# PERSONAS OF AGRICULTURAL EDUCATION SUPPORTERS: A Q-METHOD STUDY

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**Authorization to Submit Thesis**

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## Abstract

Educational partnerships in schools play a crucial role in preparing students for success in the 21st century workplace. These partnerships are an essential part of agricultural education programs whereby external supporters give their time, talent, and resources to assist teachers and students. Successful educational partnerships are reliant in part on the agricultural teachers' ability to recruit and retain quality supporters. Understanding the personal demographics and preferences of supporters is a vital part of managing those individuals. The purpose of this research study was to examine the perspectives that existed related to agricultural education supporter personas. A Q-method research design was used to describe the personas of school-based agricultural education supporters in Idaho.

Data were collected in-person with 49 participants who completed a questionnaire, q-sort procedure, and interview. The findings of this research resulted in the identification of three personas. Persona 1 supporters perceive the success of the agricultural program as the success of their community and value diversity and team work. Persona 2 supporters were driven to increase students' career success and knowledge of agriculture and provide contributions unique to each individual supporter. Persona 3 supporters desired close, personal connections with the agricultural program and sought to promote the diverse opportunities in 21st century agricultural education programs.

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# Chapter 1: Introduction

Students, teachers and schools need support and action from families, businesses, universities, community organizations, and government agencies to ensure students' success in the 21st century workplace (Epstein, 2011; Executive Office of the President, 2009; Ferguson, 2011; Fuller & Raman, 2017). Educational partnerships are linked to improving school functioning, expanding community engagement, decreasing student behavioral issues, and increasing student interest in post-secondary training (Epstein, 2011; Ferguson & Lamback 2014; Sanders, 2003). These partnerships exist in school-based agricultural education (SBAE) programs in the form of community, business, industry, or government-affiliated entities or individuals who give their time, talent, and resources to assist teachers and students (Masser, 2014).

The critical role that educational partnerships play in preparing students for success is a shared vision supported by researchers and practitioners in psychology, education, agricultural education, and agricultural extension (Albrecht & Hinckley, 2012; Culp, 2012; Dodd & Boleman, 2007; Epstein, 2011; Foster, Masser, & Sankey, 2012; Masser, Foster, & Falk, 2013; Tillinghast, Ramsey, & Terry, 2014). Due to the multidimensional nature of educational partnerships, various definitions exist to describe them (Council for Corporate and School Partnerships [CCSP], 2002; Culp, Deppe, Castillo, & Wells, 1998; Dodd & Boleman, 2007; Epstein, Simon, Salinas, & Jansorn, 2009; Rochester, 2010; Penrod, 1991; Sanders, 2003). For the purpose of this study, school, family, business and community collaboration with schools will be referred to as partnerships. "In partnerships, educators, families, and community members work together to share information, guide students, solve problems and celebrate successes" (Epstein, 2011, p. 4). The term supporter will be used to

describe those entities and individuals that collaborate with schools in educational partnerships in a positive way (Masser, 2014).

General education partnerships focus on efforts regarding students' well-being, learning ability, civic participation, and personal success (Decker & Decker, 2003; Epstein, 2011; Sanders, 2001). Because SBAE programs are rooted in Career and Technical Education (CTE), technical skill development and career readiness are integral elements of SBAE programs. In addition, educational partnerships are a foundational component of secondary agricultural education because SBAE teachers are required to utilize community members to receive funding from the Carl D. Perkins Career and Technical Education Act of 2006 (S. 250, 2006). Therefore, literature that documents the role of educational partnerships to increase practical application of curriculum and develop students' career readiness skills is also of great importance (Executive Office of the President, 2009; Fuller & Raman, 2017).

Collaboration between schools and communities in CTE programs has been a focal point of educational reform (Duncan, 2013; United States Department of Education [USDOE], 2012; USDOE, Press Office, 2017). Federal law makers and leaders recommend that educational partnerships could play a crucial role in strengthening the U.S. education system and preparing students for future career success (Executive Office of the President, 2009; Fuller & Raman, 2017). Former Secretary of Education, Arne Duncan, led the creation of a U.S. Department of Education (USDOE) report and proposed reform and improvements to CTE programs across the nation through the following core principles: alignment, collaboration, accountability, and innovation (USDOE, 2012). The second principle, collaboration, includes guidelines to support innovative learning opportunities through work-based learning, and build strong collaborations and community partnerships.

The third principle, accountability, encourages employers to have a strong voice in developing the very programs they will seek to hire graduates from (USDOE, 2012). Current Secretary of Education, Betsy Devos has also pledged support for community and industry partnerships in education. “By encouraging public-private partnerships, we can help connect students with prospective employers and provide those students with the necessary skills to find a good-paying job in their communities” (USDOE, Press Office, 2017, p. 1)

Federal lawmakers who reauthorized the Carl D. Perkins Career and Technical Education Act of 2006 (S. 250, 2006), also support collaboration in education. The Strengthening Career and Technical Education for the 21st Century Act (H.R. 2353, 2018), was signed into law to reauthorize the Carl D. Perkins Career and Technical Education Act on July 31, 2018. This legislation includes the same four principles recommended by the USDOE. In addition, the authors encouraged increased public collaboration by requiring states to include local education leaders, parents, students, workforce development boards, and community and business representatives to create performance standards in CTE programs (H.R. 2353, 2018). U.S. government officials’ focus on educational partnerships is timely, given recent research from scholars in economics and education regarding students’ workplace readiness (Casner-Lotto, 2006; Ferguson, Schwartz, & Symonds, 2011).

Researchers suggest that U.S. students lack proper training to capitalize on projected job growth and are deficient in high demand employability skills (Casner-Lotto, 2006; Baum & Ma, 2010; Executive Office of the President, 2009; Ferguson et al., 2011; Fuller & Raman, 2017). Carnevale, Smith, and Strohl (2013) estimate that by 2020, the U.S. will be deficient five million workers with post-secondary training. Based on survey results from several hundred employers, researchers suggest that high school graduates are “deficient” in

foundational communication skills, critical thinking, and professionalism (Casner-Lotto, 2006). Business representatives, education leaders, and policymakers are critical of what they view as outdated education methods (Casner-Lotto, 2006).

Implementing educational partnerships can assist schools in adopting a more focused approach to develop students' 21st century skills such as critical thinking, problem solving, creativity, and communication (Casner-Lotto, 2006; Fuller & Raman, 2017). Researchers also suggest that educational partnerships are needed to increase students' awareness of careers (Fuller & Raman, 2017). Close collaboration between schools, employers, and communities to create training programs can result in a more effective education system (Executive Office of the President, 2009; Ferguson & Lamback, 2014; Ferguson et al., 2011).

## Significance of the Study

A strong foundation of literature exists documenting the impact of educational partnerships on community members, schools, and students (Decker & Decker, 2003; Epstein, 1995, 2001, 2011; Sanders, 2001, 2003). The renewed significance of educational partnerships is evident in recent discussions surrounding education reform, community development, and workforce readiness (Hess, Mehta, & Schwartz, 2012; Fuller & Raman, 2017; USDOE, 2017). Across all disciplines, scholars confirm the need to assist teachers, community members, and administrators in building partnerships (Epstein, 2002; Fuller & Raman, 2017; Masser, 2014; Sanders, 2001). Collaboration with parents, industry representatives and community members is a foundational and required component of federally funded SBAE programs (Albrecht & Hinckley, 2012; Tillinghast, Ramsey, & Terry, 2014).

A student's success in school and their future career is the central focus of educational partnerships (Epstein, 1995; Sanders, 2001). Such partnerships are linked to improved grades and attendance, increased civic involvement, reduced behavioral problems, greater classroom cooperation, and increased capacity for self-direction. (Blank, Melaville, & Shah, 2003; Epstein, 2001; Figgis, 1998). Interaction with community partners is also linked to increased student interest in post-secondary education (Alleman & Neal, 2013). Schools benefit from the increase of resources and relationships of partnerships (Gross, Haines, Hill, Francis, Blue-Banning, & Turnbull, 2015). Educational partnerships also improve parents' communication with teachers and increase their knowledge of child development (Blank et al., 2003). Community members benefit from personal satisfaction, enhanced knowledge of best practices, personal growth, and mental nourishment (Gross et al., 2015).

Volunteers and supporters play a crucial role in the creation and sustainability of educational partnerships (Clary & Synder, 1999; Decker & Decker, 2003; Epstein et al., 2009; Phillips & Little, 2002; Rochester, 2010; Sanders, 2003; Studer, 2016). Community, partner, and volunteer scholars who research educational partnerships recognize the challenges teachers face to identify, recruit, train, and manage volunteers (Bussell & Forbes, 2001; Epstein, 2001; Lee & Brudney, 2012). Lee and Brudney (2012) stated that the burden was lessened when organizers understood volunteer needs. Volunteers with more applicable skills, available time, and aligned motivations are often more committed to organizations (Baggetta et al., 2013). "The key to an organization's success in recruiting and retaining its volunteers is to have an understanding of its target group" (Bussell & Forbes, 2002, p. 244). Understanding the unique characteristics, attributes, and preferences of volunteers and supporters is a vital

part of recruitment and retention of those individuals (Baggetta, Han & Andrews, 2013; Penner, 2002; Rochester, 2006, 2010; Studer, 2016).

Masser (2014) surveyed 172 agricultural education teachers in the Northwest to describe SBAE program supporters and agriculture teachers' views of supporter involvement. Teachers reported that a lack of time to identify and contact supporters was a barrier to implementing educational partnerships (Masser, 2014). Masser (2014) recommended investigating educational partnerships from the perspective of the program supporter to provide added knowledge of supporters' motivations, views of agriculture programs, communication preferences, and the perceptions of the supporters' impact on agricultural programs (Masser, 2014). In addition, Masser (2014) concluded that this information will aid in developing plans and policies surrounding community involvement in agricultural education programs (Masser, 2014). Understanding the personas of SBAE supporters could provide insight to equip researchers, teachers, and educational leaders in implementing and maintaining strong educational partnerships (Bussell & Forbes, 2001; Rochester, 2010; Phillips & Little, 2002). Further investigation is needed to help agricultural educators and administrators effectively recruit and retain supporters in SBAE programs (Masser, 2014).

## Purpose

The purpose of this research study is to examine the perspectives that existed related to agricultural education supporter personas. Specifically, the research study aims to meet the following research objectives:

1. Identify the demographics of selected school-based agricultural education supporters in Idaho.

2. Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho.
3. Identify the motivations of selected school-based agricultural education supporters in Idaho.
4. Describe the personas of selected school-based agricultural education supporters in Idaho.
5. Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho related to personas.
6. Identify the motivations of selected school-based agricultural education supporters in Idaho related to personas.

## Operational Definitions

Terms used in this research study were derived from a variety of literature in general education, agricultural education, and agricultural extension literature. The following section includes pertinent terms and definitions.

*Agricultural Education Supporter* – An agricultural education supporter is any community, business, industry, or government-affiliated entity (individual or group) that provides support to the agriculture program through its time, talent, or resources (Masser, 2014)

*Educational Partnership* – Connections between schools and community individuals, organizations, and businesses that are forged to promote students' social, emotional, physical, and intellectual development (Sanders, 2001)

*School-Based Agricultural Education* (*SBAE) Program*– Intra-curricular secondary education in agriculture constructed of three components: classroom instruction, FFA, and Supervised Agricultural Experience (SAE) (Talbert, Vaughn, Croom, 2005)

*Volunteer* – A group or person who actively contributes to an organization, cause or group willingly and without being forced or paid to do so (Papadakis, Griffin & Frater, 2004)

## Limitations

The limitations for this study are outlined in the following section. I used a Q-method research design in this research study. The rigor of a Q-sort method relies heavily on the quality of the research question, Q-set development and P-set selection (Watts & Stenner, 2005). A total of 49 participants were purposively chosen for this study based on procedures recommended by Q-sort methodologists (Watts & Stenner, 2012). The use of very few participants in Q-sort methodology limits the generalizability of findings to a broad population (Brown, 1980).

The transferability of Q-sort methodology is based on concepts, theoretical positions or models of practice in a certain idea (Watts & Stenner, 2012). It is important to note that results and findings from this research study are not generalizable to the entire population of SBAE supporters in Idaho, or to other states. The results from this study explain the viewpoints, preferences, and perceptions of only the participants who were selected to participate.

I contacted agricultural teachers to establish the P-set for this study. I asked teachers to categorize supporters based on a provided set of descriptions and definitions I provided them. Where they categorized their supporters depended on their own perception and understanding of that supporter. I cannot make a decision *a priori* regarding this limitation, but their perceptions may influence the p-set in this study.

## Delimitations

The delimitations of a study are those characteristics or parameters that define the boundaries of the study (Simon, 2012). These can include variables, participants, or chosen methods for a study. The first delimitation in this study is the notable lack of published research in the discipline of school-based agricultural education specifically from the supporter's perspective. A diverse set of disciplines help inform this study. There are multiple terms used to describe outside partners involved in educational partnerships. "Volunteer" is used in field of agricultural extension and volunteer management, "partner" is used in the field of general education partnerships, and "supporter" is used in field of school-based agricultural education. Literature from general education partnerships and agricultural extension informed Q-set creation.

A second delimitation of this study is the chosen method of participant recruitment. Based on the Q-method research design, I sought to obtain a population with diverse viewpoints, rather than a population with diverse geographic traits. The supporters who were available to complete our study may have depended on several factors including time of year, relationship with agricultural teacher who referred them, or current involvement in the SBAE program. It is also worth acknowledging that supporters from Northern Idaho were not surveyed in this study because a population with estimated diverse viewpoints were satisfied in southern, Idaho agricultural education programs. There may be regional differences in Idaho supporters.

## Summary

Researchers, federal lawmakers, and educational leaders support that educational partnerships are linked to improving school functioning, cultivating civic involvement,

preparing students for a career, and increasing U.S. economic competitiveness (Epstein, 2011; Ferguson & Lamback 2014; Sanders, 2003). Families, businesses, universities, community organizations, and government agencies play a key role to ensure students' success in the 21st century workplace (USDOE, 2012; Epstein, 2011; Executive Office of the President, 2009; Ferguson et al., 2011, Fuller & Raman, 2017). Masser (2014) explored educational partnerships in SBAE programs in the northwestern United States from the perspective of agricultural teachers. Understanding volunteer preferences and identities may help teachers recruit and retain SBAE supporters (Bussell & Forbes, 2001). Additional investigation is needed to understand preferences and experiences of supporters (Masser, 2014).

# Chapter 2: Review of the Literature

According to Creswell (2008), "in a thematic review of the literature, the researcher identifies a theme and briefly cites literature to document this theme" (p. 113). The following chapter is a thematic review of literature regarding the types, functions, benefits, and barriers of educational partnerships in general education and school-based agricultural education (SBAE). Additionally, the chapter includes an overview of agricultural extension and volunteer management literature regarding demographics and motivations of volunteers. Lastly there is a review of literature regarding the implementation and management of educational partnerships.

## General Education Partnerships

Researchers of educational partnership disciplines have built a strong foundation to understand the interactions between supporters and schools (Decker & Decker, 2003; Epstein, 1995, 2011; Sanders, 2001, 2003). A great deal of literature exists regarding partnership types, benefits, major functions, and implementation processes (Decker & Decker, 2003; Epstein, 1995, 2011; Epstein, Simon, Salinas & Jansorn, 2009; Sanders, 2001, 2003, 2006, 2008). Joyce Epstein has conducted research involving the interaction between families, schools, and communities over the past 20 years. Educational researcher Mavis G. Sanders has also made substantial contributions to the field of community collaboration with education (Sanders, 2001, 2003, 2006, 2008, 2012). The formative work conducted by Decker and Decker (2003), Epstein (1995), and Sanders (2001) guides current research in education and partnerships (Auerbach, 2010).

## General Education Partnership Types and Functions

Decker and Decker (2003) described the purpose, creation, implementation, management, and evaluation of educational partnerships. The authors identified five types of educational partnerships listed in Table 2.1. Joyce Epstein (2011) identified six types of educational partnerships, listed in Table 2.1. Sanders (2001) identifies four prevalent forms of partnerships exhibited in Table 2.1.

Table 2.1

*Types of educational partnerships in schools*

| Author | Types |
|---|---|
| Decker & Decker (2003) | Volunteer, After-school, Advisory committee/task forces, School-business, Service learning |
| Joyce Epstein (2011) | Parenting, Communicating, Volunteering, Learning at home, Decision making, Collaborating with the community |
| Mavis Sanders (2001) | Business, University, Service-learning, School-linked Service Integration, Faith-Based |

Educational partnerships vary greatly in complexity, duration, function, and purpose (Sanders, 2006). There is a great deal of literature in general education research documenting the function of partnerships. The most common types of partnerships that relate to this study include: business, advisory committee/task forces, service-learning, and community.

**Business partnerships.** The most common educational partnerships are those with businesses and corporations (Decker & Decker, 2003; Sanders, 2006, 2008). School-business partnerships were identified as an important element for school reform to help schools deliver relevant experiences, curriculum, and educational programming (Badgett, 2016; Fletcher & Tyson, 2017; Scales et al., 2005; Tyszko, 2014). School-business partnerships have grown from only philanthropic relationships to more purposeful engagement to prepare students for

productive lives after high school (Badgett, 2016; Fletcher & Tyson, 2017; Scales et al., 2005). According to Sanders (2006), businesses engage with schools in various ways. Large and small businesses commonly extend financial or material support, and influence state and local educational reform. In a study conducted by Sanders (2006) individual employees participated as mentors, tutors, and guest speakers. Business leaders from the local community often served as educational decision makers on school boards (Sanders, 2006).

**Advisory committee/task force partnerships.** Advisory committees and task forces serve a unique role and are commonly used to involve the community in curriculum development and educational planning (Decker & Decker, 2003). According to Decker and Decker (2003) these groups are sometimes elected or otherwise appointed to focus on a specific assignment. Individuals who take on these roles learn a great deal about school needs, consider all competing priorities, and collaborate to make decisions for the betterment of the teachers and students (Decker & Decker, 1991). Decker and Decker (1991) suggest that task force and advisory groups should reflect the diversity of the school or program with which they are involved.

**Service-learning partnerships.** "Service-learning partnerships provide students with opportunities to assist individuals or agencies in addressing social and environmental problems or community needs" (Sanders, 2006, p.20). Some examples include working with disabled children, planting community gardens, or assisting at local shelters. School-linked service brings schools, social service agencies, and health providers together to provide more efficient service to children and families in need (Sanders, 2003). Though the law prohibits faith-based organizations from imposing religious views on students, they often participate in public school reform in many ways (Sanders, 2003).

**Community partnerships.** Epstein et al. (2009) stated, "when parents, teachers, students, and others view one another as partners in education, a caring community forms around students and begins its work" (p. 20). According to Epstein (2004) family and community partnerships provided several services and programming to students and family including holding networking nights and home activities to welcome refugee families, offering programming focused on student achievement, hosting reading activities for parents and kids after school, and providing college readiness programming in partnership with local universities. The school also collaborated with the community by helping students host a senior citizen dinner (Epstein, 2004).

Sanders (2006) made the important distinctions that community is larger than a confined neighborhood, and that partnerships must be uniquely designed to fit each school and community. In 2006, Sanders surveyed 443 schools to explore their involvement with partnerships. Survey participants reported a total of 817 partnerships. Of the respondents, 70% reported having at least one educational partnership. The greatest proportion of schools were involved in one or more business partnership. Study participants also reported partnerships with the following: universities or neighboring schools, healthcare organizations, government or military agencies, service and volunteer organizations, faith organizations, and senior citizen organizations (Sanders, 2006).

According to Sanders (2001), educational partnerships take a variety of forms including: student-centered, family-centered, school-centered, community-centered, or a combination of all these. Student-centered activities are most common and focus on working with kids at school, and job shadowing. Family-centered activities focus on parents and include parenting workshops and family counseling. School-centered activities range from

beautification projects to staff development classes. Community-centered engagement included activities such as charitable outreach and exhibits.

In an exploratory study of partnership functions, Sanders (2001) reported that the most common partnership activities included, mentoring and tutoring, contextual learning, job shadowing, and the provision of services, equipment, and supplies. Decker and Decker (2003) state that there is no uniform, one-size-fits-all partnership. Regardless of type, the credibility and impact of the group largely depends on the support it gets from school staff, the substance of its assignment, and clarity of the task to everyone involved (Decker & Decker, 2003).

**General Education Partnership Benefits**

Epstein (2011) proposed that educational partnerships are meant to be mutually beneficial for supporters and students. Literature regarding the benefits of educational partnerships support this idea of shared benefits between all parties involved (Alleman & Neal, 2013; Blank et al., 2003; Decker & Decker, 2003; Epstein, 1995, 2004, 2011; Figgis, 1998; Gross, Haines, Hill, Francis, Blue-Banning, Turnbull, 2015; Sanders, 2001, 2002, 2003; Sheldon, 2007). In a focus group study of 40 community partners at five schools, Gross et al. (2015), reported on the reciprocal nature of partnerships. School officials reported that educational partnerships are engrained in the culture and fabric of their school. As part of the Coalition for Community Schools, Blank et al. (2003) summarized findings from 20 research studies that examined practices of community schools. Researchers reported the benefits of educational partnerships on students, families, schools and the community (Blank et al., 2003).

**Students.** The main reason to create educational partnerships is to help all children succeed in school and later in life (Epstein, 1995). Educational researchers have reported a

wealth of benefits that partnerships provide to students' during their primary and secondary years of education (Decker & Decker, 2003; Epstein, 1995, 2011; Epstein & Sheldon, 2002; Epstein et al., 2009; Gross et al., 2015; Sanders, 2003). Blank et al. (2003) reported several benefits to students: improved grades, increased attendance, reduced behavioral problems, increased access to health services, greater classroom cooperation, and increased capacity for self-direction (Blank et al., 2003). Sanders (2003) postulated that educational partnerships can improve students' academic achievement by increasing student test scores, and increasing student learning opportunities outside of school.

In a study of NNPS schools, Epstein et al. (2009) used longitudinal data, statistically controlled for external factors, and determined that students who engaged in family partnerships in middle school and high school showed improved attendance, student conduct, and grades. In a 2002 study, schools who involved family and community members in activities focused on school safety and student behavior reported fewer disciplinary actions from one year to the next (Sheldon & Epstein, 2002). Based on student learning data, Epstein (2011) reported that students do better in school when the important people in their lives at home, school, and in the community have common goals and play collaborative, complementary, and supportive roles.

Although many businesses partner with schools through financial support, Gross et al. (2015) postulated that business leaders want to partner with schools in ways that are more meaningful than surface-level sponsorship. These partnerships can also expose students to the relevancy of their education (Fletcher & Tyson, 2017). Students often find teaching and learning to lack meaning and are prone to question the relevance of instructional tasks in traditional classrooms (Castellano et al., 2012; Fletcher & Tyson, 2017). Fletcher and Tyson

(2017) suggested that relating material to occupational context makes learning more meaningful for students. Newmann, King, and Carmichael (2007) posited that students were more engaged in class material when the curriculum was presented in the context of an occupation.

Griggs (2005) proposed that the notion of value-added education is a strong motivator to partners. In a study of the partners involved in community-industry school partnerships, Griggs (2005) examined the perceived benefits to teachers, business, and students. Participants reported the following benefits to involvement with schools: curricular relevance, increased conversations between students and adults, an enhanced understanding of the world of work, an increase in credential attainment by students, and an increase in the development of essential skills (Griggs, 2005).

In a research study of six rural school districts in Virginia, Alleman and Neal (2013) explored the effect of community partnerships on students' preparation for post-secondary education. Researchers postulated that community partners played a role in helping students prepare for college. According to Alleman and Neal (2013), partners supported students' academic and career success by providing information and advising students on career decisions. Community members provided academic tutoring, provided resources to improve curriculum relevancy, and supported funding initiatives. Community partners also engaged in, "building students aspirations and socialization to postsecondary education, creating a formal and informal economy of support, and developing a community commitment to the value of postsecondary education" (Alleman and Neal, 2013, p. 4).

**School/ Teacher.** The benefit that educational partnerships have on schools and teachers is well reported in the literature. Researchers have recommended that partnerships

help schools and teachers facilitate more meaningful and relevant education, provide more resources and support for school programs and classes, and assist staff and teachers in guiding students in career decisions (Gross et al., 2015; Figgis, 1998; Fuller & Raman, 2017; Ferguson, 2011; Ferguson & Lamback, 2014; Sanders, 2003). Through a review of literature, Sanders (2003) posited that educational partnerships can improve school environment and programs, help teachers with their work, and increase student learning opportunities outside of school. Based on research findings, Gross et al. (2015) reported that when schools engaged in partnerships, teachers benefited from the increased resources, supports, and relationships.

Schools also benefit from the delivery of relevant curriculum in work-based learning environments that apply educational concepts to real-world situations (Figgis, 1998). In addition to making class curriculum more meaningful, researchers recommended that partnerships can serve as a way for community members and educational supporters to help students prepare to navigate a changing U.S. job market (Fuller & Raman, 2017). In a study of six states' high school counseling practices, students who received career counseling reported fewer disciplinary problems, better attendance and higher graduation rates (Carey, 2012). According to the American Counseling Association (ASCA), the average counselor to student ratio is 482 to 1 (ASCA, 2015). Ferguson and Lamback (2014) reported that school counselors face immense challenges in delivering guidance to students. Educational partnerships could help solve this issue by organizing programming focused on career advising for students (Ferguson, 2011; Ferguson & Lamback, 2014).

**Community.** Educational partnerships can also provide family support and services, increase parents' awareness of school needs, and build stronger relationships in communities (Blank et al., 2003; Decker & Decker, 2003; Gross et al., 2015; Sanders, 2001, 2002, 2003;

Sheldon, 2007). When engaging in educational partnerships, community members reported benefits such as personal satisfaction, enhanced knowledge of best practices, personal growth and mental nourishment (Gross et al., 2015). Educational partnerships also helped to provide family support and services; increase parents' leadership and skills; and connect families with others in the school and community (Gross et al., 2015). In the Coalition for Community Schools study, Blank et al. (2003) reported that families experienced improved communication with teachers, greater attendance to school meetings, decreased family violence, and increased knowledge of child development. Communities benefited from partnerships in many ways including: increased community use of school buildings, more family awareness of community agencies, and strengthened community pride and identity (Blank et al., 2003).

Figgis (1998) determined that partnerships were mutually beneficial for schools and supporters; providing benefits such as a clear investment in their future workforce. Figgis (1998) also suggested additional benefits for businesses: community recognition, enhancement of the company's skill base, more efficient and effective recruitment, personal satisfaction, and bottom-line improvement. According to a report from the United States Chamber of Commerce (USCCF) foundation, Center for Education and Workforce (2014), additional benefits are recorded for partnerships' influence on managing career pipelines. When employers collaborate with educators, students gain assurance of future employment prior to committing time and resources to a given training or certification program (USCCF, 2014). In addition, employers can plan and communicate their workforce needs and increase students' awareness of career opportunities with their company (USCCF, 2014).

## School-Based Agricultural Education Partnerships

School-based agricultural education (SBAE) programs are both designed and required to incorporate community involvement in the total program model (Calhoun, 1957; Hamlin, 1962; Newcomb, McCracken, Warmbrod, and Whittington, 2004). The following section includes a review of the literature relating to SBAE program partnerships. Through a review of historical literature, Croom (2008) postulated that the role of community members in SBAE programs was promoted by agricultural education leaders long before their foundational structure was created. Many teachers in SBAE programs were early adopters of the idea that community members played a key role in student success (Hamlin, 1949).

The total program model of agricultural education includes three components: classroom/laboratory instruction, FFA, and Supervised Agricultural Experience (SAE) (Phipps & Cook, 1952). This structure is used in modern SBAE programs and allows for unique, yearlong volunteer opportunities for supporters (Newcomb et al., 2004). The contribution of time, talent and resources from the community are an essential part of that model. Newcomb et al. (2004) states, "Well-organized and conducted agricultural education programs are community oriented. Instruction takes place in the community as well as in the school" (p. 13).

Beyond the intended design and structure of SBAE programs that allow for community support, partnerships are also mandated by the Carl D. Perkins Career and Technical Education Act of 2006 (S. 250, 2006). SBAE programs are required by law to collaborate with the community, under guidelines of the Carl D. Perkins Vocational and Technical Education Act (S. 250, 2006). CTE programs' eligibility for funding is determined in part by their active collaboration with "parents and students, interested community

members, representatives of business and industry, and representatives of labor organizations in the State" (S. 250, 2006).

**School-Based Agricultural Education Program Partnership Types and Functions**

Supporters engage in SBAE programs individually or as part of structured groups (Albrecht & Hinckley, 2012). The main types of educational partnerships in SBAE programs are non-affiliated supporters, advisory councils, and alumni chapters (Gossen, 2011; Masser et al., 2013, 2014; Phipps, Osborne, Dyer & Ball, 2008).

**Non-affiliated supporters.** Agricultural educational researchers have documented common roles of supporters in the total agriculture education program model (Baker & Futrell, 2017; Martin & Henry, 2012; Masser, 2014; Rice & Kitchel, 2017; Talbert, Vaughn, & Croom 2005). Parents, business and industry entities, colleges, government agencies, and community-based organizations commonly volunteer with agricultural programs as non-affiliated supporters (Albrecht & Hinckley, 2012; Gossen, 2011; Masser et al., 2013). Phipps et al. (2008) stated that parents often serve as a chaperone, guest speaker, judge, or in general volunteer roles. Agricultural teachers in Masser (2014) study selected all roles that occurred by supporters in the FFA, SAE and classroom components of the program.

The roles that supporters filled most often in the classroom, ranked in order, were as follows: field trip opportunities, guest speakers, and material donations (Masser, 2014). Idaho respondents ($n$ = 75) indicated that 48% of supporters also provided financial support for classroom materials (Masser, 2014). Supporter roles fulfilled in FFA included: fundraising, CDE judges, scholarship opportunities, and FFA event chaperones (Masser, 2014). Of the Idaho respondents, 41% ranked CDE practice events as the third most common role of supporters. In the SAE program component, supporters' most common roles included:

providing job placement opportunities, livestock buyer, supervision of SAEs, mentors, and providing facilities for student SAEs (Masser, 2014).

In a study of agricultural plant science curriculum, Rice and Kitchel (2017) reported that the community played a key role in classroom instruction and student projects. Community members influenced what students grew in their greenhouse, helped students make decisions, and provided supplemental knowledge to students (Rice & Kitchel, 2017). Baker and Futrell (2017) conducted a census study with a population of 201 SBAE program students participating in Oklahoma FFA Agriscience Fair. Participants indicated that outside collaborators such as parents, industry professionals and core teachers assisted students with their projects. Researchers recommended that agricultural teachers involve additional groups and individuals to support student development (Baker & Futrell, 2017).

