

Building Rural Communities through School-based Agriculture Programs

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The purpose of this study was to develop a substantive theory for community development by school-based agriculture programs through grounded theory methodology. Data for the study included in-depth interviews and field observations from three school-based agriculture programs in three non-metropolitan counties across a Midwestern state. The substantive theory that emerged was that school-based agriculture programs can have a positive impact on the social connections among a small group of community members and students. Social connections among community members and students were reinvested back into the program in the form of fundraising and student interaction. The reinvestment of resources helps individual students in the agriculture program, especially students who are destined to leave the community for higher education.

Keywords: agricultural education; community-based education; rural education; social capital

Introduction

Agriculture teachers have a vested interest in the health of their local community. A rural community that is struggling will have difficulty meeting the needs of or even funding a local agriculture program. Struggling rural communities can have declining levels of civic engagement among community members, a youth exodus to urban centers, and lack of access to basic services and resources (Beaulieu & Israel, 2011). The preceding issues can weaken the ability of a community to respond to opportunities. Research has also shown that the vitality of the community can directly relate to the educational achievement level of students (Israel, Beaulieu, & Hartless, 2001; Perna & Titus, 2005). While agriculture programs cannot revitalize their communities single-handedly, they can serve the community in a variety of positive ways. Community development should not be an issue exclusively for civic organizations and government agencies, but a real goal of agriculture programs (Phipps, Osborne, Dyer, & Ball, 2008).

Researching the connections between school-based agriculture programs and their communities is vital for designing community-based program activities. A call for research

exists to determine "examine the aspects of vibrant, resilient communities that encourage youth and adults to become future members and leaders of the community" (Doerfert, 2011, p. 10). Community development has been a significant topic in social sciences, including the decline of community social involvement (McClellan, Schultz, & Steger, 2002; Putnam, 2000). Sociologists have identified rural schools as important catalysts for building rural communities because of the close social connections in a school between students, families, and community members (Schafft & Harmon, 2011).

In addition to the disciplines of education and sociology broadly, community has been a significant topic of research for rural education (Arnold, Newman, Gaddy, & Dean 2005; Budge 2006; Theobald, 1997). Rural education studies have focused on the philosophical underpinnings and possibilities of community-based rural education (Haleman & DeYoung, 2000) and on how schools can be a catalyst for community development (London, Zimmerman, & Erbstein, 2003; Miller 1995). For instance, schools can become community centers that offer needed services, such as adult education and student-driven small businesses, as well as using the school building for community meetings

(Deweese & Velázquez, 2000). Agricultural education researchers in particular have explored the connection between agriculture programs and the community. Martin, Ball, and Connors (2006) researched the history of community-based agriculture programs through the influence of H. M. Hamlin and advisory councils. Hastings, Barrett, Barbuto, & Bell (2011) explored the role youth leadership development and community engagement through grounded theory. Hastings et al. found that the level of social capital within a community informs the sense of community among community members. Israel and Hoover (1996) developed a model for community needs assessments through school-based agriculture programs. However, there is little research exploring how school-based agriculture programs build their local communities. While there is anecdotal research that indicates such factors as economic development, the data does not indicate to what level the community was benefited (Hanagriff, Murphy, Roberts, Briers, & Linder, 2010). Research is warranted to examine the influence of school-based agriculture programs on their local communities.

Theoretical Perspectives

This study was informed by the theories of community capital and community development to explain the potential connections between a school-based agriculture program and their local rural community as (a) asset-based, and (b) developing or enhancing community capital. First, community development theories such as asset-based development have emerged to explain how communities internally develop solidarity and agency (Bhattacharyya, 2004; Hustedde & Ganowicz, 2002). According to asset-based community development perspectives, community development is defined “as a planned effort to build assets that increase the capacity of residents to improve their quality of life” (Green & Haines, 2007, p. 8). Asset-based development is unique from other community perspectives. Asset-based development involves flexing community assets or strengths rather than fixing community needs or weaknesses (Johnson, Meiller, Miller, & Summers, 1987). Thus, the school-based agriculture program could potentially be a community asset. Next, capital theories (e.g.,

social & human capital) explain how communities create and utilize their resources. In particular, social capital, or the ability of people to work together to accomplish shared goals (Flora, Flora, & Fey, 2007), has importance for community vitality and development (Cronginger & Lee, 2001; Marfe & Weber, 2010). Social Capital has been linked to students’ educational outcomes, including the role of family and community social capital on student educational achievement (Israel et al., 2001). The researchers in this grounded theory posited that the actions of the agriculture program within the local community could be a form of building social capital within the community. The purpose of this study was to develop a grounded substantive theory for community development by rural school-based agriculture programs.

Procedures

The researchers utilized a systematic grounded theory method to explain the phenomenon of building local communities by school-based agriculture programs (Creswell, 2008). The purpose of grounded theory methodology is to allow the theory to emerge from the data (Strauss & Corbin, 2007).

