Goal-Oriented Students expressed they were motivated to enroll in a study abroad course because they perceived it could enhance their educational and career-related ambitions through personal growth. Meanwhile, Social-Oriented Students articulated that the social dimensions of study abroad courses, i.e., networking, relationship building, and opportunities to experience a new culture, served as their primary motivation. Finally, the Learning-Oriented Students reported their desire to gain more agricultural knowledge, experience an alternative method of instruction, and learn to work with diverse populations provided intrinsic value and encouraged them to study abroad in the future. As a consequence, this study's findings not only broaden the study abroad literature but also provide implications for university administrators and faculty to better accommodate students through recruitment and programming tailored to their motivational needs.*

**Keywords:** motivation; Q methodology; study abroad; university agriculture students

### Introduction and Review of Literature

A fundamental role of institutions of higher education is to provide students opportunities to engage in high-impact educational experiences that foster personal and professional development (Kuh, 2008). In light of the growing impact of globalization on the behaviors and characteristics of colleges and universities (Mitchell & Nielsen, 2012), high-impact learning practices that support global learning and diversity education have been identified as an essential tenet of the core mission of universities (Kuh, 2008). Efforts to internationalize the college experience have, therefore, gained momentum across the higher education landscape, particularly in areas of developing and promoting education abroad. For example, findings from the most recent survey conducted by the American Council on Education ([ACE], 2017) revealed growth in the number of U.S. institutions implementing policies and practices to foster internationalization efforts. Moreover, the number of students enrolling in study abroad programs has continued to increase over the past decade, with roughly one in 10 students studying abroad in the 2017-2018 academic year (Institute of International Education [IIE], 2019a).

Recent calls to provide more educational opportunities abroad are supported by an extensive body of academic literature, in which myriad student benefits have been documented. In particular, the primary reported outcomes for students who studied abroad include: (a) enhanced cultural competence; (b) a more developed global perspective; (c) deeper understanding of international issues; (d) increased abilities to communicate and collaborate with diverse groups; (e) the development of international networks beneficial to students' future careers; and (f) increased self-efficacy and self-confidence when working in unfamiliar situations (Bunch, Rampold, Cater, & Blackburn, 2018; Conner, Milius, Stripling, Loizzo, & Doerr, 2019; Conner & Roberts, 2015; Foster, Sankey Rice, Foster, & Barrick, 2014; Hainline et al., 2018; Roberts & Edwards, 2015, 2016). Students who participated in a study abroad course in college were also found to be more likely to continue to engage in intercultural activities in the future than students who had not participated (Murphey, Sahakyan, Yong-Yi, & Magnan, 2014).

The benefits students obtain through study abroad courses is also critical to the success of colleges of agriculture in producing high-caliber graduates prepared to enter the agricultural career pipeline (Alston, Roberts, & Warren English, 2019, 2020). As an illustration, today's graduates must be prepared to navigate an interconnected global economy, increased competitiveness in the world market, and more accessible borders that have improved access to commodities and services (Lewis & Gibson, 2008). Colleges of agriculture have, therefore, been tasked with producing globally minded and skilled professionals (National Association of State and Land-Grant Colleges [NASULGC], 2004). In response, recent literature has primarily focused on identifying the best practices for creating effective study abroad courses in agriculture (Bunch et al., 2018; Conner et al., 2019; Conner & Roberts, 2015; Fabregas-Janeiro, Kelsey, & Robinson, 2011; Lamm et al., 2011; O'Malley, Roberts, Stair, & Blackburn, 2019; Pigg, Richardson, Roberts, & Stair, in press; Roberts & Edwards, 2015, 2016; Rodriguez & Roberts, 2011). However, well-designed programs may provide little value if university agriculture students continue to choose *not* to enroll. For example, less than 3% of the undergraduate students who studied abroad in the 2017-2018 academic year were enrolled in an agriculture major (IIE, 2019b). As a result, it is necessary for additional work to be dedicated to examine the best practices for the design and delivery of study abroad experiences while also more intimately distilling a profile of agriculture students' projected motivations to participate.

