

# Personas of Agricultural Education Supporters: A Q-Method Study

Anna K. Pratt<sup>1</sup>, Jeremy M. Falk<sup>2</sup>, Kasee L. Smith<sup>3</sup>, Sarah A. Bush<sup>4</sup>

## Abstract

*Educational partnerships are an essential part of agricultural education programs whereby external supporters give their time, talent, and resources to assist teachers and students. An agricultural teachers' ability to recruit and retain quality supporters relies in part on their understanding of the characteristics and preferences of those individuals. In this study, we utilized a Q-method research design to examine the perspectives that existed related to school-based agricultural education (SBAE) supporter personas in Idaho. Deci and Ryan's (1985) Self Determination theory served as the framework for our study. Our participants included a diverse set of 49 individuals who give their time, talent, or resources to support Idaho SBAE programs. Participants completed a questionnaire, q-sort procedure, and interview to examine components of each respondent's viewpoint related to serving as an agricultural education supporter. Three common viewpoints, or personas, resulted from the data which were classified as: Developers, Amplifiers, and Visionaries. SBAE teachers should recognize that different personas of supporters exist and be intentional with selecting, training, and managing supporters in a manner that benefits the supporters' experience with the SBAE program. Researchers should further explore the experiences and preferences of SBAE program supporters from the supporters' perspective.*

**Keywords:** community supporters; supporters; personas

## Introduction

The critical role educational partnerships play in preparing students for success is a shared vision of practitioners in psychology, general educators, and educators in agricultural extension and school-based agricultural education (SBAE) (Albrecht & Hinckley, 2012; Culp, 2012; Dodd & Boleman, 2007; Epstein, 2011; Foster et al., 2012; Masser et al., 2013; Tillinghast et al. 2014). Researchers, policymakers, and educational leaders support these partnerships as components helpful to improve school function, expand educational experiences, increase student interest in post-secondary training, and prepare students for careers (Alleman & Neal, 2013; Epstein, 2011; Ferguson & Lamback, 2014; Sanders, 2003). The renewed significance of partnerships is evident in recent discussions surrounding education reform, community development, and workforce readiness (USDOE, 2012; Executive Office of the President, 2009; Fuller & Raman, 2017). Researchers have found that educational partnerships are linked to improved grades and attendance, increased civic involvement, reduced behavioral problems, greater classroom cooperation, and increased capacity for self-direction. (Blank et al., 2003; Epstein, 2011).

---

<sup>1</sup> Anna K. Pratt is the program manager for the Idaho Farm and Ranch Center for the Idaho State Department of Agriculture, 875 Perimeter Drive, Mailstop 2040, Moscow, ID 83844, Email: [annakpratt@gmail.com](mailto:annakpratt@gmail.com)

<sup>2</sup> Jeremy M. Falk is an Associate Professor of Agricultural Education in the Department of Agricultural and Extension Education at the University of Idaho, 875 Perimeter Drive, Mailstop 2040, Moscow, ID 83844, Email: [jfalk@uidaho.edu](mailto:jfalk@uidaho.edu)

<sup>3</sup> Kasee L. Smith is an Assistant Professor of Agricultural Education in the Department of Agricultural and Extension Education at the University of Idaho, 875 Perimeter Drive, Mailstop 2040, Moscow, ID 83844, Email: [klsmith@uidaho.edu](mailto:klsmith@uidaho.edu)

<sup>4</sup> Sarah A. Bush is an Assistant Professor of Agricultural Education in the Department of Agricultural and Extension Education at the University of Idaho, 875 Perimeter Drive, Mailstop 2040, Moscow, ID 83844, Email: [sabush@uidaho.edu](mailto:sabush@uidaho.edu)

Because SBAE programs are rooted in Career and Technical Education (CTE), technical skill development and career readiness are integral elements of SBAE programs (Newcomb et al., 2004). Researchers have found that close collaboration between schools, employers, and communities can result in a more effective skill development in students, help schools and teachers facilitate more meaningful and relevant education, provide more resources for school programs and classes, and assist staff and teachers in guiding students in career decisions (Ferguson & Lamback, 2014; Ferguson et al., 2011; Gross et al., 2015). Collaboration with parents, industry, and community members is a foundational and required component of SBAE programs in order to receive funding from the Carl D. Perkins Career and Technical Education Act of 2018 (Albrecht & Hinckley, 2012; H.R. 2353, 2018; Tillinghast et al., 2014). In SBAE programs, educational partnerships exist when supporters such as community, industry, or government-affiliated entities or individuals give their time, talent, and resources to assist teachers and students (Masser, 2014).

Agricultural teachers value the contributions they receive from supporters (Masser, 2014; Solomonson & Retallick, 2018). Non-affiliated supporters, FFA alumni chapters, and advisory councils provide support as chaperones, guest speakers, event judges, and coaches (Albrecht & Hinckley, 2012; Gossen, 2011; Masser et al., 2013; Phipps et al., 2008). Supporters also play a role in classroom instruction, provide job placement, supervise SAE programs, and assist with program planning (Baker & Futrell, 2017; Masser, 2014). SBAE program supporters are critical to an agricultural teachers' ability to foster community partnerships, increasing students' career awareness, and develop students' potential for personal and professional success (Newcomb et al., 2004; Talbert, Vaughn & Croom, 2005).

