

National Participation in School-Based Agricultural Education: Considering Ethnicity, Sex, and Income

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Abstract

An empirical understanding of the value school-based agricultural education (SBAE) offers has been limited due to lack of widespread, longitudinal studies addressing the impacts of student participation in SBAE. Grounded in the theory of involvement, data from a nation-wide, longitudinal study were analyzed to explore ethnicity and income among students with varying levels of vocational club and SBAE involvement. Results indicated Black males had high involvement in non-SBAE vocational clubs but low involvement in SBAE-vocational clubs. Black and Hispanic females enrolled in SBAE at rates close to the percentages in the high school population; however, Black and Hispanic females rarely attained officer roles in SBAE-vocational clubs. White females, on the other hand, dominated officer roles within SBAE vocational clubs. Results also indicate females enrolled in SBAE who served as officers earned an additional \$10,507 annually compared to non-SBAE, female officers. However, regarding the impact of involvement in SBAE on males who serve as officers, results indicate decreased income compared to their non-SBAE peers. Findings are discussed in relation to the theory of involvement, with an emphasis on recommendations for further research.

Keywords: school-based agricultural education; student involvement; student ethnicity; club participation; income

Introduction

Student participation in the National FFA Organization is a critical component to a complete school-based agricultural education (SBAE) program experience; yet, little has been done to evaluate participation in, and the long-term impacts of, FFA involvement on a national scale. In the absence of such knowledge, stakeholders to SBAE are unable to holistically evaluate the current realities and future possibilities of the National FFA Organization and the diverse students served by this organization.

Historically, SBAE and FFA have been viewed as vocational approaches to education with the aim of preparing individuals for agriculture, food, and natural resource (AFNR) occupations, innovations, and informed community engagement (Phipps, Osborne, Dyer, & Ball, 2008). As a catalyst to SBAE, the Smith-Hughes Act spurred several pieces of legislation supporting vocational education across the country and, by 1982, 97% of high school graduates had completed at least one vocational course during high school (Boesel, 1994) a percentage which fell to 80% of high school graduates in 2009 (Nord et al., 2011). Today, vocational education (i.e., now referred to as

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“Career and Technical Education” [CTE]) continues with the mission of career preparation (Association for Career and Technical Education, 2016). Within the larger scope of career preparation, disciplines like SBAE have identified a growing importance in recruiting and training a more diverse population of students (Stripling & Ricketts, 2016). To address the mission of career preparation in tandem with increasing diversity, SBAE needs nation-wide research on who is currently being served, and underserved, within SBAE as well as the economic impact of SBAE and FFA engagement. The current study addressed these needs by evaluating the sex and ethnic distribution of student participants in SBAE and vocational⁴ clubs as well as post-graduation income of students with varying levels of SBAE and vocational club involvement.

Literature Review

Income

A dearth of research has directly evaluated employment earnings in relation to SBAE involvement (McKim, Velez, & Sorensen, 2017). However, research within this line of inquiry has identified SBAE coursework to be a significant positive predictor of postsecondary income, with each additional Carnegie unit of SBAE relating to \$1,850.67 more annual income for students who did not pursue postsecondary schooling and \$457.40 additional annual income for students who earned a postsecondary diploma (McKim et al., 2017). The McKim et al. study, however, did not explore income in relation to level of leadership involvement in FFA. Expanding the scope to include all CTE courses, several studies have evaluated economic outcomes associated with involvement. Unfortunately, consensus has not been reached, with some studies suggesting an increase in employment earnings (Gustman & Steinmeier, 1982; Silverberg, Warner, Fong, & Goodwin, 2004) while others suggest higher earnings achieved among students not taking CTE coursework (Meer, 2007). Yet, even among research identifying a positive relationship between CTE coursework and employment earnings, benefits appear to vary substantially by sex and ethnic characteristics (Gustman & Steinmeier, 1982) as well as postsecondary attendance and timing (i.e., short, medium, and long-term) of effect (Silverberg et al., 2004).

A similar story unfolds as we transition to the economic impact of club participation, with no research evaluating the relationship between employment earnings and Career and Technical Student Organization (CTSO) participation, including FFA (Bird et al., 2012; Croom & Flowers, 2001; Rose et al., 2016). Broadening the scope to include all student clubs at the secondary level reveals positive outcomes for students involved in clubs (Costa, 2010; Kosteas, 2010; Lipscomb, 2007; Rouse, 2009, 2012). While the focus of research has been on non-economic outcomes (e.g., higher test scores, postsecondary degree attainment), studies have linked club participation with higher employment earnings (Costa, 2010; Kosteas, 2010). Further, research has identified holding a student club leadership position is related to higher employment earnings (Eren & Ozbeklik, 2010; Rouse, 2009); however, as was the case with coursework, the economic impact varies by sex (Rouse, 2009).