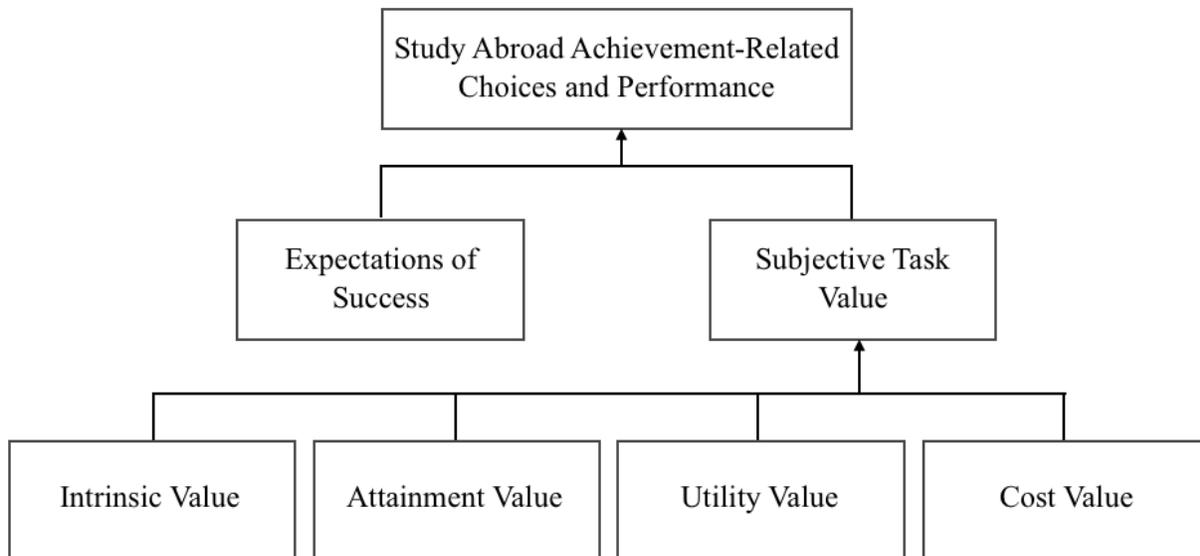
### Theoretical Framework

This study was grounded in Eccles and colleagues' expectancy-value model of achievement motivation (Eccles et al., 1983; Wigfield & Eccles, 2000). Using a similar lens, Raczkoski, Robinson, Edwards, and Baker (2018) investigated relationships among agricultural and life sciences students' overall motivation to study abroad and their perceived expectations of success, subjective-task value, and self-efficacy. A statistically significant and positive relationship was reported among each of the motivational factors and students' overall motivation to study abroad (Raczkoski et al., 2018). Although some of the other evidence in the relevant body of work has not examined motivational constructs using the expectancy-value model, several investigations (Beseli, Warner, Kirby, & Jones, 2016; Murphey et al., 2014) have more broadly examined indicators of study abroad participation, and their findings suggest students are more likely to participate if they are motivated, self-efficacious, and perceive the associated costs do not exceed the value they assign to the experience. Therefore, much of the existing literature on study abroad in agriculture aligns with key features of the expectancy-value model.

Conceptually, the key outcome of the expectancy-value model is the ability to describe individuals' *achievement-related choices and performance*. Eccles et al. (1983) theorized this outcome was directly influenced by individuals' (a) expectations of success and (b) subjective task-values (Eccles et al., 1983; Wigfield & Eccles, 2000; see Figure 1). *Expectations of success* represent individuals' beliefs about how well they will perform a task in the future. As such, students who have lower expectations of their abilities to succeed are less likely to enroll in a study abroad course. For example, Calliouet and Wood (2019) examined agricultural students' perceived barriers to participate in an international experience. They found concerns about language skills were among the top five barriers to enroll in a study abroad course (Calliouet & Wood, 2019). When interpreting this finding through the expectancy-value model, students with such concerns would be unlikely to study abroad. *Subjective task value* refers to how the value assigned to a task influences an individual's desire to actualize it in practice. Therefore, task value is subjective because individuals can attribute a range of values to the same task or activity based on their personal goals, beliefs, and memories (Wigfield, Tonks, & Klauda 2009). When applied to study abroad, subjective task value suggests students' motivations to enroll can be explained, in part, by examining four key values they assign to the experience: (1) attainment value; (2) intrinsic value; (3) utility value; and (4) cost value. To investigate students' projected motivations to study abroad, we emphasized the four aforementioned values during this study's design (Eccles et al., 1983; see Figure 1).

*Attainment value* is the personal importance students place on doing well on a task in terms of their core values (Eccles et al., 1983). Therefore, attainment value incorporates aspects of self-identity because individuals may perceive a task or activity as important if they view success as central to their sense of self (Wigfield et al., 2009). Consequently, students who maintain that studying abroad aligns with their interests, or how they wish to view themselves, may assign a higher value to enrolling in a study abroad course and be more likely to engage. To demonstrate, Beseli et al. (2016) reported the influence of attainment value on motivation to study abroad by describing how some students were motivated because they were from a small town and desired to see the world. The second value, *intrinsic*, refers to the personal enjoyment individuals' gain from performing a task. If an individual intrinsically values an activity, he or she will be more likely to participate and sustain engagement in the activity in the future (Wigfield et al., 2009). For example, students may assign a higher degree of value to studying

abroad if the intended outcomes align with their interests. Examples of intrinsic value identified in previous research include: (a) gaining overall life experience and life-changing opportunities; (b) experiencing other cultures; and (c) understanding how they can use their education to create a positive change in the world (Bunch et al., 2015; Caillouet & Wood, 2019; Danjean et al., 2015; Edgar, Edgar, & Hansen, 2018). *Utility value* refers to the perceived usefulness of a task and how it fits within an individual's future goals or plans (Eccles et al., 1983). Students who believe studying abroad will enhance their employability may perceive participating in such a program as more valuable than students who do not (Bunch et al., 2015; Danjean et al., 2015; Edgar et al., 2018). Lastly, *cost value* refers to what individuals must give up to perform a task, as well as the anticipated effort needed to complete the task (Eccles et al., 1983; Wigfield et al., 2009). Program cost, being too busy with school or work, and time away from home and friends have been identified consistently across prior literature as barriers to study abroad participation (Briers, Shinn, & Nguyen, 2010; Bunch et al., 2015; Caillouet & Wood, 2019; Danjean et al., 2015; Edgar et al., 2018). Therefore, students with concerns regarding the time and the effort required to study abroad may not perceive the value of the experience outweighs the associated costs and will be less motivated to enroll. As a consequence, the expectancy-value model's four values – attainment, cost, intrinsic, and utility – served as a critical lens in this investigation to examine students' motivations to study abroad.



*Figure 1.* Expectancy-value model of study abroad achievement motivation. Adapted from “Expectancy-Value Model of Achievement Motivation” by J. S. Eccles, T. F., Adler, R. Futterman, S. B. Goff, & C. M., Kaczala, J. L., Meece, and C. Midgley, 1983, *Achievement and achievement motivation*, p. 75.

### Purpose and Research Question

The study's purpose was to understand freshman agriculture students' projected motivations to study abroad at Louisiana State University. Using this purpose, we used one research question to guide the investigation: What patterns (i.e., the Q-sort factor load) emerged regarding freshman agriculture students' projected motivations to study abroad?