Both new and experienced teachers indicated that recruiting and managing supporters is challenging (Boone & Boone, 2007; DiBenedetto et al., 2018; Solomonson & Retallick, 2018; Sorensen et al., 2010). Complex factors such as education program requirements, supporter needs and motivations, and administrative backing all effect the success of educational partnerships (Clary & Snyder, 1999; Dodd & Boleman, 2007; Epstein, 2011). The individual characteristics of supporters can have an impact on their willingness and interest to engage in educational partnerships (Baggetta et al., 2013; Rochester, 2010; Studer, 2016). Understanding the needs and preferences of SBAE supporters could provide insight to equip teachers with the skills and tools to implement and maintain strong educational partnerships (Bussell & Forbes, 2002; Phillips & Little, 2002; Rochester et al., 2010). Few studies have explored the perspectives and characteristics of SBAE program supporters. Further investigation is needed to help agricultural educators and administrators effectively recruit and retain SBAE program supporters (Masser, 2014).

Common elements crucial to recruiting and retaining volunteers include satisfied motivations, collective program goals, strategic supporter selection and preparation, consistent management and communication, thorough evaluation, and purposeful recognition (Clary & Snyder, 1999; Culp, 2012; Decker & Decker, 2003; Dodd & Boleman, 2007; Epstein et al., 2009; Sanders, 2003). We used the subjectivity of our participants to test the importance of these concepts when applied to SBAE supporters' perceptions and experiences. Exploring the characteristics of supporters who collaborate with agricultural educators and contribute to SBAE program success aligns with Research Priority 5 of the American Association for Agricultural Education National Research Agenda, Efficient and Effective Agricultural Education Programs (Thoron et al., 2016).

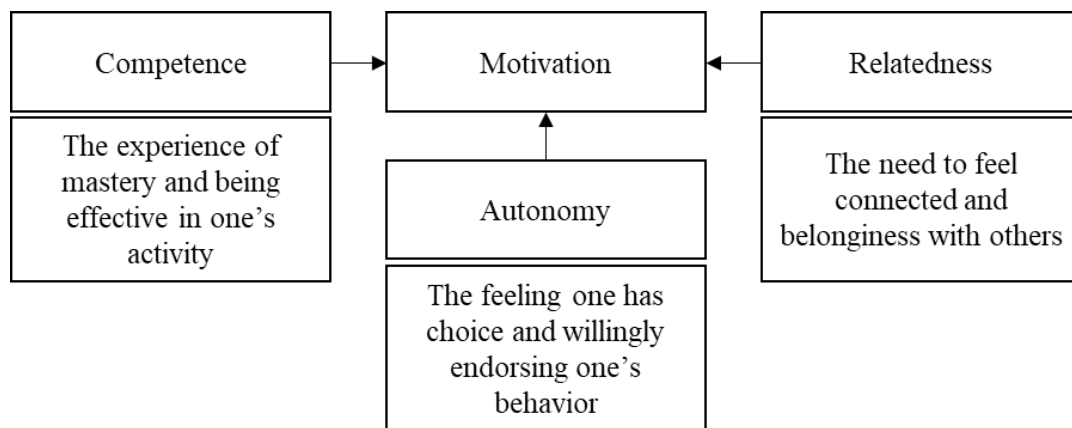
Researchers have explored SBAE partnerships largely from the perspective of agricultural teachers, although supporters play a crucial role in the creation and sustainability of educational partnerships (Clary & Snyder, 1999; Decker & Decker, 2003; Rochester et al., 2010; Studer, 2016). In this study we sought to better understand supporters who are actively involved with SBAE programs. Due to a lack of published studies related to this topic in SBAE disciplines, researchers in general education partnerships, volunteer management, and agricultural extension provided additional

foundational literature related to supporters' preferences and experiences (Culp, 2012; Epstein et al., 2009; Penrod, 1991; Rochester et al., 2010; Sanders, 2001, 2003; Studer, 2016).

The framework for our study was Deci and Ryan's (1985) self-determination theory (SDT). Deci and Ryan (1985) posited that intrinsic factors, such as interests and care, and extrinsic factors, such as rewards and evaluations, facilitate a person's motivation. They examined how biological, social, and cultural conditions facilitate or undermine human capacity for growth and engagement (Deci & Ryan, 1985). The authors suggested that humans have three basic psychological needs including a desire for some control over their lives and behavior, a desire to have knowledge and competence, and lastly a desire to have connection and relationships (Deci & Ryan, 2017). In this study, we examined SDT factors with individuals' subjectivity in reference to conditions that support or undermine their attainment of these needs when interacting with SBAE programs.

**Figure 1**

*Self Determination Theory*



**Purpose/Objectives**

The purpose of this research study was to examine the perspectives that existed related to SBAE supporter personas. Specifically, this study aimed to meet the following objectives:

1. Describe the personas of selected SBAE supporters in Idaho.
2. Identify the training and communication preferences of selected SBAE supporters in Idaho related to personas.
3. Identify the motivations of selected SBAE supporters in Idaho related to personas.

**Methods**

We used a Q-method research design along with survey methods to meet the objectives of this study. Q-method is a way to identify personal beliefs, opinions, or subjective meaning in an attempt to define general types or patterns of perspectives held by a particular group (Watts & Stenner, 2012). The process allows researchers to flip traditional *spearman r* correlations (Leggette & Redwine, 2016). According to Leggette and Redwine (2016), instead of using instruments to test the performance of an individual and make comparisons to the population, Q-methodology uses each individual, complete with all the subjectivity and holistic diversity, as tests for the performance of items (p. 51).

Q-methodology was chosen in this study as the primary objective was to define types of patterns or perspectives held by the supporters of SBAE programs. Q-method includes three main components: Concourse (population of ideas on a given topic), Q-set (sample of ideas that will be

analyzed), P-Set (participants who will sort statements in the Q-set). The Q-method allows the three components of concurrence, Q-set, and P-set to be analyzed and interpreted through statistics rooted in factor analysis (Watts & Stenner, 2012; Van Exel & de Graaf, 2005).

