

Describing Volunteer Involvement in School-Based Agricultural Education Programs

Don W. Edgar¹, Brenda Seevers², and Donna Graham³

Abstract

The purpose of this descriptive study was to assess volunteer involvement in school-based agricultural education (SBAE) programs. An electronic survey (based on Seevers and Rosencrans, 2001) was sent to a census of SBAE instructors in three states. Attitudes of involving volunteers was positive although there were some roles SBAE participants' believed that volunteers should not assume. Primary roles that volunteers assumed include advisory committees, fundraising and assisting with FFA activities. However, activities with the highest number of hours contributed were classroom instruction, FFA activities and chaperoning. Most instructors agreed that while volunteers provided a benefit to their programs it was easier to spend their time and efforts on the task than to train a volunteer. Instructors do believe that volunteers provide a positive service to SBAE programs but are not comfortable in the roles of training and supervising them, indicating an opportunity for pre-service and in-service support.

Keywords: volunteer; involvement; FFA; SBAE; roles; instructors

Introduction and Theoretical Framework

According to the National FFA organization, membership has increased over 31% during the last decade with an annual average increase of 15,000 members. In 2018, more than 669,989 members ages 12-21 participated through 8,630 local chapters as noted by the National FFA Organization (2019). Despite the increase in the number of students enrolled in middle and secondary agricultural education school based programs, the National Association of Agricultural Educators (NAAE) reports (2019) that one of the most significant issues affecting the discipline of agricultural education is a shortage of qualified agricultural education teachers. The 2017 National Agricultural Education Supply and Demand Study (Smith, Lawver & Foster, 2017) found that 189 new agricultural education programs with 216 new positions were added supporting the need that additional teachers are needed to meet the demand of school-based agricultural education (SBAE) programs. In today's educational systems and the responsibilities held by teachers, it has been constantly felt that teachers are overworked and experience burn-out because of many time constraints. Due to the need of more teachers in the discipline of agricultural education and the diversity of programs, the use and impact that volunteers can hold towards allowing programs more options should be further investigated.

Volunteers have been involved in school-based programs for decades (Shifflett, 1994), providing service and expertise both in out of the classroom. Volunteers are those who willingly

¹ Don W. Edgar is a Professor of Agricultural Education in the Department of Agricultural and Extension Education at New Mexico State University, 112 Gerald Thomas Hall, Las Cruces, NM 88001, dedgar@nmsu.edu

² Brenda Seevers is Professor Emeritus of the Department of Agricultural and Extension Education at New Mexico State University, Gerald Thomas Hall, Las Cruces, NM 88001, bseevers@nmsu.edu

³ Donna Graham is a University Professor and Graduate Coordinator in the Agricultural Education, Communications and Technology Department at the University of Arkansas, AFLS E-108, Fayetteville, AR 72701. dgraham@uark.edu

give of their time to help others without concern for monetary profit. Advisory groups such as PTA (parent teacher associations) have long been in existence but in more recent times, school systems have found that volunteers can provide a vast range of services that benefit the students, teachers and the entire system. Many principals are quick to recognize that volunteers contribute to their schools in countless ways (Education World, 2012). In their 2002 report, Henderson and Mapp found that volunteers help create a supportive and welcoming environment in the school and thus positively impact student's behavior and performance. They further report that when seen as positive role models, volunteers in schools can contribute to better attendance, improved grades and test scores, matriculation, fewer behavioral problems, better social skills, and higher graduation rates.

Although volunteer involvement in schools is well documented, much less is known towards school based agricultural education (SBAE) programs. Elliot and Suvedi (1990) reported that in SBAE programs in Michigan, a relationship between positive perceptions about volunteers and the extent that teachers used volunteers in their programs was found. However, they also concluded that volunteers served primarily on advisory committees and assisted with field trips and SAE activities. Similar findings were reported by Hile, Cromer, Burrows, Soresen, & Lawver, (2019) where the top roles of volunteer included advisory committees, CDE assistance, fundraising, and chaperoning field trips.