### Methods

In this study, we used Q methodology (Brown, 1980; McKeown & Thomas, 2013). Q uses both quantitative and qualitative approaches through a unique data collection technique, called a Q sort, to understand the collective views of individuals on a phenomenon of interest (Watts & Stenner, 2013). In Q, McKeown and Thomas (2013) argued that small sample sizes are preferred since individuals' observational perspectives are unique and should not be used to infer generalizability. Because of this, it is critical to ensure that participants' perspectives emerge through analysis, using a blend of quantitative and qualitative techniques, rather than imposing researchers' secondary interpretations (Brown 1980). Therefore, unlike the quantitative paradigm, validity and reliability are not major concerns in Q (Brown 1980; McKeown & Thomas, 2013). Instead, Q researchers place value on *replication*. As an illustration, rather than attempting to yield consistent internal factor structures, a Q researcher would place emphasis on understanding if, using a similar condition of instruction, comparable factors would emerge. Therefore, Q researchers do not attempt to generalize; rather, they offer an interpretation of participants' subjective views at a moment in time (Brown, 1980; Watts & Stenner, 2013).

### Instrumentation

In the instrument development phase, the researchers conducted a synthesis of the literature to understand how students' motivations to study abroad have evolved over time. Using the themes from the literature, we then created an open-ended questionnaire in which we purposefully selected 60 freshman students, equally male ( $n = 30$ ) and female ( $n = 30$ ), from each academic department in the college of agriculture. In particular, we asked these individuals to reflect on their motivations to study abroad by providing narrative responses to three open-ended items: "*What aspects of study abroad courses interest you the most?*" "*What aspects of study abroad courses have prevented you from enrolling before?*" and "*What aspects of study abroad courses concern you the most?*" Students' narrative responses were then analyzed using thematic analysis (Merriam & Tisdell, 2016). Through this strategy, we created 154 initial statements from participants' words, which represented this investigation's *concourse* (Watts & Stenner, 2013). However, because we perceived using all 154 statements would be too taxing on participants, we developed theoretical categories using expectancy-value theory to facilitate a sampling of 36 statements, i.e., the study's Q set. Of note, the statements were organized to reveal four homogenous theoretical categories: (1) attainment value, (2) cost value, (3) utility value, and (4) intrinsic value. However, we also emphasized heterogeneity within each category by presenting the concept in different ways. A description of each theoretical category is provided in Table 1.

Table 1  
*Theoretical Categories of the Q-Set*

| Category         | Description of Category  | # of Statements |
|------------------|--|-----------------|
| Attainment Value | Statements that relate to the personal importance students place on doing well as a result of study abroad and how it speaks to their self-identity. | 8               |
| Cost Value       | Statements that include negative aspects of engaging in study abroad, such as time, effort, and more.  | 8               |
| Intrinsic Value  | Statements related to the personal enjoyment that students attain from participating in a study abroad.  | 8               |

| Category      | Description of Category   | # of Statements |
|---------------|---|-----------------|
| Utility Value | Statements revolved around how study abroad may relate to students’ goals, such as their future career. | 8               |

**Q Set and Data Collection**

For this investigation, we sought to understand the dominant perspectives that emerged in regard to freshman undergraduate agriculture students’ motivations to study abroad. To accomplish this, we purposefully sampled 20 sorters who (a) were a freshman in the college of agriculture at Louisiana State University, and (b) had not participated in a study abroad course. Further, to ensure a diversity of perspectives were represented, we prioritized recruiting sorters from each academic department in the college of agriculture at Louisiana State University with an undergraduate program. As a result, we successfully recruited 12 females and eight males sorters. Next, we asked our 20 participants, i.e., our Q set, to sort 36 randomized statements into three separate categories: (1) most like me, (2) neutral, and (3) most unlike me (McKeown & Thomas, 2013). Thereafter, they placed the individual statements onto a forced distribution (see Figure 2) ranging from -4 to +4 using the condition of instruction: “*What are your motivations to study abroad?*”

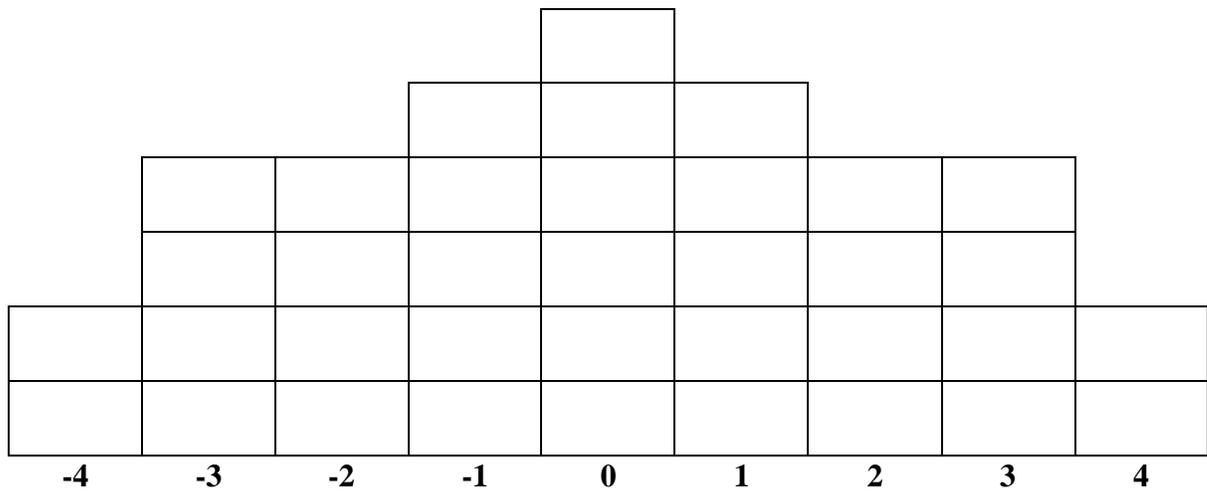


Figure 2. Forced distribution used to collect data during the Q-sort.