**Advisory councils.** When volunteers in educational partnerships seek more complex partnerships and long-term commitment, they often form structured groups with a higher level of interaction and coordination (Sanders, 2006). Advisory councils are comprised of a selected group of business, community, and education stakeholders who provide input on the planning, development, implementation, operations, and evaluations of an agricultural education program (Phipps et al., 2008). These groups provide advocacy in the community and advice that is representative of the community (Masser et al., 2013). The primary functions of advisory councils include, "(1) assist in the planning decisions of agricultural education programs, and (2) oversee the evaluation of agricultural education programs to ensure that the program's goals are achieved" (Phipps et al., 2008, p. 83). Utilization of advisory councils is varied in SBAE programs across the nation (Barbour, 2010; Foster et al., 2012; Taylor, Stripling, Stephens, Hart, Falk, & Foster, 2017).

Masser et al. (2013) surveyed agricultural educators in Idaho regarding their use of advisory councils. Of the 95 respondents, 89.5% utilized an advisory council. Masser et al. (2013) proposed that councils most commonly consisted of seven individuals, with representation from the following sectors of the community: local agricultural industries, parents of current students, parents of past students, representatives of local non-agriculture industries, and former students. The council members acted as a communication link to the general public, identified facility needs, and determined the objectives of the program (Masser et al., 2013). Based on research findings, Masser et al. (2013) recommended the need for research to further explore the role of community members in SBAE programs.

**Alumni chapters.** FFA Alumni chapters are an additional type of support common in SBAE programs. "The mission of the National FFA Alumni Association is to secure the promise of FFA and agricultural education by creating an environment where people and communities can develop their potential for premier leadership, personal growth, and career success" (National FFA Alumni Association, 2009, p. 2). According to Talbert et al. (2005), the local FFA Alumni affiliate is "one of the most productive methods for developing community support for an agricultural education program" (p. 135). The importance of implementing and maintaining a local FFA Alumni chapters has become a focus for agricultural education programs (Gossen, 2011).

The National Council for Agricultural Education (2009) recommended that active local FFA Alumni chapters are needed for SBAE programs to meet National Quality Program Standards for Secondary Agricultural Education Programs. In an unpublished dissertation study of National FFA Alumni members, Gossen (2011) stated that FFA Alumni members are engaged in local SBAE programs in several ways. These alumni members reported supporting

programs in the following ways: chaperoning trips, fundraising, coaching FFA CDEs, assisting with FFA activities, serving on advisory committees, and serving as guest speakers in the classroom.

**School-Based Agricultural Education Program Partnership Benefits**

There is a lack of published literature documenting the benefits of educational partnerships in SBAE programs. The common purpose of current literature published by agricultural education researchers is to understand the scope and implementation of supporter groups. According to Newcomb et al. (2004), community members play an important role in strengthening agricultural education programs. Involving community members in the program benefits students by making class curriculum relevant, timely and applicable to careers; providing facilities, expertise, and support; and increasing community awareness of the SBAE program (Newcomb et al., 2004).

Community support can increase the amount of skilled and prepared workers that graduate from high school or post-secondary school (Talbert et al., 2007). Martin and Henry (2012) studied the influence of agriculture programs on three rural communities. The researchers suggested that the most influential contribution of the agricultural program was providing events and activities that built social connections between community members. "Community members involved in school-based agriculture programs could find a shared identity in the program" (Martin & Henry, 2012, p. 117). Gossen (2011) asked respondents to select the benefits of joining their local Alumni affiliate. The most frequent reported benefits were personal growth/satisfaction/fulfillment ($n$ = 119, 50.4%), helping kids, supporting youth ($n$ = 113, 42.5%), and connecting with others/networking ($n$ = 55, 46.4%).

Cromer (2018) conducted a nation-wide study of 134 agricultural teachers' perceptions and utilization of their program supporters. The respondents indicated the benefits of utilizing supporters. The most frequently selected benefits were "they advocate for my local program" ($n$ = 108, 96.4%), "they assist with building community support for my program" ($n$ = 107, 95.5%), "they assist with school and community activities" ($n$ = 101, 90.2%), and "they provide guidance to the program" ($n$ = 101, 90.2%). Participants selected benefits such as: assistance with CDE/ livestock shows, assistance with SAEs, assistance with fundraising, help supervising students, and allow me to offer more events. Of the participants, 78% indicated supporters make their jobs easier and 67% reported utilizing supports allows the teachers to focus on other aspects of their program.

## General Educational Partnership Barriers

Despite strong agreement on the importance of educational partnerships, communities and families, most schools, districts, and states still face several barriers to implementing partnership programs (Decker & Decker, 2003; Epstein, 2011; Epstein et al., 2009; Sanders, 2001, 2003). The following section outlines the barriers to implementing and maintaining partnerships as posited by general education researchers. There are four common barriers to partnership development: process-oriented barriers, lack of professional preparation of teachers, policies, and lack of resources (Decker & Decker, 2003; Sanders, 2001, 2003, 2006).

Process-oriented barriers refer to any barrier caused by people during collaboration (Decker & Decker, 2003; Dryfoos, 1998; Sanders, 2001). These barriers include: a lack of consensus by the teachers on the same issue; teacher burnout; power and control issues between teachers and stakeholders; lack of trust among all parties involved; differing philosophies and attitudes toward partnership; and a lack of participation in partnership

initiatives collaboration (Decker & Decker, 2003; Dryfoos, 1998; Sanders, 2001, 2003, 2006). The lack of collaboration due to any interpersonal reason lessens the strength of the home, school, and community partnership (Decker & Decker, 2003).

A lack of professional preparation of the teachers is a second barrier to educational partnerships (Dryfoos, 1998; Sanders, 2003). When community-school partnerships go without leadership and maintenance, sustaining the activities are challenging (Sanders, 2008). In a review of the literature, Sanders (2003) posited that teachers lack the knowledge and skill to maintain partnerships. Researchers suggest that professional development and training would better ensure that teachers see working with community supporters as a part of their job, rather than viewing it as an additional obligation (Dryfoos, 1998; Sanders, 2001, 2003).

The third barrier to collaboration is federal, state, and local policy (Decker & Decker, 2003; Dryfoos, 1998). The work of community organizations and schools are often guided by different policies, regulations, rules, and definitions. This affects the ease of collaboration and efficiency of partnerships (Decker & Decker, 2003; Dryfoos, 1998). Sanders (2001) states that it is challenging for state, district, and local schools to link partnership activities to school improvement goals. As schools implement new policies, educational partnerships can often become more complex and burdensome to the teacher and community member (Decker & Decker, 2003). Policies surrounding school security could also be a barrier to educational partnerships. Multiple states, counties and schools across the country require all community members who volunteer in schools to complete background checks, some at their own expense (HB. 2992, 2018; Jacobson, 2003; SB. 213, 2017). At least 10 states across the nation require background checks of all volunteers (Jacobson, 2003).

The final barrier identified by researchers is a lack of resources (Decker & Decker, 2003; Dryfoos, 1998). Specifically, a lack of financial resources was commonly reported as a hindrance to partnerships (Decker & Decker, 2003; Dryfoos, 1998). Dryfoos (1998) added that a lack of funds also compounds to cause transportation issues. Sanders (2001) surveyed 443 National Network of Partnership Schools (NNPS) primary and secondary school teachers to describe the partnerships occurring at the schools. Teachers reported that burnout and lack of time were the top two barriers to implementing partnerships (Sanders, 2001). Additional reported barriers included: competition from other schools, lack of leadership, lack of funding, and lack of communication (Sanders, 2001). Study participants located in resource-poor communities had low access to supporters (Sanders, 2001).

Results of a case study of school-business partnerships in Houston, Texas shows the importance of buy-in when creating partnerships. According to Longoria (1999), there were approximately 2,322 school-business partnerships in Houston, TX in 1994, mostly focused on school improvement and student achievement. Partnership activities included mentorship, equipment donations, and funding student attendance awards. Students' test scores increased on the Texas Assessment of Academic Skills and the Scholastic Aptitude Test subsequent to the partnerships, but concerns were raised about how they were created and managed. A central concern was that the involvement occurred without input from teachers, administrators, parents, and community members. These risks can be reduced through proper planning that builds trust and ownership (Gross et al., 2015; Badgett, 2016; Bowman & Dawson-Jackson, 1994).

## School-Based Agricultural Education Partnership Barriers

Educational partnerships are an essential component of SBAE programs. A lack of partnerships in those programs can negatively affect compliance to national standards, federal funding, and the purpose of the program all together (S. 250, 2006). This section includes a review of literature related to teachers' barriers and supporters' barriers. Understanding the barriers that effect SBAE partnerships can help researchers and teachers in agricultural education better prepare to implement and maintain partnerships. Researchers in agricultural education have documented the challenges that teachers often face in organizing and maintaining educational partnerships (Masser, 2014). Because this study is focused toward supporters, we are also concerned with the barriers that supporters face to engage in partnerships.

Agriculture teachers value the support they receive from community stakeholders (Masser, 2014; Solomonson1 & Retallick, 2018). Yet, several researchers have suggested that teachers, both new and experienced, indicate that engaging with and organizing stakeholders and supporters is an area of concern (Boone & Boone, 2007; Camin, 2005; Joerger, 2002; Layfield & Dobbins, 2002; Myers, Dyer, & Washburn, 2005; Mundt & Connors, 1999; Solomonson & Retallick, 2018; Sorensen, Tarpley, & Warnick, 2010). In a literature review of SBAE teacher needs, DiBenedetto, Willis and Barrick (2018) identified documentation of teacher needs that included: training in utilizing the community to provide opportunities for students, and help building skills to gain support from parents, organizations, and community groups (DiBenedetto et al., 2018).

Based on research findings, Masser (2014) suggested that, most often, the agricultural teacher serves as the first point of contact for supporters. When asked to select the barriers

that prevent them from working with supporters more, 61% of respondents ranked the time it takes to work with supporters as their top barrier (Masser, 2014). Of the respondents, 36% indicated their second barrier was being unaware of potential supporters/resources in the community (Masser, 2014). Of the respondents, 29% selected that they were concerned that the community stakeholders will overstep their boundaries and run the program (Masser, 2014). Masser (2014) proposed similar barriers to those affecting general education partnerships.

Although the volunteer manager plays an essential role in maintaining successful partnerships, the volunteer or supporter is also a crucial component to partnerships (Epstein, 2001; Dodd et al., 2007; Rochester, 2010). A lack of published research exists reporting the barriers that supporters face in engaging in SBAE partnerships. Researchers and practitioners in agricultural extension literature have documented barriers and discomforts of volunteering (Culp, 2012; Dodd et al., 2007). Dodd et al. (2007) stated that volunteers may feel burdened by multiple roles, lack of funding and resources, poor communication, inappropriate job placement, underused skills, and lack of training. Culp (2012) explained that volunteers may leave the partnership if their skills are not aligned with their assigned task or if they feel unaccomplished. This is a natural occurrence in volunteer management (Culp, 2012).

Bussell and Forbes (2002) described that volunteers "may deliberate for considerable amounts of time about whether to volunteer, the extent of their involvement, and the degree to which particular activities fit with their own personal needs" (p. 1517). The authors also stated that volunteers may make a commitment that extends over a considerable period and that may entail considerable personal costs of time, energy, and opportunity (Bussell & Forbes, 2002). Masser (2014) asked participants to select the barriers they thought supporters

faced in engaging with SBAE programs. The top three barriers were as follows: lack of time, supporters do not know what assistance the program needs, and supporters' lack of understanding of agricultural education. Of the Idaho respondents ($n$ = 75), 62% ranked lack of time as the supporters' biggest barrier (Masser, 2014).

## Volunteer Demographics

The types and individual characteristics of volunteers may have an impact on their willingness and interest to enter into educational partnerships (Baggetta et al., 2013; Bureau of Labor Statistics [BLS], 2016; Rochester, 2010, Studer, 2016). However, the influence of demographics such as age, sex, occupation, income, and education level may only have a connection to engagement in distinct disciplines (Locke, 2003; Penner, 2002; Rochester, 2006, 2010; Rotolo 2000). This section provides an overview of volunteer and supporter demographics that are explored in this study.

In a 2015 census study of U.S. citizens over 16 years of age, BLS (2016), reported about 62.6 million people volunteered with at least one organization; down from 64.2 million in 2011. Respondents 35 to 44 years of age and 45 to 54 years of age were the most likely to volunteer, at a rate of 28.9% and 28.0%, respectively. The lowest volunteer rate was reported by 16 to 24 year-olds. These findings are exhibited in Table 2.2.

Table 2.2

*Volunteering in the United States, 2015: volunteer age*

| Age | *f* | % |
|---|---|---|
| 16-24 years | 8,415 | 21.8 |
| 25-34 years | 9,548 | 22.3 |
| 35-44 years | 11,490 | 28.9 |
| 45-54 years | 11,933 | 28.0 |
| 55-64 years | 10,213 | 25.1 |
| >65 years | 11,024 | 23.5 |

According to BLS (2016), individuals with higher levels of education were more likely to volunteer than those with less education. Married individuals also reported the highest volunteer rate at 29.9%. In addition, parents whose children were under age 18 were more likely to volunteer than those without children. Volunteering is often related to the family life cycle (Rochester, 2010; Roto, 2000). As children reach certain ages of childhood and join sports teams, organizations, or other school-related functions, their parents often volunteer for those same groups (Rochester, 2010). In a study with the Commission on the Future of Volunteering, Rochester (2006) posited a positive relationship existed between volunteerism and the following; educational attainment, religious affiliation, and socio-economic status (Rochester, 2006). There was not a signification difference between the participation rates of men and women (Rochester, 2006).

Current or former membership of an organization also influences supporter interest and commitment to volunteer (Bussell & Forbes, 2002; Culp, 1997; Culp, McKee, & Nestor, 2005; Fritz, Barbuto, Marx, Etling, & Burrow, 2000). Bussell and Forbes (2002) stated that when considering who volunteers for organizations, former participation in the organization as a child or having a child involved in the organization were indicating factors. In a study of agricultural extension volunteers, Culp (1997) proposed the primary reasons for volunteers to become involved in the 4-H program was “My children were 4-H members,” and “I enjoyed 4-H as a youth” (p. 3). Fritz et al. (2000) also proposed that respondents were largely motivated by affiliation and a desire to help those associated with the 4-H youth programs.

Several types of volunteers exist, with a growing distinction between long- and short-term volunteers (Rochester, 2006). Long-term volunteers are categorized with a high level of devotion, sense of affiliation to the organization, and strong emotional investment in their role

(Danson, 2003). Long-term volunteers tend to seek out the organization to pursue their commitment to a cause, become increasingly connected to the organization over a period of time, or are brought to the organization by a fellow volunteer (Rochester, 2010). This type of volunteer shapes their role, but is also willing to accomplish any tasks needed of them (Danson, 2003).

Short-term volunteers do not see volunteering as a central part of their lives and tend to be recruited through participation in a certain event (Rochester, 2006). This type of volunteer commonly looks for a well-defined, short-term role with clear expectations of what is expected of them. Rochester (2006) postulated that short-term volunteers generally take on only one kind of role. Macduff (2005) identified three types of short-term volunteers including: volunteers that offer a few hours of their time and often work in a small capacity for a larger project or event, volunteers who engage on a more regular basis, but for a limited time period; and volunteers who serve at regular intervals for short periods of time. Danson (2003) also identified transitional volunteers as individuals who use volunteering as means to integrate into a community for the first time.

Gossen (2011) reported the demographics of 399 FFA alumni members across the United States. The male respondents totaled ($n$ = 257, 64%) and females totaled ($n$ = 142, 35.6%). The most frequently reported age groups were 45-54 year olds (25%), and 55-64 year olds (20%). The most frequently reported education level was high school graduate ($n$ = 124), and bachelor's degree ($n$ = 108). Of the participants, 26% were involved in production agricultural careers and 27% in non-agricultural related careers (Gossen, 2011).

Of the total participants in Gossen's (2011) study, 352 reported their household income level. The most frequently reported income was $40,001-60,000 ($n$ = 94, 26.7%). The

participants' affiliation with the FFA consisted of past FFA members (*n* = 286, 72%) and non-members of the FFA (*n* = 113, 28%). Gossen (2011) participants reported their preferences for communication as print media (*n* = 207, 54%) and email (*n* = 147, 38%).

**Volunteer Motivation**

Motivations play a significant role in volunteer recruitment (Clary et al., 1998, 1999; Rochester, 2010). Based on their findings, researchers suggest that specific groups of people have different motivations for volunteering (Burns et al., 2006; Bussell & Forbes, 2002; Clary & Snyder, 1999; Mueller, 1975; Phillips & Little, 2002). Bussell and Forbes (2002) state that the key to success in recruiting and retaining volunteers is having knowledge of the motives of the target audience. Bussell and Forbes (2001) divide motives of volunteers into four categories: altruism, family unit consuming the collective good, enjoying selective incentive, and improvement of human capital (Bussell & Forbes, 2002; Mueller, 1975). The researchers define selective incentive as, "a sense of belonging, the need for affiliation, gaining prestige or self-esteem, or a way of making friends (p. 249).

Clary and Snyder (1999) outlined a functional approach to understand motivations that prompt volunteering. The authors identified six motives for volunteering: 1) career - developing and enhancing one's career; 2) enhance - enhancing and enriching personal development, 3) social - conforming to the norms of or establishing norms for groups, 4) protective - escaping from negative feelings, 5) understanding - learning new skills and practicing underutilized abilities, and 6) value - expressing values related to altruistic beliefs (Clary et al., 1998).

To assess these motivations, Clary and Snyder (1999) created and refined the Volunteer Function Inventory (VFI). The instrument is designed to assess each of the six

motivations for volunteering. This instrument is widely used to determine volunteer motivation (Burns et al., 2006). Research has been conducted with active volunteers, previous volunteers and non-volunteers. Understanding the motives for volunteers could help educators and administrators match potential motivations to recruitment methods (Clary & Snyder, 1999; Papadakis, Griffin, Frater, 2004).

Burns et al. (2008) used the VFI in a study of 511 students from seven different colleges. Based on study results, Burns et al., (2008) did not suggest a difference between males and females for the career and social factors. Value was the strongest motivation factor for both males and females, protective was the weakest (Burns et al., 2008). Yoshioka, Brown, and Ashcraft (2007) used an adapted VFI to study adults, 51-79 years old, who had and had not volunteered. VFI factors of value and social functions were reported as important motivators by both groups (Yoshioka et al., 2007). According to Gossen (2011) respondents' highest ranked functions were values (M = 5.72), understanding (M = 5.01), and social (M = 4.62).

## Implementing and Maintaining Partnerships

Addressing the characteristics and motivations that lead individuals to volunteer is important, but additional investigation is needed to understand why supporters remain engaged (Rochester, 2010). This section summarizes literature regarding the implementation and maintenance of educational partnerships. There is lack of published literature in SBAE literature related to this topic. Therefore, researchers in general educational partnerships, non-profit volunteer management, and agricultural extension provide most of the foundational literature for this section (Culp, 2012; Epstein et al., 2009; Penrod, 1991; Phillips & Little, 2002; Rochester, 2010; Sanders, 2003; Studer, 2016).

**Partnership Models**

Several methods and processes are documented in the literature to select, implement and maintain partnerships (Council for Corporate and School Partnerships [CCSP], 2004; Decker & Decker, 2003; Epstein et al., 2009; Sanders, 2001, 2003). Researchers who create complex models of partnership implementation provide a diverse set of recommendations for supporter retention that are specific to certain disciplines. The step-by-step processes of implementing partnership most pertinent to this study are exhibited in Table 2.3. The models and guidelines exhibited in Table 2.3 were created by researchers from diverse disciplines.

Researchers with the CCPS interviewed nearly 300 school board members, superintendents, administrators, and 50 executives from small and large businesses to create guidelines for partnership implementation. These guidelines were intended to optimize the effectiveness of school-business partnerships (CCSP, 2004). The ISOTURE model of volunteer management was developed at North Carolina State University to help extension volunteers become more involved and effective (Dodd et al., 2007). Culp et al. (1998) developed the GEMS model in response to the rapidly changing needs of extension professionals regarding volunteer management.

The GEMS model consists of 18 steps in four categories as depicted in Table 2.3. The model is displayed in a circular funnel to convey the continuous, progressive nature of the process (Culp et al. 1998). Culp (2012) provides an overview of the model with recent modifications. Research on effective volunteer management in Indiana led to the creation of the L-O-O-P model as a structured way for extension professionals to manage volunteers (Penrod, 1991). The L-O-O-P model is comprised of four phases as depicted in Table 2.3.

Table 2.3

*Steps to implementing partnerships*

| Author | Steps to Implementation | | | |
|---|---|---|---|---|
| Culp (2012) | Generate | Educate | Mobilize | Sustain |
| Dodd & Boleman (2007) | Identification | Selection | Orientation | Training |
| Epstein (2009) | Create Action Team | Identify funds | Identify starting points | Create 3-year outline |
| Penrod (1991) | Locating | Orienting | Operating | Perpetuating |
| Sanders (2003) | Identify the needs and issues of the school | Define the focus and scope of the partnership | Identify and select partners for collaboration | Monitor and evaluate partnerships' effectiveness |

The similarities across the models exhibited in Table 2.3 are related to the following components of partnerships: identifying goals, selection and preparation, management and support, evaluation, and recognition. The role of teams and communication are also documented as important aspects to these models. The following section outlines these commonalities.

**Identifying goals.** Epstein (2009) recommended that team members should create a three-year outline and one-year action plan for their support. "This plan outlines how each subcommittee will work over three years to make important, incremental advances" (Epstein, 2009, p. 34). The utilization of surveys, a student panel, and other structured discussions with school personnel are recommended methods to identify school goals, needs, and interests (Epstein, 2009).

Based on research findings, Sanders (2003) recommended that partnerships should align with school priorities, "community partnerships should be part of a well-planned

strategy to achieve a specific goal" (p. 45). Researchers with the CCSP also concluded that successful school-business partnerships should have a shared purpose with specific goals, guidance by an action plan with defined outcomes, and an extended network of support for sustainability (CCSP, 2004).

According to Culp (2012), the volunteer manager should create a needs assessment for the program or project and then create volunteer position descriptions based on those needs. Locating volunteers is the first step of the L-O-O-P model process (Penrod, 1991). This involves selecting volunteers for specific roles based on criteria such as: organization needs, volunteer needs and interests, and task requirements (Penrod, 1991). The manager must portray a positive organization image, approach a specific volunteer for an opportunity, and learn and match their needs to a task. Penrod (1991) recommended that the extension educator compare the goals and vision of the program and volunteer.

**Selection and preparation.** According to Dodd et al. (2007), the volunteer manager should asses the needs of the program to identify types of volunteers needed and create position descriptions and expectations. Volunteer managers should introduce volunteers to the program, communicate expectations, and ask volunteers to fill out the Volunteer Interest Form. "Selection is the process of studying the background of potential volunteers and motivating them to fill selected positions" (Dodd et al., 2007, p 2). According to Dodd et al., (2007), each potential volunteer should be interviewed regarding their interests, strengths, and potential. The manager should match their interests to a role in the program (Dodd et al., 2007).

Culp (2012) proposed that the volunteer manager should start selection by developing a list of qualified individuals or groups to assist with a given project. Those individuals should

be screened based on their knowledge and skills and selected for their abilities to assist the program (Culp, 2012). A volunteer's training needs depend on their experience and knowledge level. Dodd et al. (2007) recommended using multiple teaching methods, providing accurate resources, and offering continued trainings as needed. During the education process of Culp et al. (1998) GEMS model, managers should orient volunteers to organization policies and expectations in order to protect the volunteers from risks and liability (Culp et al., 1998). Teaching and educating should be ongoing and conducted through individual instruction, group meetings, workshops, or classes (Culp, 2012).

Penrod (1991) proposed formal and informal methods to orient volunteers. Formal methods include the following: explaining bylaws, procedures, and policies of the organization; reviewing volunteer expectations, organizational goals, structure and vision; sharing written materials and prepared presentations and feedback mechanisms. Informal strategies require that the volunteer gathers information pertaining to the organization and their potential role within it. Penrod (1991) stated that this phase, "allows leaders to articulate the vision, mission and goals at the beginning of a new volunteer's involvement" (p. 2). It is important that volunteers gain new knowledge and meet new people (Penrod, 1991).

Lee and Brudney (2012) suggested that an increase in the extent of social networks increased the likelihood of formal volunteering, those who volunteer formally are more likely to volunteer informally, and vice versa. Based on their findings, Lee and Brudney (2012) raised points of interest for organizations recruiting volunteers. Organizations should consider engaging informal volunteers and utilize their networks to reach out and recruit them to an organizational setting. Organizations should also actively recruit volunteers through existing

social ties, and organize recruitment activities aimed toward those who volunteer informally (Lee & Brudney, 2012).

**Management and support.** Sanders (2001) outlined the necessary elements for successful program implementation. These elements are a high-functioning school, a student-centered environment, an effective partnership team, principal leadership, and external support. Although Sanders (2001) recognizes the difficulty that some schools may have in reaching these outcomes, she advises that "schools at various stages of readiness can build their capacity for more comprehensive and complex partnerships" (p. 40).

In a case study conducted by Harvey and Sanders (2002), community members revealed a common desire to partner with schools to help increase student achievement. From research findings, the authors stated that community partners were more likely to develop and maintain partnerships with schools that had a high commitment to learning, a receptive atmosphere with staff who are appreciative of community involvement, and two-way communication with all partners (Harvey & Sanders, 2002).

During the utilization stage of the L-O-O-P model, Dodd et al. (2007) recommended that the volunteer manager help volunteers delegate tasks, provide new and diverse opportunities, and support and trust the volunteers to carry out their responsibilities. According to the GEMS model, mobilizing involves the following steps: engage volunteers in a task or role they have been selected for, understand volunteer motives to enhance their experience, and provide supervision based on need and skill of volunteers (Culp, 2012). Helping volunteers feel accomplished through activities such as conducting meetings, implementing programs, and designing projects is important (Penrod, 1991).

According to the CCSP (2004), activities should be integrated into the school and business culture, driven by a clear management process and structure, and defined by specific and measurable outcomes. Partnerships should be developed with clear definitions of success for all partners (CCSP, 2004). Partnerships should also have support from the highest level in the business and school and include detailed internal and external plans of communication (CCSP, 2004). Researchers who studied determinants of volunteer commitment reported that at the organizational level volunteers who are on teams that operate more interdependently, share work more equally, and devote smaller shares of time to meetings, are more committed (Baggetta et al., 2013).

**Evaluation.** According to Epstein (2009), the action team is responsible for evaluating current practices, considering options for new partnerships, implementing programming, and evaluating next steps. Under the ISOTURE model, volunteers should expect to have their work evaluated to ensure they are reaching desired program outcomes (Dodd et al., 2007). Dodd et al. (2007) described three types of evaluation. Process evaluation measures volunteer satisfaction, input, and overall experience. Outcome evaluation measures what the volunteer has learned from programs or activities they have implemented. Lastly, economic evaluation is a measurement of the monetary value of a volunteer's effort. The manager must have clearly defined objectives and goals before evaluating volunteers (Dodd et al., 2007).

Sustaining volunteers is the last category of the GEMS model (Culp et al., 1998). Evaluating volunteers ensures that organizational and volunteer goals are being met. Culp (2012) recommended keeping written documentation of the volunteer interaction to inform later program decisions. According to the GEMS model, formal and informal evaluations should include the strengths, weaknesses, and areas of improvement related to volunteers and

their positions (Culp, 2012). Penrod (1991) explained that the final phase in his model, perpetuating, is important to the longevity and continuity of a program. Evaluation and recognition are components of this phase. Evaluation should be directed, friendly, constructive, and focused on the volunteer's performance relative to a goal (Penrod, 1991).

**Recognition.** Recognition and evaluation are the last two steps of the ISOTURE model (Dodd et al., 2007). Recognition helps volunteers feel valued, motivated, and respected (Dodd et al., 2007). According to Dodd et al. (2007), formal recognition includes being honored at an event, given a gift, mentioned in local news sources, or given thank you letters. Informal recognition includes a pleasant working environment, timely communication, and overall respect. "Building relationships with volunteers is crucial to the recognition process," (Dodd et al., 2007, p. 5). In this model, volunteers should expect to have their work evaluated to ensure they are reaching desired program outcomes.

The GEMS model sustaining category also includes the following steps: recognition so volunteers understand the impact of their effort, retaining volunteers by motivating them, redirecting them to another position, or disengaging them from the organization (Culp, 2012). Culp (2012) explains that volunteers may choose to leave for several reasons that are natural in the evolution of volunteer engagement. Penrod (1991) states, "the recognition process is critical to a volunteer's satisfaction" (p. 3). Formal recognition is most meaningful if it is directed to a volunteer's motivations (Penrod, 1991). Time, attention and sincere respect are the best forms of recognition, but pins, plaques, or certifications are also desired by some volunteers (Penrod, 1991).

Recognition of volunteer and student accomplishments is a critical component of maintaining educational partnerships (Bartol & Srivastava, 2002; Philips, 2005; Young,

Worchel, & Woehr, 1998). Phillips and Little (2002) conducted a study of volunteer satisfaction determinant on the rewards they received after completing a task with a nonprofit organization. The researcher posited that relevant and valuable rewards provide motivation while the reward system is in place. To have an overall positive effect on the volunteer, a reward must be administered in a way that is not controlling yet maximizes its ability to convey positive information to the recipient (Phillips & Little, 2002). Three recommendations that volunteers in this study had for better retention were appreciation, providing meaningful activities, and communicating with volunteers (Phillips & Little, 2002).

Researchers of an additional study in agricultural extension support the importance of purposeful and personalized recognition. Fritz, Karmazin, Barbuto and Burrow (2000) reported that rural volunteers were less interested in public recognition than urban volunteers. Both rural and urban volunteers rated "letters from 4-H members" and "phone call from a 4-H member" as the most appealing forms of recognition. The least appealing form of recognition was a "visit from Extension Educator" (Fritz et al., 2003).

**Teams.** Epstein (2009) stressed the importance of building an Action Team for Partnerships (ATP) that follows the steps depicted in Table 2.3. The action team serves as leaders for activities, but they are also assisted by other volunteers. Obtaining funds and other resources is crucial to support the work and expenses of the action team.

Epstein (2009) focused on the importance of continuing to plan and work. The action team should plan to meet regularly and present their progress (Epstein et al., 2009). According to Sanders (2001) successful partnerships work to build a team of uniquely qualified individuals. This enabled task-sharing, advanced plans, and group synergy. In additional

studies in volunteer management, researchers indicate that a team spirit is important to some volunteers (Sinasky & Bruce, 2007; Studer, 2016)

**Communication.** According to Sanders (2003), frequent and wide communication is a critical component of successful educational partnerships. Through case study research, Sanders (2003) posited that newsletters, meeting agendas, distributed meeting minutes, thank you cards, and in-person communication were all forms of successful communication methods. Communication methods and content that are tailored to the specific motivation are more successful in recruiting recipients of the message (Clary, Snyder, Ridge, Miene, & Haugen, 1994).