Ethnicity

Historically, SBAE has predominantly been comprised of White males (Gordon, 2014). Data provided by the National FFA Organization (FFA), the largest agriculture-based vocational

⁴ Although the term vocational club is now referred to as a Career and Technical Student Organization (CTSO), we maintained the language and terminology that was originally used in the ELS: 2002 study.

club, reported 649,355 student members in 2016 with 41% males, 32% females, and 27% who did not report their sex. Ethnicity distribution included 41% identifying as White, 13% Hispanic, 3% Black, 1% American-Indian, 1% Asian, Native Hawaiian or Pacific Islander, 1% two or more races, and 40% who did not report their ethnicity (National FFA Organization, 2016a). The higher proportions of White males are mirrored throughout additional literature (e.g., Lawrence, Rayfield, Moore, & Outley, 2013; Talbert & Larke 1995); however, female involvement in SBAE appears to be increasing in recent decades (Retallick & Martin, 2005; Balschweid & Talbert, 2000). Research specific to CTE enrollment in 2014 revealed 53.7% of students enrolled in CTE were males and 46.7% were females. White was the predominant ethnicity (51.9%) followed by Hispanic/Latino (23.7%), Black (16.2%), and Asian (4%) (U.S. Department of Education, 2016).

Although several studies investigated benefits and barriers for ethnic minorities to enroll in SBAE, we found no studies exploring ethnicity and sex by varying levels of vocational club (i.e., participant and officer) and SBAE involvement. Studies exploring reasons why minority students enroll in SBAE identified encouraging and passionate SBAE teachers, high parent involvement and family influences, job preparation and skill development, hands on learning environment, response to social pressure, and academic achievement as motivators for enrollment (Balschweid & Talbert, 2000; Jones & Bowen, 1998; Roberts et al., 2009; Sutphin & Newsom-Stewart, 1995; White, 2015). Alternatively, Balschweid and Talbert (2000) identified negative perceptions of the agriculture industry and a lack of encouragement by teachers as factors that discourage some ethnicities from participation in FFA.

Analysis of the available literature revealed a lack of national data exploring the ethnicity and sex of students who enroll in SBAE, participate, and assume officer roles as well as the relationship between SBAE participation and income. Acquisition of such knowledge would illuminate populations of students underserved within SBAE, and associated leadership opportunities, as well as the economic benefits of SBAE participation. The current study leveraged a national, longitudinal dataset to address the identified limitations of existing research while also supporting the National Research Agenda's call to examine the short, medium, and long-term outcomes and impacts of educational programs within agriculture and natural resources (Roberts, Harder, & Brashears, 2016).

Theoretical Framework

Given the focus on SBAE enrollment, ethnicity, sex, and income in relation to levels of involvement, the current study is grounded in the theory of involvement (Astin, 1999). Astin postulated student involvement in co-curricular activities will result in desirable outcomes in learning and personal development. Astin defined involvement as "the quantity and quality of the physical and psychological energy that students invest to the academic experience" (Astin, 1999, p. 518). Although Astin recognized student motivation, and other internal constructs such as feelings or thoughts as important aspects of involvement, he placed more emphasis on student behavior, actions, and decisions when defining involvement. In our study, we theorize student behavior, actions, and decisions are linked to choices to enroll in SBAE and participate at various levels.

Astin (1999) stated involvement can take many forms, including but not limited to: coursework and studying, school clubs and organizations, and interaction with faculty and peers on campus. The theory of involvement includes five main postulates: (a) involvement is identified as both physical and psychological investment by students, (b) involvement is not concrete, but rather exists on a continuum, and students will manifest involvement in different objects at different times, (c) involvement can be measured both quantitatively (i.e., how many hours a student spends on

campus) or qualitatively (i.e., the conversation a student has during a club meeting), (d) the quality and quantity of student involvement in a particular activity will be proportionate to the learning and personal development the student receives, and (e) the effectiveness of any educational policy or program is directly proportionate to the “capacity of that policy or practice to increase student involvement” (Astin, 1999, p. 519). Astin asserted the greatest advantage of the theory of involvement is how it shifts attention away from course content and teaching techniques and toward student motivation and behavior, viewing student time and energy as institutional resources. Thus, the theory is meant to be utilized by school administrators and faculty to evaluate and design more effective learning experiences for students.