### **Concourse and Q-Set Development**

Q-method allows respondents to use personal preferences to sort a set of statements into a forced quasi-normal curve (Stephenson, 1935). Watts and Stenner (2012) note that 40-60 statements is adequate to cover a topic in which respondents exhibit strong feelings or knowledge. We selected a 40 statement Q-set, following the recommendation to use a more flattened curve in situations when respondents have large amounts of subject knowledge (Watts & Stenner, 2012).

To generate the Q-set, Watts and Stenner (2012) recommend conducting an exhaustive literature review of the concourse of ideas surrounding the issue to be examined. For this study, we developed a concourse to include concepts relevant to supporter experiences, perceptions, and preferences while supporting SBAE programs (Watts & Stenner, 2012). We explored literature in agricultural education, agricultural extension, school-business partnerships, and volunteer management, and generated 96 issues, theories, findings, and recommendations related to the concourse. Concourse items were organized by theme and examined to develop concise statements, each with both a point of view and connection to a concourse item. This process allowed us to generate 51 statements, called the Q-set, related to information including management, communication, evaluation, and recognition (Watts & Stenner, 2012).

The 51 Q-set statements were validated by a group of agricultural education faculty members, all with experience managing SBAE supporters. In addition, we conducted a semantic review of statements using undergraduate research students at the University of Idaho. The review process helped to identify and refine 40 statements balanced across the concourse and providing coverage of all applicable content areas, per the recommendation of Watts & Stenner (2012).

### **P-Set**

Participants (P-set) identification began by examining the Q-set and estimating the number of expected viewpoints related to concourse items including; motivation, industry-ties, FFA membership affiliation, former volunteer efforts, and life cycle of support (Watts & Stenner, 2012). Based on this examination, 11 diverse supporter viewpoints emerged. To recruit participants for the study, we contacted Idaho agricultural educators for recommendations and a description of each supporter. Van Exel and de Graaf (2005) recommend obtaining four to five participants for each defining viewpoint. Our initial recommendations from agricultural educators included no fewer than four participants for each of the 11 identified viewpoints.

We contacted potential participants via email and/or phone call to request participation. No participants declined to participate for reasons outside of scheduling conflicts. Our final P-set consisted of 55 participants with varying degrees of relevance, experience, and perspective related to the study concourse (Watts & Stenner, 2012). Of the 55 participants, ( $n = 49$ ) was our final sample, as a result of unsuspected cancellations. During the data collection process, we verified participants' defining viewpoints to ensure we were obtaining the intended, necessary number of diverse participants. Once agreeing to participate, P-set members identified a time and location to join the research team and complete the components of the study.

### **Data Collection**

Data were collected in five locations across southern Idaho, in December 2018. Data collection for each participant occurred in four phases: initial questionnaire, presorting process, Q-sort, and follow up interviews with each participant. The pre-sorting questionnaire for this study included the Volunteer Function Inventory (VFI) instrument (Clary et al., 1998) and an adapted survey from Masser's (2014)

study. We used the VFI to measure motivation (Burns et al., 2006; Burns et al., 2008; Clary et al., 1992; Clary et al., 1998, Papadakis et al., 2004). The instrument measures six motivation functions including: values, understanding, social, career, protective, and enhance.

Participants self-reported the important and accuracy of 30 statements related to their motivation using a 7-point Likert-type scale. Post hoc analysis of the VFI instrument resulted in a sufficient Cronbach's alpha coefficient score ( $\alpha = .79$ ). We used the adapted survey from Masser's (2014) study to measure the participants' preferences for training and communication methods on a Likert-type scale. Participants used a 5-point Likert-type scale to rank their preference for face-to-face, email, mailed letters, phone call, social media, and text message communication methods. In the next block of questions, participants used the same 5-point Likert-type scale to rank their preference for various training methods including formal training, informal discussion, self-guided online training, and written document.

Participants were asked to begin the Q-sort by presorting the 40 statements into piles they agreed with, disagreed with, or were indifferent to. Watts and Stenner (2012) recommend a presorting process as a means to measure general agreeability of a participant related to the Q-set. During the Q-sort procedure, participants ranked the Q-set statements based on their psychological significance (Watts & Stenner, 2012). The stem, or common set of words "As a supporter, I...", preceded each statement, and was used to ensure participants approached each statement with a specific frame of mind (Watts & Stenner, 2012). They placed statements that were most meaningful or important to them on the positive side of the curve and statements that were least meaningful on the negative side. A member of the research team observed each participant as they placed the statements on the Q-sort table, journaled observations of their sorting, and recorded the Q-sort ranking after the participants were finished (Stephenson, 1935).

After the sorting was completed, we conducted a semi-structured interview to explore each participant's wider perspective and capture the meaning and significance participants held behind certain items and themes (Watts & Stenner, 2012). Questions asked during the post-sorting interview included an explanation of the items placed at extremes, personal meaning for certain statements, items the participant felt were omitted, and any additional questions unique to the participant (Watts & Stenner, 2012).

### Data Analysis

Questionnaire data were entered into excel by hand and analyzed using SPSS. The mean and standard deviation was reported for communication and training preferences and the mean, range, and standard deviation were reported for the VFI functions. The data was used to confirm and corroborate the tone of certain interpretations reported from the Q-sorts (Watts & Stenner, 2012). To analyze the Q-sorts, we used PQMethod software that examined the location of ranked statements in relation to other items to identify similar types of participants (Schmolck, 2014).