Data were collected from the communities of three rural programs purposively selected by three criteria. First, the programs must have been within a non-metropolitan county as defined by the United States Department of Agriculture (USDA, 2004). Next, communities were selected within counties that had agriculture programs at the high school level. The local school-based agriculture programs had to be on the list of approved sites for student teachers, which was a comprehensive list of sites with specific indicators of quality in a program. The researchers believed that this would ensure that the programs would be of high standards. Third, the researchers selected communities that represented different rural community types as defined by a rural community typology (Salamon, 2007), which included six different types of rural communities. The selection of community typology was important to provide the maximum variation between cases needed to strengthen the substantive theory that emerged (Strauss & Corbin, 2007). From the researchers’ list of approved programs in non-metropolitan

counties three programs were selected for the study. Two programs were non-metropolitan counties with urban populations of 2,500 to 19,999 adjacent to a metropolitan area, and one program was from a non-metropolitan county with an urban population of 20,000 or more, not adjacent to a metropolitan area. The three school-based agriculture programs were located in (a) a mixed economy and residential community, (b) a community with a mixed economy, and (c) an agrarian community typology respectively (Salamon, 2007).

Data Sources

The data sources for this study were both interviews of community members and field notes from community-based activities. The researchers interviewed an initial group of eighteen adults who attended and engaged in the community activities of the local program. The researcher, based on recommendations from the agriculture teacher, selected the interviewees. The interviews centered on how the local agriculture program helped build their local community. The researchers probed for specific examples of community development and the involvement that the program had in the community. The data from these interviews were utilized in the open coding (general coding for themes) and the start of the axial coding phase (coding examining the core category) of the study. Then, nine in-depth interviews, from different community members than first round of interviews, were conducted based on the emerging data from the axial coding phase. Community members were selected to be interviewed from a list constructed by the agriculture teacher in each of the local programs. Adult community members were chosen over students because the researchers wanted to elicit the opinions of interviewees who possessed a deeper understanding of their community, based upon experience. The interview questions focused on the development of social connections between community members engaged in the programs' activities. The in-depth interviews lasted for about a half-hour to an hour each. The researchers attended the three

agriculture program's community-based activities and recorded field notes. The activities included advisory council meetings for two schools, chapter banquets for two schools, community festivals for three schools, and community career fairs for two schools. The researcher attended a total of nine community-based activities, and noted the attendance, purpose, agenda, occurrences, and interactions of the events. The field notes were between two to four pages long and the community-based events lasted between one to five hours in duration.

Data Analysis

Data were analyzed by a systematic grounded theory design. Creswell (2006) indicated that systematic grounded theory had specific components: categories emerging from the open coding; and a core category, causal conditions, strategies, and consequences emerging during the axial coding phase. At the open coding phase, participants discussed how the local agriculture program improved their community. The researchers identified four different types of activities that built the community; social, educational, monetary, and FFA activities. The core category was the one specific category that emerged as most significant to the participants. The participants indicated that the activities most often led to the building of the community were social activities. The researchers slightly adjusted the category of social activities to the construction of social connections to clarify the phenomenon. Construction of social connections then became the core category in the axial coding process. After the core category had been identified, the axial coding focused on that core category. The causal conditions were the factors that influence the core category. The strategies were actions and interactions that resulted from the core category. The consequences were the outcomes of the strategies. The result of the analysis was a substantive-level theory about a specific problem or people (Creswell, 2006). Figure 1 highlights the grounded theory data analysis process utilized.