**Data Analysis**

After sorts were completed, we then used PQMethod version 2.35 to analyze our data (Schmolck, 2014). Three statistical tests were conducted: (a) correlation, (b) factor analysis, and (c) a summated computation of factor scores. Of note, we did not correlate items, or statements, using the traditional factor analysis approach. Instead, we correlated individual sorts following the conventions advanced by Brown (1980). Then, to extract factors, we used principle component analysis (PCA) by which we compared one, two, three, four, and five-factor solutions (Schmolck, 2014). After this procedure, we elected to use a three-factor solution to represent our findings because it captured (a) the largest number of total participants and (b) the great amount of explained variance, i.e. 62%. After identifying three factors, we analyzed (a) eigenvalues, (b) factor arrays, (c) factor loadings, (d) factor scores, and (e) each factor’s unique consensus and distinguishing statements. Further, we also identified defining sorts by analyzing the factor

matrix (see Table 2), using a significance level of .042 in which all 20 sorts were identified as defining. It should also be noted that correlations among factors were negligible ( $r = -0.02$  (1-2);  $0.07$  (1-3); and  $0.08$  (2-3)), which indicated that our selected factor solution was quality and reflected the diverse perspectives of participants (Brown, 1980).

Table 2

*Factor Matrix with Freshman Agriculture Students' Personal Characteristics*

| P Number/<br>Gender  | Age | Race               | Academic Department      | Factor Loadings   |                   |                   |
|----------------------|-----|--------------------|--------------------------|-------------------|-------------------|-------------------|
|                      |     |                    |                          | 1                 | 2                 | 3                 |
| 2-male               | 18  | White              | Ag Econ/Business         | 0.74 <sup>a</sup> | -0.04             | 0.23              |
| 5-female             | 19  | White              | Nutrition/Food Science   | 0.81 <sup>a</sup> | 0.15              | 0.01              |
| 8-male               | 19  | White              | Natural Resources        | 0.73 <sup>a</sup> | 0.11              | -0.02             |
| 10-female            | 18  | Black              | Textiles & Merchandising | 0.85 <sup>a</sup> | -0.05             | 0.12              |
| 11-male              | 18  | White              | Plant Science            | 0.71 <sup>a</sup> | 0.21              | -0.21             |
| 12-male              | 18  | White              | Animal Science           | 0.80 <sup>a</sup> | -0.01             | -0.05             |
| 17-female            | 20  | White              | Ag Econ/Business         | 0.79 <sup>a</sup> | -0.13             | 0.31              |
| 19-female            | 20  | Mixed              | Plant Science            | 0.77 <sup>a</sup> | 0.02              | 0.24              |
| 1-female             | 19  | White              | Plant Science            | 0.01              | 0.71 <sup>b</sup> | 0.11              |
| 3-male               | 19  | White              | Textiles & Merchandising | 0.18              | 0.77 <sup>b</sup> | -0.23             |
| 14-female            | 18  | Native<br>American | Textiles & Merchandising | 0.07              | 0.53 <sup>b</sup> | -0.01             |
| 15-female            | 18  | White              | Natural Resources        | -0.01             | 0.79 <sup>b</sup> | -0.16             |
| 13-male              | 18  | Black              | Ag Econ/Business         | 0.21              | 0.57 <sup>b</sup> | 0.20              |
| 18-male              | 19  | White              | Agricultural Education   | -0.11             | 0.61 <sup>b</sup> | 0.09              |
| 20-male              | 19  | White              | Animal Science           | 0.17              | 0.59 <sup>b</sup> | 0.04              |
| 4-female             | 19  | Other              | Plant Science            | 0.05              | 0.10              | 0.53 <sup>c</sup> |
| 6-female             | 18  | Black              | Nutrition/Food Science   | -0.09             | -0.02             | 0.74 <sup>c</sup> |
| 7-male               | 18  | White              | Agricultural Education   | 0.14              | 0.05              | 0.78 <sup>c</sup> |
| 9-female             | 18  | Black              | Natural Resources        | -0.01             | -0.07             | 0.85 <sup>c</sup> |
| 16-female            | 18  | White              | Agricultural Education   | 0.13              | 0.12              | 0.49 <sup>c</sup> |
| Defining Sorts       |     |                    |                          | 8                 | 7                 | 5                 |
| % Explained Variance |     |                    |                          | 39%               | 10%               | 13%               |

Note. <sup>a</sup>Indicates a defining sort for Factor 1. <sup>b</sup>Indicates a defining sort for Factor 2. <sup>c</sup>Indicates a defining sort for Factor 3.

To help interpret the study's findings, we conducted follow-up interviews with three individuals from each factor who loaded high on the factor but did not load significantly on the other two factors. Then, using NVivo® qualitative analysis software, we analyzed the high and pure loaders' responses using the constant comparative method (Corbin & Straus, 2015). After qualitative analysis, we employed Mauldin's (2012) Q interpretation procedures and compared the qualitative data against (a) participants' demographic information, (b) array positions of statements on each factor, (c) correlations between factors, (d) Z-score differences, (e)

distinguishing statements, and (f) consensus statements. Through this comparison of existing divergences and convergences among the data sources, we created a profile of each factor (Mauldin, 2012). Finally, we interpreted each profile through our theoretical framework, a process that helped emerge three diverse perspectives: (a) *Goal-Oriented Students*, (b) *Social-Oriented Students*, and (c) *Learning-Oriented Students*. Each perspective represents the motivational viewpoints freshman undergraduate agriculture students at Louisiana State University held in regard to studying abroad. Using key data from this investigation, we next narratively describe each emergent perspective in the presentation of findings.