To begin, we calculated a correlation matrix to show the level of agreement and disagreement between all completed ( $n = 49$ ) sorts (Watts & Stenner, 2012). We then identified the number of groupings that are similar and dissimilar. These groupings of shared meaning and viewpoints were extracted to serve as our factors (Van Exel & de Graaf, 2005). We made an *a priori* decision to only extract factors with an eigenvalue of 1.00 or higher to indicate a factor's statistical strength (Guttman 1954; Kaiser, 1960). Based on PQMethod factor loading results, we used alternative factor extraction solutions to that took a holistic view of analysis and were responsive to the data (Watts & Stenner, 2012). We used Brown's (1980) calculation to manually extract factors based on a 0.408 level of significance of two or more Q-sorts in each factor.

We interpreted each factor through a careful and holistic inspection of distinguishing Q-set statements, the items in the exemplary sorts, and post-sorting interview data (Watts & Stenner, 2012).

Significant differences between the three factors were interpreted by referencing z-scores at a  $p < 0.01$  level. The z-scores were converted into a factor array to further aid in the interpretation process. A factor array is a single Q-sort configured to represent the viewpoint of a specific factor that forms the basis of persona development (Watts & Stenner, 2012).

We worked through each factor array, and placed statements into categories to identify perspectives about which each factor was polarized relative to other factors. The categories were compiled into a crib sheet that delivered a more complete view of viewpoints within each factor. It is critical to understand and report the distinctive characteristics that are unique to each factor (Watts & Stenner, 2012). To develop a complete persona description, pre-sorting questionnaire data and post-sorting interview data were connected to the data derived from the factor arrays.

### Results/Findings

A total of 49 Q-sorts were intercorrelated and factor-analyzed with 26 sorts loading significantly to one of three factors. We interpreted each factor through a careful and holistic inspection of distinguishing Q-set statements, the items in the exemplary sorts, and post-sorting interview data (Watts & Stenner, 2012).

#### Objective 1: Describe the personas of selected SBAE supporters in Idaho.

A total number of 49 Q-sorts were intercorrelated and factor-analyzed. Of the 49 Q-sorts, 26 loaded significantly to one of three factors. Factor loadings with  $\pm .408$  or above were significant at  $p \leq 0.01$  level. Factor 1 accounted for 22% of the variance. Factor 2 accounted for 20%, and Factor 3 accounted for 17% of the variance. This led to 69% of the study variance being accounted for in three factors. The exemplary sorts in each factor were combined to create a typical Q-sort for each factor called a factor array. We interpreted the factor arrays through a careful and holistic inspection of the items in each array (Watts & Stenner, 2012). We also used findings from post-sorting interviews to fully explain the viewpoint captured by each factor. Factor 1 had 11 defining sorts. Factor 2 had eight defining sorts, and Factor 3 had seven defining sorts. The factor characteristics related to defining sorts, reliability and standard error of z-scores are exhibited in Table 1. The reliability scores show that the factor extraction solution was reliable.

**Table 1**

#### *Factor Characteristics*

Characteristic	Factor 1	Factor 2	Factor 3
No. of defining sorts	11	8	7
Average reliability coefficient	0.80	0.80	0.80
Composite reliability	0.98	0.97	0.97
Standard Error of factor z-scores	0.15	0.17	0.19

The three factors that met the criteria of the calculation were extracted from the data for further analysis. This led to 69% of the study variance being accounted for in three factors (Watts & Stenner, 2012). We then manually reviewed each factor to flag defining sorts, that were above the .408 significance level and therefore have more than half of their common variance in one factor (Schmolck, 2014; Watts & Stenner, 2012). Sorts with confounding scores were not included as defining sorts. There were 26 defining sorts and 23 confounding sorts. We calculated the correlation between factors to determine that the extracted factors were dissimilar enough to be distinctive viewpoints (Watts & Stenner, 2012).

We named Persona 1 supporters *Developers* after reviewing the defining statements. These individuals value working with supporters with diverse viewpoints and did not seem to believe the teacher and supporters need to share the same vision for the program. We interpreted that these supporters viewed the community and SBAE program as an integrated system focused on students and

therefore saw their support as critical to the success of the program. They did not expect the teacher to be everywhere the supporters are and expect the teacher to use supporters to free up time for their own family. They also reported being likely to seek opportunities to recruit and mentor new supporters.

Developers reported being willing to learn new skills and did not believe they should be able to choose the task they assist with. They began supporting the program to contribute to the good things that were already happening. These supporters reported that they would not stop volunteering if they received negative feedback. They also reported not valuing public appreciation and instead requested small personal gestures from the teachers or students to show that their contribution is valued and impactful.

Persona 2 supporters became known as *Amplifiers* after reviewing the defining statements. These supporters placed high importance on helping students reach career success and gain knowledge in agriculture. Amplifiers desired to support SBAE programs because they saw good things happening and specific program areas and outcomes they could enhance. We interpreted that these supporters view their contribution in a specific way and are more likely than other supporters to choose tasks that align with their current skillset. They reported wanting to enable the teacher to do otherwise unattainable work, such as network with community members or obtain sponsorships for events and projects.

Amplifiers believe there is room for multiple supporter viewpoints in the program and do not expect the teacher and supporters to share the same viewpoints. They reported desiring to choose the tasks with which they assist. They were more likely than other supporters to desire public recognition if they represent a company but prefer small forms of appreciation such as conversations with students about their projects. These supporters reportedly welcomed evaluation of their contribution to the program and saw it to optimize their support.