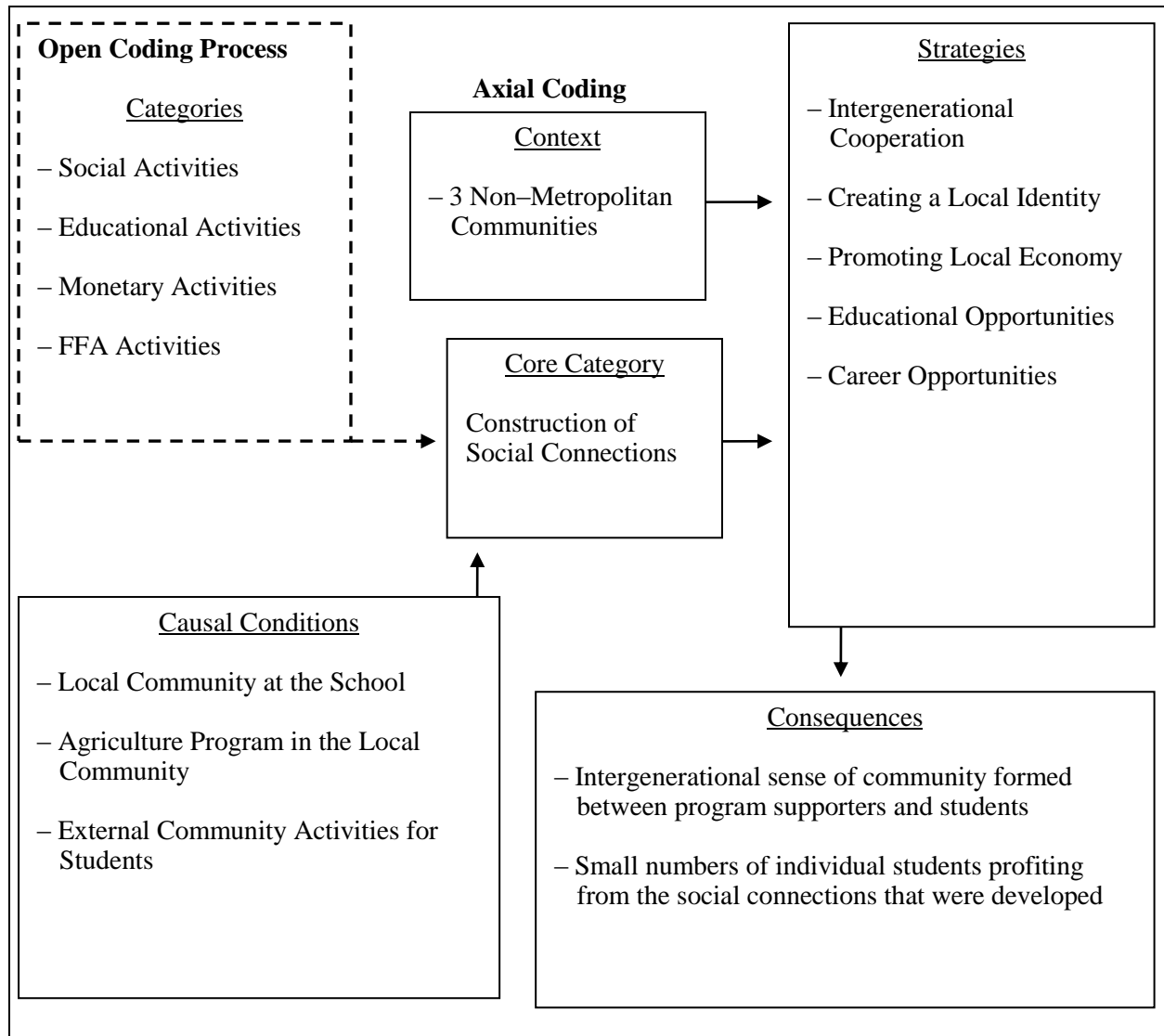


Figure 1. Grounded theory model of school-based agriculture programs constructing social connections

Standards of Rigor

Numerous trustworthiness procedures were maintained during the study. Credibility was established through a triangulation of the data, that included the use of a variety of data sources such as: interviews with community members, observations of community-based activities, second round interviews with community members, and analyses of documents from the programs (calendars, award documents, etc.). The researcher also triangulated the data by going back to each of the three communities and interviewing at least two more people from each community. The second round of interviews

served to double check the researcher’s interpretations of the data and seek data saturation. Confirmability was conducted to mitigate the influence of the researchers’ personal bias. An external audit was conducted with academic professionals in the fields of agricultural education and community studies. Transferability of the findings was constructed by providing thick, rich descriptions of the communities, activities, and programs studied (Ary, Razavieh, Jacobs, & Sorensen, 2009; Creswell, 2007; 2008).

There were limitations of this study. First, the researcher could not completely saturate the

themes developed with the interviews because the research occurred within a nine month context. The theory that emerged was a snapshot of three programs and thus not wholly comprehensive, rather substantive in nature. Secondly, the research focused on three school-based agriculture programs in Illinois in different rural community types and sizes. The researcher acknowledged that there are other rural community types. Thus, there are limitations in the transferability of the findings to other communities and school-based agriculture programs beyond those examined in this study.

Findings

The findings section was written to represent the systemic data analysis undertaken in the research. The core category, construction of social connections, and the context of the study were explained first. Then the researchers unpacked the casual conditions that influenced the construction of social connections; community at the local school, the agriculture program working in the community, and external community activities of the agriculture program. Next, the strategies, which were the actions and interactions that resulted from the construction of social connections, were explained. These strategies included the fostering of intergenerational cooperation, creating a local identity, promoting local economy, as well as educational and career opportunities for students. Finally, the consequences of the construction of social connections by school-based agriculture programs were: a sense of community constructed between program supporters and students, and individual students obtaining educational resources.

Context of Study and the Core Category of Construction of Social Connections

Brownville was the mixed economy and residential community that possessed a variety of small shops and corporate businesses, along with some agricultural and industrial occupations with a growing bedroom community. Many of the 4,000 residents commuted daily for work to a city of over 50,000 people. Approximately 5% of the population lived below the poverty level. The

town had a suburban, middle class appearance with a predominately white population. The business sector of the community was a blend of older smaller businesses with newer corporate chain stores. The newer stores came to the community less than fifteen years ago. The corporate chain stores supplemented the community employment, which had suffered from factory layoffs. The corporate businesses were drawn to Brownville by tax incentives and access to major roads. The community had a recent increase in population, which led to new subdivisions, churches, and other community structures. The newcomers were drawn in by the corporate businesses and small town atmosphere. Some of these newcomers were bedroom community dwellers from a larger nearby community. They were attracted to live in the community because of the small town atmosphere and quality schools. The newcomers generally brought more wealth and prosperity to the community. Yet, the community's once small town appearance had been changed by the addition of the new corporate businesses and subdivisions.