A 2001 study by SeEVERS and Rosencrans found similar results for New Mexico agricultural education teachers. In New Mexico, 87% of teachers reported using volunteers in their programs and reported that they were an essential component to a successful program. During a time of increased enrollment and limited resources, effective involvement of volunteers can be one solution for maximizing resources. Today's SBAE programs have grown from pragmatic based education about agriculture to advanced technology utilized in agriculture to specialized veterinarian medicine technologies. Future professionals are further teaching in not only secondary classrooms but in the middle grades (sixth to eight) and even in elementary grades. Due to the diversified positions that future teachers will undergo, holding the knowledge and skill for requirements in many positions is daunting and having volunteers to help them to reach the needs of programs could be a value to new professionals.

Guiding the conceptual model of this study, the social exchange theory was utilized to frame this research area. Social exchange theory (Homans, 1958) is a sociological and psychological theory that studies social behavior by looking at the relationship and interactions between two parties by determining risks and benefits. This approach to human behavior argues that people calculate the overall worth of a particular relationship by weighing its costs and rewards. In a mutually beneficial relationship, the needs of each party are met with low or minimal costs. Volunteers have been shown to provide significant value and contribution to organizations and programs (Cordery, et al., 2013). Secondary agricultural educators who value the contributions that volunteers make to their programs are fostering a positive relationship in which the gains to the program outweigh the time and commitment to recruit, train, and support volunteer efforts.

Purpose and Objectives

The purpose of this descriptive study was to describe volunteer involvement in school-based agricultural education (SBAE) programs and to determine which factors predict volunteer involvement. Data were collected from middle and high school agricultural education teachers in three states. Specific objectives of the study include:

1. Describe the attitudes of SBAE teachers toward the use of volunteers

2. Describe the roles assumed by volunteers in SBAE programs
3. Describe the perceived benefits and limitations of volunteers in SBAE programs
4. Determine programmatic factors associated with volunteer involvement

Methods

Previous research towards volunteerism by SBAE indicated the value respondents held towards the use of volunteers. The population for replication of that research (SeEVERS & Rosencrans, 2001) extended the census study to three states (AR, GA, and NM) which were chosen based on access by researchers to gain responses from the population. SBAE instructors holding membership (2018) in the National Association of Agricultural Educators for the three identified states ($N = 717$) were targeted for this census study. The directory (NAAE) was scrutinized for valid email addresses and a final population was deemed to be 605 (excluding state staff and university faculty members). The instrument was an adapted version of the previous instrument utilized by SeEVERS and Rosencrans (2001) yielding an overall Cronbach's alpha of .87 (section 1 = .87, section 2 = .85) and revised for use in Qualtrics.

Following Tailored Design Method (Dillman, Smith, & Christian 2014), participants were sent an introductory email one week prior to receiving the instrument. After the initial announcement, respondents received reminder emails every other week for the remaining data collection period (6 weeks). Collection of data was conducted in a period of least extracurricular engagement for SBAE teachers (after National Convention and before winter break). This time period was selected for the population based on extracurricular activities occurring at other times of the academic year and where the selected time does not incur as many responsibilities for the population of study. Of the respondents targeted for this study ($N = 605$), responses were gathered ($n = 154$) resulting in an overall response rate of 25.46%. A comparison of early to late respondents (Lindner, Murphy, and Briers, 2001) was utilized to determine if there were differences between responses. No differences were found through employing an independent *t*-test therefore, data is reported in summated format. Although participant response was low, high response rate has been shown to be less likely to be achieved unless coercively administered to a target population (Rogelberg & Stanton, 2007). Baruch (1999) noted that in recent decades' response rates have declined from approximately 65 to 48 percent aligning with findings when utilizing electronic survey methods that found lower response rates are to be expected (Mavis & Brocato, 1998). Specifically, when using SBAE as a population (Fraze, Hardin, Brashears, Haygood, & Smith, 2003) it was found that instructors responded less to electronic surveys and time was perceived as critical due to their busy schedules. Findings should not be generalized past the participants involved in this study.