Persona 3 supporters became known as *Visionaries* after reviewing the defining statements. These supporters were most likely to believe that supporters should be chosen, interviewed, or invited to support the SBAE program. Visionaries expected a sense of shared vision and teamwork between the supporters and agricultural teacher, yet they also believed that anyone who wants to support the program should be able to. They are willing to be assigned tasks that do not align with their current skills, and do not believe they should choose projects.

Visionaries were more likely to begin supporting programs because they saw changes that could be made and were willing to contribute whether there were in a comfortable environment. They reported being capable of evaluating their own contribution. These supporters were least likely to expect recognition for their support from students or other supporters. They also did not desire public appreciation for their support and instead wanted to feel a sense of connection to the teacher, students, and program.

Analyzing consensus statements enabled us to see which Q-set statements did not distinguish between any pair of factors. We found that all supporters felt positively about helping students find careers in agriculture and achieve personal success. They all reported expecting some amount of teamwork between the teacher and supporters and felt positively about communication among supporters. All participants reported working hard when they are part of a team that works hard, but they did not expect everyone to get along. They also welcomed opportunities to support independently of their family and friends and reported feeling negatively about only supporting SBAE programs that serve their kids.

The supporters in this study felt negatively about public recognition from the teacher, students, or other supporters. They spoke positively about personalized appreciation. All participants felt positively about their ability to provide unique insight to the program. They did not expect to receive feedback of the effectiveness of their support.

**Objective 2: Identify the training and communication preferences of selected SBAE supporters in Idaho related to personas.**

As reported on their questionnaires, Developers preferred to use face-to-face ( $M = 4.82$ ), text message ( $M = 4.18$ ), and email communication ( $M = 4.09$ ) methods. Amplifiers preferred to use text message ( $M = 4.25$ ) and email ( $M = 4.13$ ). Visionaries preferred to use text message ( $M = 4.43$ ), email ( $M = 4.14$ ), and face-to-face ( $M = 4.00$ ) communication methods.

**Table 2**

*Frequencies and Percentages Of Participants' Communication Preferences (n = 49)*

Method	Min	Max	M	SD
Text Message	1.00	5.00	4.22	1.05
Face-to-face	2.00	5.00	4.16	1.11
Email	1.00	5.00	4.14	1.08
Phone Call	1.00	5.00	3.92	1.10
Mailed Letters	1.00	5.00	2.90	1.25
Social Media	1.00	5.00	2.41	1.41

Regarding training methods, Developers most preferred a written document ( $M = 4.36$ ), followed by an informal discussion ( $M = 4.18$ ). Amplifiers preferred to be trained with informal discussion ( $M = 4.50$ ) followed by a written document ( $M = 3.63$ ). Visionaries preferred an informal discussion ( $M = 4.29$ ) and formal training program ( $M = 3.86$ ). Of the supporters who served as exemplary sorts for persona interpretation, ( $n = 18$ ) 69% preferred to be prepared for their role by an agricultural teacher.

**Table 3**

*Frequencies and Percentages of Participants' Training Preferences (n = 49)*

Training methods	Min	Max	M	SD
Informal discussion	2.00	5.00	4.37	0.81
Written document	1.00	5.00	3.53	1.31
Formal training program	1.00	5.00	3.30	1.31
Self-guided online training	1.00	5.00	2.76	1.18

**Objective 3: Identify the motivations of selected SBAE supporters in Idaho related to personas.**

Based on their VFI scores, supporters in all three personas expressed altruistic motives to act on their beliefs and concerns through volunteering (Developers,  $M = 6.17$ , Amplifiers,  $M = 5.88$ , Visionaries,  $M = 5.77$ ). Developers were also motivated, more than the other personas, by learning and sharing knowledge ( $M = 5.25$ ). They were least motivated by advancing their career ( $M = 3.16$ ). While Amplifiers were least motivated by reducing guilt ( $M = 1.70$ ), Visionaries were least motivated by social factors ( $M = 1.71$ ).



**Table 4***Participants' Volunteer Functions Inventory Scores (n = 49)*

Construct	Min	Max	M	SD
Values	3.60	7.00	5.91	1.34
Understand	2.40	7.00	4.84	1.77
Social	1.00	6.20	3.94	1.92
Enhance	1.00	6.60	3.57	1.75
Career	1.00	6.20	2.53	1.87
Protective	1.00	6.00	2.52	1.83

### Conclusions/Recommendations/Implications

A selected group of Idaho supporters placed meaning on their interaction with SDT factors while supporting SBAE programs by completing a questionnaire, Q-sort procedure, and interview (Deci & Ryan, 1985). Three distinct supporter personas were discovered through this examination. Teachers should recognize the three unique viewpoints of supporters regarding their preferences and values, learn the personas represented in their SBAE supporters and or build a group of supporters with a combination of personas that fits their program needs. Researchers should also recognize the three supporter personas and conduct further studies to better understand SBAE program supporters. The collective viewpoints shared by the entire P-set of participants should also be acknowledged to better understand supporters collectively.

Regarding Developers, we recommend that recruitment efforts towards this persona should focus on their potential to influence students, the community, and agriculture. Messaging toward these supporters should showcase the impact of the SBAE program on the greater surrounding community. Because they care about students' personal and career success, these supporters should spend time with students learning about their projects or helping them prepare for a CDE. They are likely to enjoy seeing how their support benefits students, and the agricultural program. They should be given projects that require skill development and problem solving with other supporters.

Being open minded will be important when managing these supporters. They welcome new ideas and do not mind conflict if it leads to a better outcome for students. They will welcome diverse viewpoints and have the potential to be a great recruiter and advocate for the program. They will likely appreciate feedback as an informal discussion, focused on their task or project rather than on them as a supporter. The teacher and students should show appreciate to them through small meaningful gestures such as thank-you cards from students, a verbal "thank you" from the teacher, or an acknowledgment from students when they see the supporter outside the agricultural program.