## Results

Through our analysis, we operationalized the emergent patterns, i.e., the significant Q-sort factor loadings, as typologies. A typology is the classification of individuals based on empirical evidence (Watts & Stenner, 2013). We identified three typologies that explained 62% of the total variance regarding freshman university agriculture students' projected motivations to enroll in a study abroad course at Louisiana State University: (1) *Goal-Oriented Students*, (2) *Social-Oriented Students*, and (3) *Learning-Oriented Students*. To discern each typology, we used significant statements from the concourse, with accompanying statement numbers and factor array positions noted in parentheses, as well as qualitative responses captured during follow-up interviews to provide a rich narrative of the study's findings. A description of each typology follows.

### Typology #1 – *Goal-Oriented Students*

Eight participants, equally male and female, loaded significantly on the first typology, which accounted for 39% of the total variance. From *Goal-Oriented Students'* perspectives, their motivation to enroll in a study abroad course was primarily to further their educational and career-related aspirations (24, +4), i.e., it held *utility value* (Eccles et al., 1983). For example, they perceived including their experiences abroad on a résumé could help them be more attractive to potential employers (20, +4). As an illustration, one male high and pure loader shared: "My professors have said that international experience can make you more marketable for internships and other jobs, so that made me realize that I should probably plan to study abroad before I graduate." The *Goal-Oriented Students* were also motivated to enroll in a study abroad course in the future because they perceived it could help them achieve growth in key dimensions of their personal lives (4, +3). For instance, individuals holding this perspective reported they sensed study abroad courses might help them expand their horizons (28, +3) and learn to work with individuals from diverse backgrounds (19, +3). When probed during a post-sort interview about how a study abroad course might foster their personal development, one female high and pure loader revealed: "I have friends who have studied abroad and they talked about how the experience changed them. So, I think it would really push me to make me think differently." Table 3 offers statements from the concourse central to this typology.

Table 3  
*Array Positions for Goal-Oriented Students Statements*

| No.             | Statement  | Array Position | Theoretical Category |
|-----------------|--|----------------|----------------------|
| 24 <sup>a</sup> | Study abroad courses interest me because I believe it could help me develop employment skills. | +4             | Utility Value        |

| No.             | Statement   | Array Position | Theoretical Category |
|-----------------|---|----------------|----------------------|
| 20 <sup>a</sup> | Study abroad interests me because it could enhance my résumé.   | +4             | Utility Value        |
| 28              | Studying abroad would help to expand my horizons and encourage personal development.                      | +3             | Intrinsic Value      |
| 19 <sup>a</sup> | A study abroad experience could help me better understand how to work with diverse populations.           | +3             | Utility Value        |
| 4 <sup>a</sup>  | Participating in study abroad course could help me be a better person.                                    | +3             | Attainment Value     |
| 10              | The financial cost of study abroad discourages me.  | -3             | Cost Value           |
| 27              | I'm afraid participating in a study abroad might distract me from other commitments and responsibilities. | -3             | Utility Value        |
| 26              | I worry that the credits obtained from studying abroad will not apply towards my degree plan.             | -3             | Utility Value        |
| 11 <sup>a</sup> | The time away from my family and friends discourages me from participating in a study abroad.             | -4             | Cost Value           |
| 7               | I am not interested in studying abroad because I do see value in the experience.                          | -4             | Attainment Value     |

Note. <sup>a</sup>Indicates distinguishing statements for the *Goal-Oriented Students* typology.

### Typology #2 – *Social-Oriented Students*

Driven by the social dimensions of study abroad courses, seven individuals represented the *Social-Oriented Students* typology. Of note, the *Social-Oriented Students* exhibited the most racial diversity of the identified typologies with four reporting they were white, one black, one Native American, and the other student identifying as mixed race. Further, the *Social-Oriented Students* were nearly equally divided between males ( $n = 3$ ) and females ( $n = 4$ ). Individuals representing this typology maintained they were motivated by the potential to meet and network with new contacts (35, +4) and study abroad with friends and others in their social network (2, +4). Nevertheless, the financial cost associated with the experience served as a major deterrent to their decision enroll (10, +3). Case in point, one male high and pure loader revealed: “I have talked about it with some of my friends, but most of them [study abroad courses] were too expensive for me right now.” *Social-Oriented Students* also reported they were driven by the opportunity to experience new food and culture (30, +3), which could help them expand their horizons and begin to think differently in the future (6, +3). As a result, from the perspective of individuals comprising this typology, study abroad courses were a valuable use of their time (7, -3). During a follow-up interview, one high and pure loader expanded on this notion: “Study abroad courses seem really fun but also seems like they could help you grow as a person.” *Social-Oriented Students*’ significant statements are presented in Table 4.

Table 4  
*Array Positions for Social-Oriented Students Statements*

| No.             | Statement  | Array Position | Theoretical Category |
|-----------------|--|----------------|----------------------|
| 35 <sup>a</sup> | Study abroad interests me because I enjoy meeting and networking with new people                             | +4             | Intrinsic Value      |
| 2 <sup>a</sup>  | I am interested in study abroad because I have friends that will go with me.                                 | +4             | Attainment Value     |
| 10              | The financial cost of study abroad discourages me.   | +3             | Cost Value           |
| 30 <sup>a</sup> | I am interested in study abroad because I want to experience different types of food and culture.            | +3             | Intrinsic Value      |
| 6               | A study abroad course interests me because meeting different types of people will help me think differently. | +3             | Attainment Value     |
| 22              | I am interested in studying abroad because I want to be more competitive for university level awards.        | -3             | Intrinsic Value      |
| 13              | Concerns about my safety in a different country are a barrier to my participation in a study abroad.         | -3             | Cost Value           |
| 7               | I am not interested in studying abroad because I do see value in the experience.                             | -3             | Attainment Value     |
| 17 <sup>a</sup> | The emotional toll of study abroad courses is a barrier.   | -4             | Cost Value           |
| 14              | Concerns about communication barriers discourage me from studying abroad.                                    | -4             | Cost Value           |

Note. <sup>a</sup>Indicates distinguishing statements for the *Social-Oriented Students* typology.