Findings

Appreciating the role and use of volunteers in SBAE programs is paramount to determining methods that young professionals can gain value and relieve time commitments towards successful program leadership. In order to gain further understanding of the use of volunteers in programs, the attitudes of SBAE teachers towards the use of volunteers was a primary objective of this study. Participants were asked if they believed there were roles that volunteers should not assume. A greater majority (76.43%) agreed that there were roles that volunteers should not assume with the next greatest percentage (21.02%) somewhat agreed with this statement. Resulting responses (2.55%) neither agreed nor disagreed or strongly agreed with this statement. To determine SBAE teacher's attitudes towards the use of volunteers, participants were asked if agricultural education programs needed volunteers to be effective. Responses tended to agree with this statement (72.11%) with 16.33% having no agreement or disagreement with the statement. Participants who

disagreed (Somewhat or Strongly) resulted in 11.56% of the participants. See Table 1 for a complete listing of responses gathered.

Table 1

Agricultural Education Programs Need Volunteers to be Effective (n = 147)

	<i>f</i>	%	
Strongly Agree	40	27.21	Agree
Somewhat Agree	66	44.90	72.11%
Neither Agree nor Disagree	24	16.33	-----
Somewhat Disagree	14	9.52	11.56%
Strongly Disagree	3	2.04	Disagree
Total	147	100.00	

To gain an understanding of why SBAEs might not utilize volunteers, respondents were asked a statement regarding their view of work towards working with volunteers. When SBAE teachers were asked if it was easier to accomplish tasks their selves or train a volunteer, a majority of responses tended to agree (61.78%) that they believed it was easier to do themselves with only 17.19% disagreeing with this statement. It should be noted that 21.02% neither agreed nor disagreed (Table 2). Because of the majority of responses agreeing with this statement, teachers tend to accomplish tasks without spending time to train and use volunteers.

Table 2

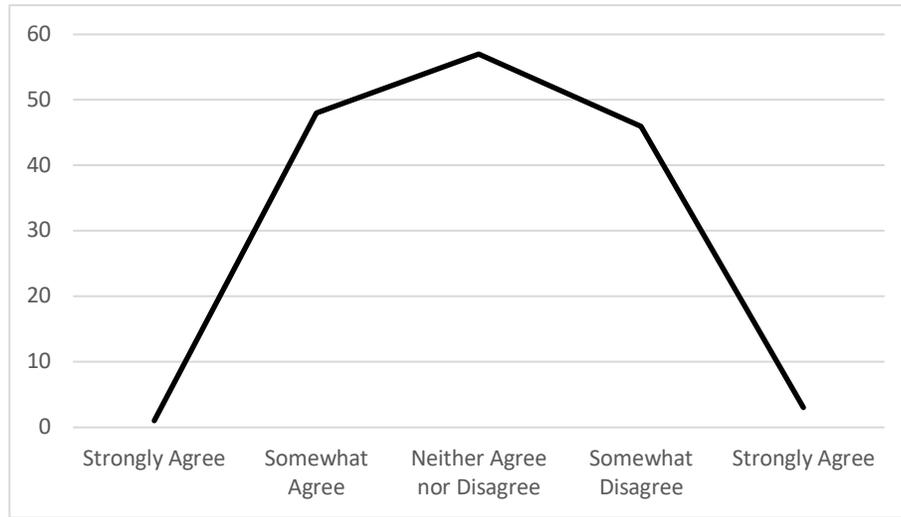
It is Easier to do Things Myself Than Train a Volunteer

	<i>f</i>	%
Strongly Agree	9	5.73
Somewhat Agree	88	56.05
Neither Agree nor Disagree	33	21.02
Somewhat Disagree	25	15.92
Strongly Disagree	2	1.27
Total	157	100.00

To further understand SBAE use of volunteers in their programs, participants were asked their level of agreement with the statement that *volunteers require too much supervision*. Based on the findings, most respondents tended to neither agree or disagree with this statement. Participants who either agreed or disagreed with the statement were similarly disbursed beyond the greater majority finding. The distribution of responses is interesting to note the disparity of responses. Figure 1 depicts the spread of data found towards the statement utilized.