Plymouth was the mixed economy community of 20,000 residents. The population was predominantly white, with a small minority of African Americans. A large service business employed many of the town's people. Some other smaller and agricultural businesses also served the community. The large institution had been located in the community for over 100 years, employed over 1,500 people, and brought around 10,000 people to the community each year. Community visitors supported the large business and many of the smaller businesses of Plymouth. One community member related the importance of the business to the community. "People complain about it sometimes, but I tell them that if it weren't for [that business] our community would not exist." The identity of the community was defined by that business. The slow growth of this large business led to the growth of new homes and new businesses, and supplemented the employment of the community. The community members interviewed all agreed that Plymouth was a good place to live, work, and raise a family. Demographically, 40% of the population lived below the poverty line, which created a variety of socio-economic statuses in the community.

People acknowledged that it was a small town, but that the large business made it unique.

Appleton was an agrarian community that was comprised of primarily agricultural businesses. The population was under 900 residents, mostly white, with 15% of the population living under the poverty line. The community had lost almost all of its other businesses. The community still retained one small business that served as the social center for the community. The only other identity for the community was the local school. This too had been in jeopardy because of the economic pressures to consolidate with another district. The community feared that if the school disappeared then the community would disappear as well. The community had a declining population that depended on the surrounding communities for employment. In addition, more low-income residents had relocated into the community. The newcomers took advantage of the low cost housing to live in the community as bedroom dwellers and commute to neighboring towns that were between 10–20 miles away. Although each community was purposively chosen for maximum variance between types for rural communities from an economic perspective, all three communities shared a sense of rural identity.

The core category was the single category that emerged from the open coding as the most important according to the participants. The core category was school-based agriculture programs building their communities through constructing social connections. These school connections branched out into the community and brought parents together at community activities like the chapter banquet. One parent described:

It was cool because during senior night I saw that some [FFA] officers were also on the dance team... and the different kids from sports and other activities within the high school that are also in the FFA. That is great because that branches [the social connections] out and they tell other kids they're involved in it.

Many times, the social connections involved a small group of community supporters, like those from Appleton.

I [the teacher] have a group of probably six really dedicated parents or friends of the FFA chapter that I could call on any of them and they could be there no excuses. They will drop any they are doing and bend over backwards to do good things.

The creation of social connections also manifested in a formation of shared identity. Shared identity was the development of a commonality among people. One teacher said, "A lot of people in the community will say that we are doing a great job. They see our kids in the paper and are really proud of what the FFA chapter has done." The construction of social connections was very important and manifested into the complex phenomenon in this grounded theory.

Conditions that influenced the Construction of Social Connections

Causal conditions were the factors that influence the emergent core category of constructing social connections. Three casual conditions were: the local community at the school, the agriculture program in the local community, and external community activities for students.

First, the agriculture program's activities that brought the community into the school were banquets, cook-outs, and open houses. Activities that occurred at the school generally had small participation from community members. These events involved students, parents, and supporters of the agriculture program. The goal of school activities was usually to highlight the successes of the students and the local agriculture program. Notable exceptions to the typical school activities were the guest speakers from local businesses and colleges that the agriculture program of Plymouth recruited to speak during class. The teacher related the following.

Usually I end that class [Introduction to Agriculture Class] with an 'Agriculture in the Community' lesson and we talk about people in the community that are in involved with agriculture... Every Friday was a career day and we had people from the community and some people from outside of the community come in to speak about

careers in their areas... It was a huge undertaking...

The bi-weekly guest speakers spoke to all of the agriculture students during the day. These guest speakers provided a link within Plymouth between employers and students. A school administrator from Plymouth appreciated this link.

We know the value of success of our kids and to keep our kids in the community... The community wants our kids to be successful and to do well because they are the future of the community. We want them to stay in the community. If they go away to school we want them to come back.

The administrator believed that the agriculture program was helping the community by connecting local businesses to students.

Second, agriculture program activities within the community included volunteering at town festivals, county fairs, and an agricultural safety day. Activities that occurred out in the community occurred less frequently but generally had larger community participation. The agriculture programs' activities were highly visible and accessible to the community because the activities were in conjunction with the larger community-wide events. Community members interacted with the students and seemed to enjoy the services that the agriculture programs and students provided. For instance, Appleton had a community-wide festival in which the agriculture program operated a refreshment booth and coordinated a children's' activity. The event reached hundreds of community members and the popular children's' activity had over twenty participants. The children received an award for participating and everyone in attendance was aware of the agriculture program's presence and contribution to the event. Parents of the participating children were very grateful of the activity. The children's competition was followed-up by a refreshment booth that ran during the event. The refreshment booth was a fundraising opportunity for the agriculture program as well as a chance for the students to highlight their accomplishments over the past year.