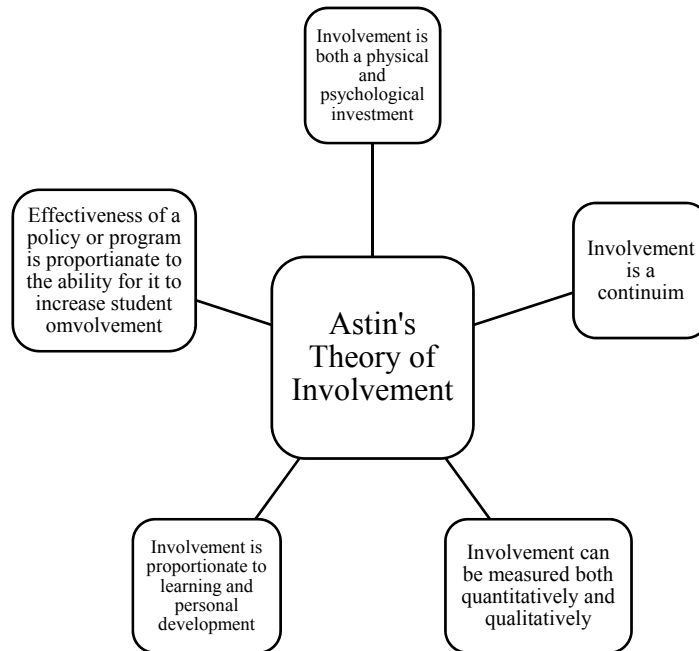


Figure 1. Graphical representation of the theory of involvement (based on Astin, 1999).

A large body of research over the past two decades confirms positive direct and indirect influences of student involvement experiences on students. Consistent evidence concludes a variety of experiences positively impact developmental learning outcomes, including moral development, cognitive development, and vocational aspirations on college students (Hernandez, Hogan, Hathaway, & Lovell, 1999; Moore, Lovell, McGann, & Wyrick, 1998; Terenzini, Pascarella, & Blimling, 1996). Further, studies show involvement specifically in leadership activities during college result in positive growth in numerous areas including civic responsibility/citizenship, multicultural awareness, collaboration, and personal and societal values (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001; Dugan & Komives, 2007; Foubert & Grainger, 2006).

Although literature has provided ample evidence of Astin’s theory with college students, limited research has explored these phenomena in secondary school students. Further, although personal and learning outcomes are seen as positive outcomes of involvement, little is known about how involvement contributes to future economic outcomes, in particular how positional involvement, such as becoming an officer in an organization versus simply participating in a club impacts future income. The current study explored how income, ethnicity, and sex relate to levels of involvement in a vocational club and SBAE.

Purpose of the Study

According to the U.S Department of Education (2004), the Educational Longitudinal Study of 2002 (ELS: 2002), “offers the opportunity for the analysis of trends in areas of fundamental importance, such as patterns of course taking, rates of participation in extracurricular activities, academic performance, and changes in goals and aspirations” (p.11). Leveraging the ELS: 2002 dataset, the purpose of this study was to examine SBAE course participation, vocational club participation, ethnicity, and sex in relation to income after high school. The current study addressed the following research objectives:

Objective 1: Compare percent participation of vocational club (i.e., participant and officer) and SBAE involvement by ethnicity and sex.

Objective 2: Compare income of vocational club (i.e., participant and officer) and SBAE involvement by ethnicity and sex.

Methods

In order to address the established research objectives, a nationally representative sample of high school students was sought with corresponding club participation and income data. Data were utilized from the ELS: 2002 which collected baseline data from high school sophomores, beginning in 2002 and culminating in a 2012 collection. Given the scope of the ELS: 2002, we will only present a general overview of the methods in this paper. We encourage review of the U.S. Department of Education, National Center for Educational Statistics, Education Longitudinal Study of 2002: Base Year Data File User’s Manual (2004) for more detailed methodological information.

One of the challenges of using a longitudinal data collection method is the passage of time between collection points. However, longitudinally tracking a nationally representative sample of students allowed us to examine high school involvement and corresponding income levels six years after graduation. Given the size and scope of this study, the complete dataset was not released for analysis until April 2015.

Target Population and Frame

The overall target population was students within all secondary schools, including public schools, charter schools, Catholic, and other private schools serving sophomore students in the United States during the 2002-2003 school year, including all 50 states and the District of Columbia (U.S. Department of Education, 2004). A representative sampling frame of schools, stratified by U.S Census divisions, and further substratified by urban, suburban, and rural, was selected resulting in an initial sample frame of 800 schools. Probability proportional to size (PPS) sampling was utilized so the schools and students selected had equal probability of being sampled and were reflective of the national population of high school sophomores in 2002.