Figure 1

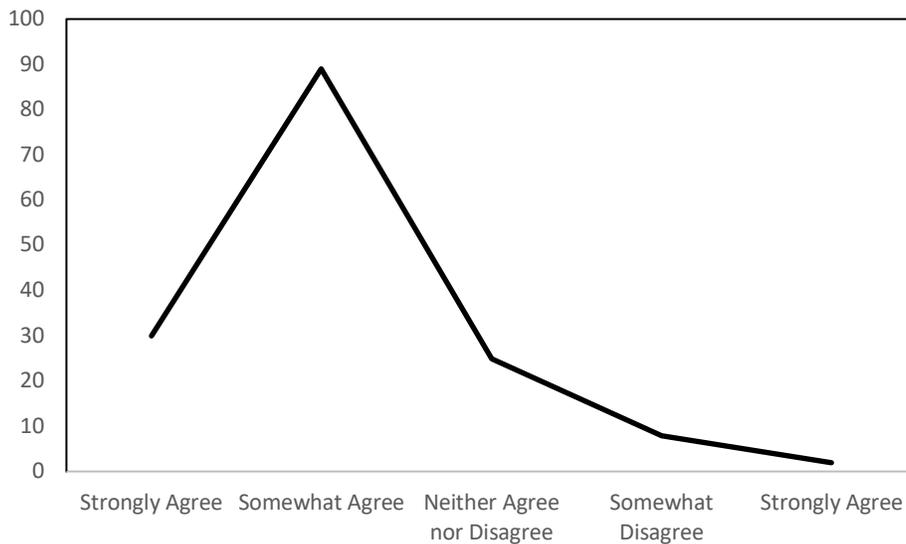
Participants Response Towards Their Perception of Volunteer Supervision (n = 147)



To determine how SBAEs view volunteers and utilize this resource towards how they manage aspects of their program, participants were asked how using volunteers allows them to focus on different aspects of the program. A great majority agreed that volunteers did allow them to focus on other aspects of their program (Strongly agree = 19.48% and Agree = 57.79%). Only 5.19% somewhat disagreed and 1.30% strongly disagreed with the remaining percentage (16.23%) being neutral. The majority of responses indicated agreement with this statement with a very low level of responses towards disagreeing with the statement. Figure 2 plots the findings based on this statement.

Figure 2

Respondents' Perception of Use of Volunteers Towards Their Ability to Focus on Other Aspects of Their Program (n = 145)



The second objective of study was to describe the roles assumed by volunteers in SBAE programs. Participants were asked to report the number of volunteers and estimate the number of hours based on categories previously used by Seevers and Rosencrans (2001). Respondents indicated that advisory committees ($M = 7.15$, $SD = 6.91$), fundraising ($M = 5.26$, $SD = 7.73$), and assisting with FFA activities ($M = 4.90$, $SD = 7.39$) were the most active roles assumed by volunteers in their organization (Table 3). Volunteer roles ranged from 3-50 volunteers per year when used, yet zero volunteers were reported in all roles. When considering the number of hours contributed by volunteers, classroom instruction ($M = 70.40$, $SD = 70.40$) accounted for the highest mean for hours followed by assisting with FFA activities ($M = 37.76$, $SD = 82.25$) and chaperoning ($M = 29.48$, $SD = 46.33$) in SBAE programs.

Table 3

Roles Assumed and Hours Utilized by Volunteers in SBAE Programs (n = 125)

Volunteer Role	Number of Volunteers				Number of Hours			
	Min	Max	<i>M</i>	<i>SD</i>	Min	Max	<i>M</i>	<i>SD</i>
Advisory Committees/ Boards	0	50	7.15	6.91	0	1000	24.05	104.33
Fundraising	0	50	5.26	7.73	0	500	26.19	62.68
Assisting with FFA Activities	0	50	4.90	7.39	0	500	37.76	82.25
Guest Speakers	0	30	3.78	4.14	0	500	15.06	48.77
SAE other than parent/guardian	0	40	2.03	5.34	0	300	16.64	44.02
Chaperoning	0	15	1.99	2.6	0	300	29.48	46.33
Field Trips	0	15	1.73	2.67	0	500	9.66	45.11
Classroom Instruction	0	20	1.64	2.99	0	700	70.40	70.40
Laboratory Instruction	0	40	1.55	4.03	0	350	12.26	40.26
Coaching CDE Events	0	30	1.55	2.99	0	360	22.46	52.64
Evaluating the program	0	40	1.07	2.55	0	40	1.54	5.11
Marketing the program	0	12	0.78	2.40	0	60	2.06	7.01
Other	0	20	0.52	2.43	0	100	2.10	10.69
Recruitment	0	10	0.50	1.75	0	200	1.26	5.36
Assisting with office operations	0	3	0.07	0.42	0	200	2.24	18.25

Note. Scales for number of volunteers and number of hours are self-reported by participants.