### Typology #3 – *Learning-Oriented Students*

The final typology, *Learning-Oriented Students*, represented students who were primarily female (4/5). From this perspective, motivation to enroll in a study abroad course was grounded in their curiosity to acquire new insights through global engagement, i.e., it held intrinsic value (Eccles et al., 1983). In particular, the *Learning-Oriented Students* desired to learn more about agricultural production practices in another country (31, +4). Further, they viewed study abroad courses as an attractive option because of its design, experiential nature, and because it served as an alternative method of instruction (32, +4). The *Learning-Oriented Students* also perceived that study abroad courses could help them learn to work with diverse and underprivileged populations (19, +3; 8, +3) as well as to create a positive change in the world (5, +3). Or, as one high and pure loader explained: “I want to make an impact on the world so I think a study abroad course could help me understand how I can impact agriculture in other countries.” Table 5 provides an overview of the array positions of the *Learning-Oriented Students*.

Table 5  
*Array Positions for Learning-Oriented Students Statements*

| No              | Statement   | Array Position | Theoretical Category |
|-----------------|---|----------------|----------------------|
| 31 <sup>a</sup> | Studying abroad interests me because I would like to see how agriculture is practiced in different countries.                   | +4             | Intrinsic Value      |
| 32 <sup>a</sup> | I am interested in study abroad because I want to experience a different teaching approach.                                     | +4             | Intrinsic Value      |
| 5 <sup>a</sup>  | I am interested in studying abroad because I want to learn how to create positive change in the world.                          | +3             | Attainment Value     |
| 19 <sup>a</sup> | A study abroad experience could help me better understand how to work with people from diverse backgrounds in my future career. | +3             | Utility Value        |
| 8               | I want to study abroad because I want to expand my understanding of what it means to be underprivileged.                        | +3             | Attainment Value     |
| 1               | I'm not been interested in studying abroad because the courses do not align with my interests.                                  | -3             | Attainment Value     |
| 12              | I am not interested in participating in a study abroad because being in an unfamiliar culture scares me.                        | -3             | Cost Value           |
| 13              | Concerns about my safety in a different country are a barrier to my participation in a study abroad.                            | -3             | Cost Value           |
| 2 <sup>a</sup>  | I am interested in study abroad because I have friends that will go with me.  | -4             | Attainment Value     |
| 17              | The emotional toll of study abroad courses is a barrier to my participation.  | -4             | Cost Value           |

Note. <sup>a</sup>Indicates distinguishing statements for the *Learning-Oriented Students* typology.

### Conclusions

The purpose of this study was to understand freshman undergraduate agriculture students' projected motivations to study abroad. When viewed through the lens of the expectancy-value model (Eccles et al., 1983), findings suggested that students' motivations at Louisiana State University could be interpreted through three typologies: (1) *Goal-Oriented Students*, (2) *Social-Oriented Students*, and (3) *Learning-Oriented Students*. In particular, the *Goal-Oriented Students* expressed they were motivated to enroll in a study abroad course because they perceived it could enhance their educational and career-related ambitions through personal growth – a notion Eccles et al. (1983) described as utility value. This finding also aligns with those reported by Briers et al. (2010) that one of the primary motivations for university agriculture students to engage in international experiences is to enhance their competitiveness in their future careers.

*Social-Oriented Students*, the most racial diverse typology, articulated that the social dimensions of study abroad courses, i.e., networking, relationship-building, and opportunities to experience a new culture, served as their primary motivation – a notion that somewhat supports Eccles et al., (1983) description of intrinsic value. However, literature on the role social

influences play in serving as a primary motivation for agriculture students, especially regarding racial minority groups, to study abroad is scant. Finally, the *Learning-Oriented Students*, who were primarily female, reported their desire to gain more agricultural knowledge, experience an alternative method of instruction, and learn to work with diverse populations provided intrinsic value (Eccles et al., 1983) to encourage them to enroll in a study abroad course in the future, which is supported by literature reported in agricultural education (Danjean, et al., 2015; O'Malley et al., 2019; Raczkoski et al., 2018). Our findings, therefore, provided important insights into expectancy-value theory and practice regarding the design and delivery of study abroad courses. For instance, this study's findings could be used as a basis to explore new dimensions of expectancy-value (Eccles et al., 1983; Wigfield et al., 2009) regarding the need to more intimately understand the role that social dimensions play in foregrounding motivation. Finally, we conclude that cost value – financial, safety, and time related concerns – did not appear to profoundly influence the typologies distilled in this investigation (Eccles et al., 1983). As a consequence, our findings conflict with those reported by Raczkoski et al. (2018).

### **Implications, Recommendations, and Discussion**

As the blurring of borders between nations threatens to intensify, agricultural capital, labor, and trade will likely become more globally integrated in the future (Mitchell & Nielsen, 2012). Such trends present daunting challenges for U.S. colleges of agriculture that have, historically, struggled to motivate students to enroll in educational opportunities abroad (IIE, 2019b). As a result, today's graduates appear ill prepared to tackle a world fraught by increasingly complex agricultural issues and problems (Alston et al., 2019, 2020). In response, the current study identified three typologies that represented freshman university agriculture students' projected motivations to enroll in a study abroad course at Louisiana State University. Moving forward, we recommend that university administrators and faculty consider carefully the motivational characteristics of agriculture students identified in this investigation and use this knowledge to create recruitment and communication campaigns intended to target students' diverse interests. We also recommend that future research explore the types of recruitment strategies that influence students' intentions and actualized behaviors (Ajzen, 1991) to participate. Further, because students reported that cost value (Eccles et al., 1983) was not a primary factor influencing their motivation, we recommend that colleges of agriculture emphasize the value-added characteristics of study abroad courses to increase the likelihood of student enrollment moving forward.