## Theoretical Foundation

According to Kitchel and Ball (2014), the theoretical foundation of a study should articulate the rationale behind the relationships between variables. The Self-determination Theory (SDT), displayed in Figure 2.1, serves as the theoretical foundation for this research study. SDT focuses factors, both intrinsic and extrinsic, that facilitate a person's motivation, social integration, and progress (Deci & Ryan, 1985). Intrinsic motivation refers to the interests, curiosity, care or abiding values of an individual, and extrinsic motivation refers to the external factors such as reward systems, evaluations, or the opinions of others that motivate an individual to act. The theory examines how biological, social, and cultural conditions support and facilitate or undermine inherent human capacity for growth, engagement, and wellness (Deci & Ryan, (1985). Deci and Ryan (1985) suggested that humans have three basic psychological needs including competence, relatedness and autonomy.

Regarding autonomy, the theorists suggested that people have the basic desire to have at least some control over their lives and control over their behavior (Deci & Ryan, 2017). Additionally, Deci and Ryan (2017) posited that people feel the need to have knowledge, skills and competence around a subject or task that is important to them. People also feel the need to have connection, communication, and relationships with others (Deci & Ryan, 2017).

Ryan and Deci (2000) argued that conditions that support an individual's experience of autonomy, competence, and relatedness foster their motivation and engagement for activities, including enhanced performance, persistence, and creativity. They also suggested that the degree to which these needs are not met will have a detrimental impact on individuals (Ryan & Deci, 2000). The SDT framework has broad and discipline-specific implications for understanding practices and functions that enhance versus diminish the satisfaction of basic needs (Ryan & Deci, 2000).

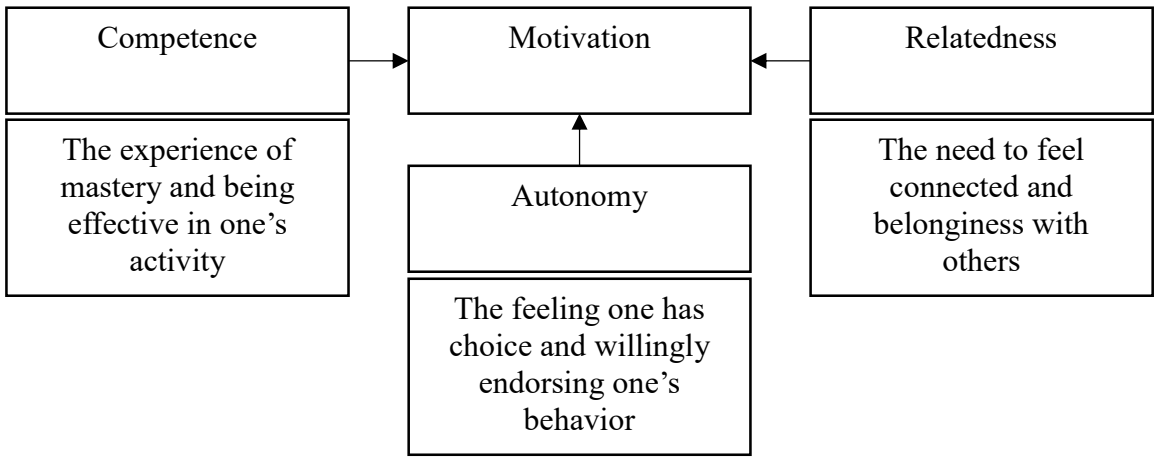


*Figure 2.1*

*Self-determination Theory*

## Conceptual Framework

Kitchel and Ball (2014) explained that a conceptual framework is based on theory and serves as a visual diagram or description of the relationships among variables in a study. The variables highlighted in grey, as depicted in Figure 2.2 are the focus of this research study. The study was guided by the factors influencing supporters during engagement in SBAE programs.

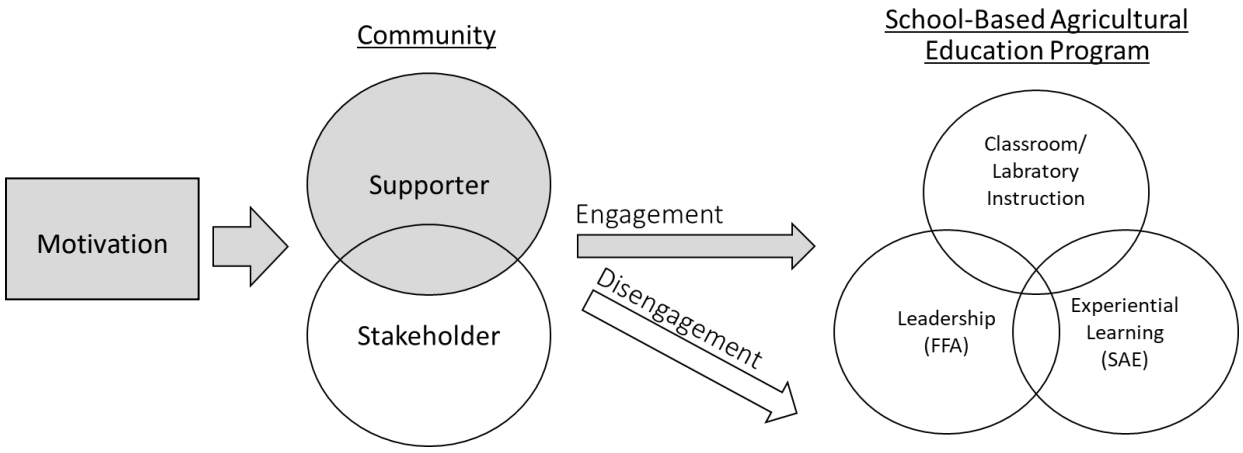


*Figure 2.2*

*Factors Influencing Supporters During Engagement in SBAE Programs*

The conceptual framework begins with motivation factors that influence satisfaction. The SDT states that intrinsic and extrinsic motivation factors are affected by competence, autonomy, and relatedness needs that impact the satisfaction of individuals (Deci & Ryan, 2017). Motivation influences individuals who are associated with SBAE programs: stakeholders and supporters.

Agricultural education supporters are the focus of this study. An agricultural education supporter is any community, business, industry, or government-affiliated entity that provides support to the agriculture program through its time, talent, or resources (Masser, 2014).

Agricultural education stakeholders are those individuals or entities that have a vested interest in the SBAE program, but do not engage in actively supporting the program (Masser, 2014). When supporters experience factors of extrinsic or intrinsic nature, they have a choice to disengage, or engage in the SBAE program. The focus of this study is to examine the perspectives that exist related to agricultural education supporter roles as they engage in the program.

The last component of this research study conveyed in Figure 2.2 is the SBAE program. The unique structure of the program involves three circles: classroom/laboratory instruction, FFA, and Supervised Agricultural Experience (SAE) (Phipps et al., 2008). Masser (2014) reported that supporters engage in all three areas of the three-component model of SBAE programs. The current study examines the characteristics, motivations, and preferences of SBAE supporters while engaging with SBAE programs.

## Summary

The importance, benefits, and types of educational partnerships are supported by literature (Albrecht & Hinckley, 2012; Epstein, 1995; Ferguson, 2011; Sanders, 2001). Barriers remain in the implementation and maintenance of partnerships in general education and SBAE programs (Decker & Decker, 2003; Masser, 2014; Tillinghast et al., 2014). Educational programs and organizations rely on volunteers to perform important tasks. Understanding how to recruit, train and manage volunteers can improve collaboration (Bussell & Forbes, 2002). Additional research is needed to improve collaborative efforts and understand supporters' experiences in educational partnerships in SBAE programs (Martin & Henry, 2012; Masser, 2014).

# Chapter 3: Methods

The following chapter outlines the methods and procedures used to address the research question and objectives of this study. I used the Q-method research method to examine the perspectives that exist related to school-based agricultural education (SBAE) supporter personas. Q-method research utilizes a set of participants, called a P-set. The participants analyze a set of statements, called a Q-set, that pertain to an identified concourse. A concourse refers to a concept of shared knowledge and meaning from a relevant population of opinion, experiences, and perceptions (Watts & Stenner, 2012). The concourse for this research study was supporter experiences, perceptions, and preferences as they support SBAE programs. The Q-sort was accompanied by a post-sorting interview. A questionnaire was also used to capture demographic characteristics, preferences, and each participants' Volunteer Function Inventory (VFI).

## Research Design

The Q-method was developed by William Stephenson in the 1930's and is one of the first alternative research methods in psychology (Stephenson, 1935). The Q-sort method is an inverted version of traditional factor analysis methods (Watts & Stenner, 2012). The benefits of using the Q-sort method include: limiting researcher bias, using subjectivity to gather holistic understanding, and using fewer participants to gain meaningful data (Brown, 1980; Stephenson, 1953; Watts & Stenner, 2012). Value also remains in the establishment of viewpoints that would otherwise go undiscovered without the use of such a unique method (Stephenson, 1953). The aim of a Q-methodologist is to collect data when a sample of tests or items are measured by a collection of individuals used as variables (Stephenson, 1936).

In this method, participants express their subjectivity operantly by performing a series of operations on a series of items. The outcome of this data is a correlation between persons, rather than a correlation between tests (Watts & Stenner, 2012). "Performing a Q-methodology study involves the following steps: 1) definition of the concourse, 2) development of the q-sample, 3) selection of the P-set, 4) Q-sorting, 5) analysis and interpretation" (Exel & Graaf, 2005, p. 4). The Q-set is sampled from a collection of information relating to the research question (Stephenson, 1936). Participants act as the variables in this method and are strategically selected based on a determined set of characteristics (Watts & Stenner, 2012).

Participants rank a set of heterogenous items based on their psychological significance into a forced quasi-normal curve (Watts & Stenner, 2012). Pre-sorting information is captured with a survey and post-sorting information is capture with an in-person interview; both methods are used to achieve a richer more detailed understanding of participants' Q-sort placement (Watts & Stenner, 2012). Data analysis involves examining the location of ranked statements in relation to other items (Stephenson, 1953). This potentially identifies similar perspectives, identities or types of participants (Stephenson, 1953). Data analysis procedures for the Q-sort method involve factor extraction, rotation and estimation (Brown, 1980; Exel, 2005; Watts & Stenner, 2005; Watts & Stenner, 2012). PQMethod software is used to analyze data (Watts & Stenner, 2012).

## Instrumentation

I utilized a pre-sorting survey to identify the demographics, training and communication preferences, and motivations of SBAE supporters relating to personas. The questionnaire for this study was adapted from Masser's (2014) study. The instrument was

administered via a paper survey. There were three instrument sections related to the study objectives: supporter demographics and roles in SBAE programs, communication and training preferences, and supporter motivation using the VFI. The instrument is included in Appendix A.

The first block of items in the questionnaire were selected based on supporter characteristics reported in the literature to have a possible relationship to supporter engagement (Baggetta, 2013; BLS, 2016; Rochester, 2010, Studer, 2016). Items concerning general demographics included: occupation, age, gender, education level, household income level, and marital status. Participants were asked to choose which supporter group or entity they identified most with by choosing one of the following: community-based, business/ industry entity, and government entity. This section also included items related to past FFA membership and participants' residency in relation to the community of the SBAE program they support. The final section of this block allowed participants to select the areas of the three components of an SBAE program that they actively support.

The second block of items asked supporters to rank their communication and training preferences. Participants used a 5-point Likert-type scale (1 = least preferred, 5 = most preferred) to rank face-to-face, email, mailed letters, phone call, social media, and text message communication. Participants indicated who they preferred to prepare them for their role as a supporter by choosing one of the following: agriculture teacher, other program supporters, FFA Alumni Association members. Lastly, participants used the same 5-point Likert-type scale to indicate their preference for various preparation methods by ranking formal training, informal discussion, self-guided online training, and written document.

The third block of items includes the VFI to identify factors that motivate the participants to support SBAE programs. The VFI is commonly used to determine volunteer motivation (Burns et al., 2006; Burns et al., 2008; Clary et al., 1992; Clary et al., 1998, Papadakis et al., 2005). According to Phillips (2005) it is the most applicable instrument for studies determining volunteer motivations. The first function measured is "values" and relates to altruistic motives to express and act on believes and concerns of people's welfare. The values function is consistently reported at or near the top of every study in which the VFI is administered (Snyder et al., 2000).

The second function is "understanding." This function provides an opportunity for new learning experiences for the volunteer and whoever they are working with. Volunteers can seek new information or skills for their own personal gain and exercise knowledge, skills, and abilities that might otherwise go unpracticed" (Clary et al. 1998). A third function of the VFI is "social" and is related to the desire to expand social circles, join new social groups, or adapt to the social pressure applied by those in a particular social group. The fourth function measured is "career" and relates to one's motivation to further their career-related skills, relationships, and contacts (Clary et al., 1998).

The fifth function measured by this instrument is the "protective" function and relates to the need to reduce guilt, address personal problems, or deal with inner struggles through volunteering. The final function "enhance," is focused on the positive desire of personal growth and enhancing the volunteer's self-esteem. The VFI is designed with a seven-point Likert scale, ranging from 1-"not at all important/ accurate" to 7-"extremely important/ accurate" (Clary et al., 1998). In a test of internal consistency, the Cronbach's alpha coefficients for each VFI scale are the following: career, ($\alpha = .89$); enhancement, ($\alpha = .84$);

social, (α = .83); understanding, (α = .81); protective, (α = .81); and values, (α = .80) (Clary et al., 1998). Post hoc analysis of the VFI instrument for this study showed the following Cronbach's Alpha coefficient scores: career, (α = .89); enhancement, (α = .73); social, (α = .77); understanding, (α = .77); protective, (α = .82); and values, (α = .76). The Cronbach's alpha reliability coefficients for the four constructs exceeded .60, which is the acceptable minimum for exploratory research pertaining to personality variables (Ary et al., 2006, p. 267; Hair, Black, Babin, Anderson, & Tatham, 2006).

**Q-set Development**

Q-set development is regarded as one of the most challenging aspects of performing a Q-method study (Watts & Stenner, 2012). "The Q-methodologist must carry out this task skillfully, patiently and with an appropriate application of rigor" (Watts & Stenner, 2005, p. 75). There is no single, correct way to develop a Q-set (Watts & Stenner, 2012). There is also not a correct number or type of items to use as the Q-set (Stephenson, 1953). This process involves identifying literature relevant to the concourse and surveying literature in a structured or unstructured way to generate items for the Q-set (Watts & Stenner, 2012). The concourse for this research study was supporter experiences, perceptions, and preferences as they support SBAE programs.

I chose to use a semi-unstructured collection technique to evaluate the concourse and generate items that were balanced among literature sources and provided coverage of all applicable content areas (Watts & Stenner, 2012). To begin I identified key themes and issues surrounding educational partnerships, partnership implementation, and volunteer management using an extensive set of academic literature from the following content areas: agricultural education supporters, agricultural extension volunteer management, school-business

partnership, family and community partnership, volunteer management, and non-profit volunteer management. I generated a total of 96 issues, theories, findings, and recommendations related to the concourse as exhibited in Appendix C.

I organized the items by theme to assist with q-set development, as exhibited in Appendix D. I created 51 statements directly from the concourse evaluation. Generating an excess number of statements allowed me to refine and reduce the Q-set through discussion and face validity procedures (Watts & Stenner, 2005). "A Q-set somewhere between 40 and 80 statements has become the house standard" (Watts & Stenner, 2012 p. 61). Watts and Stenner (2012) recommended that the number of items used in a given study should be based on the subject matter and justified by the researcher (Watts & Stenner, 2005). I chose to use a set of 40 statements because the amount was representative of the concourse and covered viewpoints reported by researchers in the subject matter.

The rigor of Q-sort methodology is strengthened through sound Q-set generation (Watts & Stenner, 2012). The Q-set items enable participants to impress their own meaning and viewpoint of the item (Watts & Stenner, 2012). The review process provided confirmation of intended interpretation of each statement and served as a verification of word and topic choice in the Q-set. Three agricultural education professors, one agricultural communications professor, two agricultural education graduate students, and 11 undergraduate research students reviewed the Q-set for intention and semantic phrasing.

A face-validity test was established with participation from undergraduate research students and two graduate students in the Agricultural and Extension Education Department at the University of Idaho. During the test, each student received a set of statements to review. They validated the statement by indicating their perception of the following: meaning of the

statement, statement's psychological significance, and placement on the Q-sort table. At the completion of this test, 40 statements were deemed appropriate and valid for inclusion, seen in Appendix E.

**P-set Recruitment**

The Q-method is designed to facilitate the expression of personal viewpoints, by allowing individuals to self-categorize based on the Q-sorts they produce (Watts & Stenner, 2005). Participants engaging in Q-sort procedures use their subjectivity to rank a set of heterogenous statements. Watts and Stenner (2012) stated that considerable care should be applied when selecting participants because they serve as a variable in the study, not a sample. Participants must have a defined viewpoint of expression that matters in relation to the concourse (Watts & Stenner, 2012). Brown (1980) recommended selecting enough participants to establish the existence of a factor with the purpose of comparing one factor to another. Watts and Stenner (2012) stated that this can potentially be achieved through, "the engagement of very few participants or perhaps even a single individual" (p. 72). The authors further recommend that it may be sensible to use a number of participants that is less than the number of items in the Q-set.

To begin P-set selection, I examined the concourse to identify an estimated number of viewpoints that will be expressed through the Q-sort. A thorough examination of the concourse revealed potential viewpoints related to motivation, industry-ties, affiliation, former volunteer efforts, and life cycle of support. Based on this examination, 11 diverse supporter viewpoints were generated and defined as exhibited in Table 3.1.

Table 3.1

*Estimated viewpoints of P-Set*

| Viewpoint | Description |
|---|---|
| Talent/ time | a supporter whose main contribution is their time and talent |
| Resource | a supporter whose main contribution is resources |
| New Supporter | a supporter who is relatively new to supporting the program |
| Long-time Supporter | a supporter who has supported the program for a relatively long time |
| Kids | a supporter who have kids in FFA and agricultural programs |
| Wish for better | a supporter who disagrees with some aspects of the ag program or FFA |
| Cheerleader | a supporter who is eager to help with anything the teacher, students, or program needs at any time |
| Community Guru | a supporter who is involved in the community and has a community-lens perspective |
| Industry Guru | a supporter who is heavily involved in industries related to the agricultural program, but not necessarily agricultural production |
| Strong Agriculture | a supporter who is heavily involved in agricultural production |
| Strong Youth | a supporter who is heavily involved with youth |

To obtain participants for this study I contacted all state agricultural teachers via a listserv email and requested recommendations for study participants. Teachers who submitted participant lists were contacted to gain a description of each supporter and general information pertaining to their involvement including contact information, SBAE program affiliation, and supporter description. Follow-up phone calls were made to gather more potential participants as needed. Exel (2005) recommends the use of four to five participants for each defining viewpoint. The final list consisted of 98 potential participants.

We contacted each identified potential participant and asked them to participate in this study. During the phone conversation, supporters were asked about their involvement to further refine the estimation of their viewpoint. No participants declined to participate for reasons outside of scheduling conflicts. The P-set consisted of $n = 55$ participants with

varying degrees of relevance, experience, and perspective related to the concourse (Watts & Stenner, 2012). Of the participants, six did not attend their interview, resulting in $n = 49$ final participants. Each supporter was categorized based on their estimated viewpoint (Appendix F). According to Watts and Stenner (2012), four to five participants should represent each estimated viewpoint to ensure adequate coverage of the concourse. We were able to achieve this in 10 of 11 estimated viewpoints.

## Data Collection

Watts and Stenner (2012) recommended collecting data in person. Data collection occurred in five locations across southern Idaho. Participants met at a scheduled time and location. During the data collection process, participants performed a series of tasks. First, the participants completed the demographics survey, then completed Q-sort, and were then interviewed to gather information regarding their sort.

Participants started the process with an orientation to provide an overview of their role in the data collection process. We asked for their assent in completing a questionnaire, then administered the hard copy questionnaire (Dillman, 1998). After completing the questionnaire, participants were presented with the Q-set statements printed on individual, evenly sized white cards per recommendation of Watts and Stenner (2012). Each card received a random number, visible on the back, to aide in data analysis.

A stem, or common set of words that precede each statement, was used to ensure participants approached each statement with a specific frame of mind (Watts & Stenner, 2012). The stem that framed the participants' perspectives was, "As a supporter, I…" To begin the sort, participants grouped the statements in three categories indicating the following: statements they feel positive about, statements they feel negative about, and statements they

perceive neutrally. We recorded the number on the back of the cards after the participants divided the statements into the three categories.

Participants in this Q-sort ranked Q-set statements on a quasi-normal distribution table consisting of 40 squares. Using a prearranged frequency distribution standardizes the ranking procedure, enables convenient data analysis of scores, and decreases the amount of decisions participants must make during sorting (Watts & Stenner, 2012). The range and slope of the table were chosen based on recommendations and concourse topic (Stephenson, 1953). Tables with a steeper slope are used for complex concepts and allow participants to place more statements near the middle of the table. "A shallower more flattened distribution is then saved for more straightforward topics in relation to which the participant group are likely to be particularly expert and knowledgeable" (Watts & Stenner, 2012, p. 80). In this research study I was examining supporters regarding their own experiences and preferences in supporting SBAE programs, which allowed them to present an expert and informed opinion.

The slope of the chosen Q-sort table is flatter; requiring that participants exhibit stronger feelings toward their selection (Watts & Stenner, 2012). The table is exhibited in Figure 3.1.

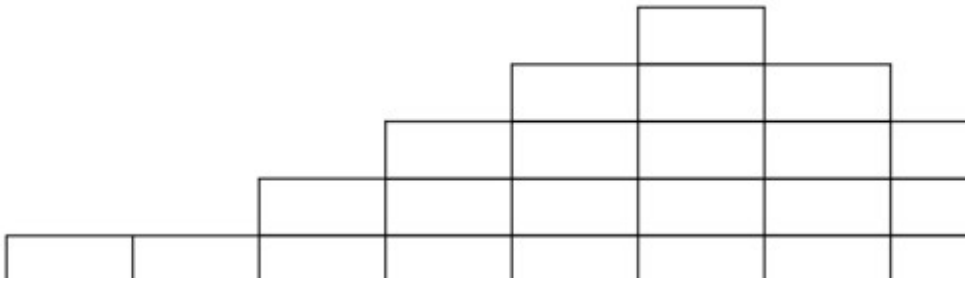

*Figure 3.1*

*Example of a quasi-normal distribution table with 40 ranking positions* (*Stenner, Watts, 2012).*

The numbering system in a shallower distribution reflects that people tend to feel very positively or negatively about a relatively limited number of issues (Watts & Stenner, 2012). A limited number of items can be ranked at each end, while a larger number can be ranked in the middle based on relative indifference (Watts & Stenner, 2012).

Participants were asked to rank the Q-set statements by placing them in the squares based on their psychological significance. Participants ranked items of most importance to them at the positive, or high number value, end of the curve. They ranked items of least importance at the negative, or lower number value, end of the curve. Participants placed items of neutral importance to them in the middle of the table. I observed each participant as they placed the statements on the Q-sort table, journaled observations of their sorting, and recorded the ranking after the participants were finished (Stephenson, 1936).

The final stage of data collection involved gathering post-sorting information through in-person interviews to further increase the quality of the data (Watts & Stenner, 2012). The purpose of an interview is to better understand the meaning and significance participants hold behind certain items and themes (Watts & Stenner, 2005). A crucial foundation of Q method is that the subjectivity of participants is communicable. To gather a richer understanding of the operant subjectivity of Q method, we explored each participant's wider perspective and discovered the rationale behind their sort (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. The interviews were semi-structured to ensure the interviewer had freedom to explore the participants' perspectives (Watts & Stenner, 2012). An interview protocol is exhibited in Appendix B.

## Data Analysis

The following section outlines the data analysis strategies and techniques used to analyze questionnaire and Q-sort data. I used SPSS to analyze demographic data, and PQ Method Software to analyze Q-sort data. Data were collected during the pre-sorting questionnaire, Q-sorting procedure, and post-sorting interview.

### Questionnaire

These three sections of the data were analyzed separately. The questionnaire shown in Appendix A is comprised of demographic questions and the Volunteer Functions Inventory (VFI) instrument. The pre-sorting questionnaire data were entered into excel by hand from the hard-copy documents. After the data was checked for accuracy and completion, data were analyzed using SPSS. Frequencies and percentages were reported for all demographic data. The mean and standard deviation was reported for communication preferences and training preferences. The mean, range and standard deviation were reported for the VFI functions.

### Q-sort

Pre-sorting information gathered from the questionnaire was used to confirm and corroborate the tone of certain interpretations reported from the Q-sorts (Watts & Stenner, 2012). Additionally, the information tells the researcher the overall perception of the broader concourse (Exel, 2005). Q-sort data is the result of a sample of tests being measured or scaled relatively by a collection of individuals (Watts & Stenner, 2012). The ranked order of the items, and their location in relation to other items, identifies potentially similar perspectives, identities or types of participants (Stephenson, 1953). Data analysis procedures for the Q-sort method involve factor extraction, rotation and estimation (Brown, 1980; Exel, 2005; Watts & Stenner, 2005, 2012).

A total number of $n$ = 49 Q-sorts were intercorrelated and factor-analyzed using PQMethod software (Schmolck, 2014). The program facilitates data input, automatically generates correlation matrixes for each member of the P-set, and conducts factor extraction, rotation and estimation (Watts & Stenner, 2005). The first step is to calculate the correlation matrix showing the connections between each Q-sort configuration. This represents the level of agreement and disagreement between sorts, not individual items (Watts & Stenner, 2005). It also provides a measure of the extent and nature of the relationship between any two Q-sorts (Watts & Stenner, 2012). The entire correlation matrix is exhibited in Appendix G.

The next objective of data analysis is to identify the number of groupings that are similar or dissimilar. Similar groupings, or people with the same views regarding the concourse, will share similar factors. "These portions or dimensions of shared meaning are our factors" (Watts & Stenner, 2012, p. 98). Q-method factors and their shared meaning will lead to the key viewpoints that the participant group holds in common (Brown, 1980). The number of factors in the final set depends on the variability in the Q-sorts and specific factor analysis methods (Exel, 2005).

Eigenvalues are the most commonly used measurement to indicate a factor's statistical strength and explanatory power in a Q-sort (Watts & Stenner, 2012). Most experts agree that factors must have an eigenvalue of 1.0 or higher to be extracted and retained (Guttman 1954; Kaiser, 1960). An *a priori* decision was made to only extract factors with an eigenvalue of 1.00 or higher. Eight factors were identified by the PQ Method software with an eigenvalue of 1.00 or higher. The unrotated factor matrix is exhibited in Appendix H.

The results generated from a varimax rotation with PQMethod software resulted an unrotated factor matrix with 50% of the variance in Q-sorts is accounted for in Factor 1.

Factor 1 had an eigenvalue of 24.39. Factor 2 accounted for 5% of the variance (eigenvalue = 2.32). Factor 3 accounted for 5% of the variance (eigenvalue = 2.22). Because the majority of sorts loaded to Factor 1, Watts and Stenner (2012) suggest implementing alternative factor extraction solutions to take a holistic view of analysis and be responsive and sensitive to the data (Watts & Stenner, 2012). Brown (1980) recommended a method to manually extract factors based on the significance of two or more factor loadings in that factor. I conducted the following calculation to obtain the significance level number.

$$2.58 \times \left(1 \div \sqrt{no.of\ items\ in\ the\ Q-set}\right) = 0.408$$

I tagged and accepted factors in the unrotated factor matrix that contained two or more sorts above the 0.408 level of significance (Brown, 1980; Watts & Stenner, 2012). Factors one, two, and three met this criterion and were extracted. A factor matrix with the three factors is exhibited in Appendix I.

The next step was to identify defining sorts that have more than half of their common variance in one factor. This provides a representative estimate of each factor's viewpoints (Stenner & Watts, 2012). This is commonly done with varimax rotation is PQMethod software. However, according to Schmolck (2014) the selection of defining sorts is a matter of reasoned judgement rather than definitive statistics. I chose to manually review each factor to flag sorts that were above the previously calculated 0.408 significance level. Sorts with confounding scores were not included as defining sorts. There were 26 defining sorts and 23 confounding sorts. The "x" indicates a defining sort, exhibited in Appendix G.

The accuracy of the three-factor solution can also be checked by calculating the degree to which factors correlate. The final factors that resulted, represent a type of point of views that are correlated with one another (Exel, 2005). This measure is used to ensure that

extracted factors are dissimilar enough to be separate, distinct viewpoints. According to Watts and Stenner (2012), the Table 3.2 exhibits the correlation between the three factors.

Table 3.2

*Correlation between factor scores*

| | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| Factor 1 | 1 | | |
| Factor 2 | 0.66 | 1 | |
| Factor 3 | 0.67 | 0.56 | 1 |

**Persona Investigation**

The next step in Q-sort data analysis is persona investigation. Varying numbers of defining sorts represent the viewpoint of each factor, so a z-score is calculated for cross-factor comparisons. The z-scores are also 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. The arrays form the basis of persona development (Watts & Stenner, 2012).

According to Watts and Stenner (2012), a strategy and system must be present to interpret and analyze factors. Factor interpretation must explain and account for the entire item configuration captured in the factor array. Significant differences between factors can be interpreted by referencing z-scores at a $p < 0.01$ level. However, analyzing and understanding the interrelations between items in each factor is critical to delivering a holistic view of each factor (Watts & Stenner, 2012).

Based on recommendations from Watts and Stenner (2012), I used the crib method to analyze factors. This method involves working through the factor arrays, item by item, and placing statements into categories including: items ranked highest, items ranked lowest, items ranked higher by (factor) than by other factors, and items ranked lower by (factor) than other

factors. This method allowed me to identify perspectives about which each factor is polarized and show how factors are polarized relative to other factors (Watts & Stenner, 2012).

Participants were able to self-categorize themselves as they responded to pre-sorting information. This led to a more in-depth comparison of emergent factors during data analysis regarding supporter personas (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 crib sheets.

## Summary

This chapter included an explanation of methods and procedures used to address the research question and objectives of this study. I used Q-method research to conduct this study and examine the perspectives that exist related to agricultural education supporter personas in Idaho. A questionnaire was also used to capture demographic statistics and each participants' VFI score. I generated a Q-set of 40 statements related to the concourse of interest for this study. I also gathered a P-set of 55 participants with 11 estimated differences in viewpoints related to their experiences. The Q-sort was accompanied by a post-sorting interview.

# Chapter 4: Results

The purpose of this research study was to examine the perspectives that exist related to agricultural education supporter personas in Idaho. Participants completed a questionnaire, Q-sort procedure and interview. The following chapter includes data and results based on study objectives.