When participants were asked to respond to their agreement on the statement volunteers should be involved in the educational part of the program as well as activities, a majority (53.79%) somewhat agreed with this statement and a smaller percentage strongly agreed (15.86%). The lowest response rate was attributed with those who strongly disagreed (1.38%). Overall (Table 4), most participants (69.65%) agreed (to some degree) that volunteers should be involved in the education aspect of the program.

Table 4

Volunteers Should be Involved in the Educational Part of the Program as Well as the Activities

	<i>f</i>	%
Strongly Agree	23	15.86
Somewhat Agree	78	53.79
Neither Agree nor Disagree	26	17.93
Somewhat Disagree	15	11.03
Strongly Disagree	2	1.38
Total	145	100.00

Additional exploration of the views held by participants towards the impact that volunteers have towards SBAE programs was warranted therefore participants were queried about the statement that *volunteers make my job easier*. Overwhelmingly, the majority of responses tended to agree (strongly or somewhat) that volunteers make their job easier (71.72%). Less than ten percent of the respondents disagreed with the statement presented with just over 20% neither agreed or disagreed (Table 5).

Table 5

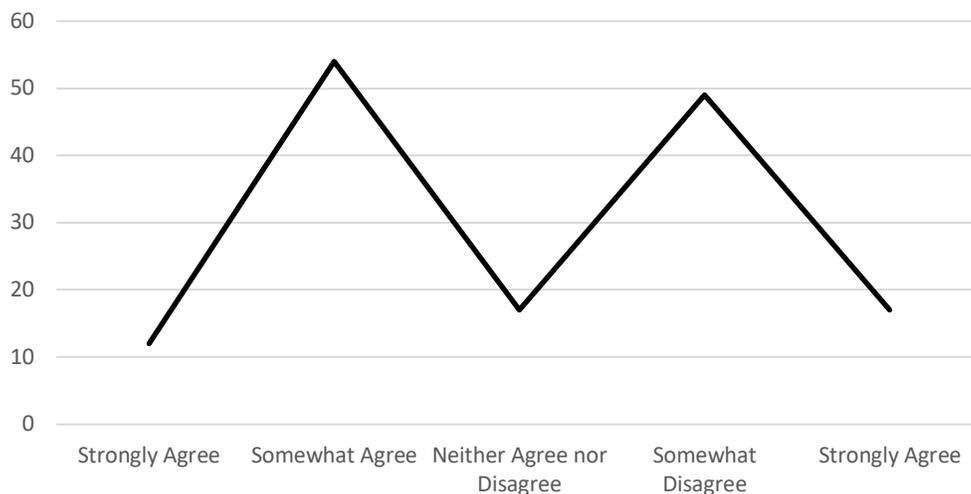
Volunteers Make my Job Easier

	<i>f</i>	%
Strongly Agree	30	20.69
Somewhat Agree	74	51.03
Neither Agree nor Disagree	30	20.69
Somewhat Disagree	10	6.90
Strongly Disagree	1	0.69
Total	145	100.00

Objective three sought to describe the perceived benefits and limitations of volunteers in SBAE programs. When respondents were queried about their dependence on volunteers in support of programs, respondents agreed (73.89%) that their program is dependent on volunteers and the remaining (26.11%) indicating either disagreement or no direction either towards agreement or disagreement. It was further sought to describe the perception of SBAE teachers towards whether it was easier for them to conduct the work themselves or train a volunteer. Respondents indicated with agreement that it was easier for them (61.78%) to do things than train volunteers with only 17.19% disagreeing and believing it was not easier for them to complete items without working with volunteers. A small percentage (21.02%) of respondents neither agreed nor disagreed with the statement of it is easier to do things myself than to train a volunteer. Figure 3 depicts the plot of responses by percentage of SBAEs use of volunteers in their programs based on supervision required.