A unique aspect of this study was that we analyzed indicators of students' motivation to enroll in a study abroad course by interpreting how such coalesced holistically to form patterns of thought (i.e., the Q-sort factor loadings). As a result, this approach offered a more granular profile of freshman agriculture students' motivations. For example, much of the previous research on student motivation to study abroad has focused on assessing the contribution of individual variables (Beseli et al., 2016; Danjean, et al., 2015; Raczkoski et al., 2018). However, through the use of Q methodology, we demonstrated how key motivational factors combined, clashed, and fomented to form three dominant perspectives or typologies. By providing this gestalt level view, students' motivational needs can now be better accommodated through tailored programming. As such, we recommend that faculty who lead study abroad courses not only dedicate curricular space to engage students in agriculture-related content but also provide opportunities for students to reflect, individually and socially, on career advancement, being

more inclusive of diverse groups and perspectives, networking, relationship-building, and the integration of their learning abroad into their daily lives.

Although our intent was not to generalize from the study's findings (Brown, 1980), the demographic composition of typologies, particularly the *Social-Oriented Students*' and *Learning-Oriented Students*' perspectives, warrant further study to examine whether such dimensions are transferable across contexts. Also, because of students' emphasis on aspects of attainment, intrinsic, and utility values (Eccles et al., 1983) in this study, more research is needed to describe how these variables converge and diverge to shape motivation. Perhaps more intimately defining students' motivational schemas can attain a better understanding of how to foster students' perspective transformations (Mezirow, 2000) on global agricultural issues during their experiences abroad. Further, future research should also explore the specific programmatic aspects that significantly affect student motivation. This study's findings also opened up additional questions that warrant future consideration. First, what are the effects of recruitment strategies that target students' motivational interests over time in comparison to individual course-focused campaigns that are more short-term in form and function? And finally, which academic, career, cultural, and personal experiences most profoundly contribute to motivating and deterring students from studying abroad?

### References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decisions Processes*, 50(1), 179-211. doi:10.1016/0749-5978(91)90020-T
- Alston, A. J., Roberts, R., & English, C. W. (2019). Building a sustainable agricultural career pipeline: Effective recruitment and retention practices used by colleges of agriculture in the United States. *Journal of Research in Technical Careers*, 3(2), 1-23. Retrieved from <http://dx.doi.org/10.9741/2578-2118.1073>
- Alston, A. J., Roberts, R., & Warren English, C. (2020). Toward a holistic agricultural student recruitment model: A national analysis of the factors affecting students' decision to pursue an agricultural related degree. *Journal of Research in Technical Careers*, 4(1), 1-28. <https://doi.org/10.9741/2578-2118.1071>
- American Council on Education. (2017). *Mapping internationalization on U.S. campuses: 2017 edition*. Washington, DC: Author. Retrieved from <https://www.acenet.edu/Documents/Mapping-Internationalization-2017.pdf>
- Beseli, A. L., Warner, W. J., Kirby, B. M., & Jones, D. W. W. (2016). Motivations to study abroad: A case study of College of Agricultural and Life Sciences agrribusiness short-term study abroad program. *Journal of International Agricultural and Extension Education*, 23(1), 48-49. doi:10.5191/jiaee.2016.23104
- Briers, G. E., Shinn, G. C., & Nguyen, A. N. (2010). Through students' eyes: Perceptions and aspirations of college of agriculture and life science students regarding international education experiences. *Journal of International Agricultural and Extension Education*, (17)2, 5-20. doi:10.5191.jiaee.2010.17201
- Bunch, J. C., Blackburn, J. J., Danjean, S., Stair, K. E., & Blanchard, L. D. (2015). Examining Louisiana State University College of Agriculture students' perceived motivators and barriers to participation in an international experience. *Journal of International Agricultural and Extension Education*, 22(3), 69-82. doi:10.5191/jiaee.2015.22305
- Bunch, J. C., Rampold, S. D., Cater, M., & Blackburn, J. J. (2018). The impact of a short-term international experience on undergraduate students' cultural competence. *Journal of Agricultural Education*, 59(4), 120-136. doi:10.5032/jae.2018.04120
- Brown, S. R. (1980). *Political subjectivity: Applications of Q methodology in political science*. New Haven, CT: Yale University Press.
- Caillouet, O. C., & Wood, L. S. (2019). Students' perceived barriers, benefits and international programmatic preferences. *Journal of International Agricultural and Extension Education*, 26(3), 134-146. doi:10.5191/jiaee.2019.26309
- Conner, N., Milius, J., Stripling, C. T., Loizzo, J., & Doerr, D. (2019). Using an international experience to bridge the gap between culture and science literacy. *Journal of International Agricultural and Extension Education*, 26(2), 106-120. doi:10.5191/jiaee.2019.26208
- Conner, N. W., & Roberts, G. (2015). The cultural adaptation process during a short-term study abroad experience. *Journal of Agricultural Education*, 56(1), 155-171. doi:10.5032/jae.2015.01155
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Thousand Oaks, CA: Sage.
- Danjean, S., Bunch, J. C., & Blackburn, J. (2015). Examining the motivations and barriers influencing the decisions of Louisiana State University College of Agriculture freshman