## Objective 1: Identify the demographics of selected school-based agricultural education supporters in Idaho.

Study participants completed a paper survey and answered questions relating to their demographics. The results regarding the age, sex, group affiliation, and occupation of the participants are exhibited in Table 4.1. The participants provided their birth year on the questionnaire. The year was subtracted from 2019 to obtain the age of each participant. The highest number of participants were 40-49 years of age ($n$ = 15, 30.6%) and 50-59 years of age ($n$ = 14, 28.6%). The youngest participant was 27 years old, and the oldest was 79 years old.

Of the 49 participants, ($n$ = 31, 68.3%) were male and ($n$ = 18, 36.7%). Participants selected the group they most affiliate with, by selecting one of three options: community-based, business and industry entity, and government-affiliated entity. Of the participants, ($n$ = 13, 26%) selected community-based, and ($n$ = 36, 73%) selected business and industry entity. No participants selected that they identify most with a government-affiliated entity.

The questionnaire contained an open response question for participants to provide their occupation. During data analysis, I consolidated reported occupations. The most common occupation for this study population was agricultural production ($n$ = 16, 32.7%). Homemaker ($n$ = 7, 14.3%), and business ($n$ = 5, 10.2%) were the next most common

occupations. Other reported occupations included education, agricultural mechanics and engineering/ technology. These results are exhibited in Table 4.1.

Table 4.1

*Frequencies and percentages of participants' age, sex, group affiliation and occupation (n = 49)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Age | | |
| 20-29 | 1 | 2.04 |
| 30-39 | 8 | 16.33 |
| 40-49 | 15 | 30.61 |
| 50-59 | 14 | 28.75 |
| 60-69 | 8 | 16.33 |
| 70-79 | 3 | 6.12 |
| Sex | | |
| Male | 31 | 63.27 |
| Female | 18 | 36.73 |
| Group Affiliation | | |
| Community-based | 13 | 26.53 |
| Business and industry entity | 36 | 73.47 |
| Government-affiliated entity | 0 | 0.00 |
| Occupation | | |
| Agricultural Business | 4 | 8.16 |
| Agricultural Mechanics | 3 | 6.12 |
| Agricultural Processing | 1 | 2.04 |
| Agricultural Production | 16 | 32.65 |
| Veterinarian | 3 | 6.12 |
| Business | 5 | 10.20 |
| Engineering/ Technology | 3 | 6.12 |
| Homemaker | 7 | 14.29 |
| Human Resources | 1 | 2.04 |
| Plant Science | 2 | 4.08 |
| Writer | 1 | 2.04 |
| Construction | 1 | 2.04 |
| Education | 2 | 4.08 |

Participants were asked to report their education level, household income level, and marital status on the questionnaire. Their responses are exhibited in Table 4.2.

Table 4.2

*Frequencies and percentages of participants' education level, household income level and marital status* (*n = 49)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Highest Level of Education | | |
| Less than high school | 0 | 0.00 |
| High school graduate | 14 | 28.57 |
| Technical school or associate degree | 8 | 16.33 |
| Bachelor's degree | 21 | 42.86 |
| Master's degree | 4 | 8.16 |
| Doctorate degree | 2 | 4.10 |
| Household income level | | |
| <$20,000 | 0 | 0.00 |
| $20,001 - $40,000 | 0 | 0.00 |
| $40,001 - $60,000 | 7 | 14.29 |
| $60,001- $80,000 | 6 | 12.24 |
| $80,001- $100,000 | 10 | 20.41 |
| >$100,001 | 14 | 28.57 |
| Rather not say | 12 | 24.49 |
| Marital status | | |
| Single | 3 | 6.12 |
| Living with another | 0 | 0.00 |
| Married | 44 | 89.87 |
| Separated | 0 | 0.00 |
| Divorced | 2 | 4.1 |
| Widowed | 0 | 0.00 |
| Rather not say | 0 | 0.00 |

Participants were given six options regarding education level and were asked to select their highest level of educational attainment. Nearly half the participants indicated their highest level of education is a bachelor's degree (*n* = 21, 42.86%). Of the 49 participants, (*n* = 14, 28.6%) indicated their highest level of education as high school graduate. Only two participants indicated they have a doctorate degree. Participants were asked to select their level of household income on the questionnaire. Of the 49 participants, (*n* = 12, 24.5%) chose not to indicate their income level. Of the participants, (*n* = 10, 20.4%) selected $80,0001-

100,000 as their household income level and (*n* = 12, 24.5%) chose >$10,001. Regarding marital status, the majority of respondents were married (*n* = 44, 89.9%).

Participants were asked to provide the following relating to their parental status: total number of children, number of children who are current FFA members, number of children who are past FFA members, number of children who were/are not FFA members, and number of children who are not of high school age. Of the 49 participants, (*n* = 47, 95.9%) reported having two or more children (M = 3). Only (*n* = 12, 24.5%) participants reported having one or more children who are current FFA members. Twenty-three respondents had one or more children who are past FFA members. Of the respondents, (*n* = 21, 42.9%) indicated they have one or more children who were/ are not FFA members. Of the participants, (*n* = 14, 28.6%) indicated that more than half of their total number of children are not of high school age.

The participant demographics relating to past FFA membership and years lived in the community of the agricultural program they support is exhibited in Table 4.3. Participants were asked to indicate whether they are past FFA members by choosing between two options: yes or no. Of the participants, (*n* = 22, 44.9%) indicated they are past FFA members. The frequency of participants who are not past FFA members totaled (*n* = 27, 55.1%).

The questionnaire contained an open response for participants to indicate the number of years they have lived in the community of the agricultural program they support. The most frequently reported length of time was 20-29 years (*n* = 12, 24.5%). Of the participants, (*n* = 10, 20.4%) indicated having lived in their community for 10-19 years. Those participants who reported living in their community for 40-49 years totaled (*n* = 9, 18.4%). These results are exhibited in Table 4.3.

Table 4.3

*Frequencies and percentages of participants' FFA membership and years lived in agricultural program they support* (*n* = *49)*

| Demographic Variables | *f* | % |
|---|---|---|
| FFA membership | | |
| Past FFA member | 22 | 44.90 |
| Not a past FFA member | 27 | 55.10 |
| Years lived the community of program you support | | |
| Do not live in community of program | 2 | 4.08 |
| <9 | 5 | 10.20 |
| 10-19 | 10 | 20.41 |
| 20-29 | 12 | 24.49 |
| 30-39 | 4 | 8.16 |
| 40-49 | 9 | 18.37 |
| 50-59 | 2 | 4.08 |
| 60-69 | 4 | 8.16 |
| 70-79 | 1 | 2.04 |

In the next section of the questionnaire, the areas of support in agricultural programs were divided into three categories: support for classroom and laboratory component; support for the FFA component; and, support for the Supervised Agricultural Experience (SAE) component. The participants indicated which areas they actively support by selecting specific options in each category (Table 4.4).

Participants first selected the roles that occurred to support the classroom and laboratory component of the program. Of the 10 areas, the most frequently supported areas include: financial support (*n* = 33, 67.4%), and curriculum (*n* = 27, 55.1%). Material donation was chosen by (*n* = 23, 46.5%) participants, and (*n* = 23, 46.5%) participants indicated they have served as a guest speaker. The FFA component was the second category addressed by the participants. The most frequently selected area of support was fundraising, (*n* = 35, 71.4%). Scholarship opportunities were selected by (*n* = 26, 53.1%) participants. The third most frequently supported area of FFA was community service (*n* = 26, 53.1%). Of the 49

participants, ($n$ = 23, 46.5%) selected material donation, and chapter banquet assistance was selected by ($n$ = 22, 44.9%) participants. These results are exhibited in Table 4.4.

Table 4.4

*Frequencies and percentages of program areas participants support* (*n = 49)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Classroom Laboratory | | |
| Financial support | 33 | 67.35 |
| Curriculum | 27 | 55.10 |
| Material donation | 23 | 49.94 |
| Guest speaker | 23 | 46.94 |
| Chaperone for class field trips | 19 | 38.78 |
| Equipment use/rental | 15 | 30.61 |
| Facilities for classes/workshops | 15 | 30.61 |
| Job shadowing | 15 | 30.61 |
| Facilities repairs | 8 | 16.33 |
| Teacher skill building | 6 | 12.24 |
| FFA | | |
| Fundraising | 35 | 71.43 |
| Scholarship opportunities | 26 | 53.06 |
| Community service | 26 | 53.06 |
| Material donation | 23 | 46.94 |
| Chapter banquet assistance | 22 | 44.90 |
| CDE judge | 17 | 34.69 |
| Leadership opportunities | 16 | 32.65 |
| Awards/ proficiency applications | 15 | 30.61 |
| Member recruitment | 12 | 24.49 |
| FFA Event Chaperone | 10 | 20.41 |
| Chapter CDE events | 9 | 18.37 |
| CDE team coach | 4 | 8.16 |
| Supervised Agricultural Experience (SAE) | | |
| Livestock buyer | 21 | 42.86 |
| Material donation | 15 | 30.61 |
| Mentorship | 14 | 28.57 |
| Job placement opportunity | 12 | 24.94 |
| Supervision of SAEs | 9 | 18.37 |
| Facilities for student SAEs | 3 | 6.12 |
| Laboratory assistance | 1 | 2.04 |

The SAE component was the third category of support addressed by the participants. The most frequent selection by supporters was livestock buyer ($n$ = 21, 42.9%). Material

donation was selected by ($n$ = 15, 30.6%) participants. Of the 49 participants, ($n$ = 14, 28.6%) selected mentorship. Job placement opportunity was selected by ($n$ = 12, 24.5%) participants. The results are exhibited in Table 4.4. Participants also provided additional information regarding their program support in agricultural programs by using an open response. Their responses included: help organize tours in the dairy industry and serve on the ag advisory committee, coordinated the formation of Alumni Chapter, and serve as President of the Alumni Chapter.

**Objective 2: Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho.**

The second objective of this study related to supporters' preferences in training and communication methods. Participants used a 5-point Likert Type scale (1-Least Preferred, 5-Most Preferred) to indicate their preference for communication and training methods in their role as a supporter. The supporters' preference for various forms of communication methods are exhibited in Table 4.5. Participants' preferred to use text messaging (M = 4.22), and face-to-face (M = 4.16) communication methods most. The least preferred method as reported by participants was social media (M = 2.41). These results are exhibited in Table 4.5.

Table 4.5

*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 |

*Note.* Means were calculated based on a five-point summated scale with the following identifiers; 1 = Least preferred, 5 = Most preferred.

Participants used a 5-point Likert-type scale to rate their preference for various training methods. The training preferences of study participants when preparing for their role as a supporter are exhibited in Table 4.6. The participants rated an informal discussion (M = 4.37), and a written document (M = 3.53) as their most preferred training methods. A self-guided online training was the least preferred method (M = 2.76).

Table 4.6

*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 |

*Note.* Means were calculated based on a five-point summated scale with the following identifiers; 1 = Least preferred, 5 = Most preferred.

Participants were also asked to select who they would most prefer to prepare them for their role as a supporter by choosing one of three options: the agriculture teacher, other program supporters, FFA Alumni association members. Training from the agricultural teacher was preferred the most frequently by most participants (*n* = 38, 77.6%). Of the participants (*n* = 10, 20.4%) indicated they most preferred an FFA Alumni member to prepare them for their role as a supporter. One participant indicated they had no preference.

**Objective 3: Identify the motivations of selected school-based agricultural education supporters in Idaho.**

The third objective of this study related to supporters' motivations relating to personas. The participants' motivations for supporting were measured with the Volunteer Functions Inventory (VFI). The VFI measured six functions in a 30-item instrument. The motivation constructs include: values, understanding, social, career, protective, and

enhancement. Participants used a 7-point Likert-type scale (1 = not at all important/accurate, 7 = extremely important/ accurate), to rate the accuracy and importance of each statement. Post hoc analysis of the VFI instrument showed the following Cronbach's Alpha coefficient scores: career, (α = .89); enhancement, (α = .73); social, (α = .77); understanding, (α = .77); protective, (α = .82); and values, (α = .76).

The results of the VFI for all study participants are exhibited in Table 4.7. Participants rated the values function as the most important to them (M = 5.91). This construct also has the smallest standard deviation, related to the other VFI constructs (SD = 1.34). The understand function was rated with lesser importance by the participants (M = 4.84).

The social function was rated with a large range between scores (M = 3.94). Participants rated the enhance function, on average, (M = 3.57) as the fourth most important motivation to support agricultural programs. The career function and protect function were rated similarly with (M = 2.53) and (M = 2.52) respectively. The protect function had the largest range of scores (1.88-4.06).

Table 4.7

*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 |

*Note.* Means were calculated based on a seven-point summated scale with the following identifiers; 1 = not at all important/accurate, 7 = extremely important/ accurate.

## Objective 4: Describe the personas of selected school-based agricultural education supporters in Idaho.

The fourth objective of this study was related to personas of SBAE supporters based on participants' viewpoints. The following section includes results related to each factor. I used PQMethod software to extract factors, identify defining sorts, and estimate viewpoints of participants (Schmolck, 2014). Analysis procedures were based on recommendations from the literature (Brown, 1980; Exel, 2005; Watts & Stenner, 2005, 2012). 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 ± .408 or above were significant at $p < 0.01$ 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 distinct ideal-typical Q-sort for each factor called a factor array. I interpreted the factor arrays through a careful and holistic inspection of the items in each array (Watts & Stenner, 2012). I 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 4.8. The reliability scores show that the factor extraction solution was reliable.

Table 4.8

*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 |

## Persona 1: Developers

Based on PQMethod analysis and results, a strong positive relationship existed between 11 participants P8, P9, P10, P19, P23, P26, P31, P44, P46, P48, P49. This section includes the Q-sort, demographic, VFI, and interview results for supporters in Persona 1.

### Persona 1 Q-sort

Participants were observed during the Q-sort process to document the nature of their categorizations and sorting. Participants initially sorted statements into piles of three categories, “Definitely like me,” “Definitely not like me,” and “unsure”. We recorded each participants’ categorization. Participants in this persona agreed with (M = 16) statements. The participants disagreed with (M = 14) statements and were unsure about (M = 11) statements. The results of their categorization are displayed in Table 4.9.

Table 4.9

*Initial categorization of items for Persona 1 (n = 11)*

| Participant | Items "definitely like me" | Items "Definitely not like me" | Unsure |
|---|---|---|---|
| P8 | 11 | 12 | 17 |
| P9 | 13 | 11 | 16 |
| P10 | 20 | 9 | 11 |
| P19 | 14 | 11 | 15 |
| P23 | 17 | 16 | 7 |
| P26 | 19 | 16 | 5 |
| P31 | 15 | 15 | 10 |
| P44 | 15 | 19 | 6 |
| P46 | 12 | 13 | 15 |
| P48 | 15 | 17 | 8 |
| P49 | 21 | 12 | 7 |
| Total | 172 | 151 | 117 |
| M | 16 | 14 | 11 |

Based on recommendations from Stenner and Watts (2012), I created a factor crib sheet to deliver a genuinely holistic factor interpretation of Persona 1 participants’ viewpoints.

Crib sheets serve as an analysis tool to compare the factor array for Persona 1 against the additional two factor arrays to establish relative estimations of the persona. The crib for Persona 1 is exhibited in Appendix J. Additionally, using the distinguishing statements in Table 4.10 to describe this persona

Table 4.10

*Distinguishing statements for Persona 1*

| Statement No. | Q-sort value | Z-score | Statement |
|---|---|---|---|
| 20 | 3 | 1.14* | am willing to be assigned tasks that require me to learn new skills |
| 34 | 2 | 0.88* | enjoy volunteering independently of my family and friends |
| 39 | 2 | 0.83* | expect the ag teacher to use supporters as a way to free up time for their own family |
| 32 | 1 | 0.82* | began supporting the program because I wanted to contribute to the good things that were happening |
| 29 | 1 | 0.70* | seek opportunities to recruit and mentor new supporters |
| 33 | 1 | 0.47* | began supporting the program because I saw there were changes that could be made |
| 25 | 0 | 0.16* | am capable of measuring my own contributions to the program |
| 19 | -1 | -0.70 | should be able to choose which tasks I assist with |
| 10 | -3 | -1.20* | desire individualized appreciation, not public, for my contributions |
| 21 | -4 | -1.23* | only want to be assigned specific tasks that align with my skills |
| 38 | -4 | -1.29* | would stop volunteering if I received negative feedback about my support |
| 28 | -5 | -1.35* | expect that the ag teacher is everywhere the supporters are expected to be |
| 12 | -5 | -1.55* | desire public appreciation for my contributions |
| 24 | -6 | -1.68* | expect all supporters and the ag teacher to share the same vision for the program |

Note: * indicates $p < .01$

The data displayed in Table 4.10 was used in persona investigation of Persona 1 supporters. Significant differences between factors can be interpreted by referencing z-scores at a $p < 0.01$ level. It is critical to understand and report the distinctive characteristics that are unique to each factor (Watts & Stenner, 2012). The distinguishing statements for Persona 1

participants' sorts with a significance level of ($p < 0.05$) are listed in Table 4.10. The asterisk (*) indicates a higher significance level of $p < 0.01$.

These individuals welcome a variety of viewpoints and supporters to be involved with the SBAE program and do not think the agriculture teacher and supporters need to share the same vision for the agriculture program (24: -6). P9 stated, "you're kind of doing problem solving, when you go into a volunteer position, and that's all part of it, is getting different opinions from people and putting those together to come to one outcome." They are more likely to recruit and mentor new supporters than other supporters (29:+1). However, these individuals did not indicate that working with family and friends as important to them (34:+2).

During post-sorting interviews, participants in this persona spoke passionately about their roles as supporters. Individuals in this persona had a higher mean score for the values function (M = 6.17) of the VFI than the other personas. They are also motivated to gain and share knowledge as supporters, as indicated by their VFI score for the understanding function (M = 5.25). They are willing to be assigned tasks that require them to learn new skills (20:+3, 21:-4), and do not believe they should be able to choose the task they assist with (19:-1). Participant, P19 stated, "I didn't know coaching a team was even a thing, but I loved coming to help coach and learning about the CDE...it's a tough contest, I even had to study up on certain terms."

During the post-sorting interview, P23 stated,

> If the community wants the ag advisor to meet their needs and teach aquaculture for instance, they need to help them do that and use their strengths to help that whole

system work and ensure the students are successful… the program is built to need all these different people to help out.

Negative feedback would not dissuade these supporters from continuing to support the program (38:-4). In post-sorting interviews, participants in this persona spoke favorably of feedback that is formatted in a discussion, rather than a formal evaluation. These supporters may feel unsure about evaluation and feedback, just as they feel unsure about their capability of measuring their own support to the agricultural program (25:0). They did not necessarily start supporting the SBAE program because of the good things happening, nor because they saw changes that could be made (32:+1, 33:+1).

They believe more so than supporters in other factors, that the agriculture teacher does not need to be everywhere the supporters are (28:-5). P49 stated, "that's just not going to happen, if we're working with students maybe it's nice to have the teacher there, but I don't expect it." They are also more likely than the other personas to expect the agriculture teacher should use supporters as a way to free up their time to be with their own family (39:+2). P23 stated, "I mean, if the teacher isn't getting time with family, they should probably ask for some help."

This group does not want public appreciation for their support (12:-5). They are also unlikely to desire individual appreciation (10:-3). P46 stated, "within the group, recognition is good, but I don't want anything public. A simple thank you from the teacher, or the students is just right." Participants said seeing student success is important to them. P8 stated, "if students come up and tell me about their project or what they are doing, that's thanks enough, big recognition is just not needed for me to keep coming back. P26 stated, "I just like to be

behind the scenes…if there's anyone who should be recognized it's the students and the teacher in my opinion. So, I could care less about what I do, it's all for them."

**Persona 1 Demographics**

This section includes a review of results related to the demographic characteristics of supporters in Persona 1. The demographics relating to the age, sex, group affiliation, and occupation of this factor are exhibited in Table 4.11.

Table 4.11

*Frequencies and percentages of Persona 1 age, sex, group affiliation and occupation (n = 11)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Age | | |
| 20-29 | 0 | 0.00 |
| 30-39 | 3 | 27.27 |
| 40-49 | 2 | 18.18 |
| 50-59 | 2 | 18.18 |
| 60-69 | 3 | 27.27 |
| 70-79 | 1 | 9.09 |
| Sex | | |
| Male | 8 | 72.73 |
| Female | 3 | 27.27 |
| Group Affiliation | | |
| Community-based | 2 | 18.18 |
| Business and industry entity | 9 | 81.82 |
| Government-affiliated entity | 0 | 0.00 |
| Occupation | | |
| Agricultural Business | 2 | 18.18 |
| Agricultural Mechanics | 0 | 0.00 |
| Agricultural Processing | 0 | 0.00 |
| Agricultural Production | 3 | 27.27 |
| Veterinarian | 0 | 0.00 |
| Business | 2 | 18.18 |
| Engineering/ Technology | 1 | 9.09 |
| Homemaker | 3 | 27.27 |
| Human Resources | 0 | 0.00 |
| Plant Science | 0 | 0.00 |
| Writer | 0 | 0.00 |
| Construction | 0 | 0.00 |
| Education | 0 | 0.00 |

The ages of these supporters were (*n* = 3) 30-39 year olds, (*n* = 2, 18.2%) 40-49 year olds, (*n* = 2, 18.2%) 50-59 year olds, (*n* = 3, 27.3%) 60-69 year olds, and (*n* = 1, 9.1%) 70-79 year olds. There were (*n* = 8, 72. 7%) males and (*n* = 3, 27.3%) females. Of all participants, (*n* = 2, 18.2%) had an occupation in agricultural business. Agricultural production occupations were identified by (*n* = 3, 27.3%) participants. Participants in business occupations totaled (*n* = 2, 18.2%), and (*n* = 1, 9.1%) participant reported an occupation in engineering/ technology. The frequency of homemakers in Persona 1 was (*n* = 3, 27.3%).

The demographics of Persona 1 relating to education, household income, and marital status are exhibited in Table 4.12. The most reported education level was high school graduate (*n* = 5, 45.5%). Of the participants (*n* = 3, 27.3%) reported their education level as technical school or associate degree. The remaining participants reported bachelor's degree (*n* = 2, 18.2%), master's degree (*n* = 1, 9.1%) and doctorate (*n* = 1, 9.1%). The household income of the participants in Persona 1 consist of (*n* = 3, 27.3%) reported a household income of $40,001 - $60,000, (*n* = 3, 27.3%) reported a household income of $60,001 - $80,000, (*n* = 2, 18.2%) reported a household income of $80,001-100,000, and (*n* = 1, 9.1%) reported a household income of >$100,001.

Table 4.12

*Frequencies and percentages of Persona 1 education level, household income level and marital status (n = 11)*

| Demographic Variables | *f* | % |
|---|---|---|
| Highest Level of Education | | |
| Less than high school | 0 | 0.00 |
| High school graduate | 5 | 45.45 |
| Technical school or associate degree | 3 | 27.27 |
| Bachelor's degree | 2 | 18.18 |
| Master's degree | 1 | 9.09 |
| Doctorate degree | 1 | 9.09 |
| Household income level | | |
| <$20,000 | 0 | 0.00 |
| $20,001 - $40,000 | 0 | 0.00 |
| $40,001 - $60,000 | 3 | 27.27 |
| $60,001- $80,000 | 3 | 27.27 |
| $80,001- $100,000 | 2 | 18.18 |
| >$100,001 | 1 | 9.09 |
| Rather not say | 2 | 18.18 |
| Marital status | | |
| Single | 0 | 0.00 |
| Living with another | 0 | 0.00 |
| Married | 11 | 100.00 |
| Separated | 0 | 0.00 |
| Divorced | 0 | 0.00 |
| Widowed | 0 | 0.00 |
| Rather not say | 0 | 0.00 |

The participants who selected "rather not say" totaled (*n* = 2, 18.2%). Of the participants who sorted to Persona 1, (*n* = 11, 100%) indicated their marital status as married. All participants in Persona 1 reported they have two or more children. Of those participants, (*n* = 4, 36.4%) reported having 1-2 children who are FFA members, (*n* = 6, 54.5%) have children who are past FFA members, and (*n* = 4, 36.4%) indicated having children who were/ are not FFA members. Of the participants, (*n* = 7, 63.6%) reported having children who are not of high school age.

Of the participants who sorted to Persona 1, 54.6% ($n$ = 6, 54.5%) indicated they are not past FFA members, and ($n$ = 5, 45.5%) indicated there are past FFA members. These results are exhibited in Table 4.13. The participants in this group reported having lived in the community of the agricultural program they support for a range of years. One participant does not live in the community of the program they support was. The group reported having lived in the community for the following years: ($n$ = 2, 18.2%) reported less than 9 years, ($n$ = 3, 27.3%) reported 10-19 years, ($n$ = 1, 9.1%) reported 20-29 years, ($n$ = 1, 9.1%) reported 30-39 years, ($n$ = 1, 9.1%) reported 40-49 years, and ($n$ = 2, 18.2%) reported 60-69 years.

Table 4.13

*Frequencies and percentages of Persona 1 FFA membership and years lived in agricultural program they support* (*n = 11)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| FFA membership | | |
| Past FFA member | 6 | 54.55 |
| Not a past FFA member | 5 | 45.45 |
| Years lived the community of program you support | | |
| Do not live in community of program | 1 | 9.09 |
| <9 | 2 | 18.18 |
| 10-19 | 3 | 27.27 |
| 20-29 | 1 | 9.09 |
| 30-39 | 1 | 9.09 |
| 40-49 | 1 | 9.09 |
| 50-59 | 0 | 0.00 |
| 60-69 | 2 | 18.18 |
| 70-79 | 0 | 0.00 |

The SBAE program areas supported by Persona 1 participants are exhibited in Table 4.14. Of the participants, ($n$ = 9, 81.8%) selected financial support, ($n$ = 6, 54.6%) selected curriculum support, and ($n$ = 5, 45.5%) selected chaperones for class field trips, guest speaker and material donation. In the FFA section, ($n$ = 8, 72.7%) participants provide fundraising, and ($n$ = 7, 63.6%) participants provide scholarship opportunities. The same number of participants ($n$ = 6, 54.5%) reported they provided chapter banquet assistance and community

service. The participants' responses to their support in the SAE component include: ($n$ = 5, 45.5%) selected mentorship, ($n$ = 4, 36.4%) selected material donation, ($n$ = 4, 36.4%) selected livestock buyer, and ($n$ = 3, 27.3%) selected job placement opportunity.

Table 4.14

*Frequencies and percentages of program areas Persona 1 participants support* ($n$ = 11)

| Demographic Variables | *f* | *%* |
|---|---|---|
| Classroom Laboratory | | |
| Financial support | 9 | 81.82 |
| Curriculum | 6 | 54.55 |
| Chaperone for class field trips | 5 | 45.45 |
| Guest speaker | 5 | 45.45 |
| Material donation | 5 | 45.45 |
| Job shadowing | 3 | 27.27 |
| Equipment use/rental | 3 | 27.27 |
| Facilities for classes/workshops | 2 | 18.18 |
| Facilities repairs | 1 | 9.09 |
| Teacher skill building | 1 | 9.09 |
| FFA | | |
| Fundraising | 8 | 72.73 |
| Scholarship opportunities | 7 | 63.64 |
| Chapter banquet assistance | 6 | 54.55 |
| Community service | 6 | 54.55 |
| Leadership opportunities | 5 | 45.45 |
| Material donation | 5 | 45.45 |
| Awards/ proficiency applications | 5 | 45.45 |
| Member recruitment | 4 | 36.36 |
| FFA Event Chaperone | 4 | 36.36 |
| CDE judge | 2 | 18.18 |
| Chapter CDE events | 2 | 18.18 |
| CDE team coach | 2 | 18.18 |
| Supervised Agricultural Experience | | |
| Mentorship | 5 | 45.45 |
| Material donation | 4 | 36.36 |
| Livestock buyer | 4 | 36.36 |
| Job placement opportunity | 3 | 27.27 |
| Supervision of SAEs | 2 | 18.18 |
| Laboratory assistance | 0 | 0.00 |
| Facilities for student SAEs | 0 | 0.00 |

## Persona 2: Amplifiers

Persona 2 was identified through analysis with the PQ Method. A strong positive relationship was reported between eight participants P2, P6, P12, P16, P21, P29, P38, and P40. This section includes the Q-sort, demographic, VFI, and interview results for the participants that represent Persona 2.

### Persona 2 Q-sort

The pre-sorting categorization that participants completed is displayed in Table 4.15. These supporters agreed with (M = 15) statements. The participants disagreed with (M = 12) statements and were unsure about (M = 12) statements.

Table 4.15

*Initial categorization of items for Persona 2* (*n = 8)*

| Participant | Items "definitely like me" | Items "Definitely not like me" | Unsure |
|---|---|---|---|
| P2 | 16 | 13 | 11 |
| P6 | 20 | 8 | 12 |
| P12 | 16 | 16 | 8 |
| P16 | 16 | 13 | 11 |
| P21 | 16 | 8 | 16 |
| P29 | 5 | 10 | 24 |
| P38 | 12 | 18 | 10 |
| P40 | 22 | 11 | 7 |
| Total | 123 | 97 | 99 |
| M | 15 | 12 | 12 |

Table 4.16 shows the distinguishing statements for Persona 2 participants' sorts with a significance level of ($p$ <0.05). The asterisk (*) indicates a higher significance level of $p$ < 0.01. The crib sheet in Appendix J and the distinguishing statements were used to create a complete description of supporter viewpoints of Persona 2.

Table 4.16

*Distinguishing statements for Persona 2*

| Statement No. | Q-sort value | Z-score | Statement |
|---|---|---|---|
| 32 | 6 | 2.25* | began supporting the program because I wanted to contribute to the good things that were happening |
| 14 | 5 | 1.85 | believe that because I support the program, I am helping students find careers in agriculture |
| 16 | 5 | 1.83 | believe that because I support the program, I am helping students know more about agriculture |
| 25 | 3 | 1.19* | am capable of measuring my own contributions to the program |
| 19 | 2 | 0.63* | should be able to choose which tasks I assist with |
| 13 | 2 | 0.57 | believe there is room to have multiple supporter viewpoints for the vision of the program |
| 4 | 1 | 0.41 | expect that supporters will communicate with each other about their work |
| 21 | 1 | 0.31* | only want to be assigned specific tasks that align with my skills |
| 12 | 0 | -0.39* | desire public appreciation for my contributions |
| 24 | -2 | -0.69* | expect all supporters and the ag teacher to share the same vision for the program |
| 33 | -2 | -0.76* | began supporting the program because I saw there were changes that could be made |
| 39 | -5 | -1.67* | expect the ag teacher to use supporters as a way to free up time for their own family |
| 26 | -6 | -2.21* | know that if my support is evaluated I will stop volunteering |

Note: * indicates $p < .01$

Helping students know more about agriculture is also important to this group (16: +5). Individuals in this factor place importance on students' career success (14:+5). Participant P21, stated,

> I work in the metal industry, and so, part of my support is showing them what that type of career would be, if they went into welding, machining. So, I feel like I give them a good example, or an idea, of what that would be like and what kind of things they'd be doing if they went into that career.