Data Collection

Based on an initial sampling frame of students within 800 high schools, 752 agreed to participate resulting in a 94% sample realization. Of these 752 schools, 580 were public, 95 were Catholic, and 77 were other private schools. As part of the large data collection effort, data were collected from students, parents, teachers, administrators, librarians, and facilities managers. In the current study, we focus solely on the *student* data which was requested from 17,591 students of whom 15,362 elected to participate.

Data Analysis

Based on the overall collection methods, our intent was to examine only students enrolled in high schools where there was an option to participate in agricultural education, thus limiting our generalizability to high schools, within the United States, who offer SBAE. We did not analyze private, religious, or charter schools. All the data, findings, and conclusions are reflective of this particular student population. Of the overall 15,362 participants, 4,050 were included in the sample. The data utilized in this study were weighted to enable the generalizability of the 4,050 participants. While weighting is simply a multiplier that adjusts a respondent's contribution to account for different probabilities within the sample (Solon, Haider, & Wooldridge, 2013), it is important to recognize the weighting multiplier is only applied to those in the original sample. Thus, as is the case in this study, if there were no Hispanic females enrolled in SBAE who also served as officers in vocational clubs in the original frame, the weighted results will still reflect none enrolled.

To address our research objectives, we utilized the Statistical Package for the Social Sciences (SPSS) to analyze descriptive variables and report ethnicity percentages, based on participation levels, including the differences between observed ethnicity percentage and overall ethnicity percentages in the high schools included in our frame. Given the potential influence of sex on both income and participation levels, we have chosen to delineate our results by male and female (McKim et al., 2017).

The income data used for analysis in this study were collected in 2011, nine years after the collection of initial demographic data. We recognize the role of many mediating and confounding factors that may influence annual income. However, since there are no current or prior nationally representative studies in SBAE that address income and participation, we have chosen to start by focusing solely on our two research objectives.

Participation levels were categorized and reported for those enrolled in SBAE and those not enrolled in SBAE. Under each of these main categories, we analyzed the sub-categories of *no vocational club involvement*, *vocational club participant*, and *vocational club officer*. Although the term "vocational club" has since been replaced by Career and Technical Student Organization (CTSO), we chose to utilize the same language that was used in the original questionnaire. Additionally, students enrolled in SBAE and concurrently enrolled in a vocational club, would likely be members of the National FFA Organization, a large agriculturally-based youth leadership organization. The National FFA has a membership of almost 650,000 members representing 7,859 local high school FFA chapters in the U.S., Puerto Rico and the U.S. Virgin Islands (National FFA Organization, 2016a). Enrollment in FFA requires students to be enrolled in at least one SBAE course during a given academic school year (National FFA Organization, 2016b). Unfortunately, the ELS: 2002 data has identifiers for involvement in vocational clubs, but not a specific identifier for FFA participation. It does however, on the student questionnaire, list four example student vocational education clubs (i.e., DECA, VICA, FHA, and FFA), of which FFA is included. While we cannot definitively quantify the impact of student involvement in FFA, we can distinguish between those students who were not enrolled in SBAE yet are involved in a vocational club and those who are both enrolled in SBAE and involved in a vocational club. Presumably, those who are enrolled in SBAE and involved in a vocational club have a greater likelihood to be members of the National FFA Organization.

Findings

For the first objective, we analyzed the involvement levels of students, both enrolled ($n = 910$) and not enrolled in SBAE ($n = 3,140$), by ethnicity and sex (see Figures 2, 3, & 4). We detailed

the participation percentages by Black/African American, Hispanic, and White students and utilized a horizontal line denoting the population percentage we would expect to see based on the ethnicity percentages present throughout high schools where SBAE was offered.

Black males (expected 12.1%) who are not enrolled in SBAE, participate in vocational clubs at a high rate (21.3%), however, when enrolled in SBAE, participation in vocational clubs drops to 7.3% (see Figure 2). While low in participation, it appears Black males in SBAE do assume officer roles in vocational clubs at a rate commensurate with overall high school percentages (11.3%). For Black females, participation percentages in non-SBAE vocational clubs (14.3%) and SBAE vocational clubs (13.0%) exceeds the expected percentage of 10.4%. However, unlike their male counterparts, Black females enrolled in SBAE and in a vocational club, comprise only 6.6% of the female officer roles. This is not the case for non-SBAE enrolled Black females who do assume officer roles in other vocational clubs at a 10.4% rate.