The last causal condition was the activities that developed external (beyond the local

community) educational and career opportunities for students. These activities included FFA activities and conventions, college visits, scholarships, guest speakers, and career shows. External activities typically involved the individual students because the whole community did not take part in the external activities. One notable exception was career shows, such as the event sponsored by the FFA alumni of Appleton. The career show included both local and outside representatives of businesses and educational institutions. The FFA alumni from Brownville and Appleton facilitated external opportunities by sponsoring a \$500 scholarship for one graduating senior. Two alumni members of Brownville proudly discussed the amount of money that was raised by the alumni during the past five years. They figured the amount to be about \$10,000. The money had been raised by a variety of different activities all coordinated by the alumni.

We give out two scholarships per year for the last five years... We have been out making money to help that with that. They are \$500 scholarships, so that helps [the students] out a little bit. Two weeks ago we worked at a sale for a local business and sold stuff. That was one of the ways of making money. Every year we have a chili supper and pie auction. We make good money at that.

The researcher specifically asked the Brownville alumni members about the potential brain drain effect of the Brownville as students who won the scholarship, left the community, and utilized the resources built by the Brownville alumni in different community. A community member quickly repudiated the issue of a brain drain. "... That it doesn't matter. What does matter is giving the students the best opportunity to succeed in life." These efforts and activities reached out to the students to link them to external opportunities and prepare them for their future.

Strategies for Constructing Social Connections

The actions and interactions that result from the core category of the construction of social connections were termed strategies. The strategies that emerged were: fostering intergenerational cooperation, creating a local

identity, promoting the local economy, and promoting educational and career opportunities for students. First, intergenerational communication occurred at cookouts and banquets. Intergenerational communication was the interaction of people from different age groups or generations. At a cookout in Appleton the students and adults worked together to host and coordinate the event. The adults and students served the food, the students conducted an informational meeting after the food, and the adults cleaned the facilities after the event. The goal of the cookout was to raise money for students to attend FFA activities. Pride and admiration for the agriculture program and the students' success was high. A parent at the cookout reported that their child had "grown out of their shell" because of the FFA to become a better student and person. Furthermore, the strength of the support from the families involved was evident by the number of generations represented. A community member related. "Did you know that there are four generations here of one family tonight to support the FFA?" The teamwork between the adults and students resulted in intergenerational cooperation.

Some agriculture program activities developed a sense of local identity for the community members. Community members involved in school-based agriculture programs could find a shared identity in the program. Banquets and open houses highlighted the accomplishments of the students and instilled pride in parents and community members. One community member enjoyed knowing that their agriculture program had defeated a nearby community's agriculture program in various FFA activities.

I have people outside of the community come up to me all the time and say that they read about our accomplishments in the paper. It is a great feeling to know that people notice what our kids are doing and how successful they are.

The third strategy was local businesses visiting the agriculture programs to promote the development of the local economies. The guest speakers facilitated this development. The representatives of the local businesses discussed their careers, the education or skills that were

required, and the local job market for that career. Students received firsthand knowledge of local job opportunities with the goal of forming economic connections for the future. The community members of Plymouth appreciated this effort. "There is a great balance between a global and local education... The agriculture program is helping to meet the needs of the local community through its classroom and FFA experience."

The fourth strategy was the external opportunities for students when they made connections to educational networks outside of the community. All three of the agriculture programs had community members that emphasized the importance of students visiting universities and colleges. Two of the community members discussed the importance of the students obtaining a college degree to be competitive. "We have one child wanting to work in the farm industry near our community and another wants going to college... They are going their separate ways and that is okay." The agriculture instructor interviewed from Appleton said, "... students need a vehicle for success because there were no real opportunities [in the community]." The FFA programs sponsored college activities like college visits, college recruiters in the classroom, scholarships opportunities, and relevant college preparation. External career opportunities occurred when students made connections to career networks outside of their community. For example, Brownville visited non-local horticulture businesses to supplement their horticulture course work. Two school administrators from Plymouth quickly pointed out that their agricultural instructor had strong agricultural corporate business ties outside of the community.

While the agriculture economy is important for the area, we are aware that our students are entering into a global economy. We need to prepare them for this global community. Our teacher's connections to outside corporate industries are a valuable resource for our students.

External educational and career opportunities for students were important strategies for the construction of social connections.

Outcomes of Constructing Social Connections

Outcomes were the consequences of the strategies. There were two broad outcomes from the strategies utilized in the construction of social connections: intergenerational sense of community formed between program supporters and students and small numbers of individual students profiting from the social connections that were developed. First, an intergenerational sense of community was formed between the small group of agriculture program supporters and the agriculture students. Supporters and students worked together to develop a local identity through such activities as program cookouts and community-based fundraisers. Career fairs and guest speakers also built some community identity between different generations. Community members involved with career and educational events may not have been the typical program supporter, but the interaction with students was usually limited and not cooperative in nature. The events, which included some level of intergenerational community building, were usually conducted to benefit the students' future, though the program supporters were conscious of the typical one-sided nature of the activities' benefits. The agriculture programs' FFA alumni chapters, instead of the agriculture students, organized the activities.