Participants in this factor put a strong emphasis and importance of the good things happening in agricultural programs (32: +6). They did not start supporting the program because they saw changes that could be made (33:-2). P40 stated, “I support the ag program personally and professionally, but not because my kids are in FFA. We attend auctions as a family because those are fun, and we spend personal money but I also represent [company] as a supporter.” Conversely, P6 and P38 started supporting the SBAE programs because their kids were involved, but have continued after they graduated. P6 stated, “my daughter hasn’t been in FFA for 20 years but I still serve on the alumni because I saw how good it was for her.” P38 stated, “I want to keep supporting, even after my kids are out of high school.”

These supporters do not expect the agricultural teacher to use supporters as a way to free up time for their own family (39:-5). During the post-sorting interview, P12, stated,

> I don’t see the two even correlating…my role is to help the teacher with things they can’t do, like connect to the industry or community resources. So if they want to spend more time with their family that’s their decision, not mine.

They value communication among supporters less than other supporters (4:1). These supporters view their role in a specific way and would most likely prefer to choose the task they assist with (19:+2). They are more likely than other supporters to request a task that aligns with their specific skills (21:+1). These supporters believe there is room for multiple supporter viewpoints in the program (13: +2). They do not expect the agricultural teacher and the supporters to share the same vision for the program (24:+2).

These supporters are more likely than other supporters to desire public recognition for their support (12:0). Participant P2 stated, “Personal recognition is not important to me at all, but professionally, recognition for my company is very important...its needed to justify my

support professionally." P40 stated, "I don't want public recognition. But I do like small appreciation like a thank you note, or even a conversation with a student means a lot to me, I love that. It really is special."

These supporters are more likely than the other supporters to welcome an evaluation of their contribution (26: -6). Yet, the also feel that they can measure their own contributions to the program (25: +3). P38, stated, "It doesn't matter to me if my support is evaluated, in fact I would encourage it, you can probably learn something to optimize my support." When asked what the evaluation of their support looks like P21 stated, "in meetings, we have with [teacher] we kinda throw it out all on the table and talk about what we thought went well, and what we thought needed improvement. Then we build on that."

**Persona 2 Demographics**

This section includes a review of results related to the demographic characteristics of supporters in Persona 2. The age of participants who sorted to Persona 2 consist of 12.5% ($n$ = 1) 30-39 year olds, ($n$ = 4, 50%) 40-49 year olds, ($n$ = 2, 25%) 50-59 year olds, and ($n$ = 1, 12.5%) 70-79 year olds. Of the participants in Persona 2, ($n$ = 4, 50%) were male, and ($n$ = 4, 50%) were female.

There were ($n$ = 3, 37.5%) participants who most identify as community-based supporters, and ($n$ = 5, 62.5%) who identify most with business and industry entities. Of the participants, ($n$ = 1, 12.5%) reported having an occupation in agricultural business. Participants who reported agricultural production occupations totaled ($n$ = 2, 25%). One participant reported they were a veterinarian. Of the participants, ($n$ = 2, 25%) reported having engineering/ technology occupations. The remaining participants reported their

occupation as homemaker ($n$ = 1, 12.5%) and education ($n$ = 1, 12.5%). These findings are reported in Table 4.17.

Table 4.17

*Frequencies and percentages of Persona 2 age, sex, group affiliation and occupation ($n$ = 8)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Age | | |
| 20-29 | 0 | 0.00 |
| 30-39 | 1 | 12.50 |
| 40-49 | 4 | 50.00 |
| 50-59 | 2 | 25.00 |
| 60-69 | 1 | 12.50 |
| 70-79 | 0 | 0.00 |
| Sex | | |
| Male | 4 | 50.00 |
| Female | 4 | 50.00 |
| Group Affiliation | | |
| Community-based | 3 | 37.50 |
| Business and industry entity | 5 | 62.50 |
| Government-affiliated entity | 0 | 0.00 |
| Occupation | | |
| Agricultural Business | 1 | 12.50 |
| Agricultural Mechanics | 0 | 0.00 |
| Agricultural Processing | 0 | 0.00 |
| Agricultural Production | 2 | 25.00 |
| Veterinarian | 1 | 12.50 |
| Business | 0 | 0.00 |
| Engineering/ Technology | 2 | 25.00 |
| Homemaker | 1 | 12.50 |
| Human Resources | 0 | 0.00 |
| Plant Science | 0 | 0.00 |
| Writer | 0 | 0.00 |
| Construction | 0 | 0.00 |
| Education | 1 | 12.50 |

The education level, household income, and marital status of participants who sorted to Persona 2 is exhibited in Table 4.18. The education level that participants selected most frequently was bachelor's degree ($n$ = 5, 62.5%). Of the remaining participants in this persona, ($n$ = 2, 25%) selected technical school or associate, and ($n$ = 1, 12.5%) selected

doctorate. Participants in this factor reported the following household income levels: (*n* = 1, 12.5%) selected $40,001-60,000, (*n* = 3, 37.5%) selected $80,001-100,000, (*n* = 3, 37.5%) selected >$100,000, and (*n* = 1, 12.5%) selected "rather not say."

Of the participants in Persona 2, all were married. All participants reported they have 2-3 children. None of the participants have children who are current FFA members, but (*n* = 5) reported they have 1-2 children who are past FFA members. Of the participants, (*n* = 7) reported having children who are not of high school age.

Table 4.18

*Frequencies and percentages of Persona 2 education level, household income level, and marital status* (*n = 8)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Highest Level of Education | | |
| Less than high school | 0 | 0.00 |
| High school graduate | 0 | 0.00 |
| Technical school or associate degree | 2 | 25.00 |
| Bachelor's degree | 5 | 62.50 |
| Master's degree | 0 | 0.00 |
| Doctorate degree | 1 | 12.50 |
| Household income level | | |
| <$20,000 | 0 | 0.00 |
| $20,001 - $40,000 | 0 | 0.00 |
| $40,001 - $60,000 | 1 | 12.50 |
| $60,001- $80,000 | 0 | 0.00 |
| $80,001- $100,000 | 3 | 37.50 |
| >$100,001 | 3 | 37.50 |
| Rather not say | 1 | 12.50 |
| Marital status | | |
| Single | 0 | 0.00 |
| Living with another | 0 | 0.00 |
| Married | 8 | 100.00 |
| Separated | 0 | 0.00 |
| Divorced | 0 | 0.00 |
| Widowed | 0 | 0.00 |
| Rather not say | 0 | 0.00 |

Persona 2 participants' FFA membership and years lived in the community of the agricultural program they support are depicted in Table 4.19. Of the Persona 2 participants, (*n* = 3, 37.5%) were past FFA members and (*n* = 5, 62.5%) are not past FFA members. Regarding years lived in the community of the agricultural program they support, (*n* = 1, 12.5%) indicated living in the community 10-19 years, and (*n* = 2, 25%) reported living in the community for 20-29 years. Those who have lived in the community of the agricultural program they support 30-39 years totals (*n* = 2, 25%), and those having lived in the communities 40-49 years total 37.5% (*n* = 3, 37.5%).

Table 4.19

*Frequencies and percentages of Persona 2 FFA membership and years lived in community of the agricultural program they support* (*n = 8)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| FFA membership | | |
| Past FFA member | 3 | 37.50 |
| Not a past FFA member | 5 | 62.50 |
| Years lived the community of program you support | | |
| Do not live in community of program | 0 | 0.00 |
| <9 | 0 | 0.00 |
| 10-19 | 1 | 12.50 |
| 20-29 | 2 | 25.00 |
| 30-39 | 2 | 25.00 |
| 40-49 | 3 | 37.50 |
| 50-59 | 0 | 0.00 |
| 60-69 | 0 | 0.00 |
| 70-79 | 0 | 0.00 |

The Persona 2 participants' results for the areas of the SBAE program they support are exhibited in Table 4.20. In the classroom/ laboratory section, the most frequently selected area of support was material donation (*n* = 5, 62.5%). Financial support, guest speaker and curriculum were selected by (*n* = 4, 50%) participants. In the FFA section, the most frequently selected area of support was fundraising (*n* = 6, 75%). Scholarship opportunities and community service were selected by (*n* = 5, 62.5%) participants. Material donation was

selected by ($n$ = 4, 50%) participants. In the SAE section, Persona 2 participants selected livestock buyer most frequently ($n$ = 4, 50%). Job placement opportunity was selected by ($n$ = 2, 25%) participants. Material donation, mentorship and supervision of SAEs was selected by ($n$ = 1, 12.5%) participants.

Table 4.20

*Frequencies and percentages of program areas Persona 2 participants support* (*n = 8)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Classroom Laboratory | | |
| Material donation | 5 | 62.50 |
| Financial support | 4 | 50.00 |
| Guest speaker | 4 | 50.00 |
| Curriculum | 4 | 50.00 |
| Facilities for classes/workshops | 3 | 37.50 |
| Job shadowing | 3 | 37.50 |
| Equipment use/rental | 2 | 25.00 |
| Facilities repairs | 2 | 25.00 |
| Chaperone for class field trips | 2 | 25.00 |
| Teacher skill building | 1 | 12.50 |
| FFA | | |
| Fundraising | 6 | 75.00 |
| Scholarship opportunities | 5 | 62.50 |
| Community service | 5 | 62.50 |
| Material donation | 4 | 50.00 |
| Awards/ proficiency applications | 3 | 37.50 |
| Chapter banquet assistance | 2 | 25.00 |
| Chapter CDE events | 2 | 25.00 |
| Member recruitment | 1 | 12.50 |
| CDE judge | 1 | 12.50 |
| Leadership opportunities | 1 | 12.50 |
| FFA Event Chaperone | 0 | 0.00 |
| CDE team coach | 0 | 0.00 |
| Supervised Agricultural Experience (SAE) | | |
| Livestock buyer | 4 | 50.00 |
| Job placement opportunity | 2 | 25.00 |
| Material donation | 1 | 12.50 |
| Mentorship | 1 | 12.50 |
| Supervision of SAEs | 1 | 12.50 |
| Laboratory assistance | 0 | 0.00 |
| Facilities for student SAEs | 0 | 0.00 |

## Persona 3: Visionaries

Persona 3 was identified through analysis with the PQ Method. A strong positive relationship can be identified between 8 participants P1, P5, P18, P22, P32, P39 and P42. This section includes the demographic, VFI, Q-sort, and interview results for these participants that represent Persona 3.

### Persona 3 Q-sort

Participants sorted statements into piles of three categories, “Definitely like me,” “Definitely not like me,” and “unsure”. The results of their categorization are displayed in Table 4.21. Participants in this persona agreed with (M = 17) statements. The participants disagreed with (M = 11) statements and were unsure about (M = 11) statements. Persona 3 participants felt more positive than negative about the statements.

Table 4.21

*Initial categorization of items for Persona 3 (n = 7)*

| Participant | Items "definitely like me" | Items "Definitely not like me" | Unsure |
|---|---|---|---|
| P1 | 20 | 9 | 11 |
| P5 | 16 | 13 | 11 |
| P18 | 18 | 14 | 8 |
| P22 | 20 | 6 | 14 |
| P32 | 14 | 8 | 18 |
| P39 | 16 | 15 | 9 |
| P42 | 20 | 14 | 6 |
| Total | 124 | 79 | 77 |
| M | 17 | 11 | 11 |

Significant differences between factors can be interpreted by referencing z-scores at a $p < 0.01$ level. The interrelations between items in each factor are critical to understand and report (Watts & Stenner, 2012). Table 4.22 shows the distinguishing statements for Persona 3

participants' sorts with a significance level of ($p < 0.05$). The asterisk (*) indicates a higher significance level of $p < 0.01$.

Table 4.22

*Distinguishing statements for Persona 3*

| Statement No. | Q-sort value | Z-score | Statement |
|---|---|---|---|
| 9 | 5 | 1.84 | expect a sense of teamwork between the ag teacher and those that support the program |
| 24 | 5 | 1.73* | expect all supporters and the ag teacher to share the same vision for the program |
| 33 | 4 | 1.16* | began supporting the program because I saw there were changes that could be made |
| 18 | 1 | 0.45* | expect to be interviewed before I volunteer |
| 17 | 1 | 0.35* | believe that anyone who wants to support the program should be able to |
| 32 | 1 | 0.18* | began supporting the program because I wanted to contribute to the good things that were happening |
| 36 | 0 | 0.14 | expect that my opinions about the ag program are attended to |
| 39 | 0 | -0.07* | expect the ag teacher to use supporters as a way to free up time for their own family |
| 19 | -1 | -0.20 | should be able to choose which tasks I assist with |
| 25 | -2 | -0.49* | am capable of measuring my own contributions to the program |
| 21 | -2 | -0.59* | only want to be assigned specific tasks that align with my skills |
| 23 | -3 | -0.97 | only want to attend relaxed meetings that allow for casual discussion |
| 6 | -4 | -1.37* | am only willing to contribute if I work in a comfortable environment |
| 5 | -5 | -1.40 | expect to be recognized by the students for my contributions |
| 27 | -5 | -1.64 | expect to be recognized by other program supporters for my contributions |
| 12 | -6 | -2.31* | desire public appreciation for my contributions |

Note: * indicates $p < 0.01$

The crib sheet for Persona 3 is exhibited in Appendix J. Individuals in this factor are most likely to believe that supporters should be chosen, interviewed, or invited to support the SBAE program (18:1). They expect all supporters and the agricultural teacher to share the same vision for the program (24: +5). P32 stated, "I think if they're not going to share the same vision for the program, they're not going to be very successful, because if you have

competing expectations you end up not being very successful." These supporters expect a sense of teamwork between the supporters and agricultural teacher (9:+5).

During post-sorting interviews, P32 stated, "the program is designed for student success so I'm helping to facilitate that." P5 stated, "this is a cause I feel personally called to and passionate about, and it has affected people I know so that's why I go to support the program… I love seeing the kids be successful." These supporters are least likely to support SBAE programs for social reasons (M = 3.94).

These supporters appreciate efficiency and high-quality work when supporting the agricultural program. They prefer to attend productive meetings (23:-3). P18 stated,

> I feel like if we're going to meet it needs to be worthwhile and get things done and move on and see what things we need to do for the future. So, I don't want to put my time in for just something casual and not worth the time.

They are willing to do tasks that do not align with their specific skills (21: -2), and are open to being given a task, rather than choosing what they assist with (19:-1). They are also willing to contribute whether or not they are in a comfortable environment (6:-4). These supporters feel neutral about whether the agricultural teacher should use supporters as a way to free up time for their own family (39:0).

They are also likely to begin supporting programs because they see changes that could be made (33:+4), and not necessarily because of the good things that were already happening in the program (32:+1). P1 stated, "I know how successful these programs can be so I wanted to help make that happen." Of the participants in persona three, 71% reported occupations outside the agricultural industry. This persona seemed to appreciate the diversity of

opportunities with SBAE programs. P42 stated, “when people think about FFA they don’t see all the diversity, I mean there are so many greats things for students to do.” P22 stated,

> It’s important for people to know that there is a lot to these programs, science, technology you name it… that’s part of why I support, to show people this is not just about farming...there so many things different people can do to help the program.

They feel neutral about whether their opinions should be attended to (36: 0). However, they do not feel capable of measuring the success of their contributions to the program (25:-2). Supporters in this persona do not desire recognition for their support from students and other supporters (27:-5, 5:-5). They also do not desire public appreciation for their contributions. P39 stated, “I don’t feel the need for any recognition or anything like that, ya know, personal satisfaction is what you get when you volunteer and help others so I don’t need personally recognized.” P32 stated, “I choose to support because I want to impart knowledge to help students from what I have learned, not to get recognized.”

**Persona 3 Demographics**

This section includes a review of results related to the demographic characteristics of supporters in Persona 3. The demographics related to age, sex, group affiliation and occupation of participants in this persona are displayed in Table 4.23.

Of the participants who sorted to Persona 3, ($n$ = 1, 14.3%) were 30-39 years old, ($n$ = 3, 42.9%) were 40-49 year olds, and ($n$ = 3, 42.9%) were 50-59 year olds. Of the participants in Persona 3, ($n$ = 4, 57.1%) were males, and ($n$ = 3, 42.9%) were female. The participants’ group affiliation consists of ($n$ = 2, 28.6%) community-based and ($n$ = 5, 71.4%) business and industry entity. Of the participants, ($n$ = 1, 14.3%) reported an occupation in agricultural business, ($n$ = 1, 14.3%) reported an agricultural production occupation, and ($n$ = 1, 14.3%)

reported an engineering and technology occupation. Additionally, ($n$ = 2, 28.6%) reported homemaker, and ($n$ = 2, 28.6%) reported an occupation in business.

Table 4.23

*Frequencies and percentages of Persona 3 age, sex, group affiliation and occupation ($n$ = 7)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Age | | 0.00 |
| 20-29 | 0 | 0.00 |
| 30-39 | 1 | 14.29 |
| 40-49 | 3 | 42.86 |
| 50-59 | 3 | 42.86 |
| 60-69 | 0 | 0.00 |
| 70-79 | 0 | 0.00 |
| Sex | | 0.00 |
| Male | 4 | 57.14 |
| Female | 3 | 42.86 |
| Group Affiliation | | 0.00 |
| Community-based | 2 | 28.57 |
| Business and industry entity | 5 | 71.43 |
| Government-affiliated entity | 0 | 0.00 |
| Occupation | | |
| Agricultural Business | 1 | 14.29 |
| Agricultural Mechanics | 0 | 0.00 |
| Agricultural Processing | 0 | 0.00 |
| Agricultural Production | 1 | 14.29 |
| Veterinarian | 0 | 0.00 |
| Business | 2 | 28.57 |
| Engineering/ Technology | 1 | 14.29 |
| Homemaker | 2 | 28.57 |
| Human Resources | 0 | 0.00 |
| Plant Science | 0 | 0.00 |
| Writer | 0 | 0.00 |
| Construction | 0 | 0.00 |
| Education | 0 | 0.00 |

Participant demographics related to education, household income and marital status are reported in Table 4.24. The most frequently reported level of education was a bachelor's degree ($n$ = 4, 57.1%). Additionally, ($n$ = 2, 28.6%) indicated their educational level at high school graduate, and ($n$ = 1, 14.3%) participant indicated their education level as technical

school or associate degree. Participants who sorted to this factor indicated their household income levels as the following: ($n$ = 1, 14.3%) selected $60,001-80,000, ($n$ = 1, 14.3%) selected $80,001-100,000, ($n$ = 2, 28.6%) selected >$100,000, and ($n$ = 3, 42.9%) chose rather not say. Of the participants, ($n$ = 1, 14.3%) reported their marital status as single, and ($n$ = 6, 85.7%) reported their marital status as married.

Table 4.24

*Frequencies and percentages of Persona 3 education level, household income level and marital status* (*n = 7)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Highest Level of Education | | 0.00 |
| Less than high school | 0 | 0.00 |
| High school graduate | 2 | 28.57 |
| Technical school or associate degree | 1 | 14.29 |
| Bachelor's degree | 4 | 57.14 |
| Master's degree | 0 | 0.00 |
| Doctorate degree | 0 | 0.00 |
| Household income level | | 0.00 |
| <$20,000 | 0 | 0.00 |
| $20,001 - $40,000 | 0 | 0.00 |
| $40,001 - $60,000 | 0 | 0.00 |
| $60,001- $80,000 | 1 | 14.29 |
| $80,001- $100,000 | 1 | 14.29 |
| >$100,000 | 2 | 28.57 |
| Rather not say | 3 | 42.86 |
| Marital status | | 0.00 |
| Single | 1 | 14.29 |
| Living with another | 0 | 0.00 |
| Married | 6 | 85.71 |
| Separated | 0 | 0.00 |
| Divorced | 0 | 0.00 |
| Widowed | 0 | 0.00 |
| Rather not say | 0 | 0.00 |

These participants were either in FFA in high school or have children with affiliation to the organization. All participants reported having two-to-four children. Three participants' children are current FFA members, and two participants' children are past FFA members.

Three participants also reported having children who are not of high school age. One participant reported their children are/ were not FFA members.

The participants' FFA affiliation, and years lives in the community of the agricultural program they support is exhibited in Table 4.25. Of the participants, ($n$ = 3, 42.9%) indicated they are past FFA members, and ($n$ = 4, 57.1%) indicated there are not past FFA members. The participants reported years lived in the community of the agricultural program they support as follows: ($n$ = 1, 14.3%) was 9 years, ($n$ = 2, 28.6%) were 10-19 years, ($n$ = 3, 42.9%) were 20-29 years, and ($n$ = 1, 14.3%) were 50-59 years.

Table 4.25

*Frequencies and percentages of Persona 3 FFA membership and years lived in agricultural program they support* (*n = 7)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| FFA membership | | 0.00 |
| Past FFA member | 3 | 42.86 |
| Not a past FFA member | 4 | 57.14 |
| Years lived the community of program you support | | 0.00 |
| Do not live in community of program | 0 | 0.00 |
| <9 | 1 | 14.29 |
| 10-19 | 2 | 28.57 |
| 20-29 | 3 | 42.86 |
| 30-39 | 0 | 0.00 |
| 40-49 | 0 | 0.00 |
| 50-59 | 1 | 14.29 |
| 60-69 | 0 | 0.00 |
| 70-79 | 0 | 0.00 |

The areas of agricultural programs that the Persona 3 participants indicated they support are exhibited in Table 4.26. In the classroom and laboratory section, ($n$ = 4, 57.4%) selected financial support and ($n$ = 3, 42.9%) selected chaperone for class field trips, guest speaker, curriculum, equipment use/ rental, and material donation. In the FFA section, ($n$ = 5, 71.4%) selected fundraising, and ($n$ = 3, 42.9%) selected material donation, scholarship opportunities, and community service. In the SAE section, ($n$ = 3, 42.9%) selected material

donation and livestock buyer, and ($n$ = 2, 28.6%) selected job placement opportunity and mentorship.

Table 4.26

*Frequencies and percentages of program areas Persona 3 participants support* (*n = 7)*

| Demographic Variables | *f* | *%* |
|---|---|---|
| Classroom Laboratory | | |
| Financial support | 4 | 57.14 |
| Chaperone for class field trips | 3 | 42.86 |
| Guest speaker | 3 | 42.86 |
| Curriculum | 3 | 42.86 |
| Equipment use/rental | 3 | 42.86 |
| Material donation | 3 | 42.86 |
| Facilities repairs | 1 | 14.29 |
| Facilities for classes/workshops | 1 | 14.29 |
| Job shadowing | 1 | 14.29 |
| Teacher skill building | 1 | 14.29 |
| FFA | | |
| Fundraising | 5 | 71.43 |
| Material donation | 3 | 42.86 |
| Scholarship opportunities | 3 | 42.86 |
| Community service | 3 | 42.86 |
| Chapter banquet assistance | 2 | 28.57 |
| Leadership opportunities | 2 | 28.57 |
| FFA Event Chaperone | 2 | 28.57 |
| Awards/ proficiency applications | 1 | 14.29 |
| Member recruitment | 1 | 14.29 |
| Chapter CDE events | 0 | 0.00 |
| CDE judge | 0 | 0.00 |
| CDE team coach | 0 | 0.00 |
| Supervised Agricultural Experience (SAE) | | |
| Material donation | 3 | 42.86 |
| Livestock buyer | 3 | 42.86 |
| Job placement opportunity | 2 | 28.57 |
| Mentorship | 2 | 28.57 |
| Facilities for student SAEs | 1 | 14.29 |
| Laboratory assistance | 1 | 14.29 |
| Supervision of SAEs | 1 | 14.29 |

## Consensus Statements

Consensus statements show what statements all the study participants viewed similarly. These results show the shared viewpoints regarding the concourse and may indicate areas for improvement or further training (Watts & Stenner, 2012). Consensus statements that do not distinguish between any pair of factors are listed in Table 4.27. All list statements are not significant at the level $p > 0.01$, and those with an asterisk (*) are not significant at $p > 0.05$.

All supporters believed similarly about their ability to provide insight to SBAE programs (2: 3, 3, 2). Participants also felt similarly about the importance of communication with each other (4:2, 1, 3), and about the importance of teamwork between the teacher and supporters (9: 4, 3, 5). They feel positive about working as part of a team (8: 1, 2, 2), yet do welcome the opportunity to volunteer independently of their family and friends (40: 2, 2, 3).

The participants felt similarly about the influence of school staff on their support (11: 1, 1, 2). Supporters felt positively about their role in helping students find careers in agriculture (14: 5, 5, 4). However, they did not view that mission in relation to their own career field (35: 0, 1, 1). They also felt positive about their role in helping students achieve personal success (15: 6, 4, 6). Across all factors, supporters do not expect feedback regarding the effectiveness of their support (30: 0, 0, -1).

Statements specifying whether a student or teacher contacts supporters regarding volunteer opportunities was ranked relatively neutral across all factors (1: -1, -1, -2; 3: 0, -1, 0). Supporters feel neutral about the expectation that all meetings need to be efficient (22: 0, 0, 1). They do not expect everyone to get along (7: -2, -1, -2). They felt negatively about

recognition from students and teachers (5: -5, -3, -2; 31: -2, -4, -4). They also felt negatively about only supporting programs that serve their kids (37: -3, -5, -2).

Table 4.27

*Non-distinguishable statements across all factors*

| No. | Q-sort value (1) | Q-sort value (2) | Q-sort value (3) | Statement |
|---|---|---|---|---|
| 1* | -1 | -1 | -2 | expect that students, not the ag teacher, will contact me about volunteer opportunities |
| 2* | 3 | 3 | 2 | can provide a unique insight into the program |
| 3* | 0 | -1 | 0 | expect that the ag teacher, not the students, will contact me about volunteer opportunities |
| 4 | 2 | 1 | 3 | expect that supporters will communicate with each other about their work |
| 5 | -5 | -3 | -2 | expect to be recognized by the students for my contributions |
| 7* | -2 | -1 | -2 | am only willing to contribute if everyone gets along |
| 8* | 1 | 2 | 2 | work hard when I am part of a team of supporters that works hard |
| 9 | 4 | 3 | 5 | expect a sense of teamwork between the ag teacher and those of us that support the program |
| 11* | 1 | 1 | 2 | believe that support from school staff makes me a better supporter |
| 14 | 5 | 5 | 4 | believe that because I support the program, I am helping students find careers in agriculture |
| 15* | 6 | 4 | 6 | believe that because I support the program, I am helping students achieve personal success |
| 22 | 0 | 0 | 1 | only want to attend short, efficient meetings |
| 30* | 0 | 0 | -1 | expect to receive feedback of the effectiveness of my support |
| 31* | -2 | -4 | -4 | expect to be recognized by the ag teacher for my contributions |
| 35* | 0 | 1 | 1 | value contributing to programs because they relate to my career field |
| 37 | -3 | -5 | -3 | only support programs that serve my kids |
| 40* | 2 | 2 | 2 | enjoy volunteering with my family and friends |

**Objective 5: Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho related to personas.**

The fifth objective of this study was to identify the communication and training preferences of participants related to personas. This section includes the results across the three personas in this study.

**Communication Preferences**

The communication preferences of participants in all three personas are exhibited in Table 4.28. Of the communication methods provided on the questionnaire, Persona 1 supporters preferred face-to-face communication the most (M = 4.82). Next, the participants preferred text messages (M = 4.18) and email (M = 4.09). The least preferred form of communication was social media (M = 2.72).

The method that Persona 2 supporters preferred most was text message (M = 4.25). The participants rated email as their second-highest preference (M = 4.13). The least preferred communication method by these supporters was social media (M = 1.88). Supporters in Persona 3 preferred text message communication (M = 4.43). Email communication (M = 4.14) was rated as the next preferred method. The participants rated mailed letters as their least preferred form of communication (M = 2.00).

Table 4.28

*Communication preferences of participants in each Persona*

| | Persona 1 *(n=11)* | | Persona 2 *(n=8)* | | Persona 3 *(n=8)* | |
|---|---|---|---|---|---|---|
| Method | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Face-to-face | 4.82 | 0.60 | 3.00 | 1.20 | 4.00 | 1.15 |
| Text Message | 4.18 | 0.75 | 4.25 | 1.16 | 4.43 | 0.79 |
| Email | 4.09 | 0.83 | 4.13 | 1.64 | 4.14 | 1.46 |
| Phone Call | 3.91 | 0.83 | 3.38 | 1.30 | 3.57 | 1.13 |
| Mailed Letters | 3.18 | 0.98 | 3.25 | 1.58 | 2.00 | 1.00 |
| Social Media | 2.72 | 1.42 | 1.88 | 0.83 | 3.67 | 1.21 |

*Note.* Means were calculated based on a five-point summated scale with the following identifiers; 1 = Least preferred, 5 = Most preferred.

**Training Preferences**

The communication preferences of participants in all three personas are exhibited in Table 4.29. Persona 1 participants rated a written document as the most preferred training method (M = 4.36). They rated an informal discussion as the second most preferred method to

prepare them for their role as a supporter (M = 4.18). The participants' least preferred training method was a self-guided online training (M = 2.91). The agricultural teacher was preferred to serve as their trainer by (*n* = 8, 72.7%) of Persona 1 participants.

The most preferred training method for Persona 2 supporters was an informal discussion (M = 4.5, SD = .76). Participants rated written document (M = 3.63), and formal training program (M = 2.88) next. The least preferred training method for Persona 2 was a self-guided online training (M = 1.63). Regarding who these participants prefer to train them, (*n* = 5, 62.5%) preferred agricultural teacher, and (*n* = 3, 37.5%) preferred alumni members to train them.

Participants in Persona 3 preferred informal discussion the most (M = 4.29). They rated formal training program as the next preferred method (M = 3.86). Witten document was rated as the least preferred, (M = 3.00). Of the participants in this Persona 3, (*n* = 5, 71.4%) prefer the agricultural teacher to prepare them for their role. Additionally, (*n* = 3, 42.9%) participants preferred state alumni members prepare them for their role as a supporter.

Table 4.29

*Training preferences of participants in each Persona*

| | Persona 1 *(n=11)* | | Persona 2 *(n=8)* | | Persona 3 *(n=8)* | |
|---|---|---|---|---|---|---|
| Method | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Written document | 4.36 | 0.67 | 3.63 | 1.51 | 3.00 | 1.53 |
| Informal discussion | 4.18 | 1.08 | 4.50 | 0.76 | 4.29 | 0.76 |
| Formal training program | 3.82 | 1.33 | 2.88 | 1.46 | 3.86 | 0.69 |
| Self-guided online training | 2.91 | 1.14 | 1.63 | 0.74 | 3.57 | 0.79 |

*Note.* Means were calculated based on a five-point summated scale with the following identifiers; 1 = Least preferred, 5 = Most preferred.