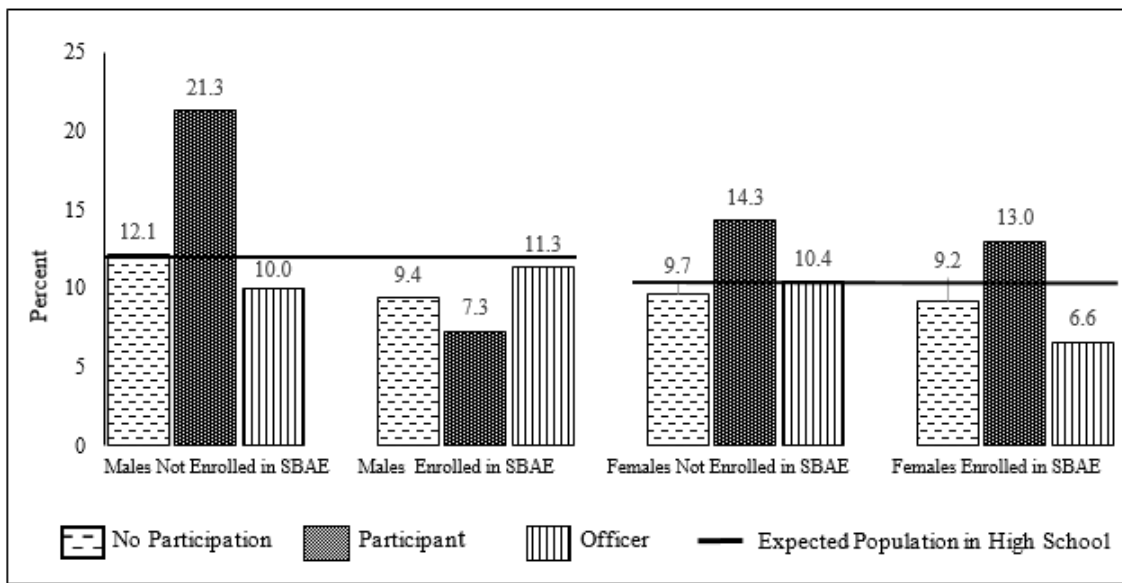


Figure 2. Percent participation of Black or African American students by sex.

For Hispanic males, where we would expect 11.9% enrollment in SBAE, participation in vocational clubs is low (5.1%); however, once involved, Hispanic males do assume officer roles at a 14.9% rate (see Figure 3). Females, expected to enroll at 13.8%, enroll in SBAE at greater than expected percentages (16.8%) and participate at a greater rate than males (11.3% to 5.1% respectively). Still, Hispanic females hold fewer officer positions; in fact, within the sample there were no Hispanic females, enrolled in SBAE, who concurrently assumed officer roles in a vocational club.

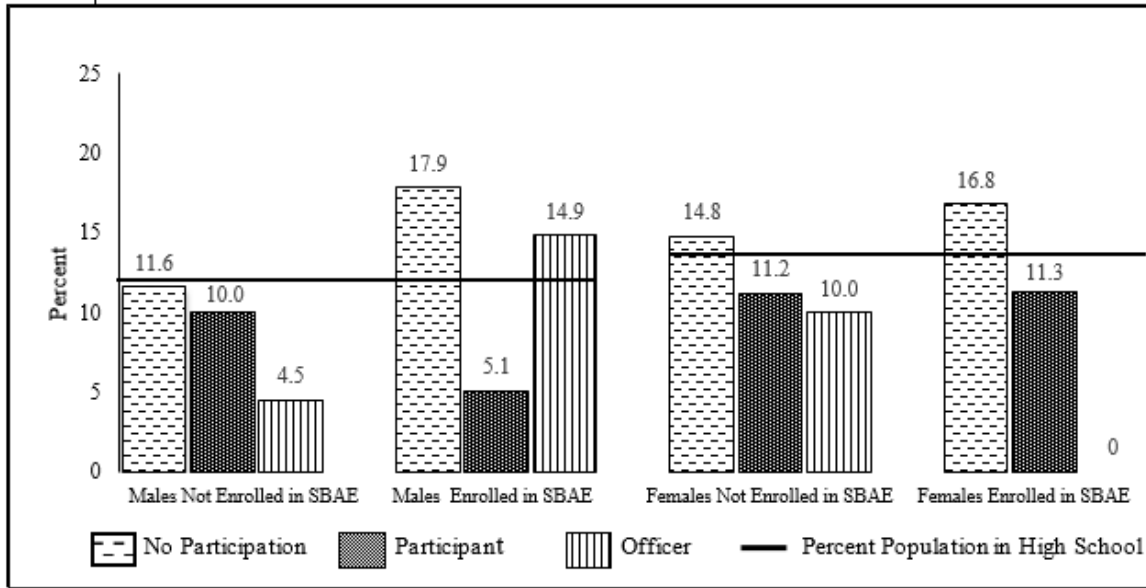


Figure 3. Percent participation of Hispanic students by sex.