Second, small numbers of individual students profited the most from the social connections that were developed. All three school-based agriculture programs had activities to engage their students with career and educational opportunities. The activities often connected the students to local careers and educational institutions. These events were usually short in duration. The agriculture programs did sponsor activities that had a greater impact for individual students, including scholarships. The number of students who reaped the most benefits from these opportunities was small because of the availability of program resources though. The career training, college preparation, and scholarship opportunities built from the community's social connections benefited a few students.

Discussion

The purpose of this grounded theory study was to develop a substantive theory of community development by rural school-based agriculture programs. Through open and axial coding a substantive theory of how school-based agriculture programs constructed social connections emerged. A substantive theory, unlike grand or mid-range theories, serves to offer an explanation of a phenomenon of a limited scope (Camp, 2001). According to the findings in this study, agriculture programs can have a positive impact on the social connections between small groups of community supporters and students. The agriculture program utilizes the pre-existing community asset of social connections to generate more social connections between the students and the community. As articulated in this study, these social connections are then reinvested back into the agriculture program in the form of fundraising and student interaction. Individual students, especially those who are destined to leave the community for college, benefit from this reinvestment through scholarships and interaction with educational institutions.

The findings from this study describe a small slice of community development through school-based agriculture programs. It was concluded from the findings that community development in general could happen through agriculture programs. While these three programs were not the community leaders and planners, they were doing their part in building their communities. This conclusion is consistent with research about community development through school-based agriculture programs (Arnold et al., 2005; Budge 2006; Dewees & Velázquez, 2000; Miller 1995). School-based agriculture programs can build their local communities, but more research is needed to determine the effect that these programs have on their communities.

The researchers further concluded that the three school-based agriculture programs in this study were working with pre-existing community assets to build more assets. The energy and resources of the program supporters and agriculture students were transformed to assets for the community and individual students. For instance, Appleton utilized the local business resources of the community to

host a career fair for students with the goal of connecting students to local employers. This model of community development is consistent with theories of asset-based community development (Green & Haines, 2007). This conclusion has implications for teachers who have followed a model of needs assessment when analyzing their communities (Phipps et al., 2008). Needs-based focuses on the deficiencies of a local community and how a school-based agriculture program can help fill the community's deficiencies. The three school-based agriculture programs studied took an assets-based focus, which highlights the strengths of the community and how a school-based agriculture program can help build the community based on the identified strengths. These findings are not suggesting that agricultural educators do away with needs assessments, but rather teachers should do more to determine community assets and how they can build on existing assets rather than focusing solely on needs. Research on community development activities of both the needs and asset-based assessment approaches to community development by agriculture programs should be conducted to determine the advantages and disadvantages of both approaches.

The researchers also concluded that the substantive theory that emerged was that the school-based agriculture programs were constructing social connections between community members. FFA Alumni members and community supporters worked collectively

for the good of the program. These people were utilizing their social connections to help individual students, even at the possible expense of draining the community's resources. In other words, the resources built by the community members were given to a student that was leaving the community temporarily for school and possible indefinitely with their career. The substantive theory functioned similarly to community social capital theories and this conclusion is also consistent with community social capital research that found individual community members gained the most from the community's social capital. Sociologists describe this phenomena as a community using its bonding social capital, or the connections to resources within the community, to construct bridging social capital, or the connections to resources outside of the community, for the gain of individual community members (Agnitsch, Flora, & Ryan, 2006; Gittel & Vidal, 1998; Koliba, 2003; Leonard, 2004). Agriculture programs can have an impact on the social connections of a community, but more research is needed to determine if school-based agriculture programs can have the same impact on other aspects of the community, such as developing financial and cultural resources. Furthermore, research needs to be conducted to analyze how suburban and urban school-based agriculture programs construct social connections.

Figure 2 described the substantive theory that emerged for school-based agriculture programs in rural communities.