## Objective 6: Identify the motivations of selected school-based agricultural education supporters in Idaho related to personas.

The sixth objective of this study was to identify the motivations of study participants related to personas. This section includes the results across the three personas in this study.

### Volunteer Function Inventory

The VFI scores of all personas are in Table 4.30. The Persona 1 participants rated the values function highest (M = 6.17). The understand function was rated as the second highest (M = 5.25). The participants rated the social function as their third highest motivation (M = 4.45). The participants rated the protective function as the least important to them (M = 3.20).

The Persona 2 participants rated values as the most important and accurate for their motivation (M = 5.83). They rated the understand function as their second-highest motivation (M = 4.28). The social function was rated next (M = 4.08). The lowest rated function was protective (M = 1.7). Participants in Persona 3 scored statements in the values function highest (M = 5.77). They scored statements in the understand function next (M = 5.03). The statements that Persona 3 participants scored the lowest related to the protective function (M=1.70).

Table 4.30

*Volunteer Functions Inventory scores of participants in each persona*

| | Persona 1 *(n=11)* | | Persona 2 *(n=8)* | | Persona 3 *(n=8)* | |
|---|---|---|---|---|---|---|
| Method | *M* | *SD* | *M* | *SD* | *M* | *SD* |
| Values | 6.17 | 1.06 | 5.83 | 1.30 | 5.83 | 1.30 |
| Understand | 5.25 | 1.48 | 4.28 | 2.05 | 4.28 | 2.05 |
| Social | 4.45 | 1.90 | 4.10 | 1.62 | 4.10 | 1.62 |
| Enhance | 3.71 | 1.83 | 3.53 | 1.69 | 3.53 | 1.69 |
| Career | 3.16 | 2.07 | 2.10 | 1.66 | 2.10 | 1.66 |
| Protective | 3.20 | 1.90 | 1.70 | 1.34 | 1.70 | 1.34 |

*Note.* Means were calculated based on a seven-point summated scale with the following identifiers; 1 = not at all important/accurate, 7 = extremely important/ accurate.

## Summary

The results of this study relating to participant demographics, preferences, motivation and viewpoints are exhibited in Chapter 4. Those results were also reported for each of the three factors extracted form Q-sort data. The interview data from post-sorting interviews was also reported in each factor. The array for each factor was reported in this section, along with the confounded sorts and consensus statements derived from Q-sort data. The occupation, income, FFA affiliation, areas of support, communication preferences, training preferences, and motivations may distinguish supporters between variables.

# Chapter 5: Conclusions and Recommendations

The following chapter outlines the conclusions and discussions for each study objective. Factors and their viewpoints will be compared, contrasted and discussed based on key themes of the literature and study objectives (Watts & Stenner, 2012). Recommendations for practice and future research are also included.

## Purpose and Objectives

The purpose of this research study is to examine the perspectives that existed related to agricultural education supporter personas. Specifically, the research study aims to meet the following research objectives:

1. Identify the demographics of selected school-based agricultural education supporters in Idaho.
2. Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho.
3. Identify the motivations of selected school-based agricultural education supporters in Idaho.

4. Describe the personas of selected school-based agricultural education supporters in Idaho.
5. Identify the training and communication preferences of selected school-based agricultural education supporters in Idaho related to personas.
6. Identify the motivations of selected school-based agricultural education supporters in Idaho related to personas.

## Conclusions, Discussions, and Recommendations for Practice

The conclusions, discussions, and recommendations for practice will be presented in the following section, by persona. Practitioners such as agricultural teachers in SABE programs, and FFA alumni members, should recognize the three distinct viewpoints regarding preferences of supporters. They should also acknowledge the collective viewpoints shared by the entire P-set of participants. The recommendations for practice will be focused on the selection, training, management, evaluation, and recognition preferences of the personas identified in this study.

### Developers Conclusions and Discussions

Supporters in this persona welcome diversity and view collaboration from the community, industry, and teacher as vital for student success. They enjoy learning new skills and believe that running a successful SBAE program is a community-wide effort. These supporters view their involvement with the agricultural program as a way to enrich their community, the state, and the agricultural industry

The supporters in this persona wee an average age of 53 years old. They were most commonly males involved in agricultural production, and females who were homemakers. Most participants in this persona had high school or technical school degree. Half of the

supporters in this persona were FFA members. They have lived in the communities of the agricultural program they support for an average of 25 years.

Individuals in this persona perceive the success of the agricultural program as the success of their community and they know it takes a village to accomplish those goals. They commonly held management and leadership positions in their profession or state and local leadership roles. Supporters in this persona valued their role in helping students find careers in agriculture. They also felt that students' personal success in FFA is very important. Expressing and acting on values important to them is what motivated this persona. They were also motivated to gain and share knowledge as supporters and were willing to be assigned tasks that require them to learn new skills.

These individuals welcomed a variety of viewpoints and supporters to be involved with the SBAE program, and did not think the agriculture teacher and supporters need to share the same vision for the agriculture program. They were willing to contribute whether they were in a comfortable environment. They were likely to recruit and mentor new supporters. However, working with people they know is not important to them. They do not necessarily work harder when they are part of a team.

Negative feedback will not dissuade individuals in this persona from continuing to support the program. However, if their support is evaluated by an outside party, they are more likely to stop volunteering than the other personas. Participants in this persona will be more open to feedback that is formatted in a discussion rather than a formal evaluation. In regard to preparing this persona, a written training document is preferred but an informal discussion is also favorable. Individuals in this persona like to communicate face-to-face, and through text message. They are least likely to use social media as a form of communication.

They believe that the agriculture teacher does not need to be everywhere the supporters are. They are also likely to expect the agriculture teacher to use supporters as a way to free up their time to be with their own family. This group does not want public appreciation for their support. They value personal appreciation and recognition from the agricultural teacher or students such as a verbal or written thank you. Seeing whether the support they provide is leading to student success is important to these supporters.

This persona can be characterized as long-term supporters. They have a strong devotion to and understanding of what it takes to run successful SBAE programs, and are committed to providing a variety of service. They most commonly provide support such as: financial, curriculum support for the classroom/laboratory, scholarships, chapter banquet assistance, mentorship, and material donations.

**Developers Recommendations for Practice**

The following recommendations will be focused on the selection, training, management, evaluation and recognition of Persona 1 supporters. Recruitment and selection efforts targeted to these individuals should focus on their potential to influence the students, teacher(s), agricultural program, community, and agricultural industry. Messaging toward these supporters should showcase the role of the SBAE program to enrich students, the community, and agriculture. These supporters are also motivated by learning new skills and sharing their knowledge with students, so understanding the SBAE program will be important to them.

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 enjoy seeing how their support benefits students, and the agricultural program. They

welcome new projects that expand their skills and challenge them to solve problems with other supporters. These supporters respond best to a training document or informal discussion when they are being prepared for their role. They also prefer face-to-face communication or text messaging.

Being open minded will be important when managing these supporters. They welcome new ideas and do not mind conflict as long as 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. When evaluating the projects or activities these supporters are involved in, an informal discussion will most likely work best. They appreciate feedback that is focused on their project, not them as a supporter. They truly want to be what is best for students.

These supporters prefer not to be publicly recognized for their contributions to the program. 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. Another way to show appreciation to them is describing or showing them the impact they have on students and the program. They will appreciate being made a part of program success.

**Amplifiers Conclusions and Discussions**

The contributions from this group are purpose-driven, goal-oriented, and unique to each individual supporter. These supporters enjoy seeing the tangible results of their support. Students' career success and knowledge of agriculture is important to them. The average age of this persona is 50 years old with an even division between males and females. This persona is affiliated with the community and industry groups. They may be found in agricultural production and engineering and technology occupations and have bachelor's degrees. Most of

the supporters in this persona were not FFA members. They have lived in the community of the agricultural program they support for an average of 36 years.

These supporters put a strong emphasis on the importance of good things happening in agricultural programs. They are motivated by altruism and a desire to express their values. They did not start supporting the program because they saw changes that could be made and do not expect their opinions to be attended to regarding the program. Teamwork is not as important to them as other supporters, and they do not care to communicate with other supporters about their contributions. These supporters value a pleasant work environment and believe that everyone should be welcome to support the program. They do not expect to be interviewed before volunteering.

These supporters view their role in a specific way and want to choose the task they assist with. They are likely to request a task that aligns with their specific skills. They prefer to use text message and email for communication purposes. An informal discussion is preferred to prepare them for their role as supporters. Participants in this persona do not expect the agricultural teacher to use supporters as a way to free up time for their own family and their support of the SBAE program is not determinant on their own children's' involvement.

This persona is more likely than other personas to desire public recognition for their support because they often represent companies who need the publicity for their contribution. However, as individual supporters, they greatly appreciate small gestures such as thank you notes, conversations with students, or being shown student projects. These supporters welcome feedback and evaluation and view it as means to increase the effectiveness of their contribution. They enjoy improving the events they are involved in or programs they support.

They value the commitment of other supporters to engage in evaluation and continue improving the support they provide to SBAE programs.

This persona may be characterized by short-term supporters. They are passionate about the SBAE programs and understand the benefit of the program to agriculture and the students, but provide more short-term assistance. They most commonly provide material donations, give financial support, and serve as guest speakers for the classroom and laboratory. For the FFA, they provide fundraising, scholarship opportunities, and community service opportunities. For SAE's they most commonly support as livestock buyers and provide job placement opportunities.

**Amplifiers Recommendations for Practice**

The following recommendations will be focused on the selection, training, management, evaluation and recognition of Persona 2. Persona 2 participants view their role in the agricultural program as a way to support the good things that are already happening. Recruitment efforts for these supporters should showcase program success and outline future goals that supporters can contribute to. They will also respond well to recruitment messaging that focuses on the advocacy efforts in agricultural programs and students who find promising careers in agriculture.

These supporters prefer to use text message and email communication. They may prefer to be trained and prepared for their role through informal discussion. When working with these supporters, managers should learn their specific skills. The supporters should be given options of what they might want to assist with. These supporters most likely want to choose ways to support the program. They are less likely to have background knowledge about SBAE programs and will appreciate information to help them decide how to help.

These supporters are less likely to be connected to the program because of their kids, so they need additional communication relating to upcoming events or current projects. Roles these supporters enjoy should be well-defined tasks such as serving on the advisory council or coaching a CDE team. They may also want smaller tasks that only happen once a year, such as sponsoring and attending an advocacy enter or serving as the secretary at an auction.

They welcome evaluation of their support. The evaluation should not be personal and should be focused on what they contributed. Involve these supporters in the evaluation and ask them to assess their own support. Give them ideas of how their contributions could improve. These supporters may stop supporting if they receive negative feedback, so focus on the positive impact of protentional changes to their contributions.

These supporters may want public recognition, if they represent a company but they appreciate private appreciation. Private appreciation such as a thank you letter from a student or a picture that showcases a student project they sponsored would work well to show these supporters appreciation. Additional methods to show appreciate may include letters that showcase student success stories, or students' post-secondary and career goals.

**Visionaries Conclusions and Discussions**

These supporters value the diversity in SBAE programs and want to promote the opportunities and possibilities that the program offers students. Students' success in the agricultural program is important to these supporters. The average age of this persona is 48 years old, with an even division between males and females. They can be found in occupations relating to business and homemakers. Supporters in this persona were affiliated with the FFA through their own involvement or their children's. On average, they have lived in the community of the agricultural program they support for 22 years.

These supporters may desire to focus their contributions to SBAE programs on student success. They feel personally connected to agricultural education and FFA. This persona is least likely to support SBAE programs for social reasons, and they appreciate efficiency and high-quality work when supporting the agricultural program. They prefer to attend productive meetings. These supporters want to make a difference in agricultural programs and began supporting because they saw changes that could be made.

Individuals in this persona are most likely to believe that supporters should be chosen, or personally invited to support the SBAE program. These supporters value their time and teachers' time and therefore want to be utilized effectively. They want the agricultural teacher to know their abilities and interests before they volunteer with the program. They also desire to be given tasks within their skillset. They prefer an informal discussion or a formal training program to prepare for their role as a supporter.

These supporters feel that all supporters and the teacher should share the same vision for the program. They value the diversity of supporters but feel strongly that competing agendas are not productive for the future of the program. They desire a close relationship with the teacher, other supporters, and school staff and prefer the agricultural teacher to prepare them for their role as supporters. Communication is significantly more important to this group than the other personas, and they expect a sense of teamwork between the supporters and agricultural teacher. They prefer text message, email, and face-to-face communication.

These supporters do not want public recognition. They chose to support the program to enable students to benefit from otherwise unattainable opportunities. It is important for these supporters to see the results of their contribution. They are more likely than other

supporters to desire individual appreciation such a personal conversation about their support or a thank you card. They want to feel a sense of connection to students and the teacher.

These supporters want students to be successful in all aspects of the SBAE program. They recognize that SBAE programs are about more than cows and plows and want all students to have equal opportunity in the program. They could be characterized as long-term supporters if they are given a specific aspect of the program to support or short-term supporters if they take on a specific task at a large event or activity. They most commonly provide financial support for the classroom and laboratory and fundraising for FFA. They also provide material donation, scholarship opportunities, and serve as guest speakers and chaperones.

**Visionaries Recommendations for Practice**

The following recommendations will be focused on the selection, training, management, evaluation, and recognition of Persona 3. This persona views their role as facilitating student success in SBAE programs. Recruitment messaging toward these supporters should focus on the diversity of agricultural programs and the many ways that students find success in through experience in the classroom, FFA, and SAEs. They will be more likely to support the SBAE program, if they are provided with a list of goals they can align their support to.

These supporters may need to be asked to get involved with the SBAE program and would appreciate the teacher or alumni member to get to know them personally. Teachers should consider interviewing these individuals to understand their specific skillset. 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. Communicate with them through text messages and email.

These supporters may be unsure as to whether their ideas and opinions should be listened to, but they most likely began supporting the program because they felt called to do so and felt changes could be made. Their intentional involvement should be harnessed to specific tasks that they feel passionate about. They will appreciate efficient meetings and focused discussions related to their supporter role. These supporters 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 they may feel hurt if their support is evaluated. However, they are passionate about the success of the program. So, when engaging them in evaluation measures related to their work, ask them to generate ideas of how their contributions can improve.

These supporters are the least likely to desire public recognition, and appreciation. However, they will accept individualized appreciation for their support. Recommendations for appreciation include thank you cards from students and exposure to program success. These supporters will appreciate learning about how diverse students have achieved success in the program as well.

**Consensus Statements Conclusions and Discussions**

Consensus statements, or statements that do not distinguish between any pair of factors, show a viewpoint or idea held by all participants. The statements may indicate areas

for improvement (Watts & Stenner, 2012). A set of 17 statements were distinguished by PQMethod Software as statements that all participants in this study felt similarly about.

The supporters placed high importance in their role to help students find careers in agriculture. They also felt very positive about their role in helping student achieve personal success. Prior research reiterates this finding that supporters are passionate about the mission and purpose of the organization they support (Clary & Snyder, 1999; Culp, 1998; Epstein et al., 2009; Rochester, 2010) All supporters felt positively about their ability to provide insight to SBAE programs. This finding is also parallel to volunteer and agricultural extension literature that the supporters are motivated by affiliation and desire to help an organization they have knowledge of (Fritz et al., 2000, Rochester, 2006).

Across all factors, supporters felt similarly about volunteering independently of their family and friends. Social factors influence volunteers that enjoying building their social circle and relationships, however this is not shown as a commonly determinant factor for supporter commitment (Rochester, 2010; Yoshioka et al., 2007). These participants felt positively about the importance of teamwork between the teacher and supporters. However, it is more important to some supporters than others. Building teams can have a positive influence on volunteers (Epstein, 2009; Sanders, 2001). However, it is not a central focus of agricultural extension models (Culp, 2012; Dodd & Boleman, 2007; Penrod, 1991).

Participants felt positive about the importance of communication with one another. However, it is more important to some supporters than others. Communication from the volunteer manager is crucial (Culp, 2012; Fritz et al., 2003). Researchers also suggest that poor management may cause volunteers to leave the organization (Locke et al., 2003, Sinasky

et al., 2007). Understanding the communication preferences of various supporters may be important to their sustained and active support of SBAE programs.

Participants felt positively about the importance of school staff to enable them to be better supporters. However, it was not of high importance to them. Researchers recommend that educational partnerships need support from school staff (CCSP, 2004; Sanders, 2001, 2002). This may be an aspect of supporters' experience with SBAE programs that goes unnoticed by them. These supporters feel positively about a sense of teamwork between supporters and the agricultural teacher. However, they are not an element of SBAE programs that supporters need in order to work hard.

Supporters felt unsure about the expectation that all meetings need to be efficient. Baggetta et al. (2013) reported that efficient meetings help increase volunteers' commitment. Based on the Q-sort findings, this may be truer for some volunteers than others. Supporters felt neutral regarding their value of contributing to programs because they relate to their career field. This is an interesting finding given that almost half the supporters reported having an occupation in the agricultural industry.

Across all factors, supporters felt unsure about expecting feedback regarding the effectiveness of their support. Evaluation is an important component of models in general education partnerships and agricultural extension volunteer management (Culp, 2012; Dodd et al., 2007; Epstein, 2009; Penrod, 1991). However, supporters may feel negative or unfamiliar with the word "evaluation" in relation to their role as a supporter and were therefore unsure where to place this specific statement.

Statements specifying whether a student or teacher contacts supporters regarding volunteer opportunities was ranked neutrally and negatively across all factors. In post-sorting

interviews, supporters' comments regarding these statements indicated that they had no preference of who contacted them. Supporters do not expect everyone to get along. This finding is not supported by research that a pleasant working environment is among the many factors that affect a volunteers' experience while working with organizations (Culp et al., 1998; Epstein et al., 2009; Hackman, 2002; Penrod, 1991; Rochester, 2010). Supporters are most likely comfortable with conflict to a reasonable amount.

Supporters felt negatively about only supporting programs that only serve their kids. In literature regarding the volunteer life cycle, researchers indicate that parental status can be an indicator or commitment to an organization (Rochester, 2006, 2010; Roto, 2000). This may not be true for supporters of SBAE programs in Idaho. Through post-sorting interviews, participants in persona two stated that they wish they received more invitations to support the program now that their kids have graduated high school.

Supporters felt negatively about receiving recognition from students and teachers. Recognizing those who volunteer their time to an organization is important (CCSP, 2004; Culp, 2012; Dodd et al., 2007; Phillips & Little, 2002). However, private forms of recognition, with the sole purpose of showing appreciation, are favored by this group. Additional forms of recognition such as time, attention, sincere respect, timely communication and small gestures are also recommended to show appreciation of supporters (Dodd et al., 2007; Penrod, 1991). These forms of recognition may work better for these supporters.

**Recommendations for Practice for All Supporters**

The following recommendations will be focused on the selection, training, management, evaluation and recognition across all factors. Teachers, alumni members, and

those involved with SBAE programs need to openly promote, communicate, and advocate for the vision and goals of agricultural programs. Although these participants have a wide range of demographics, on average they are motivated by expressing and acting on their passion for agricultural education, students, or their community. All supporters in this study place high importance in student students' personal and career success.

Instill a sense of teamwork and collaboration with these supporters. These supporters' motivations are not derived from social interaction, and they do not seem to care whether they volunteer with their family and friends. However, they felt positively about the importance of teamwork and favor communication between the teacher and other supporters. Some supporters place high importance on teamwork. Providing the foundation for teams to form may be positive for all supporters and highly preferred by others. If school staff needs to be incorporated into that team, educate supporters on the influence of school staff in their ability to support the SBAE program.

Openly communicate about expectations surrounding evaluation and expectation for supporters' contribution. Additionally, supporters will likely respond well to informal evaluation methods that are structured as a discussion and focused on improvement rather than an evaluation of their direct actions. Some supporters indicated they may stop volunteering if they receive negative feedback, while others saw evaluation as a useful tool for their success. Evaluation is important in general education partnerships and agricultural extension volunteer management. However, supporters may have different experiences with what evaluation entails.

Continue engaging these supporters after their children have graduated high school. Supporters felt negatively about only supporting programs that only serve their kids.

Numerous supporters reported they do not have children currently in SBAE programs and the FFA. Several supporters in this study also voiced that they would like to continue receiving communication about how to support the program after their children have graduated.

Use informal, personal methods to show appreciation to supporters. Supporters felt negatively about receiving public recognition from students and teachers. Forms of appreciation such as time, attention, sincere respect, timely communication and small gestures may be perceived very well by supporters. During post-sorting interviews, participants voiced that they love to see students' success made possible by their support. Encourage students to ask supporters for advice or help with projects. Supporters also voiced that they love to receive sincere thank you notes from students.

## Recommendations for Research

Recommendations for research are based on the conclusions and implications of this study. The first recommendation for research is to refine the concourse and Q-set and replicate this study. 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.

The second recommendation for research is to explore the experiences and preferences of SBAE program supporters from the supporters' perspective. Published research studies in agricultural education often survey agricultural teachers to learn about program supporters. Key findings relating to communication methods and the importance of recognition may indicate that supporters' preferences and experience are different from teachers' perceptions.

Further research from the supporters' perspective may uncover important findings related to commitment, motivation, and duration of support.

The third recommendation for research is to further investigate the demographics that differed between factors in this study. The demographics that may distinguish between supporters include group affiliation, occupation, household income level, communication preferences, and training preferences. There may be underlying significant differences between these demographics and their influence on supporters' preferences. Further research related to demographics may give practitioners a better understanding of supporter preferences.

The fourth recommendation is to further explore motivations of SBAE program supporters. 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. Understanding the motivations of SBAE supporters may assist teachers and alumni members in develop more successful strategies for recruiting and retaining supporters.

The fifth 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. Given the findings of this study, SBAE program supporters may have a different life cycle and duration of commitment than researchers currently indicate. Exploring the duration and life cycle of SBAE supporters may lead to a better understanding of their distinguishing characteristics. This may also help prepare agricultural teachers to better recruit and retain supporters.

## Summary

Based on study results, there are three distinct personas for SBAE supporters in Idaho. These three types of supporters are unique in their viewpoints, and preferences. There are also broad similarities across all factors. These findings indicate that a variety of supporters are needed to achieve program and student success goals in Idaho SBAE programs. Research study results can assist practitioners in recruiting and retaining supporters to provide their time, talent and resources to SBAE programs in Idaho. These findings also provide researchers with a broad understanding of supporters in SBAE programs in Idaho.

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## Appendix A – Pre-sorting Questionnaire

Occupation: _____ What year were you born? _____
Gender: _____

1. Please select the group you most identify with:
   ___ Community-Based (parent, civic organization, political leader)
   ___ Business and Industry Entity (farmer/ rancher, commodity group, business)
   ___ Government-Affiliated Entity (government agency, extension service)

2. Were you a member of the FFA?
   ___ Yes
   ___ No

3. Please answer the following question in relation to your parental status.
   ___ Total number of children
   ___ Children who are current FFA members
   ___ Children who are past FFA members
   ___ Children who were/ are not FFA members
   ___ Children who are not of high school age

4. How many years have you lived in the community of the ag program you support?
   _____

5. What is your highest level of education completed?

___ Less than High School
___ High School Graduate
___ Technical School or Associate Degree
___ Bachelor's degree
___ Master's degree
___ Doctorate Degree

6. Annual household income level:

___ $0 - $20,000
___ $20,001 - $40,000
___ $40,001 - $60,000
___ $60,001-$80,000
___ $80,001-$100,000
___ $100,001 or more
___ Rather not say

7. Marital status:

___ Single
___ Living with another

___ Married
___ Separated
___ Divorced
___ Widowed
___ Rather not say

8. Please select all the areas of a high school agriculture program that you support, within each category below.

Classroom/Laboratory:

___ Chaperone for Class Field Trips
___ Curriculum
___ Equipment Use/Rental
___ Facilities for Classes/Workshops
___ Facility Repairs
___ Financial Support
___ Guest Speaker
___ Job Shadowing
___ Material Donation
___ Teacher Skill Building

FFA:

___ Awards/Proficiency Apps.
___ CDE Judge
___ CDE Team Coach
___ Chapter Banquet Assistance
___ Chapter CDE Events
___ FFA Event Chaperone
___ Fundraising
___ Leadership Opportunities
___ Material Donation
___ Member Recruitment
___ Scholarship Opportunities
___ Community Service

Supervised Agriculture Experience:

___ Material Donation
___ Facilities for Student SAEs
___ Job Placement Opportunity
___ Laboratory Assistance
___ Livestock Buyer
___ Mentorship
___ Supervision of SAEs

What other ways, not listed above, do you support the ag program?

9. Please select your level of preference for using the following communication methods in your role as a supporter.

| Method | Least Preferred | | | | Most Preferred |
|---|---|---|---|---|---|
| Face-to-Face | | | | | |
| Email | | | | | |
| Mailed Letters | | | | | |
| Phone Call | | | | | |
| Social Media | | | | | |
| Text Message | | | | | |

10. Who do you prefer to prepare you for your role as a supporter?
    ___ The agriculture teacher
    ___ Other program supporters
    ___ FFA Alumni Association members

11. When preparing to support the program, please select your preference for the following preparation methods.

| Method | Least Preferred | | | | Most Preferred |
|---|---|---|---|---|---|
| Formal Training Program | | | | | |
| Informal Discussion | | | | | |
| Self-Guided Online Training | | | | | |
| Written Document | | | | | |

**Volunteer Function Inventory**

| Using the 7-point scale below, please indicate how important or accurate each of the following possible reasons for volunteering is for you in doing volunteer work at this organization. | not at all important/ accurate | | | | | | extremely important/ accurate |
|---|---|---|---|---|---|---|---|
| Statement | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Volunteering can help me to get my foot in the door at a place where I would like to work. | | | | | | | |
| My friends volunteer. | | | | | | | |
| I am concerned about those less fortunate than myself. | | | | | | | |
| People I'm close to want me to volunteer. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Volunteering makes me feel important. | | | | | | | |
| People I know share an interest in community service. | | | | | | | |
| No matter how bad I've been feeling, volunteering helps me to forget about it. | | | | | | | |
| I am genuinely concerned about the particular group I am serving. | | | | | | | |
| By volunteering I feel less lonely. | | | | | | | |
| I can make new contacts that might help my business or career. | | | | | | | |
| Doing volunteer work relieves me of some of the guilt over being more fortunate than others. | | | | | | | |
| I can learn more about the cause for which I am working. | | | | | | | |
| Volunteering increases my self-esteem. | | | | | | | |
| Volunteering allows me to gain a new perspective on things. | | | | | | | |
| Volunteering allows me to explore different career options. | | | | | | | |
| I feel compassion toward people in need. | | | | | | | |
| Others with whom I am close place a high value on community service. | | | | | | | |
| Volunteering lets me learn things through direct, hands-on experience. | | | | | | | |
| I feel it is important to help others. | | | | | | | |
| Volunteering helps me work through my own personal problems. | | | | | | | |
| Volunteering will help me to succeed in my chosen profession. | | | | | | | |
| I can do something for a cause that is important to me. | | | | | | | |
| Volunteering is an important activity to the people I know best. | | | | | | | |
| Volunteering is a good escape from my own troubles. | | | | | | | |
| I can learn how to deal with a variety of people. | | | | | | | |
| Volunteering makes me feel needed. | | | | | | | |
| Volunteering makes me feel better about myself. | | | | | | | |
| Volunteering experience will look good on my resume. | | | | | | | |
| Volunteering is a way to make new friends. | | | | | | | |
| I can explore my own strengths. | | | | | | | |

## Appendix B – Interview Protocol

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

**Research Question:** What are the personas of school-based agricultural education supporters in Idaho?

**Source:** Watts, S., Stenner, P. (2012). *Doing Q Methodological Research: Theory, Method & Interpretation*. London, Thousand Oaks, CA, New Delhi, Singapore: Sage Publications

1. Why did you decide to sort these items to +6?
    a. What does this statement mean to you?
2. What made you decide to sort these items to -6?
    a. What does this statement mean to you?
3. Are there any statements you didn't understand?
4. Do you feel that anything was left out of these statements?