White males (68.4%) and females (69.4%) enroll in SBAE near the expected 71.2% (see Figure 4). White males participate in SBAE and vocational clubs at a greater than expected rate (84.7%) and White females slightly exceed the participation rate (73.1%). However, we see a decrease in White male SBAE enrollees who assume office roles (68.8%) and a sizeable increase in White females who are SBAE enrollees and assume officer roles (90.8%).

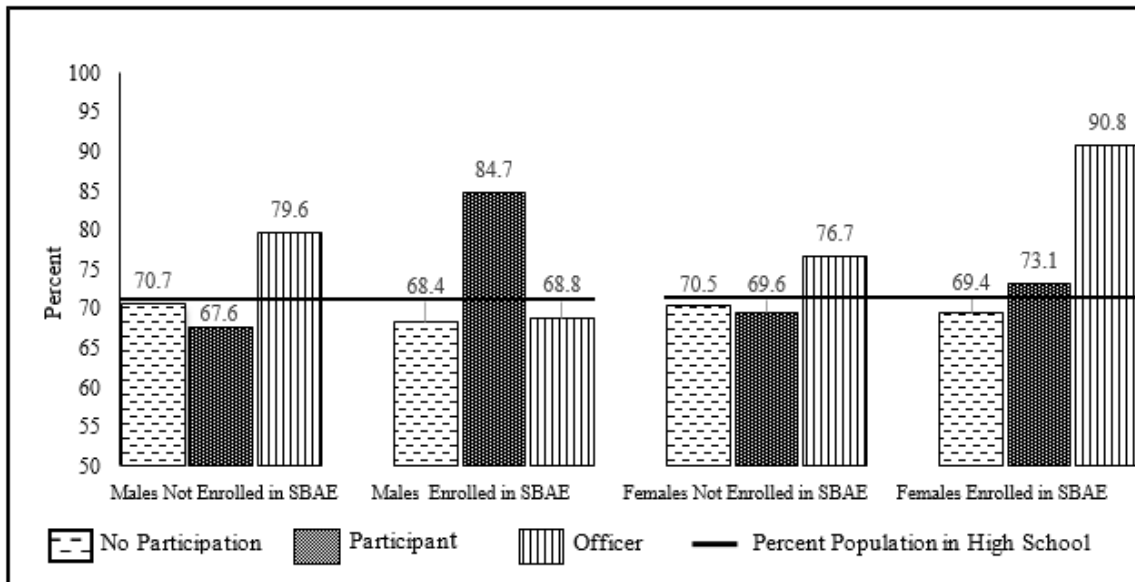


Figure 4. Percent participation of White students by sex.

When analyzing the income data (see Figure 5) for our second objective, we see that males who are SBAE enrollees start at a higher annual income ($M = \$30,049$, $SD = \$22,024$), but as they increase in participation and assume officer roles, they make less money ($M = \$35,995$, $SD = \$27,105$) than their non-SBAE peers ($M = \$40,081$, $SD = \$60,179$). Females, who are enrolled in

SBAE, make less money initially ($M = \$15,136$, $SD = \$14,975$), but rise above their non-SBAE counterparts at both the participation level ($M = \$19,994$, $SD = \$14,341$) and the officer level ($M = \$29,758$, $SD = \$17,192$).