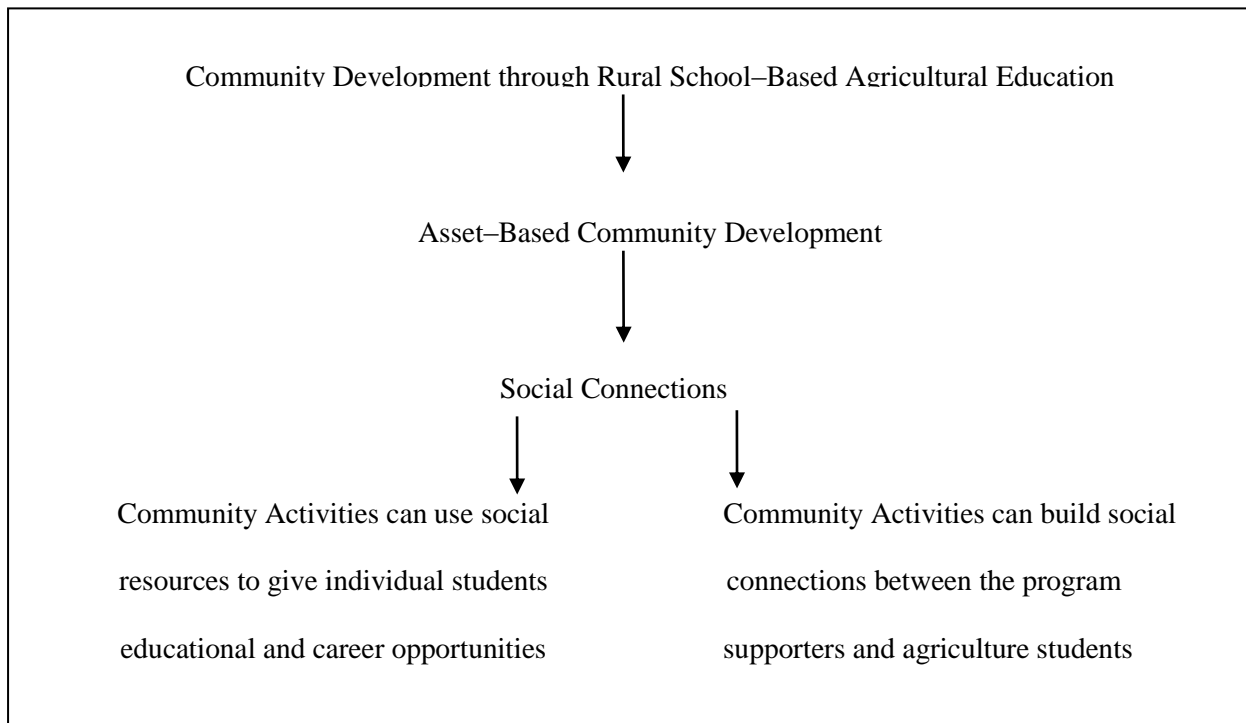


Figure 2. Community development theory through rural school-based agricultural education

Figure 2 illustrates how rural school-based agriculture programs can build their local communities; through asset-based community development to create social connections that result in community activities to benefit students in the local program. In this figure agriculture programs are practicing community development by conducting activities within the community and with the support of community members. Programs are practicing asset-based community development by working with the pre-existing resources of the community. For example, one program had a bake sale to raise money for student scholarships. The bake sale required community members to collaboratively use their social connections to sell more pies, which gave school-based agriculture students more educational opportunities. As Figure 2 illustrates, programs constructed social connections within the community by designing cooperative activities between the community members and school-based agriculture students. Activities that facilitated asset-based community development included community events, program cook-outs, career shows, guest speakers, and any other activity that brings

community members and students together to accomplish a shared goal.

This grounded theory explained how programs could build and utilize the social connections of a community to improve students' lives. More research is needed to determine the impact school-based agriculture programs can have on their local communities, in addition to building social connections. This research did not directly examine the role of classroom instruction, the FFA chapter, and students' SAEs in local community development. Researchers also need to examine the benefits of community-based agriculture activities to their community's financial, cultural, and community vitality. For instance, how can school-based agricultural education programs develop a community's financial resources through SAEs? In this age of accountability, agricultural education teachers need research that explains the benefits of their program to the students, the school, and the community.

References

- Agnitsch, K., Flora, J., & Ryan, V. (2006). Bonding and bridging social capital: The interactive effects on community action. *Journal of Community Development Society*, 37(1), 36–51.
- Arnold, M. L., Newman, J. H., Gaddy, B. B., & Dean, C. B. (2005). A look at the condition of rural education research: Setting a direction for future research. *Journal of Research in Rural Education*, 20(6). Retrieved from <http://www.umaine.edu/jrre/20-6.htm>
- Ary, D., Razavieh, A., Jacobs, L. C., & Sorensen, C. K. (2009). *Introduction to research in education*. Stanford, CT: Cengage Learning.
- Bhattacharyya, J. (2004). Theorizing community development. *Journal of community development*, 34(2), 5–34.
- Beaulieu, L. J., & G. D. Israel. (2011). Communities in rural America: Current realities and emerging strategies. In J. W. Robinson and G. P. Green (Eds.), *Introduction to community development: Theory, practice, and service-learning* (pp. 169–191). New York, NY: Sage Publications.
- Budge, K. (2006). Rural leaders, rural places: Problem, privilege, and possibility. *Journal of Research in Rural Education*, 21(3). Retrieved from <http://www.umaine.edu/jrre/21-13.htm>
- Camp, W. G. (2001). Formulating and evaluating theoretical frameworks for career and technical education research. *Journal of Vocational Education Research*, 26(1). Retrieved from <http://scholar.lib.vt.edu/ejournals/JVER/v26n1/camp.html>
- Creswell, J. W. (2006). *Qualitative inquiry and research design: Choosing among the five traditions*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (2007). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.
- Cronginger, R. G., & Lee, V. E. (2001). Social capital and dropping out of school: Benefits to at-risk students of teachers' support and guidance. *Teachers College Record*, 103(4), 548–581. doi: [10.1111/0161-4681.00126](https://doi.org/10.1111/0161-4681.00126)
- Deweese, S., & Velázquez, J. A. (2000). Community development in Rural Texas: A case study of Balmorhea Public Schools. *Journal of Community Development Society*, 31(2), 216–232.
- Doerfert, D. L. (Ed.) (2011). *National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015*. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.
- Flora, C. B., Flora, J. L., & Fey, S. (2007). *Rural communities: Legacy and change*. Boulder, CO: Westview.
- Gittell, R., & Vidal, A. (1998). *Community organizing: Building social capital as a development strategy*. Thousand Oaks, CA: Sage.