Figure 3

Responses of SBAEs Towards the Use of Volunteers in Programs with Supervision (n = 147)



Further investigation towards the use of time by respondents towards supervision of volunteers was sought and they were asked to respond to the statement that *supervising volunteers takes too much time*. The greatest majority of respondents neither agreed or disagreed with the statement (34.21%). Responses on the stronger agreement (1.32%) or disagreement (8.55%) tended to be a smaller amount of responses when comparing them to the majority of responses in the other categories. Similar responses for somewhat agree (28.29%) and somewhat disagree (27.63%) were found. Data suggests that SBAEs do not agree or disagree to a great extent towards the use of time when supervising volunteers.

Table 6

Supervising Volunteers Takes Too Much Time

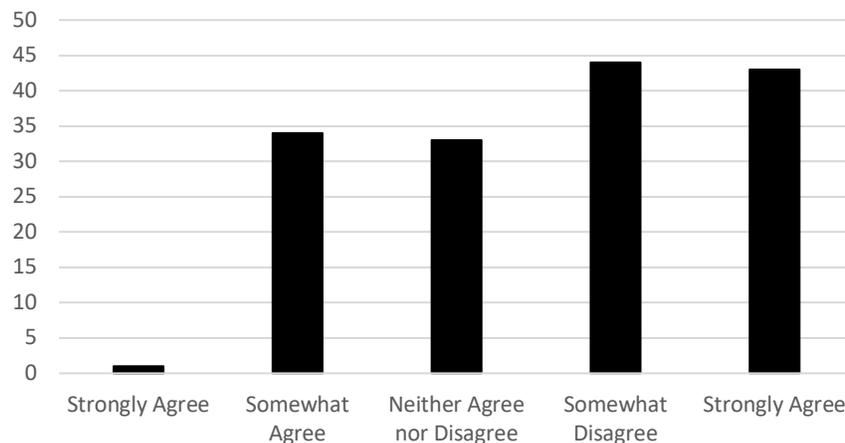
	<i>f</i>	%
Strongly Agree	2	1.32
Somewhat Agree	43	28.29
Neither Agree nor Disagree	52	34.21
Somewhat Disagree	42	27.63
Strongly Disagree	13	8.55
Total	152	100.00

The final objective of study was to determine programmatic factors associated with predicted volunteer involvement. Responses were varied when analyzing aspects pertaining to this objective. When asked to respond to the statement that *volunteers can take on almost any aspect of the agricultural education program with the right supervision* responses were mixed towards agreement and disagreement. Refer to Figure 1 for responses based on volunteer use as viewed by participants in this study.

To further delineate the findings based on the need to determine factors associated with volunteer involvement, respondents were asked their agreement towards the statement *the benefits of involving volunteers outweighs additional expenses to my program*. A greater majority (72.42%) agreed with this statement. A miniscule amount strongly agreed with the statement with the remaining only slightly agreeing or indicated they neither agreed nor disagreed (Figure 4).

Figure 4

Expenses Related to Volunteer Use (n = 146)



Conclusions and Implications

School based agricultural education teachers have differing attitudes of using volunteers. When determining the attitude of SBAE teachers towards the use of volunteers, a majority (72.11%) tended to agree that agricultural education programs need volunteers to be effective. This conflicts with the finding based on participants involved in this study where a majority of responses were aligned towards agreement that tasks were easier to accomplish themselves than to spend time working and training a volunteer. Conversely when analyzing the responses there was a disparity of responses towards agreement when asked if volunteers require too much supervision by the teacher. It could be concluded that even though volunteers are seen as useful, they require effort to train them when working with students.

Following the premise of the social exchange theory whereby risks and benefits of relationships and interactions occur, mixed responses were held by respondents in this study towards the use of volunteers in SBAE programs. Some respondents agreed with the benefits for integrating volunteers in their programs where others may have centered on the associated risks. Much research has shown the effects of teacher burn out and resilience for SBAE. It is held true that the roles and duties of teachers in today's agricultural education profession have many duties in addition to their normal classroom schedule. Does this affect them overall as a classroom educator and advisor? Can more effectively utilizing volunteers increase their perception of their profession and what they can provide for their students?