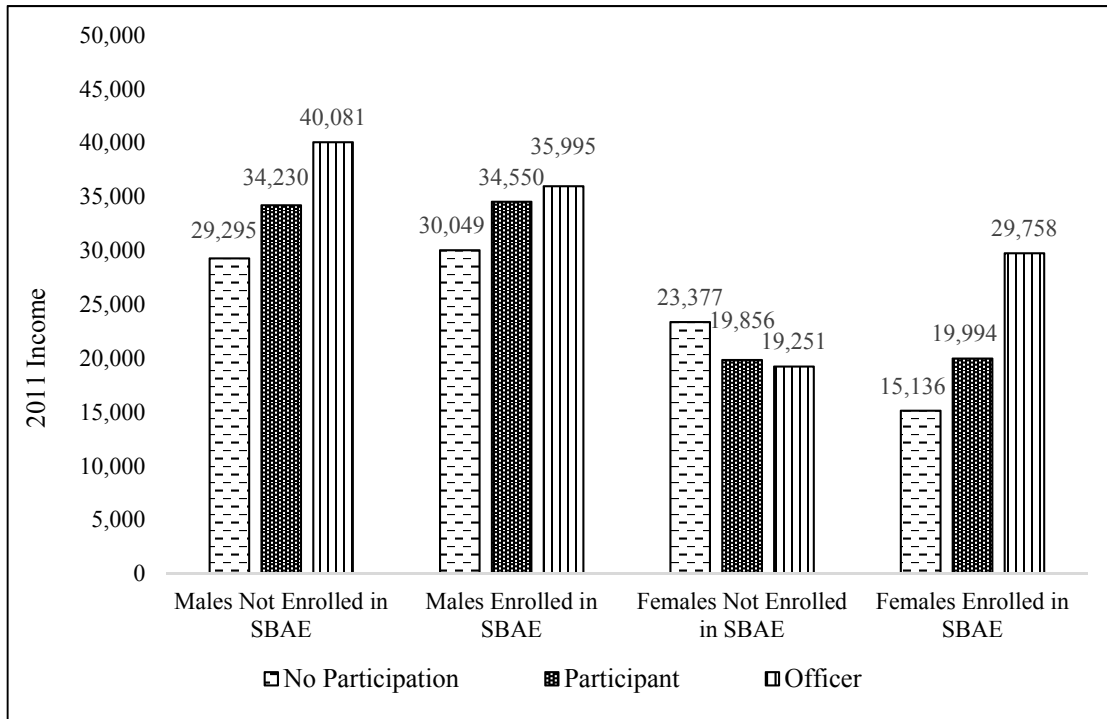


Figure 5. Annual income for SBAE enrollees and non-SBAE enrollees, based on vocational club involvement.

Discussion, Implications, and Conclusions

The methodology used in this study allows description of both income and ethnicity percentages and patterns or areas of discrepancy. While our methodologies limit the breadth of our conclusions, we will address some initial insights and conclusions and identify four major phenomena emerging from the data. We also want to clarify that, at times, we have chosen to refer to the National FFA Organization as it represents the largest and only vocational club directly linked to SBAE. For our study, students enrolled in SBAE and concurrently enrolled in a vocational club, meet the criteria for FFA members. However, we do want to be clear that anyone in FFA would meet the SBAE/Vocational club enrollee parameters, but potentially not everyone in the SBAE/Vocational club enrollees would be, necessarily, in FFA.

Our first research objective explored the participation levels of male and female students both enrolled and not enrolled in SBAE by ethnicity. For comparison purposes, we examined all levels of actual participation compared to the high school population percentage of the same ethnicity. When examining the data for Black and Hispanic males, we observed what we are terming the *Black and Hispanic Male Leadership Phenomena*.

Black and Hispanic Male Leadership Phenomena

We found Black males have high involvement in non-SBAE vocational clubs but low involvement in SBAE-vocational clubs. These individuals have demonstrated a willingness and

commitment to participate in vocational clubs, just not SBAE-based. In SBAE, we recommend examining the structures of other vocational clubs who enroll a higher percentage of Black males. In addition, qualitative research should explore why Black males, specifically, are choosing not to enroll in SBAE. It is also intriguing that while, for those enrolled in SBAE, participation in a vocational club is low, officer participation is on par with participation levels outside of SBAE. Once Black males do become involved in SBAE and presumably FFA, they hold officer positions at a disproportionately high percentage compared to their participation levels.

Similar to Black males, Hispanic males in SBAE participate in vocational clubs at a disproportionately low rate. Yet, as observed among Black males, once involved, they ascend to officer positions at a rate far higher than would be expected. Future research should examine why Hispanic males chose to participate in FFA and what enhances or limits their participation and leadership. Although additional recruitment is needed, once they become participants, both groups pursue officer positions at an accelerated rate. This is encouraging for the National FFA Organization as it illuminates what may be an initial recruitment hurdle but also provides evidence these select groups perceive benefit once involved. As Astin (1999) indicated, the quality and quantity of involvement will be proportionate to the learning and personal development a student receives. In the case of Black and Hispanic males, their disproportionate rise to officer roles indicates that, once involved, they are both learning and engaging in personal development.

White males, on the other hand, enroll in SBAE near the population percentage (71.2%), yet, once enrolled, participate at rates greater than would be expected (84.7%). Despite high participation rates, White males assume officer roles at a rate lower than the population percentage. However, White males not enrolled in SBAE, do pursue officer positions in vocational clubs at a rate greater than expected. For some reason, White males chose not to pursue the number of officer roles we would expect, given the participation percentages, within SBAE-vocational clubs. According to Astin's theory of involvement (1999), White males who do not assume officer roles are not obtaining the highest level of personal development possible. A potential clue may rest on the rate of White female participation in officer roles, discussed later as White Female Leadership Empowerment. Future research should explore potential barriers for White males to assume officer positions within the FFA.