## Appendix C – Concourse Items

| Item | Source |
|---|---|
| Support from school staff is important for partnership success | Decker & Decker, 2003 |
| Substance of the assignment for partner helps them feel needed and valued | Decker & Decker, 2003 |
| Clarity of the task is important | Decker & Decker, 2003 |
| All partners must have shared vision | Sanders, 2008 |
| Clearly defined roles and responsibilities for all partners | Sanders, 2008 |
| Open communication is important | Sanders, 2008 |
| Job specificity for volunteer to meet program needs | Penrod, 1991 |
| Organizational mission motivates volunteers to be involved | Penrod, 1991 |
| Appropriate recognition | Penrod, 1991 |
| Volunteer meets new people and develops relationships | Penrod, 1991 |
| Volunteer learns new knowledge and shares knowledge | Penrod, 1991 |
| Volunteer needs to feel accomplished | Penrod, 1991 |
| Evaluation is a fundamental component of volunteer management | Penrod, 1991 |
| Provide recognition that appeals to volunteer's motivation | Penrod, 1991 |
| Constructive meetings | Penrod, 1991 |
| Developing plans for volunteers before recruiting them | Penrod, 1991 |
| Communication between volunteer manager and volunteers | Penrod, 1991 |
| Set goals for partnerships with partners, school board, teachers and students | Epstein, 2009 |
| action team should write and implement plan for partnership | Epstein, 2009 |
| Conduct evaluations of partnership effectiveness | Epstein, 2009 |
| Celebrate progress of partnership goals and programs | Epstein, 2009 |
| Continue to improve | Epstein, 2009 |
| Volunteer opportunities are identified through a needs assessment and written position descriptions | Culp et al., 1998 |
| Targeted recruitment that is individualized | Culp et al., 1998 |
| Screen recruited volunteers for their abilities to give specific tasks | Culp et al., 1998 |
| Oriented volunteers with the programs, staff, org. | Culp et al., 1998 |

| | |
|---|---|
| purpose and policies, and expectations | |
| Supervising volunteers as they engage in activities is based on their skills and how often they need assistance | Culp et al., 1998 |
| Motivating volunteers to enhance their experience | Culp et al., 1998 |
| Performance evaluation to know whether the volunteer and org. goals are being met | Culp et al., 1998 |
| Recognize formally and informally to help volunteers feel they are making a meaningful contribution | Culp et al., 1998 |
| Identification - get the right people for the right positions | Dodd, Boleman, 2007 |
| non-targeted marketing, targeted marketing | Dodd, Boleman, 2007 |
| Selection - identify the types of volunteers needed based on program needs, match volunteers based on talents and interests | Dodd, Boleman, 2007 |
| Orientation - interview the volunteer, inform about program, position description | Dodd, Boleman, 2007 |
| Training - offer ongoing training, provide volunteers with tools | Dodd, Boleman, 2007 |
| Utilization - give volunteers opportunities to use skills, apply knowledge, supervise, contact with students | Dodd, Boleman, 2007 |
| Formal recognition - honored at event, news articles, certificates, letters | Dodd, Boleman, 2007 |
| Informal recognition - pleasant work environment, timely information, payed attendance at trainings, mentorship opportunities | Dodd, Boleman, 2007 |
| volunteers build relationships through teamwork | Dodd, Boleman, 2007 |
| Process evaluation - satisfaction, hours provided, resources needed | Dodd, Boleman, 2007 |
| Outcome evaluation - teaching others, appropriate teaching methods, managing others | Dodd, Boleman, 2007 |
| Economic evaluation - assessing impact based on cost to pay for effort | Dodd, Boleman, 2007 |
| Shared philosophy and values of partners - school and business need to believe in the goals of the partnership | CCSP, 2002 |
| Mutually beneficial goals - for the business and school | CCSP, 2002 |
| Partnership should be integrated into school/business culture | CCSP, 2002 |
| Clear management and role guidelines to understand who is responsible for what tasks | CCSP, 2002 |
| Clear measure of results and outcomes of partnership | CCSP, 2002 |

| | |
|---|---|
| Applicable skills make volunteers more committed to their role | Baggetta, Han, Andrews, 2013 |
| Available time make volunteers more committed to their role | Baggetta, Han, Andrews, 2013 |
| Aligned motivations make volunteers more committed to their role | Baggetta, Han, Andrews, 2013 |
| Interdependent teams that work together make volunteers more committed | Baggetta, Han, Andrews, 2013; Hackman, 2002 |
| Equal work share make volunteers more committed to their role | Baggetta, Han, Andrews, 2013 |
| Devote smaller shares of time to meetings | Baggetta, Han, Andrews, 2013; Ganz, 2009; Polletta, 2012; Baggetta et al., 2012 |
| Prior skill development | Verba et al., 1995 |
| More time availability makes volunteers more committed | Verba et al., 1995 |
| Prior motivation, experiences, beliefs play a role in volunteers motivation to become involved | Omoto, Snyder, 2002 |
| Personal views align with organization | Benford, Snow, 2000 |
| Strong collaborative identity for teams of volunteers | Hackman, 2002 |
| Clear goals for volunteers | Hackman, 2002 |
| Supportive environment helps volunteers be useful | Hackman, 2002 |
| Shared effort between volunteers to accomplish a task | Corrigall-Brown, 2012 |
| Organizational maintenance and management | Ganz, 2000; Polletta, 2002 |
| Meetings length and productivity to manage volunteers' time constructively | Ganz, 2009; Polletta, 2012; Baggetta et al., 2012 |
| Well run meetings are important to manage volunteers | Baggetta, Han, Andrews, 2013 |
| Volunteers' feeling of being well supported and managed | Paine, Rochester, Zimmeck, Howlett, 2009 |
| Motivational needs met to sustain volunteering | Paine, Rochester, Zimmeck, Howlett, 2009 |
| People who are motivated to volunteer will stick with it | Clary et al., 1998 |
| Lack of supervision - Inadequacies reported as reason to stop volunteering | Locke, 2003 |
| Lack of communication - Inadequacies reported as reason to stop volunteering | Locke, 2003 |
| Lack of training - Inadequacies reported as reason to stop volunteering | Locke, 2003 |
| Volunteers feeling undervalued - Inadequacies reported as reason to stop volunteering | Locke, 2003 |
| Volunteers being ill-deployed - Inadequacies reported as reason to stop volunteering | Locke, 2003 |

| | |
|---|---|
| Volunteering taking up too much time - Inadequacies reported as reason to stop volunteering | Locke, 2003 |
| High-quality training - important to volunteer success | Britton, 1999; Rochester, 2010 |
| Formal and informal support is important to volunteer success | Britton, 1999; Rochester, 2010 |
| Well run organization that provides good environment to volunteers | Britton, 1999; Rochester, 2010 |
| Tasks that match skillset - so volunteers feel able to fulfill their role | Britton, 1999; Rochester, 2010 |
| Flexible tasks that allow for volunteer to be flexible | Britton, 1999; Rochester, 2010 |
| Proper management of volunteers | McCudden, 2000; Rochester, 2010 |
| Meeting expectations set before the meetings | McCudden, 2000; Rochester, 2010 |
| Appropriate policies in place for volunteer success | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Strong communication between volunteers and with manager | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Reimbursement for expenses | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Limit involvement to avoid burnout | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Flexible tasks for volunteers | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Strong orientation for volunteers to learn about organization | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Strong training for volunteers to feel prepared for their role | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Recognition so volunteers feel valued | Barker, 2005; Pillips, Little, 2002; Rochester, 2010 |
| Age of kids impact on org. volunteering and volunteer life cycle | Rotolo, 2000; Rochester, 2010 |
| Role identity and affiliation | Chacon et al., 2007; Rochester, 2010 |
| Balance of interest between organizations is a factor that volunteers consider | Studer, 2015 |
| Strategic commitment toward volunteers from the organization is important | Studer, 2015 |
| Role clarity and tasks specificity for volunteers | Studer, 2015 |
| Team spirit | Studer, 2015 |
| Respect between all volunteers and manager | Studer, 2015 |
| Partnership planning significantly related to retention | Cuskelly et al., 2006 |

## Appendix D – Concourse themes

*Themes related to support*

| |
|---|
| Believe that support from school staff is important |
| Have a close relationship to the ag teacher |
| Volunteers' feeling of being well supported and managed |
| Volunteers feeling undervalued |
| Formal and informal support |
| Support |
| Strategic commitment toward volunteers |
| Respect |
| Volunteer meets new people |
| Build relationships |
| Interdependent teams |
| Team spirit |
| Strong collaborative identity |
| Interdependent teams |
| Shared effort |
| Equal work share |
| Pleasant work environment |
| Mentorship opportunities |

*Themes related to utilization*

| |
|---|
| Substance of the assignment |
| Clarity of the task |
| Clearly defined roles and responsibilities |
| Job specificity |
| Constructive meetings |
| Educate supporters |
| Supervising |
| Utilization |
| Clear management |
| Applicable skills |
| Devote smaller shares of time to meetings |
| Organizational maintenance |
| Meetings length and productivity |
| Well run meetings |
| Supervision |
| Volunteers being ill-deployed |
| Well run organization |
| Flexible tasks |

| |
|---|
| Management |
| Appropriate policies |
| Reimbursement |
| Flexible tasks |
| Role clarity |
| Opportunities to use skills |
| Opportunities to apply knowledge |
| Contact with students |

*Themes related to training and preparation*

| |
|---|
| Shared vision |
| Organizational mission |
| Developing plans |
| Set goals |
| Write and implement plan |
| Shared philosophy and values |
| Mutually beneficial goals |
| Integrated into school/business culture |
| Role identity |
| Am more engaged when I have clear goals to accomplish |
| Tasks that match skillset |
| Prefer to be trained by the agricultural instructor before volunteering |
| Prefer to be trained by other community members |
| Planning significantly related to retention |
| Training |
| Orientation |
| Strong orientation |
| High-quality training |
| Right people for the right positions |

*Themes related to communication*

| |
|---|
| Expect to hear from the agriculture teacher |
| Communication |
| Communication |
| Strong communication |

*Themes related to a feeling of value*

| |
|---|
| Appropriate recognition |
| Accomplishments |
| Recognition - according to motivation |
| Celebrate progress |

| |
|---|
| Continue to improve |
| Recognize |
| Formal recognition |
| Informal recognition |
| Recognition |
| Feel appreciated when I receive personal attention and sincere respect for my efforts |
| Feel appreciated when I am given plagues or gifts for my efforts |
| Feel appreciated when I am publicly recognized for my efforts. |
| Payed attendance at trainings |

*Themes related to evaluation*

| |
|---|
| Evaluation |
| Conduct evaluations |
| Evaluate |
| Meeting expectations |
| Clear measure |
| Process evaluation |
| Outcome evaluation |
| Economic evaluation |
| Timely information |

*Themes related to time*

| |
|---|
| Available time |
| More time availability |
| Volunteering taking up too much time |
| Limit involvement to avoid burnout |
| Balance of interest |

*Themes related to identity/ affiliation*

| |
|---|
| Prior motivation, experiences, beliefs |
| Prior skill development |
| Personal views align with organization |
| Motivating |
| Aligned motivations |
| Motivational needs met |
| People who are motivated to volunteer will stick with it |
| Age of kids impact on org. volunteering |
| Volunteer learns new knowledge |

## Appendix E – Q-set

| # | Statement | Source | | |
|---|---|---|---|---|
| 1 | expect that students, not the ag teacher, will contact me about volunteer opportunities | Penrod, K. N. 1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | Sanders, M. G. 2008, December). School-Community Partnerships for 21st Century Schools. *Leadership Compass.* | |
| 2 | can provide a unique insight into the program | Chacon, F., Vecina, M., & Davila, M. 2007). The three-stage model of volunteers' duration of service. *Social Behavior and Personality: An international journal*, 35, 627-642. | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., Ellis Paine, A. 2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | |
| 3 | expect that the ag teacher, not the students, will contact me about volunteer opportunities | Penrod, K. N. 1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | | |
| 4 | expect that supporters will communicate with each other about their work | Locke, M., A. Ellis and J. Davis Smith 2003) 'Hold on to what you've got: the volunteer retention literature', *Voluntary Action 5* 3), 81-100. | | |
| 5 | expect to be recognized by the students for my contributions | Culp, K., III, Deppe, C. A., Castillo, J. X., Wells, B. J. 1998). The GEMS model of volunteer administration. *The Journal of Volunteer Administration.* 16 4) 36-41. | | |

| | | | | |
|---|---|---|---|---|
| 6 | am only willing to contribute if I work in a comfortable environment | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | | |
| 7 | am only willing to contribute if everyone gets along | Hackman, J. R. (2002). *Leading Teams: Setting the Stage for Great Performances.* Boston, Mass.: Harvard University Press. | | |
| 8 | work hard when I am part of a team of supporters that works hard | 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. | Hackman, J. R. (2002). *Leading Teams: Setting the Stage for Great Performances.* Boston, Mass.: Harvard University Press. | Studer, S. (2016). Volunteer Management: Responding to the Uniqueness of Volunteers. *Nonprofit and Voluntary Sector Quarterly, 45* 4), 688–714. |
| 9 | expect a sense of teamwork between the ag teacher and those of us that support the program | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., (2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | 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. | |
| 10 | desire individualized appreciation, not public, for my contributions | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for- | | |

| | | | | |
|---|---|---|---|---|
| | | volunteer-management-E-457.pdf | | |
| 11 | believe that support from school staff makes me a better supporter | Decker, L. E. & Decker, V. A. (2003). *Home, school, and community partnerships.* Lanam, MD: Scarecrow Press. | McCudden, J. (2000) What makes a committed volunteer? Research into the factors affecting the retention of volunteers in Home-Start, *Voluntary Action*, *2* 2), 59-76. | Phillips, S., Little, B. R. (2002). *Recruiting, retaining and rewarding volunteers: what volunteers have to say.* Canadian Center of Philanthropy; Toronto. |
| 12 | desire public appreciation for my contributions | Dodd, C., Boleman, C.,(2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | | |
| 13 | believe there is room to have multiple supporter viewpoints for the vision of the program | Council for Corporate and School Partnerships. (2004). A how-to guide for school-business partnerships. Retrieved from http://www.project10.info/files/SchoolBusinessHowtoGuide.pdf | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | |
| 14 | believe that because I support the program, I am helping students find careers in agriculture | Council for Corporate and School Partnerships. (2004). A how-to guide for school-business partnerships. Retrieved from http://www.project10.info/files/SchoolBusinessHowtoGuide.pdf | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | |
| 15 | believe that because I support the program, I am helping students achieve personal | Council for Corporate and School Partnerships. (2004). A how-to guide for school-business | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | |

| | | | | |
|---|---|---|---|---|
| | success | partnerships. Retrieved from http://www.project10.info/files/SchoolBusinessHowtoGuide.pdf | | |
| 16 | believe that because I support the program, I am helping students know more about agriculture | Council for Corporate and School Partnerships. (2004). A how-to guide for school-business partnerships. Retrieved from http://www.project10.info/files/SchoolBusinessHowtoGuide.pdf | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | |
| 17 | believe that anyone who wants to support the program should be able to | Culp, K., III, Deppe, C. A., Castillo, J. X., Wells, B. J. (1998). The GEMS model of volunteer administration. *The Journal of Volunteer Administration.* 16 4) 36-41. | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | |
| 18 | expect to be interviewed before I volunteer | Culp, K., III, Deppe, C. A., Castillo, J. X., Wells, B. J. (1998). The GEMS model of volunteer administration. *The Journal of Volunteer Administration.* 16 4) 36-41. | | |
| 19 | should be able to choose which tasks I assist with | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., Ellis Paine, A. (2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | | |
| 20 | am willing to be assigned tasks that require me to learn new skills | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | | |

| | | | | |
|---|---|---|---|---|
| 21 | only want to be assigned specific tasks that align with my skills | 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. | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | |
| 22 | only want to attend short, efficient meetings | 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. | | |
| 23 | only want to attend relaxed meetings that allow time for casual discussion | 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. | | |
| 24 | expect all supporters and the ag teacher to share the same vision for the program | Sanders, M. G. (2008). School-Community Partnerships for 21st Century Schools. *Leadership Compass.* | | |
| 25 | am capable of measuring my own contributions to the program | Epstein, J. L., Simon, B. S., Salinas, K. C., Jansorn, N. R. (2009). *School, family, and community partnerships: Your handbook for action* 3rd ed.). Thousand Oaks, CA: Corwin Press. | McCudden, J. (2000) What makes a committed volunteer? Research into the factors affecting the retention of volunteers in Home-Start, *Voluntary Action*, *2* 2), 59-76. | |

| | | | | |
|---|---|---|---|---|
| 26 | know that if my support is evaluated I will stop volunteering | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | Epstein, J. L., Simon, B. S., Salinas, K. C., Jansorn, N. R. (2009). *School, family, and community partnerships: Your handbook for action* 3rd ed.). Thousand Oaks, CA: Corwin Press. | Culp, K., III, Deppe, C. A., Castillo, J. X., Wells, B. J. (1998). The GEMS model of volunteer administration. *The Journal of Volunteer Administration.* 16 4) 36-41. |
| 27 | expect to be recognized by other program supporters for my contributions | Barker, (2005) Pillips, Little, (2002) | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., Ellis Paine, A. (2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | |
| 28 | expect that the ag teacher is everywhere the supporters are expected to be | Culp, K., III, Deppe, C. A., Castillo, J. X., Wells, B. J. (1998). The GEMS model of volunteer administration. *The Journal of Volunteer Administration.* 16 4) 36-41. | | |
| 29 | seek opporuntities to recruit and mentor new supporters | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | |
| 30 | expect to receive feedback of the effectiveness of my support | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from | | |

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|---|---|---|---|---|
| | | https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | | |
| 31 | expect to be recognized by the ag teacher for my contributions | Penrod, K. N. (1991). Leadership Involving Volunteers. *Journal of Extension. 29* 4). | | |
| 32 | began supporting the program because I wanted to contribute to the good things that were happening | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | | |
| 33 | began supporting the program because I saw there were changes that could be made | Zappala, G.Burrell, T. (2002). Understanding the factors associated with volunteer commitment: a case study of volunteers in community service. *Third Sector Review, 8* 2) 5-30. | | |
| 34 | enjoy volunteering independently of my family and friends | 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 | | |
| 35 | value contributing to programs because they relate to my career field | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., Ellis Paine, A. (2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | | |
| 36 | expect that my opinions about the ag program are attended to | Phillips, S., Little, B. R. (2002) Recruiting, retaining and rewarding | Rochester, C., Paine, A. E., Howlett, S., Zimmeck, M., Ellis | |

| | | | | |
|---|---|---|---|---|
| | | volunteers: what volunteers have to say. Canadian Center of Philanthropy; Toronto. | Paine, A. (2010). *Volunteering and Society in the 21st Century.* UK: Palgrave Macmillan. | |
| 37 | only support programs that serve my kids | 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 | | |
| 38 | would stop volunteering if I received negative feedback about my support | Dodd, C., Boleman, C. (2007). Volunteer administration in the 21st Century: ISOTURE: A model for volunteer management. Retrieved October 25, 2018, from https://agrilifecdn.tamu.edu/od/files/2010/06/Isoture-model-for-volunteer-management-E-457.pdf | Council for Corporate and School Partnerships. (2004). *A how-to guide for school-business partnerships.* Retrieved from http://www.project10.info/files/SchoolBusinessHowtoGuide.pdf | |
| 39 | expect the ag teacher to use supporters as a way to free up time for their own family | Locke, M., A. Ellis and J. Davis Smith (2003) 'Hold on to what you've got: the volunteer retention literature', *Voluntary Action 5* 3), 81-100. | | |
| 40 | enjoy volunteering with my family and friends | Omoto, A. M., & Snyder, M. (2002). Considerations of community: The context and process of volunteerism. American Behavioral Scientist, 45 5), 846-867. | | |

## Appendix F – P-set

| Talent/ time | Resources | New supporter | Long-time supporter | Kids | Wish for better | Cheerleader | Community Guru | Industry Guru | Strong Ag | Strong Youth |
|---|---|---|---|---|---|---|---|---|---|---|
| P3 | P2 | P4 | P7 | P6 | P1 | P11 | P9 | P10 | | |
| | | | | | P5 | | | | P8 | |
| P13 | | | P14 | P21 | | | P15 | P12 | | P17 |
| | | | P18 | P20 | | | P19 | | | P16 |
| | P25 | P22 | | | P23 | P29 | P27 | P26 | P28 | P31 |
| | P24 | P30 | | | | | | | | |
| P42 | P39 | | P43 | P34 | | P44 | | P45 | P37 | P38 |
| P32 | P40 | | P33 | P47 | | P46 | | P35 | P36 | |
| | | | | | | | | P41 | | |
| P49 | | P48 | | | | | | | | |

## Appendix G – Correlation Matrix

| SORTS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 1 | 100 | 4 | 9 | 50 | 43 | -6 | 27 | 35 | 39 | 26 | 30 | 20 | 29 | 34 | 29 | 34 | 38 | 39 | 21 | 15 | 32 | 24 | 22 | 24 | 29 | 17 | 26 | 42 | 11 | 30 |
| 2 2 | 4 | 100 | 40 | -2 | -8 | 18 | 23 | 35 | 20 | 33 | 30 | 38 | 28 | 33 | 23 | 49 | 33 | 30 | 13 | 36 | 30 | 27 | 20 | 21 | 26 | 22 | 21 | 36 | 39 | 25 |
| 3 3 | 9 | 40 | 100 | 41 | 16 | 42 | 69 | 58 | 44 | 52 | 62 | 53 | 46 | 60 | 52 | 69 | 51 | 44 | 64 | 57 | 55 | 54 | 61 | 52 | 50 | 67 | 64 | 65 | 41 | 68 |
| 4 4 | 50 | -2 | 41 | 100 | 42 | 17 | 24 | 49 | 37 | 32 | 41 | 9 | 20 | 55 | 29 | 35 | 41 | 38 | 45 | 23 | 46 | 21 | 51 | 37 | 28 | 57 | 42 | 49 | 12 | 33 |
| 5 5 | 43 | -8 | 16 | 42 | 100 | 23 | 49 | 45 | 55 | 24 | 35 | 29 | 44 | 53 | 58 | 33 | 39 | 46 | 39 | 20 | 43 | 39 | 34 | 58 | 45 | 40 | 37 | 41 | 11 | 39 |
| 6 6 | -6 | 18 | 42 | 17 | 23 | 100 | 46 | 37 | 13 | 19 | 24 | 30 | 11 | 48 | 53 | 47 | 44 | 39 | 45 | 54 | 47 | 27 | 28 | 48 | 26 | 40 | 46 | 30 | 28 | 36 |
| 7 7 | 27 | 23 | 69 | 24 | 49 | 46 | 100 | 55 | 55 | 46 | 67 | 73 | 52 | 67 | 60 | 62 | 51 | 57 | 59 | 61 | 64 | 47 | 56 | 59 | 58 | 58 | 63 | 64 | 41 | 64 |
| 8 8 | 35 | 35 | 58 | 49 | 45 | 37 | 55 | 100 | 56 | 50 | 72 | 52 | 42 | 74 | 67 | 55 | 43 | 48 | 61 | 44 | 60 | 52 | 63 | 77 | 67 | 67 | 69 | 58 | 22 | 63 |
| 9 9 | 39 | 20 | 44 | 37 | 55 | 13 | 55 | 56 | 100 | 57 | 62 | 56 | 37 | 52 | 54 | 45 | 52 | 40 | 52 | 42 | 36 | 33 | 53 | 61 | 62 | 42 | 50 | 54 | 32 | 58 |
| 10 10 | 26 | 33 | 52 | 32 | 24 | 19 | 46 | 50 | 57 | 100 | 49 | 44 | 34 | 51 | 45 | 34 | 46 | 29 | 24 | 47 | 34 | 33 | 40 | 52 | 44 | 51 | 38 | 36 | 21 | 34 |
| 11 11 | 30 | 30 | 62 | 41 | 35 | 24 | 67 | 72 | 62 | 49 | 100 | 72 | 48 | 61 | 63 | 63 | 58 | 53 | 57 | 49 | 57 | 45 | 58 | 57 | 58 | 60 | 76 | 62 | 38 | 64 |
| 12 12 | 20 | 38 | 53 | 9 | 29 | 30 | 73 | 52 | 56 | 44 | 72 | 100 | 47 | 50 | 62 | 62 | 61 | 37 | 49 | 52 | 44 | 36 | 30 | 55 | 66 | 56 | 63 | 49 | 39 | 59 |
| 13 13 | 29 | 28 | 46 | 20 | 44 | 11 | 52 | 42 | 37 | 34 | 48 | 47 | 100 | 41 | 50 | 46 | 43 | 29 | 40 | 13 | 36 | 43 | 28 | 54 | 42 | 45 | 42 | 49 | 37 | 59 |
| 14 14 | 34 | 33 | 60 | 55 | 53 | 48 | 67 | 74 | 52 | 51 | 61 | 50 | 41 | 100 | 63 | 63 | 53 | 62 | 57 | 61 | 70 | 52 | 72 | 73 | 66 | 70 | 65 | 66 | 34 | 64 |
| 15 15 | 29 | 23 | 52 | 29 | 58 | 53 | 60 | 67 | 54 | 45 | 63 | 62 | 50 | 63 | 100 | 61 | 57 | 47 | 59 | 47 | 52 | 49 | 52 | 83 | 64 | 54 | 60 | 50 | 40 | 56 |
| 16 16 | 34 | 49 | 69 | 35 | 33 | 47 | 62 | 55 | 45 | 34 | 63 | 62 | 46 | 63 | 61 | 100 | 66 | 64 | 61 | 70 | 73 | 40 | 51 | 52 | 37 | 53 | 65 | 64 | 37 | 64 |
| 17 17 | 38 | 33 | 51 | 41 | 39 | 44 | 51 | 43 | 52 | 46 | 58 | 61 | 43 | 53 | 57 | 66 | 100 | 48 | 38 | 49 | 62 | 40 | 24 | 51 | 52 | 44 | 59 | 55 | 41 | 55 |
| 18 18 | 39 | 30 | 44 | 38 | 46 | 39 | 57 | 48 | 40 | 29 | 53 | 37 | 29 | 62 | 47 | 64 | 48 | 100 | 43 | 55 | 58 | 34 | 58 | 39 | 30 | 40 | 46 | 53 | 35 | 48 |
| 19 19 | 21 | 13 | 64 | 45 | 39 | 45 | 59 | 61 | 52 | 24 | 57 | 49 | 40 | 57 | 59 | 61 | 38 | 43 | 100 | 53 | 53 | 48 | 59 | 66 | 44 | 56 | 62 | 56 | 27 | 66 |
| 20 20 | 15 | 36 | 57 | 23 | 20 | 54 | 61 | 44 | 42 | 47 | 49 | 52 | 13 | 61 | 47 | 70 | 49 | 55 | 53 | 100 | 69 | 32 | 54 | 45 | 36 | 43 | 50 | 38 | 30 | 47 |
| 21 21 | 32 | 30 | 55 | 46 | 43 | 47 | 64 | 60 | 36 | 34 | 57 | 44 | 36 | 70 | 52 | 73 | 62 | 58 | 53 | 69 | 100 | 31 | 52 | 50 | 43 | 42 | 49 | 61 | 35 | 55 |
| 22 22 | 24 | 27 | 54 | 21 | 39 | 27 | 47 | 52 | 33 | 33 | 45 | 36 | 43 | 52 | 49 | 40 | 40 | 34 | 48 | 32 | 31 | 100 | 32 | 55 | 50 | 50 | 67 | 41 | 18 | 40 |
| 23 23 | 22 | 20 | 61 | 51 | 34 | 28 | 56 | 63 | 53 | 40 | 58 | 30 | 28 | 72 | 52 | 51 | 24 | 58 | 59 | 54 | 52 | 32 | 100 | 48 | 42 | 59 | 44 | 63 | 27 | 60 |
| 24 24 | 24 | 21 | 52 | 37 | 58 | 48 | 59 | 77 | 61 | 52 | 57 | 55 | 54 | 73 | 83 | 52 | 51 | 39 | 66 | 45 | 50 | 55 | 48 | 100 | 73 | 65 | 66 | 48 | 27 | 63 |
| 25 25 | 29 | 26 | 50 | 28 | 45 | 26 | 58 | 67 | 62 | 44 | 58 | 66 | 42 | 66 | 64 | 37 | 52 | 30 | 44 | 36 | 43 | 50 | 42 | 73 | 100 | 54 | 58 | 54 | 43 | 54 |
| 26 26 | 17 | 22 | 67 | 57 | 40 | 40 | 58 | 67 | 42 | 51 | 60 | 56 | 45 | 70 | 54 | 53 | 44 | 40 | 56 | 43 | 42 | 50 | 59 | 65 | 54 | 100 | 73 | 57 | 17 | 58 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 27 | 26 | 21 | 64 | 42 | 37 | 46 | 63 | 69 | 50 | 38 | 76 | 63 | 42 | 65 | 60 | 65 | 59 | 46 | 62 | 50 | 49 | 67 | 44 | 66 | 58 | 73 | 100 | 58 | 25 | 64 |
| 28 | 28 | 42 | 36 | 65 | 49 | 41 | 30 | 64 | 58 | 54 | 36 | 62 | 49 | 49 | 66 | 50 | 64 | 55 | 53 | 56 | 38 | 61 | 41 | 63 | 48 | 54 | 57 | 58 | 100 | 39 | 68 |
| 29 | 29 | 11 | 39 | 41 | 12 | 11 | 28 | 41 | 22 | 32 | 21 | 38 | 39 | 37 | 34 | 40 | 37 | 41 | 35 | 27 | 30 | 35 | 18 | 27 | 27 | 43 | 17 | 25 | 39 | 100 | 39 |
| 30 | 30 | 30 | 25 | 68 | 33 | 39 | 36 | 64 | 63 | 58 | 34 | 64 | 59 | 59 | 64 | 56 | 64 | 55 | 48 | 66 | 47 | 55 | 40 | 60 | 63 | 54 | 58 | 64 | 68 | 39 | 100 |
| 31 | 31 | 21 | 28 | 54 | 26 | 31 | 27 | 38 | 46 | 60 | 31 | 47 | 45 | 22 | 36 | 52 | 67 | 38 | 41 | 49 | 42 | 30 | 25 | 45 | 39 | 30 | 39 | 48 | 44 | 27 | 48 |
| 32 | 32 | 44 | 27 | 53 | 62 | 66 | 39 | 47 | 67 | 49 | 42 | 52 | 35 | 58 | 62 | 55 | 59 | 61 | 42 | 53 | 32 | 58 | 55 | 38 | 59 | 41 | 58 | 61 | 55 | 22 | 59 |
| 33 | 33 | 49 | 22 | 53 | 52 | 39 | 52 | 54 | 49 | 51 | 41 | 55 | 39 | 32 | 70 | 60 | 63 | 64 | 61 | 60 | 68 | 67 | 45 | 60 | 55 | 50 | 41 | 60 | 55 | 42 | 56 |
| 34 | 34 | 37 | 37 | 69 | 36 | 43 | 31 | 69 | 63 | 60 | 43 | 77 | 66 | 46 | 73 | 58 | 79 | 58 | 63 | 57 | 62 | 61 | 44 | 59 | 56 | 54 | 55 | 71 | 64 | 39 | 79 |
| 35 | 35 | 15 | 22 | 52 | 23 | 51 | 47 | 55 | 56 | 58 | 47 | 66 | 61 | 36 | 62 | 69 | 66 | 62 | 36 | 58 | 55 | 55 | 45 | 40 | 70 | 53 | 58 | 71 | 50 | 15 | 61 |
| 36 | 36 | 18 | 34 | 69 | 39 | 45 | 47 | 70 | 69 | 66 | 46 | 70 | 65 | 47 | 71 | 61 | 61 | 64 | 46 | 63 | 55 | 62 | 54 | 60 | 66 | 70 | 71 | 76 | 78 | 34 | 74 |
| 37 | 37 | 31 | 46 | 74 | 44 | 42 | 27 | 59 | 65 | 60 | 47 | 64 | 57 | 45 | 65 | 56 | 79 | 55 | 53 | 60 | 61 | 63 | 48 | 55 | 58 | 54 | 65 | 59 | 54 | 37 | 62 |
| 38 | 38 | 5 | 12 | 46 | 14 | 21 | 62 | 61 | 38 | 26 | 31 | 46 | 64 | 31 | 57 | 55 | 45 | 52 | 34 | 48 | 54 | 45 | 39 | 23 | 53 | 48 | 44 | 53 | 44 | 42 | 42 |
| 39 | 39 | 48 | 24 | 38 | 34 | 32 | 23 | 42 | 50 | 39 | 43 | 58 | 46 | 36 | 43 | 49 | 53 | 58 | 62 | 26 | 33 | 32 | 36 | 36 | 33 | 24 | 42 | 52 | 45 | 40 | 45 |
| 40 | 40 | 18 | 51 | 55 | 20 | 24 | 20 | 40 | 43 | 35 | 30 | 37 | 42 | 47 | 48 | 42 | 57 | 37 | 30 | 50 | 43 | 44 | 37 | 36 | 44 | 41 | 43 | 33 | 41 | 25 | 53 |
| 41 | 41 | 38 | 38 | 55 | 35 | 42 | 28 | 58 | 67 | 57 | 56 | 69 | 48 | 36 | 78 | 63 | 57 | 55 | 55 | 41 | 53 | 68 | 61 | 63 | 61 | 61 | 49 | 62 | 68 | 29 | 58 |
| 42 | 42 | 35 | 11 | 52 | 48 | 61 | 45 | 63 | 68 | 56 | 33 | 70 | 46 | 54 | 74 | 59 | 63 | 63 | 60 | 59 | 40 | 62 | 52 | 55 | 67 | 55 | 62 | 76 | 67 | 32 | 73 |
| 43 | 43 | 30 | 31 | 69 | 40 | 31 | 31 | 64 | 68 | 61 | 38 | 75 | 55 | 61 | 65 | 55 | 69 | 55 | 56 | 61 | 54 | 60 | 52 | 71 | 60 | 56 | 59 | 67 | 66 | 42 | 81 |
| 44 | 44 | 14 | 28 | 63 | 37 | 35 | 48 | 73 | 70 | 54 | 41 | 79 | 60 | 33 | 70 | 63 | 57 | 50 | 58 | 66 | 54 | 55 | 42 | 73 | 62 | 53 | 67 | 70 | 69 | 27 | 68 |
| 45 | 45 | 25 | 25 | 22 | 11 | 40 | 38 | 42 | 30 | 21 | 17 | 34 | 40 | 51 | 52 | 52 | 41 | 48 | 39 | 14 | 8 | 38 | 36 | 18 | 40 | 49 | 27 | 45 | 39 | 42 | 31 |
| 46 | 46 | 16 | 1 | 27 | 27 | 15 | 21 | 25 | 51 | 35 | 31 | 39 | 28 | 3 | 30 | 46 | 23 | 13 | 26 | 52 | 36 | 21 | 6 | 46 | 43 | 31 | 25 | 25 | 30 | 8 | 32 |
| 47 | 47 | 23 | 15 | 57 | 36 | 47 | 61 | 53 | 55 | 33 | 31 | 53 | 45 | 53 | 59 | 61 | 69 | 54 | 49 | 64 | 45 | 51 | 61 | 42 | 61 | 34 | 67 | 72 | 62 | 18 | 62 |
| 48 | 48 | 36 | 6 | 62 | 49 | 38 | 31 | 61 | 68 | 70 | 53 | 74 | 49 | 33 | 62 | 56 | 49 | 50 | 45 | 50 | 44 | 41 | 43 | 61 | 58 | 52 | 61 | 70 | 62 | 18 | 58 |
| 49 | 49 | 23 | 23 | 44 | 44 | 23 | 36 | 49 | 56 | 28 | 30 | 46 | 35 | 45 | 69 | 43 | 49 | 26 | 34 | 44 | 41 | 44 | 19 | 58 | 53 | 37 | 61 | 51 | 45 | 18 | 49 |