When participants were asked their perception when utilizing volunteers and how it affects their program, an overwhelming group of the respondents (77.27%) agreed that they were able to effectively focus on other aspects of their program. This aligns with Henderson and Mapp's (2002) conclusion that volunteers can create a positive impact and respondents in this study agree. Therefore, it can be concluded that SBAE teachers in this study felt that volunteers allowed tasks to be more easily accomplished. It is noted that it takes valuable time from teachers, but the result could further improve aspects of programs which they would not otherwise focus towards without the use of volunteers.

Some SBAE instructors do not use volunteers in any capacity while others report using volunteers in multiple roles. Data suggest a general reservation to the role's volunteers can assume in their programs, yet they believe volunteers are needed to have an effective program. Are teachers more protective of their classrooms or do they find it more difficult to integrate them in a formal setting? This finding did not align with Elliot and Suvedi (1990) where positive relationships and use of volunteers was found. It is concluded that participants in this study hold different views than held in previous research. When examining this under the lens of the social exchange theory (1958), does the population under study here see inherently more risk than benefits? Based on the findings, it can be concluded that they value the use of volunteers, the relationship is present but only in circumstances where risks are less seen. When determining the roles that volunteers assume for SBAE programs, advisory committee membership was the highest, followed by fundraising then FFA activities. Participants were not asked to describe those roles, but considering findings of this research, it can be assumed that the amount of training would not be in-depth due to their view of the difficulty involved. Associated with the previous discussion towards not utilizing volunteers in a more formal setting such as a classroom it might be indicative of the view of respondents towards the use of volunteers in formal versus non-formal settings. Therefore, it could be assumed that the roles volunteers play would be those that require negligible effort but would allow teachers to focus on other needs. The use of volunteers regarding the hours reported that they were utilized resulted in an average of 70 hours (focusing mostly towards FFA activities) with a range of use of individuals from 3 – 50 per year. Based on the findings here, these are less risky activities where

volunteers are utilized and the impact of social exchange is more focused on the positive value of the use of volunteers where the risk is minimized but allowing SBAEs to focus on other areas is concluded.

It was interesting a majority of respondents agreed that volunteers should be utilized in the educational aspects of agricultural education programs, but it is assumed that the amount of training detracts from implementing these ideals. When evaluating the impact of volunteers, a greater majority (71.72%) agreed that volunteers made their job easier which aligns with SBAE's view of their impact and the role they play in the agricultural education program. Respondents reported volunteers were utilized most frequently for assistance with advisory committees, field trips and SAE projects aligning with previous research (Elliott & Suvedi, 1990; SeEVERS & Rosencrans (2001). These roles are low in cost and can easily be integrated into the program with little commitment by the teacher. Further, the enacted roles can be organized where the teacher can have control over the activity. The teacher can organize the committee meetings and field trips and include the volunteer as supporting adult(s) for FFA members.

SBAE teachers' indicated that it was much easier to complete a task or complete a job themselves than spend the time training volunteers. Do teachers view the relationship to have no benefit or profit for them or the program, a fundamental assumption in social exchange (1958)? Agricultural educators are overwhelmed by their job responsibilities (Myers, Dyers & Washburn, 2005) so adding the task of training volunteers increases the stress and time commitment to have a successful program. Overall, there was a mixed response from participants towards use of volunteers in SBAE programs. There were as many who utilize and those who do not feel the value of volunteers. Although many respondents felt the value of volunteers to the program, a majority (>64%) felt it was easier to accomplish tasks themselves that spend time working with volunteers. Further research is needed to determine the costs/benefits of volunteers in SBAE programs.

Recommendations

Historically, teacher education pre-service programs do not include curriculum on working with volunteers. It is recommended that State FFA staff develop volunteer guidelines suitable for teacher use. Additionally, each state could partner with the local Extension program. The Extension Service has used volunteers extensively since the 1920's (University of Georgia, 2019) and could aid in training, oversight, and practical tips. In-service training could include working with volunteers, the various roles volunteers can fill, and allow for sharing personal experiences. The findings of this research agree with previous research (Hile, et al., 2019) and it is recommended that further and specific training towards volunteers for SBAEs be explored. The question remains to whether that teachers do not utilize volunteers because of lack of knowledge of how to integrate them into their program or due to the effort involved with this integration. Education and experience with using volunteers would help build trust in volunteer usage and alleviate fears or risks of their value in the social exchange relationship as proposed by Homans (1958).