When recruiting Amplifiers, practitioners should showcase program success and outline future goals that supporters can contribute to. They may desire to choose a specific task that aligns with their skillset and the needs of the program. Teachers should utilize text messaging and email to communicate with these supporters, as they are unlikely to prefer face to face communication. Amplifiers are less likely to have background knowledge about SBAE programs and will appreciate information to help them decide how to help and options of what they can assist with. Tasks for these supporters should be well-defined, such as serving on the advisory council or coaching a CDE team or sponsoring and attending an advocacy event or serving as the secretary at an auction.

We recommend that Amplifiers be involved in the evaluation process of projects in which they are involved. These supporters may stop supporting if they receive negative feedback, so practitioners should focus on the positive impact of potential changes to their contributions. These supporters may want public recognition, if they represent a company, but they will likely also desire small gestures to

feel personally appreciated. Additional methods to show appreciate may include letters that showcase student success stories, or students' post-secondary and career goals.

Visionaries may need to be asked to engage with SBAE programs and would likely appreciate a teacher or alumni member to get to know them personally. Teachers should consider interviewing these individuals to understand their specific skill set and harness their intentional involvement. These supporters would respond well to an informal discussion to prepare them as supporters. They may also be interested in attending a formal training program. They are likely to begin supporting an SBAE program because they see a need or project that they can improve with their skillset.

These supporters are likely to appreciate efficient meetings and focused discussions related to their supporter role. They will want to be part of a close-knit team that communicates with one another regarding their work and shares the same vision for the future of the SBAE program. These supporters do not expect feedback relating to their contributions. They hold great pride in helping the students and program, so when engaging them in evaluation measures related to their work, ask them to generate ideas of how their contributions can improve. In lieu of public recognition, provide these supporters with small gestures of individualized appreciation.

The intrinsic, values-driven motivation of our study participants is supported by literature as a common volunteer trait (Clary & Snyder, 1999; Rochester, et al. 2010). However, in analyzing consensus statements, we found that additional motivators of promoting career success, agricultural knowledge, and personal growth for students in SBAE programs were very important to supporters. These motivators seem to be built not just by their values, but also their lifestyle, career, and perception of the importance of agriculture. SBAE supporters may have more unique motivation than the literature suggests. We recommend that practitioners need to openly promote, communicate, and advocate for the vision and goals of SBAE programs so supporters can see where their skillsets, experiences, and interests align with the program.

Across all personas, the supporters did not expect everyone to get along, preferred informal training methods, and felt unsure that all meetings need to be efficient. Researchers argue that a pleasant environment and well-planned management are among factors that increase volunteer commitment (Culp, 2012; Fritz et al., 2000; Penrod, 1991; Rochester, et al., 2010). SBAE supporters may require less structure and comfort than initially conceptualized, however, they all felt positive about the importance of teamwork, and favor communication between the teacher and other supporters. We recommend that practitioners maintain structure within their supporter group, but also provide foundation for teams to form and communicate regularly with the group.

Supporters felt unsure about expecting feedback and evaluation regarding their support. Evaluation is an important component of general education and agricultural extension partnerships (Culp, 2012; Dodd & Boleman, 2007; Epstein, 2009). These supporters may feel negative or unfamiliar with the word "evaluation" in relation to their role and therefore require more open dialogue and positive reinforcement surrounding the effectiveness of their support. Supporters felt negatively about receiving public recognition. Recognizing those who volunteer their time to an organization is important (Culp, 2012; Dodd & Boleman, 2007; Phillips & Little, 2002), however, private forms of recognition to show genuine appreciation were favored by this group. We recommend additional forms of recognition such as conversations about the impact of their support, sincere respect, stories of student success, timely communication, thank you cards, and small gestures. (Dodd & Boleman, 2007; Penrod, 1991; Tillinghast et al., 2014).

Based on the results of this study, our first recommendation for research is to refine the concourse and Q-set and replicate this study to better enable study participants to organize statements. Of the total number of sorts utilized in data analysis, 23 sorts were confounded and therefore could not be used to explain a singular viewpoint. Content clarity of Q-set statements relating to appreciation and recognition, and evaluation and feedback may better enable study participants to organize statements

based on their personal experience and perceptions relating to their support. Several published studies of SBAE program supporters survey agricultural teachers, leaving the experiences and preferences of supporters up to interpretation. Our second recommendation is to further explore SBAE program supporters from the supporters' perspective to uncover important findings related to commitment, motivation, and supporter life cycle.

Our third recommendation is to continue exploring motivations of SBAE program supporters to understand the distinguishing characteristics that influence their motivations. The differences in motivation between supporters was evident with relatively high standard deviations and relatively large ranges of VFI scores reported by participants. There were also sizable differences between the motivations of participants in and between factors in this study.

Our fourth recommendation is to explore the relationship between the duration of support and supporter demographics, years lived in their community, preferences, or experiences. Researchers in volunteer management disciplines have studied the life cycle of a volunteer and its influence on their commitment (Rochester, 2010; Rotolo, 2000). Given the findings of this study, SBAE program supporters may have a different life cycle and duration of commitment than researchers currently indicate.

We found that a variety of supporters are needed to achieve program and student success goals in Idaho SBAE programs. Our results can assist teachers in recruiting and retaining supporters. These findings also provide researchers with a broad understanding of supporters in SBAE programs in Idaho. The results of this study can serve as a basis for effective partnership implementation and further exploration into the distinguishing characteristics of SBAE supporters.