| SORTS | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 21 | 44 | 49 | 37 | 15 | 18 | 31 | 5 | 48 | 18 | 38 | 35 | 30 | 14 | 25 | 16 | 23 | 36 | 23 |
| 2 | 2 | 28 | 27 | 22 | 37 | 22 | 34 | 46 | 12 | 24 | 51 | 38 | 11 | 31 | 28 | 25 | 1 | 15 | 6 | 23 |
| 3 | 3 | 54 | 53 | 53 | 69 | 52 | 69 | 74 | 46 | 38 | 55 | 55 | 52 | 69 | 63 | 22 | 27 | 57 | 62 | 44 |
| 4 | 4 | 26 | 62 | 52 | 36 | 23 | 39 | 44 | 14 | 34 | 20 | 35 | 48 | 40 | 37 | 11 | 27 | 36 | 49 | 44 |
| 5 | 5 | 31 | 66 | 39 | 43 | 51 | 45 | 42 | 21 | 32 | 24 | 42 | 61 | 31 | 35 | 40 | 15 | 47 | 38 | 23 |
| 6 | 6 | 27 | 39 | 52 | 31 | 47 | 47 | 27 | 62 | 23 | 20 | 28 | 45 | 31 | 48 | 38 | 21 | 61 | 31 | 36 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 7 | 38 | 47 | 54 | 69 | 55 | 70 | 59 | 61 | 42 | 40 | 58 | 63 | 64 | 73 | 42 | 25 | 53 | 61 | 49 |
| 8 | 8 | 46 | 67 | 49 | 63 | 56 | 69 | 65 | 38 | 50 | 43 | 67 | 68 | 68 | 70 | 30 | 51 | 55 | 68 | 56 |
| 9 | 9 | 60 | 49 | 51 | 60 | 58 | 66 | 60 | 26 | 39 | 35 | 57 | 56 | 61 | 54 | 21 | 35 | 33 | 70 | 28 |
| 10 | 10 | 31 | 42 | 41 | 43 | 47 | 46 | 47 | 31 | 43 | 30 | 56 | 33 | 38 | 41 | 17 | 31 | 31 | 53 | 30 |
| 11 | 11 | 47 | 52 | 55 | 77 | 66 | 70 | 64 | 46 | 58 | 37 | 69 | 70 | 75 | 79 | 34 | 39 | 53 | 74 | 46 |
| 12 | 12 | 45 | 35 | 39 | 66 | 61 | 65 | 57 | 64 | 46 | 42 | 48 | 46 | 55 | 60 | 40 | 28 | 45 | 49 | 35 |
| 13 | 13 | 22 | 58 | 32 | 46 | 36 | 47 | 45 | 31 | 36 | 47 | 36 | 54 | 61 | 33 | 51 | 3 | 53 | 33 | 45 |
| 14 | 14 | 36 | 62 | 70 | 73 | 62 | 71 | 65 | 57 | 43 | 48 | 78 | 74 | 65 | 70 | 52 | 30 | 59 | 62 | 69 |
| 15 | 15 | 52 | 55 | 60 | 58 | 69 | 61 | 56 | 55 | 49 | 42 | 63 | 59 | 55 | 63 | 52 | 46 | 61 | 56 | 43 |
| 16 | 16 | 67 | 59 | 63 | 79 | 66 | 61 | 79 | 45 | 53 | 57 | 57 | 63 | 69 | 57 | 41 | 23 | 69 | 49 | 49 |
| 17 | 17 | 38 | 61 | 64 | 58 | 62 | 64 | 55 | 52 | 58 | 37 | 55 | 63 | 55 | 50 | 48 | 13 | 54 | 50 | 26 |
| 18 | 18 | 41 | 42 | 61 | 63 | 36 | 46 | 53 | 34 | 62 | 30 | 55 | 60 | 56 | 58 | 39 | 26 | 49 | 45 | 34 |
| 19 | 19 | 49 | 53 | 60 | 57 | 58 | 63 | 60 | 48 | 26 | 50 | 41 | 59 | 61 | 66 | 14 | 52 | 64 | 50 | 44 |
| 20 | 20 | 42 | 32 | 68 | 62 | 55 | 55 | 61 | 54 | 33 | 43 | 53 | 40 | 54 | 54 | 8 | 36 | 45 | 44 | 41 |
| 21 | 21 | 30 | 58 | 67 | 61 | 55 | 62 | 63 | 45 | 32 | 44 | 68 | 62 | 60 | 55 | 38 | 21 | 51 | 41 | 44 |
| 22 | 22 | 25 | 55 | 45 | 44 | 45 | 54 | 48 | 39 | 36 | 37 | 61 | 52 | 52 | 42 | 36 | 6 | 61 | 43 | 19 |
| 23 | 23 | 45 | 38 | 60 | 59 | 40 | 60 | 55 | 23 | 36 | 36 | 63 | 55 | 71 | 73 | 18 | 46 | 42 | 61 | 58 |
| 24 | 24 | 39 | 59 | 55 | 56 | 70 | 66 | 58 | 53 | 33 | 44 | 61 | 67 | 60 | 62 | 40 | 43 | 61 | 58 | 53 |
| 25 | 25 | 30 | 41 | 50 | 54 | 53 | 70 | 54 | 48 | 24 | 41 | 61 | 55 | 56 | 53 | 49 | 31 | 34 | 52 | 37 |
| 26 | 26 | 39 | 58 | 41 | 55 | 58 | 71 | 65 | 44 | 42 | 43 | 49 | 62 | 59 | 67 | 27 | 25 | 67 | 61 | 61 |
| 27 | 27 | 48 | 61 | 60 | 71 | 71 | 76 | 59 | 53 | 52 | 33 | 62 | 76 | 67 | 70 | 45 | 25 | 72 | 70 | 51 |
| 28 | 28 | 44 | 55 | 55 | 64 | 50 | 78 | 54 | 44 | 45 | 41 | 68 | 67 | 66 | 69 | 39 | 30 | 62 | 62 | 45 |
| 29 | 29 | 27 | 22 | 42 | 39 | 15 | 34 | 37 | 42 | 40 | 25 | 29 | 32 | 42 | 27 | 42 | 8 | 18 | 18 | 18 |
| 30 | 30 | 48 | 59 | 56 | 79 | 61 | 74 | 62 | 42 | 45 | 53 | 58 | 73 | 81 | 68 | 31 | 32 | 62 | 58 | 49 |
| 31 | 31 | 100 | 49 | 37 | 64 | 55 | 43 | 67 | 22 | 51 | 45 | 32 | 42 | 52 | 39 | 17 | 24 | 53 | 48 | 20 |
| 32 | 32 | 49 | 100 | 48 | 61 | 57 | 61 | 65 | 24 | 51 | 42 | 49 | 70 | 56 | 45 | 43 | 15 | 70 | 48 | 47 |
| 33 | 33 | 37 | 48 | 100 | 64 | 55 | 61 | 54 | 51 | 43 | 41 | 67 | 59 | 64 | 55 | 45 | 29 | 51 | 52 | 43 |
| 34 | 34 | 64 | 61 | 64 | 100 | 71 | 68 | 77 | 47 | 61 | 53 | 65 | 71 | 73 | 65 | 39 | 29 | 62 | 63 | 52 |
| 35 | 35 | 55 | 57 | 55 | 71 | 100 | 70 | 58 | 44 | 34 | 43 | 64 | 67 | 51 | 64 | 37 | 20 | 66 | 55 | 36 |
| 36 | 36 | 43 | 61 | 61 | 68 | 70 | 100 | 68 | 54 | 35 | 50 | 71 | 71 | 74 | 78 | 39 | 33 | 67 | 68 | 51 |
| 37 | 37 | 67 | 65 | 54 | 77 | 58 | 68 | 100 | 35 | 42 | 70 | 56 | 58 | 72 | 51 | 23 | 28 | 58 | 59 | 48 |
| 38 | 38 | 22 | 24 | 51 | 47 | 44 | 54 | 35 | 100 | 35 | 29 | 41 | 45 | 43 | 50 | 34 | 31 | 58 | 48 | 30 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 39 | 51 | 51 | 43 | 61 | 34 | 35 | 42 | 35 | 100 | 14 | 39 | 51 | 48 | 46 | 33 | 25 | 52 | 51 | 28 |
| 40 | 40 | 45 | 42 | 41 | 53 | 43 | 50 | 70 | 29 | 14 | 100 | 40 | 35 | 51 | 40 | 26 | 10 | 40 | 26 | 33 |
| 41 | 41 | 32 | 49 | 67 | 65 | 64 | 71 | 56 | 41 | 39 | 40 | 100 | 61 | 64 | 66 | 48 | 19 | 49 | 64 | 34 |
| 42 | 42 | 42 | 70 | 59 | 71 | 67 | 71 | 58 | 45 | 51 | 35 | 61 | 100 | 75 | 68 | 51 | 27 | 72 | 64 | 59 |
| 43 | 43 | 52 | 56 | 64 | 73 | 51 | 74 | 72 | 43 | 48 | 51 | 64 | 75 | 100 | 68 | 33 | 30 | 63 | 67 | 55 |
| 44 | 44 | 39 | 45 | 55 | 65 | 64 | 78 | 51 | 50 | 46 | 40 | 66 | 68 | 68 | 100 | 30 | 43 | 57 | 71 | 56 |
| 45 | 45 | 17 | 43 | 45 | 39 | 37 | 39 | 23 | 34 | 33 | 26 | 48 | 51 | 33 | 30 | 100 | -17 | 41 | 17 | 38 |
| 46 | 46 | 24 | 15 | 29 | 29 | 20 | 33 | 28 | 31 | 25 | 10 | 19 | 27 | 30 | 43 | -17 | 100 | 26 | 47 | 32 |
| 47 | 47 | 53 | 70 | 51 | 62 | 66 | 67 | 58 | 58 | 52 | 40 | 49 | 72 | 63 | 57 | 41 | 26 | 100 | 54 | 43 |
| 48 | 48 | 48 | 48 | 52 | 63 | 55 | 68 | 59 | 48 | 51 | 26 | 64 | 64 | 67 | 71 | 17 | 47 | 54 | 100 | 44 |
| 49 | 49 | 20 | 47 | 43 | 52 | 36 | 51 | 48 | 30 | 28 | 33 | 34 | 59 | 55 | 56 | 38 | 32 | 43 | 44 | 100 |

## Appendix H – Unrotated factor matrix

Factors

| SORTS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 1 | 0.3981 | -0.4256 | 0.4070 | 0.3533 | 0.1114 | 0.2453 | 0.0167 | 0.0709 |
| 2 2 | 0.3770 | 0.5288 | -0.0091 | 0.4297 | -0.1198 | -0.0900 | -0.2148 | 0.1351 |
| 3 3 | 0.7753 | 0.1842 | -0.2502 | 0.1293 | -0.0603 | -0.2171 | -0.0379 | -0.0879 |
| 4 4 | 0.5191 | -0.5677 | 0.0484 | 0.1629 | 0.2658 | -0.1047 | -0.1191 | 0.0405 |
| 5 5 | 0.5552 | -0.3751 | 0.4281 | -0.1615 | -0.0034 | 0.0150 | 0.1180 | 0.2574 |
| 6 6 | 0.5200 | 0.2901 | -0.0855 | -0.4583 | 0.4697 | -0.0239 | 0.1098 | 0.0908 |
| 7 7 | 0.7983 | 0.1462 | -0.0446 | -0.1053 | -0.0198 | 0.1268 | -0.0719 | -0.1185 |
| 8 8 | 0.8121 | -0.2260 | -0.0980 | -0.0375 | -0.1386 | -0.0382 | -0.1074 | 0.0537 |
| 9 9 | 0.6960 | -0.2224 | -0.0422 | 0.1724 | -0.3507 | 0.2484 | 0.1224 | 0.1584 |
| 10 10 | 0.5685 | -0.0564 | -0.0952 | 0.1255 | -0.2644 | 0.2406 | -0.0367 | 0.2517 |
| 11 11 | 0.8239 | -0.0410 | -0.0938 | 0.0728 | -0.1785 | 0.1637 | 0.0340 | -0.2202 |
| 12 12 | 0.7124 | 0.3262 | -0.0421 | -0.0629 | -0.3224 | 0.2269 | 0.1386 | -0.1058 |
| 13 13 | 0.5858 | 0.0843 | 0.4087 | 0.0170 | -0.2767 | -0.2383 | -0.1273 | -0.2334 |
| 14 14 | 0.8573 | -0.0746 | 0.0157 | -0.0764 | 0.1534 | 0.0081 | -0.2999 | 0.1295 |
| 15 15 | 0.7870 | 0.0331 | 0.0727 | -0.2360 | -0.0795 | 0.1544 | 0.1021 | 0.1529 |
| 16 16 | 0.8112 | 0.2511 | 0.0043 | 0.2461 | 0.2242 | -0.1369 | 0.1936 | 0.0146 |
| 17 17 | 0.7183 | 0.1713 | 0.2859 | 0.0498 | 0.0751 | 0.2019 | 0.1787 | 0.0669 |
| 18 18 | 0.6653 | -0.0193 | 0.0729 | 0.2287 | 0.4004 | 0.1864 | 0.0146 | -0.0896 |
| 19 19 | 0.7367 | -0.0840 | -0.2654 | -0.1388 | 0.0740 | -0.2174 | 0.1115 | 0.0345 |
| 20 20 | 0.6686 | 0.2610 | -0.3700 | 0.0882 | 0.3101 | 0.1291 | 0.0596 | 0.2790 |
| 21 21 | 0.7349 | 0.0962 | 0.0369 | 0.0821 | 0.3719 | 0.0136 | -0.1689 | 0.2035 |
| 22 22 | 0.6086 | 0.0364 | 0.2149 | -0.1717 | -0.1547 | -0.1809 | 0.0168 | 0.0847 |
| 23 23 | 0.7046 | -0.2547 | -0.3468 | 0.1601 | 0.1338 | -0.0140 | -0.2942 | -0.0697 |
| 24 24 | 0.7941 | -0.0953 | 0.0191 | -0.3313 | -0.1939 | -0.0200 | -0.0399 | 0.2271 |
| 25 25 | 0.7037 | 0.0306 | 0.0822 | -0.1834 | -0.3851 | 0.2185 | -0.2459 | 0.1516 |
| 26 26 | 0.7572 | -0.1323 | -0.1100 | -0.1573 | -0.0985 | -0.2718 | -0.0583 | -0.0918 |
| 27 27 | 0.8230 | -0.0187 | 0.0256 | -0.2098 | -0.0496 | -0.0772 | 0.1457 | -0.1633 |
| 28 28 | 0.7777 | -0.0668 | 0.0418 | 0.1241 | 0.0306 | 0.0001 | -0.1623 | -0.1966 |
| 29 29 | 0.4403 | 0.4209 | 0.1435 | 0.1811 | 0.0197 | 0.2972 | -0.1710 | -0.2148 |
| 30 30 | 0.8071 | 0.0159 | -0.0473 | 0.0557 | -0.0824 | -0.1368 | 0.0027 | -0.1971 |
| 31 31 | 0.5985 | 0.0365 | -0.1130 | 0.3265 | -0.0745 | -0.1168 | 0.5150 | 0.0441 |
| 32 32 | 0.7358 | -0.2202 | 0.3539 | 0.0541 | 0.0455 | -0.3055 | 0.1303 | 0.1035 |
| 33 33 | 0.7556 | 0.0004 | 0.0483 | 0.0476 | 0.3558 | 0.2031 | -0.0877 | 0.1857 |
| 34 34 | 0.8546 | 0.0774 | -0.0161 | 0.2194 | 0.0023 | -0.0010 | 0.1265 | -0.0879 |
| 35 35 | 0.7642 | 0.0773 | 0.0107 | -0.2038 | -0.1084 | -0.0552 | 0.2710 | 0.2338 |
| 36 36 | 0.8648 | 0.0461 | -0.0833 | -0.1260 | -0.1307 | -0.0567 | -0.1013 | -0.0037 |
| 37 37 | 0.8049 | 0.0692 | -0.0852 | 0.3195 | -0.0845 | -0.2279 | 0.0837 | 0.1690 |
| 38 38 | 0.6047 | 0.3379 | -0.1007 | -0.4227 | 0.1281 | 0.2383 | 0.0726 | -0.0868 |
| 39 39 | 0.5966 | -0.0726 | 0.2040 | 0.2492 | 0.1060 | 0.2823 | 0.3341 | -0.3408 |
| 40 40 | 0.5713 | 0.2810 | -0.0291 | 0.2624 | -0.1463 | -0.3827 | -0.0977 | 0.2738 |
| 41 41 | 0.7790 | -0.0156 | 0.0751 | 0.0455 | -0.0420 | 0.1875 | -0.2476 | 0.1934 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 42 | 0.8318 | -0.1781 | 0.1935 | -0.1459 | 0.0900 | -0.0832 | 0.0100 | -0.1732 |
| 43 43 | 0.8357 | 0.0013 | -0.0728 | 0.1567 | -0.0502 | -0.0957 | -0.0924 | -0.2316 |
| 44 44 | 0.8123 | -0.0370 | -0.2760 | -0.1462 | 0.0053 | 0.0642 | -0.1025 | -0.1874 |
| 45 45 | 0.4899 | 0.2546 | 0.6237 | -0.1898 | 0.0606 | 0.0938 | -0.2220 | -0.0826 |
| 46 46 | 0.3977 | -0.3135 | -0.5431 | -0.0989 | -0.0105 | 0.2475 | 0.0813 | 0.0071 |
| 47 47 | 0.7610 | 0.0156 | 0.1120 | -0.2337 | 0.1727 | -0.3047 | 0.2992 | -0.1162 |
| 48 48 | 0.7580 | -0.3129 | -0.2100 | -0.0264 | -0.1358 | 0.1729 | 0.1009 | -0.1412 |
| 49 49 | 0.6090 | -0.1336 | -0.0999 | -0.0835 | 0.1404 | -0.2219 | -0.3656 | -0.1813 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Eigenvalues | 24.3867 | 2.3214 | 2.2163 | 1.9921 | 1.7839 | 1.6364 | 1.4939 | 1.3113 |
| % expl.Var. | 50 | 5 | 5 | 4 | 4 | 3 | 3 | 3 |

## Appendix I - Factor Matrix with an X Indicating a Defining Sort

| | Loadings | | |
|---|---|---|---|
| QSORT | 1 | 2 | 3 |
| 1 | 0.1621 | -0.1029 | 0.6844X |
| 2 | 0.0185 | 0.6489X | -0.0218 |
| 3 | 0.5714 | 0.5925 | 0.1414 |
| 4 | 0.5330 | -0.1590 | 0.5336 |
| 5 | 0.2252 | 0.0301 | 0.7620X |
| 6 | 0.2589 | 0.5354X | 0.0904 |
| 7 | 0.4671 | 0.5811 | 0.3237 |
| 8 | 0.6680X | 0.2847 | 0.4392 |
| 9 | 0.5572X | 0.2219 | 0.4194 |
| 10 | 0.4420X | 0.2813 | 0.2467 |
| 11 | 0.5944 | 0.4423 | 0.3747 |
| 12 | 0.3356 | 0.6778X | 0.2089 |
| 13 | 0.0630 | 0.4210 | 0.5798 |
| 14 | 0.5577 | 0.4376 | 0.4880 |
| 15 | 0.4309 | 0.4861 | 0.4514 |
| 16 | 0.3987 | 0.6755X | 0.3254 |
| 17 | 0.1897 | 0.5650 | 0.5213 |
| 18 | 0.3767 | 0.3728 | 0.4092X |
| 19 | 0.6705X | 0.3514 | 0.2169 |
| 20 | 0.5508 | 0.5895 | -0.0352 |
| 21 | 0.3951 | 0.5061X | 0.3721 |
| 22 | 0.2246 | 0.3894 | 0.4645X |
| 23 | 0.7759X | 0.1915 | 0.2070 |
| 24 | 0.5247 | 0.3842 | 0.4660 |
| 25 | 0.3735 | 0.4360 | 0.4162 |
| 26 | 0.6019X | 0.3287 | 0.3642 |
| 27 | 0.5062 | 0.4635 | 0.4554 |
| 28 | 0.4875 | 0.3985 | 0.4632 |
| 29 | 0.0037 | 0.6025X | 0.1694 |
| 30 | 0.5294 | 0.4802 | 0.3782 |
| 31 | 0.4332X | 0.3739 | 0.2118 |
| 32 | 0.3215 | 0.2587 | 0.7382X |
| 33 | 0.4411 | 0.4405 | 0.4298 |
| 34 | 0.5127 | 0.5587 | 0.4020 |
| 35 | 0.4386 | 0.5070 | 0.3751 |
| 36 | 0.5764 | 0.5372 | 0.3691 |
| 37 | 0.5304 | 0.5212 | 0.3273 |
| 38 | 0.3018 | 0.6230X | 0.1039 |
| 39 | 0.2703 | 0.2934 | 0.4936X |
| 40 | 0.2579 | 0.5595X | 0.1633 |

| | | | | |
|---|---|---|---|---|
| 41 | 41 | 0.4449 | 0.4419 | 0.4686 |
| 42 | 42 | 0.4690 | 0.3439 | 0.6503X |
| 43 | 43 | 0.5702 | 0.4842 | 0.3797 |
| 44 | 44 | 0.7049X | 0.4334 | 0.2296 |
| 45 | 45 | -0.2099 | 0.5103 | 0.6240 |
| 46 | 46 | 0.7374X | -0.0404 | -0.0775 |
| 47 | 47 | 0.3962 | 0.4579 | 0.4746 |
| 48 | 48 | 0.7443X | 0.1793 | 0.3613 |
| 49 | 49 | 0.5031X | 0.2420 | 0.2951 |
| % expl.Var. | | 22 | 20 | 17 |

## Appendix J – Crib sheets

### Factor 1 Crib Sheet

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked highest** | | |
| 15 | 6 | believe that because I support the program, I am helping students achieve personal success |
| 13 | 5 | believe there is room to have multiple supporter viewpoints for the vision of the program |
| 14 | 5 | believe that because I support the program, I am helping students find careers in agriculture |
| **Items ranked higher in factor 1 than in other factors** | | |
| 5 | -2 | expect to be recognized by the students for my contributions |
| 6 | -1 | am only willing to contribute if I work in a comfortable environment |
| 8 | 1 | work hard when I am part of a team of supporters that works hard |
| 13 | 5 | believe there is room to have multiple supporter viewpoints for the vision of the program |
| 20* | 3 | am willing to be assigned tasks that require me to learn new skills |
| 23 | 0 | only want to attend relaxed meetings that allow time for casual discussion |
| 26 | -2 | know that if my support is evaluated I will stop volunteering |
| 29* | 1 | seek opportunities to recruit and mentor new supporters |
| 31 | -2 | expect to be recognized by the ag teacher for my contributions |
| 34* | 2 | enjoy volunteering independently of my family and friends |
| 39* | 2 | expect the ag teacher to use supporters as a way to free up time for their own family |
| **Items ranked lowest** | | |
| 24 | -6 | expect all supporters and the ag teacher to share the same vision for the program |
| 12 | -5 | desire public appreciation for my contributions |
| 28* | -5 | expect that the ag teacher is everywhere the supporters are expected to be |

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked lower in factor 1 than in other factors** | | |
| 10* | -3 | desire individualized appreciation, not public, for my contributions |
| 21* | -4 | only want to be assigned specific tasks that align with my skills |
| 24* | -6 | expect all supporters and the ag teacher to share the same vision for the program |
| 28* | -5 | expect that the ag teacher is everywhere the supporters are expected to be |
| 35 | 0 | value contributing to programs because they relate to my career field |
| 38* | -4 | would stop volunteering if I received negative feedback about my support |

**Factor 2 Crib Sheet**

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked highest** | | |
| 32 | 6 | began supporting the program because I wanted to contribute to the good things that were happening |
| 14 | 5 | believe that because I support the program, I am helping students find careers in agriculture |
| 16 | 5 | believe that because I support the program, I am helping students know more about agriculture |
| **Items ranked higher in factor 2 than in other factors** | | |
| 7 | -1 | am only willing to contribute if everyone gets along |
| 12* | 0 | desire public appreciation for my contributions |
| 16 | 5 | believe that because I support the program, I am helping students know more about agriculture |
| 17 | 4 | believe that anyone who wants to support the program should be able to |
| 19* | 2 | should be able to choose which tasks I assist with |
| 21* | 1 | only want to be assigned specific tasks that align with my skills |
| 25* | 3 | am capable of measuring my own contributions to the program |
| 32* | 6 | began supporting the program because I wanted to contribute to the good things that were happening |
| 38 | 0 | would stop volunteering if I received negative feedback about my support |

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked lowest** | | |
| 26 | -6 | know that if my support is evaluated I will stop volunteering |
| 37 | -5 | only support programs that serve my kids |
| 39 | -5 | expect the ag teacher to use supporters as a way to free up time for their own family |
| **Items ranked lower in factor 2 than in other factors** | | |
| 3 | -1 | expect that the ag teacher, not the students, will contact me about volunteer opportunities |
| 4 | 1 | expect that supporters will communicate with each other about their work |
| 9 | 3 | expect a sense of teamwork between the ag teacher and those of us that support the program |
| 13 | 2 | believe there is room to have multiple supporter viewpoints for the vision of the program |
| 15 | 4 | believe that because I support the program, I am helping students achieve personal success |
| 18 | -4 | expect to be interviewed before I volunteer |
| 26* | -6 | know that if my support is evaluated I will stop volunteering |
| 33* | -2 | began supporting the program because I saw there were changes that could be made |
| 36 | -3 | expect that my opinions about the ag program are attended to |
| 37 | -5 | only support programs that serve my kids |
| 39* | -5 | expect the ag teacher to use supporters as a way to free up time for their own family |

**Factor 3 Crib Sheet**

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked highest** | | |
| 15 | 6 | believe that because I support the program, I am helping students achieve personal success |
| 9 | 5 | expect a sense of teamwork between the ag teacher and those of us that support the program |
| 24 | 5 | expect all supporters and the ag teacher to share the same vision for the program |
| **Items ranked higher in factor 3 than in other factors** | | |
| 4 | 3 | expect that supporters will communicate with each other about their work |
| 9* | 5 | expect a sense of teamwork between the ag teacher and those of us that support the program |
| 10 | 0 | desire individualized appreciation, not public, for my contributions |
| 11 | 2 | believe that support from school staff makes me a better supporter |
| 18* | 1 | expect to be interviewed before I volunteer |
| 22 | 1 | only want to attend short, efficient meetings |
| 24* | 5 | expect all supporters and the ag teacher to share the same vision for the program |
| 28 | -1 | expect that the ag teacher is everywhere the supporters are expected to be |
| 33* | 4 | began supporting the program because I saw there were changes that could be made |
| 36* | 0 | expect that my opinions about the ag program are attended to |
| **Items ranked lowest** | | |
| 12 | -6 | desire public appreciation for my contributions |
| 27 | -5 | expect to be recognized by other program supporters for my contributions |
| 5 | -5 | expect to be recognized by the students for my contributions |

| Statement Number | Rank | Statement |
|---|---|---|
| **Items ranked lower in factor 3 than in other factors** | | |
| 2 | 2 | can provide a unique insight into the program |
| 1 | -2 | expect that students, not the ag teacher, will contact me about volunteer opportunities |
| 5* | -5 | expect to be recognized by the students for my contributions |
| 6* | -4 | am only willing to contribute if I work in a comfortable environment |
| 12 | -6 | desire public appreciation for my contributions |
| 14 | 4 | believe that because I support the program, I am helping students find careers in agriculture |
| 16 | 3 | believe that because I support the program, I am helping students know more about agriculture |
| 17* | 1 | believe that anyone who wants to support the program should be able to |
| 20 | 0 | am willing to be assigned tasks that require me to learn new skills |
| 23* | -3 | only want to attend relaxed meetings that allow time for casual discussion |
| 25* | -2 | am capable of measuring my own contributions to the program |
| 27* | -5 | expect to be recognized by other program supporters for my contributions |
| 30 | -1 | expect to receive feedback of the effectiveness of my support |
| 34 | -1 | enjoy volunteering independently of my family and friends |