Minority Female Leadership Barrier

In contrast to the involvement levels of Black and Hispanic males, Black and Hispanic females display a phenomenon we refer to as the *Minority Female Leadership Barrier*. Both Black and Hispanic female groups enroll in SBAE at rates close to the percentages in the high school population, and some participate, yet there is a precipitous decline in officer roles. It seems Black and Hispanic females rarely serve in officer roles. Based on Astin's theory (1999), females in these groups may not be experiencing the learning and professional development they need and are therefore not involved. Alternatively, perhaps there are cultural or organizational structures, policies, or practices limiting or even discouraging involvement. Further research is needed to examine why Black and Hispanic females are not attaining officer positions.

White Female Leadership Empowerment

We term our next observed phenomenon as *White Female Leadership Empowerment*. White females participate in SBAE and are involved in vocational clubs at, or very near, the expected rate. Yet, for officer roles, we see participation exceed the expected rate by 20% among SBAE enrollees. It appears White females dominate officer roles within an SBAE-related vocational club, presumably FFA. What is it about the organizational structure and cultural

dynamics which are both appealing and highly beneficial to White females? For a potential explanation, we turn to our second objective, which identified SBAE enrolled female officers make, on average, more money than their non-SBAE enrolled fellow vocational club officers. White female SBAE officers, given their high rates of participation, may realize a financial benefit at a proportionally greater percentage than both the Black and Hispanic female SBAE officers. Further research should examine what aspects of the current culture and structure support White females, and how we can design a system to equally support all females.

Objective two sought to highlight the income levels, based on level of involvement, for students in this sample. Males enrolled in SBAE who are officers in vocational clubs annually make \$4,086 less than males who are officers in vocational clubs outside of SBAE. For some reason, the impact of involvement in SBAE on males results in decreased income compared to their non-SBAE peers. One potential influencer to these results may be socioeconomic status (SES). Prior research by McKim et al. (2017) revealed that proportionally, students enrolled in SBAE have a lower SES than students not enrolled in SBAE. This disproportionate SES enrollment may relate to and influence the overall earnings observed.

Female SBAE Income Effect

For females, we observed an interesting phenomenon we are labeling the *Female SBAE Income Effect*. Namely, enrollment in SBAE provides tremendous additional earning potential compared to their non-SBAE peers. Females who do not enroll in SBAE make \$8,242 more than females who are enrolled in SBAE. At first glance, this appears concerning. However, when we look at the effects of participation, we see rapid gains in annual income for females involved in SBAE. The clearest gains are for SBAE enrolled female officers who make \$10,507 more than their fellow officers from non-SBAE vocational clubs. For females, enrollment in SBAE makes a positive economic difference, provided they either participate in a vocational club or serve as an officer. Unfortunately, despite the benefits associated with female participation, female annual income still lags behind their male counterparts.

Data revealed some surprising results when examining female income for those not enrolled in SBAE. Namely, as participation level increased from no club involvement to involvement in a vocational club, to officer involvement, income decreased. These results show an opposite trend from both overall males and females enrolled in SBAE. For some reason, participation in a vocational club, outside of SBAE, results in decreased income for females.

We recommend future research examine income to specifically account for additional variables. While our research focuses solely on identifying what is, and we are limited in speculating as to why we are seeing these results, it is important to note females are gaining more from enrollment in SBAE than their male colleagues. What is it about the structure of SBAE and concurrent involvement in a vocational club that enhances the success of females? What are the organizational practices, structures, reward systems, and activities that promote the earning success of females? What are female students gaining, through enrollment in SBAE that is distinctive from their non-SBAE peers?

We recognize, in this paper, we focus on involvement and income as it may relate to the potential structures, policies, and practices of a national organization. Specific to income, ethnicity, and sex, we acknowledge that upbringing, SES, size of school, and cultural distinctives may play a role in the results we are seeing. However, detailed analysis of these areas is outside the scope of the current study. Astin (1999) reminds us the effectiveness of any program is directly proportionate to its capacity to increase student involvement. As we assess SBAE, we need to develop the

capacity to increase student involvement across all ethnicities and sexes. We now know where we are at in relation to income, sex, and ethnicity in SBAE. What remains is to determine where we need to be and how we are going to get there.

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