### References

- Albrecht, B. & Hinckley, R. (2012). Partnerships. *In The career pathways effect: Linking education and economic prosperity* (pp. 123-147). CORD Communications.
- Alleman, N. F. & Neal, H. L. (2013). Multiple points of contact: Promoting rural postsecondary preparation through school-community partnerships. *Rural Educator*, 34(2), 1-11.
- Baggetta, M., Han, H., Andrews, K. (2013). Leading associations: How individual characteristics and team dynamics generate committed leaders. *American Sociological Review*, 78(4), 544-573.
- Baker, M. A., Futrell, J., Kelly, K. (September 2012). *Does it take a Village? An Examination of the Experiential Roles Played by Educators in Supporting Agriscience Fair Participants in Oklahoma*. Paper presented at the western meeting of the American Association for Agricultural Education, Fort Collins, CO.
- Blank, M., Melaville, A., & Shah, B. (2003). *Making a difference: Research and practice in community schools*. Washington, DC: Coalition for Community Schools.  
[www.communityschools.org/assets/1/page/ccsfullreport.pdf](http://www.communityschools.org/assets/1/page/ccsfullreport.pdf)
- Boone, Jr., H. N., & Boone, D. A. (2007). Problems faced by high school agricultural education teachers. *Journal of Agricultural Education*, 48(2), 36-45. <https://doi.org/10.5032/jae.02036>
- Brown, S.R. 1980: Political subjectivity: applications of Q methodology in political science. Yale University Press.
- Burns, D. J., Reid, J. S., Toncar, M., Fawcett, J., & Anderson, C. (2006). Motivations to volunteer: The role of altruism. *International Review on Public and Non Profit Marketing*, 3(2), 79-91.
- Burns, D. J., Reid, J., Toncar, M., Anderson, C., & Wells, C. (2008). The effect of gender on the motivation of members of generation Y college students to volunteer. *Journal of Nonprofit & Public Sector Marketing*, 19(1), 99-118.
- Bussell, H., & Forbes, D. (2002). Understanding the volunteer market: The what, where, who and why of volunteering. *International Review on Public and Nonprofit Marketing*, 7(3), 244-257.

- Clary, E. G., & Snyder, M. (1999). The motivations to volunteer: Theoretical and practical considerations. *Current Directions in Psychological Science*, 8(5), 156-159. <https://doi.org/10.1111/1467-8721.00037>
- Clary, E. G., Snyder, M., & Ridge, R., (1992). Volunteers' motivations: A functional strategy for the recruitment, placement, and retention of volunteers. *Nonprofit Management and Leadership*, 2, 333-350.
- Clary, E. G., Snyder, M., Ridge, R. D., Copeland, J., Stukas, A. A., Haugen, J., & Miene, P. (1998). Understanding and assessing the motivations of volunteers: A functional approach. *Journal of Personality and Social Psychology*, 74(6), 1516-1530. <https://doi.org/10.1037/0022-3514.74.6.1516>
- Culp, K., III. (2012). Overview of the GEMS model of volunteer administration (Generate, Educate, Mobilize, and Sustain). *The Journal of Extension*, 50(6). <https://joe.org/joe/2012december/tt10.php>
- Deci, E., Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Publishing Co.
- Deci, E., Ryan, R. M. (2017). *Self-Determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.
- Decker, L. E. & Decker, V. A. (2003). *Home, school, and community partnerships*. Scarecrow Press.
- DiBenedetto, C. A., Willis, V. C., & Barrick, K. R. (2018) Needs assessments for school-based agricultural education teachers: A review of literature. *Journal of Agricultural Education*, 59(4), 52-71. <https://doi.org/10.5032/jae.2018.04052>.
- Dodd, C., & Boleman, C. (2007). *Volunteer administration in the 21<sup>st</sup> Century: ISOTURE: A model for volunteer management*. <https://agriflifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf>
- Epstein, J. L., Simon, B. S., Salinas, K. C., & Jansorn, N. R. (2009). *School, family, and community partnerships: Your handbook for action* (3<sup>rd</sup> ed.). Corwin Press.
- Epstein, J. L. (2011). *School, family, and community partnerships: Preparing educators and improving schools* (2<sup>nd</sup> ed.). Westview Press.
- Executive Office of the President; Council of Economic Advisers. (2009). *Preparing the workers of today for the jobs of tomorrow*.
- Ferguson, R., Schwartz, R. B., & Symonds, W. C., (2011). *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. Harvard Education Publishing Group.
- Ferguson, R. F. & Lamback, S. (2014). *Creating pathways to prosperity: A blueprint for action*. Harvard Education Publishing Group.
- Foster, D. D., Masser, D., & Sankey, L. (2012, November) *Utilization of advisory councils in Pennsylvania secondary agricultural education programs*. Paper presented at the meeting of the Association of Career and Technical Education Research, Atlanta, GA.
- Fritz, S., Barbuto Jr., J. E., Marx, D., Etling, A., & Burrow, S. (2000). Motivation and recognition preferences of 4-H volunteers. *Journal of Agricultural Education*, 41(3), 40-49.
- Fuller, J., & Raman, M. (2017). *Dismissed by degrees*. Published by Accenture, Grads of Life, Harvard Business School.
- Gossen, L. A. (2011). *A study of the membership of the National FFA Alumni Association: Volunteering, loyalty, and benefits* (Unpublished doctoral dissertation). Kansas State University.
- Gross, J. M., Haines, S. J., Hill, C., Francis, G. L., Blue-Banning, M., & Turnbull, A. P. (2015). Strong school–community partnerships in inclusive schools are “part of the fabric of the school... We count on them”. *School Community Journal*, 25(2), 9–34. <https://doi.org/2016-00631-002>
- Guttman, L. (1954). A new approach to factor analysis: The radex. In P. F. Lazarsfeld (Ed.), *Mathematical thinking in the social sciences*. 258-348. Free Press.