- Green, G. P., & Haines, A. (2007). *Asset building and community development*. Thousand Oaks, CA: Sage.
- Haleman, D. L., & DeYoung, A. J. (2000). A reflective essay concerning something better: The experience of Appalachian Rural Trust schools. *Journal of Research in Rural Education*, 16(1), 3–7.
- Hanagriff, R. D., Murphy, T. H., Roberts, T. G., Briers, G. E., & Linder, J. R. (2010). Economic impact of supervised agricultural experiences: Returns from SAE investment costs in Texas, 2007–2008. *Journal of Agricultural Education*, 51(4), 71–81. doi: [10.5032/jae.2010.04071](https://doi.org/10.5032/jae.2010.04071)
- Hastings, L. J., Barrett, L. A., Barbuto, J. E., & Bell, L. C. (2011). Developing a paradigm model of youth leadership development and community engagement: A grounded theory. *Journal of Agricultural Education*, 52(1), 19–29. doi: [10.5032/jae.2011.01019](https://doi.org/10.5032/jae.2011.01019)
- Hustedde, R. J., & Ganowicz, J. (2002). The basics: What’s essential about theory for community development practice? *Journal of Community Development*, 33(1), 1–19.
- Israel, G. D., Beaulieu, L. J., & Hartless, G. (2001). The influence of family and community social capital on educational achievement. *Rural Sociology*, 66(1), 43–68. doi: [10.1111/j.1549-0831.2001.tb00054.x](https://doi.org/10.1111/j.1549-0831.2001.tb00054.x)
- Israel, G. D., & Hoover, T. S. (1996). Developing opportunities for FFA chapters recognition: A model for community needs assessments. *Journal of Agricultural Education*, 37(3), 1–8. doi: [10.5032/jae.1996.03001](https://doi.org/10.5032/jae.1996.03001)
- Johnson, D. E., Meiller, L. R., Miller, L. C., & Summers, G. F. (Eds.). (1987). *Needs assessments: Theory and methods*. Ames, IA: Iowa State University Press.
- Koliba, C. J. (2003). Generating social capital in schools service–learning. *Academic Exchange Quarterly*, 7(2), 336–345.
- Leonard, M. (2004). Bonding and bridging capital: Reflections from Belfast. *Sociology*, 38(5), 927–944. doi: [10.1177/0038038504047176](https://doi.org/10.1177/0038038504047176)
- London, J. K., Zimmerman, K., & Erbstein, N. (2003). Youth–led research and evaluation: Tools for youth, organizational, and community development. *New Directions for Evaluation*, 98, 33–45. doi: [10.1002/ev.83](https://doi.org/10.1002/ev.83)
- Marfe, A. W., & Weber, B. A. (2010). Assessing community capacity and social capital in rural America: Lessons from two rural observations. *Community Development*, 41(1), 92–107. doi: [10.1080/15575331003661099](https://doi.org/10.1080/15575331003661099)
- Martin, M. J., Ball, A. L., & Connors, J. J. (2006). A historical analysis of H. M. Hamlin and his community schools. *Journal of Agricultural Education*, 47(2), 14–23. doi: [10.5032/jae.2006.02014](https://doi.org/10.5032/jae.2006.02014)
- McClellan, S. L., Schultz, D. A., & Steger, M. B. (2002). Introduction. In S. L. McClellan, D. A. Schlutz, & M. B. Steger (Eds.), *Social capital: Critical perspectives on community and “Bowling alone”* (pp. 1–19). New York: NY University Press.

- Miller, B. (1995). The role of rural schools in community development: Policy issues and implications. *Journal of Research in Rural Education, 11*(3), 163–172.
- Perna, L. W., & Titus, M. A. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *The Journal of Higher Education, 76*(5), 485–518.
- Phipps, L. J., Osborne, E. W., Dyer, J. E., & Ball, A. (2008). *Handbook of agricultural education in public schools*. Clifton Park, NY: Delmar Learning.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster.
- Salamon, S. (2007). *Newcomers to old towns: Suburbanization of the heartland*. Chicago, IL: University of Chicago Press.
- Schafft, K. A., & Harmon, H. L. (2011). Schools and community development. In J. W. Robinson and G. P. Green (Eds.), *Introduction to community development: Theory, practice, and service-learning* (pp. 245–260). New York, NY: Sage Publications.
- Strauss, A., & Corbin, J. (2007). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage Publications.
- Theobald, P. G. (1997). *Teaching the commons: Place, pride, and the renewal of community*. Boulder, CO: Westview Press.
- United States Department of Agriculture. (2004). *Measuring rurality: Rural–Urban Continuum Codes*. Retrieved from <http://www.era.usda.gov/briefing/rurality/RuralUrbCon/>

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