- to participate in international experiences. *Journal of International Agricultural and Extension Education*, 22(1), 49–62. doi:10.5191/jiaee.2015.22104
- Eccles, J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motivation* (pp. 75–146). San Francisco, CA: Freeman.
- Edgar, L. D., Edgar, D. W., & Hansen, M. J. (2018). College of Agricultural, Food, and Life Sciences international education: Students' preferred location of travel and perceptions of benefits and barriers. *Journal of International Agricultural and Extension Education*, 25(1), 89–99. doi:10.5191/jiaee.2018.25108
- Fabregas-Janeiro, M., Kelsey, K. D., & Robinson, J. S. (2011). Assessing changes in intercultural sensitivity among agricultural students exposed to international experiences. *Journal of International Agricultural and Extension Education*, 18(1), 34–44. doi:10.5191/jiaee.2011.18103
- Foster, D. D., Sankey Rice, L. L., Foster, M. J., & Barrick, R. K. (2014). Preparing agricultural educators for the world: Describing global competency in agricultural candidates. *Journal of Agricultural Education*, 55(1), 51–65. doi:10.5032/jae.2014.01051
- Hainline, M. S., Mayorga, B. B., Morales, S., Boren, A. E., Ritz, R. A., & Burris, S. (2018). A change in perspective: Agriculturally-based study abroad experience for Nicaragua students. *Journal of International Agricultural and Extension Education*, 25(1), 39–50. doi:10.5191/jiaee.2018.25104
- Institute of International Education. (2019a). *Open doors 2019 fast facts* [Fact sheet]. Author. Retrieved from <https://www.iie.org/Research-and-Insights/Open-Doors/Fact-Sheets-and-Infographics/Fast-Facts>
- Institute of International Education. (2019b). *Open doors 2019* [Data file]. Author. Retrieved from <https://www.iie.org/Research-and-Insights/Open-Doors/Data/US-Study-Abroad/Fields-of-Study>
- Kuh, G. D. (2008). *High impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC: Association of American Colleges and Universities.
- Lamm, A. J., Cannon, K. J., Roberts, T. G., Irani, T. A., Unruh Snyder, L. J., Bendemuhl, J., & Rodriguez, M. T. (2011). An exploration of reflection: Expression of learning style in an international experiential learning context. *Journal of Agricultural Education*, 52(3), 122–135. doi:10.5032/jae.2011.03122
- Lewis, E. C., & Gibson, J. (2008). The attitudes of extension faculty in Virginia toward globalizing extension programs. *Journal of International Agricultural and Extension Education*, 15(3), 59–68. Retrieved from <https://www.aiaee.org/attachments/article/114/Lewis-Vol-15.3-5.pdf>
- Mauldin, C. (2012). *Overview of the Q interpretation process*. Louisville, KY: Media Marketing Inc.
- McKeown, B., & Thomas, D. (2013). *Q methodology* (2nd ed.). Thousand Oaks, CA: Sage.
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). San Francisco, CA: John Wiley & Sons, Inc.
- Mezirow, J. (2000). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco, CA: Jossey-Bass.

- Mitchell, D. E., & Nielsen, S. Y. (2012). Internationalization and globalization in higher education. In H. Cuadra-Montiel (Ed.), *Globalization – Education and management agendas*, (pp. 3-22). Rijeka, Croatia: InTech.
- Murphey, D., Sahakyan, N., Yong-Yi, D., & Magnan, S. S. (2014). The impact of study abroad on the global engagement of university graduates. *Frontiers: The Interdisciplinary Journal of Study Abroad*, 24, 1–24. Retrieved from <http://files.eric.ed.gov/fulltext/EJ1062085.pdf>
- National Association of State Universities and Land-Grant Colleges (NASULGC). (2004). *A call to leadership: The presidential role in internationalizing the university*. Washington, DC: NASULGC Task Force on International Education. Retrieved from <http://www.aplu.org/library/a-call-to-leadership-the-presidential-role-in-internationalizing-the-university/file>
- O'Malley, A. M., Roberts, R., Stair, K. S., & Blackburn, J. J. (2019). The forms of dissonance experienced by U.S. university agriculture students during a study abroad to Nicaragua. *Journal of Agricultural Education*, 60(3), 191-205. doi:10.5032/jae.2019.0319
- Pigg, J., Richardson, M. A., Roberts, R., & Stair, K. S. (in press). Awakening transformative learning: A comparison of the dissonance experienced by agriculture majors during study abroad courses to Costa Rica and Thailand. *Journal of International Agricultural and Extension Education*.
- Raczkoski, B. M., Robinson, S., Edwards, C. M., & Baker, M. A. (2018). Forecasting college students' motivations to study abroad: A pilot study. *Journal of Agricultural Education*, 59(2), 123–142. Retrieved from <https://doi.org/10.5032/jae.2018.02123>
- Roberts, R., & Edwards, M. C. (2015). Confronting food insecurity during an international service-learning opportunity: What were the *lived experiences* of six university agriculture students? *Journal of International Agricultural and Extension Education*, 22(2), 38-40. doi:10.5191/jiaee.2014.22206
- Roberts, R., & Edwards, M. C. (2016). Transforming students' global knowledge and perspectives through international service-learning: How U.S. university agriculture students made sense of their lived experience over time. *Journal of International Agricultural and Extension Education*, 23(3), 7–22. doi:10.5191/jiaee.2016.23301
- Rodriguez, M. T., & Roberts, T. G. (2011). Identifying best practices for a successful study abroad program. *Journal of International Agricultural and Extension Education*, 18(1), 19–33. doi:10.5191/jiaee.2011.18102
- Schmolck, P. (2014). *PQMethod manual*. London, UK: Author. Retrieved from <http://schmolck.userweb.mwn.de/qmethod/pqmanual.htm>
- Watts, S., & Stenner, P. (2013). *Doing Q methodological research: Theory, method, and interpretations* (2nd ed.). Thousand Oaks, CA: Sage.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25, 68–81. doi:10.1006/ceps.1999.1015
- Wigfield, A., Tonks, S., & Klauda, S. L. (2009). Expectancy-value theory. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 55–75). New York, NY: Routledge.