- Kaiser, H. F. (1960). The Application of Electronic Computers to Factor Analysis. *Educational and Psychological Measurement*, 20(1), 141–151. <https://doi.org/10.1177/001316446002000116>
- Leggette, H. R. and Redwine, T. (2016). Using Q methodology in agricultural communications research: A philosophical study, *Journal of Applied Communications* 100(3), 57-67. [doi.org/10.4148/1051-0834.1230](https://doi.org/10.4148/1051-0834.1230)
- Masser, D. T., Foster, D. D., & Falk, J. M. (2013, May). *Level of agricultural education advisory council implementation in Idaho secondary agricultural education programs*. Paper presented at the national meeting of the American Association for Agricultural Education, Columbus, OH. <https://doi.org/jae.2014.03116>
- Masser, D. T. (2014). *Describing agriculture teachers' utilization and views of school-based agricultural education supporters in the northwestern United States*. (Unpublished graduate thesis). University of Idaho.
- Newcomb, L. H., McCracken, J. D., Warmbrod, J. R., & Whittington, M. S. (2004). *Methods of teaching agriculture* (3rd ed.). Pearson Education.
- Papadakis, K. (2004). Understanding volunteers motivations (Master's Thesis). State University of New York at Brockport. [https://digitalcommons.brockport.edu/cgi/viewcontent.cgi?article=1000&context=rcl\\_theses](https://digitalcommons.brockport.edu/cgi/viewcontent.cgi?article=1000&context=rcl_theses)
- Penrod, K. N. (1991). Leadership involving volunteers. *Journal of Extension*, 29(4). <https://www.joe.org/joe/1991winter/a2.php>
- Phillips, S., & Little, B. R., (2002) *Recruiting, retaining and rewarding volunteers: what volunteers have to say*. Canadian Center of Philanthropy.
- Phipps, L. J., Osborne, E. W., Dyer, J. E., Ball, A. (2008). *Handbook on agricultural education in public schools* (6<sup>th</sup> ed.). Thompson Delmar Learning.
- Rochester, C., Paine, A. E., Howlett, S., & Zimmeck, M. (2010). *Volunteering and society in the 21st century*. UK: Palgrave Macmillan. <https://doi.org/10.1057/9780230279438>
- Rotolo, T (2000) A time to join, a time to quit: the influence of life cycle transitions on voluntary association membership. *Social Forces*, 78(3). 1133-1161
- Sanders, M. G. (2001). The role of “community” in comprehensive school, family, and community partnerships programs. *The Elementary School Journal*, 102(1), 19-34. <https://doi.org/10.1086/499691>
- Sanders, M. G. (2003). Community involvement in schools: From concept to practice. *Education and Urban Society*, 35(2), 161-180. <https://doi.org/10.1177/0013124502239390>
- Schmolck, P. (2014). PQMethod manual. <http://schmolck.userweb.mwn.de/qmethod/pqmanual.htm>
- Solomonson, J. K., & Retallick, M. S. (2018). Over the edge: Factors nudging mid-career, school-based agriculture teachers out of the profession. *Agricultural Education and Studies Publications*, 60. [https://lib.dr.iastate.edu/ageds\\_pubs/60](https://lib.dr.iastate.edu/ageds_pubs/60)
- Sorensen, T. J., Tarpley, R. S., & Warnick, B. K. (2010). Inservice needs of Utah agriculture teachers. *Journal of Agricultural Education*, 51(3), 1-11. <https://doi.org/10.5023/jae.2010.03001>
- Stephenson, W. (1935). Technique of factor analysis. *Nature*, 136, 297. <https://doi.org/136297b0>
- Strengthening Career and Technical Education for the 21st Century Act, H.R. 2353, 115th Cong. (2018) (enacted)
- Studer, S. (2016). Volunteer management: Responding to the uniqueness of volunteers. *Nonprofit and Voluntary Sector Quarterly*, 45(4), 688–714. <https://doi.org/0899764015597786>
- Talbert, B. A., Vaughn, R., & Croom, D. B. (2005). *Foundations of agricultural education*. Professional Educators Publications.
- Thoron, A. C., Myers, B. E., Barrick, K. R., (2016). Research priority 5: Effective and Efficient Agricultural Education Programs in T. G. Roberts, A. Harder, & M. T. Brashears (Eds.), *American Association for Agricultural Education national research agenda: 2016-2020* (pp. 29-35). Department of Agricultural Education and Communication.
- Tillinghast, S., Ramsey, J. W., & Terry, R. (2014, May). *Teacher perceptions of adult volunteers serving local, school-based agricultural education programs*. Paper presented at the

- American Association for Agricultural Education Research Conference, Salt Lake City, UT.  
<http://aaaeonline.org/Resources/Documents/National/Research%20Proceedings,%20National2014.pdf>
- U.S. Department of Education, Office of Vocational and Adult Education, (2012) *Investing in America's Future: A Blueprint for Transforming Career and Technical Education*, Washington, D.C.
- Van Exel & de Graaf, N. J. A., & de Graaf, G. (2005). *Q-methodology: A sneak preview* Retrieved from: [www.jobvanexel.nl](http://www.jobvanexel.nl).
- Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method & interpretation*. Sage Publications. <https://doi.org/9781446251911>