Further research is needed to learn of the roles that teachers feel volunteers can enhance programming to alleviate the stress of managing program components. Additionally, research is needed to learn what roles volunteers cannot fill and what reservations teachers have in using volunteers. Why are there mixed feelings of having volunteers for effective programs, yet volunteers are not used in some programs?

References

- Baruch, Y. (1999). Response rate in academic studies – A comparative analysis. *Human Relations* (52), 421–38. <https://doi.org/10.1177/001872679905200401>
- Center for Mental Health in Schools at UCLA. (2010). Guiding and supporting volunteers. Los Angeles: Author at UCLA.
<http://smhp.psych.ucla.edu/pdfdocs/practicenotes/voluntresource.pdf>
- Cordery, C. J., Proctor-Thomson, S. B., & Smith K. A. (2013) Towards communicating the value of volunteers: lessons from the field. *Public Money & Management* (33)1, 47-54. <https://doi.org/10.1080/09540962.2013.744894>
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). Internet, phone, mail, and mixed-mode surveys: The tailored design method (4th ed.). Wiley & Sons.
- Education World. (2012). *Schools recruit, recognize contributions of volunteers*.
http://www.educationworld.com/a_admin/admin/admin420_a.shtml
- Elliot, J., & Suvedi, M. (1990). Factors influencing the use of volunteers by Michigan secondary agricultural education teachers. *Proceedings of the National Agricultural Education Research Meeting 17th Annual Meeting*. 17, 208-15.
- Fraze, S.D., Hardin, K.K., Brashears, M.T., Haygood, J.L., & Smith, J.H. (2003). The effects of delivery mode upon survey response rate and perceived attitudes of Texas agri-science teachers. *Journal of Agricultural Education* (44)2, 27 - 37.
<https://www.doi.org/10.5032/jae.2003.02027>
- Homans, C. G. (1958). Social behavior as exchange. *American Journal of Sociology* (63)6, 597 – 606. <https://doi.org/10.1086/222355>
- Henderson, A. & Mapp. K. (2002). *A New Wave of evidence: The impact of school, family, and community connections on student achievement*. Austin, TX: National Center for Family and Community Connections with Schools. SEDL.
<http://www.sedl.org/connections/resources/evidence.pdf>
- Hile, O., Cromer, A., Burrows, M., Sorensen, T.J., & Lawver, R.G, (2019). Examining the utilization of volunteers in school-based agriculture education. *Proceedings of the National Agricultural Education Research Conference. Des Moines, Iowa*. 46, 176-191.
- Mavis, B.E. & Brocato, J.J. (1998). Postal surveys versus electronic mail surveys: The tortoise and the hare revisited. *Evaluation & the Health Professions* (21), 395–408.
<https://doi.org/10.1177/016327879802100306>
- Myers, B. E., Dyer, J. E., & Washburn, S. G. (2005). Problems facing beginning agriculture teachers. *Journal of Agricultural Education*, 46(3), 47.
<https://www.doi.org/10.5032/jae.2005.03047>
- National Association of Agricultural Educators (2019, April 28). *What is Agricultural Education?*
<http://www.naae.org>

National FFA Organization (2019, April 2). <http://www.ffa.org>

Rogelberg, S. & Stanton, J. (2007). Understanding and dealing with organizational survey nonresponse. *Organizational Research Methods* (10), 195–209.
<https://doi.org/10.1177/1094428106294693>

SeEVERS, B.S. & Rosencrans, C. (2001). Involvement of volunteers in agricultural education programs in New Mexico. *Journal of Agricultural Education*, 42 (1) 71-80.
<https://www.doi.org/10.5032/June2001.01072>

Shifflett, D. M. (1994). What effect do volunteers have on a rural primary school? (ERIC Document Reproduction Service No. ED 373 945)

Smith, A.R., Lawver, R. G. & Foster, D. D (2017). *National Agricultural Education Supply and Demand Study*. <http://www.naae.org>

University of Georgia (2019, April 28). Volunteers. <https://extension.uga.edu/about/join-our-team/volunteers.html>