

Jones Valley Teaching Farm

2017 Report

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Executive Summary

This report was commissioned by Jones Valley Teaching Farm in spring 2017 to explore student and parent/guardian experiences with Jones Valley Teaching Farm activities, specifically Farm Lab Club, Farmer's Market Club, and the Woodlawn High School Urban Farm. A descriptive case study design was used to capture these experiences. Primary data were drawn from nine focus group sessions.

Consistent with research literature on school connectedness, findings revealed a high level of student, family, and community engagement based on student involvement in Jones Valley Teaching Farm activities. Students and parents/guardians reflected on increased levels of student responsibility/accountability in the Teaching Farms and Farmer's Market. Similarly, students demonstrated increased levels of self-efficacy as reflected by personal growth, life skills, and career exposure.

Finally, students and parents/guardians discussed the valuable relationships students developed as a result of their participation in these activities, including peer-to-peer, student-to-farmer, and student-and-parent relationships. Notably, students and parents/guardians spoke about the significant roles of Jones Valley Teaching Farm Good School Instructors and Teaching Farm Fellows who frequently served as mentors to students. The value of these relationships, especially among urban youth, is well-supported in the research literature.

While significant numbers of students in partner schools are introduced to Jones Valley Teaching Farm through the Good School Program, all students would benefit from the highly interactive and hands-on afterschool programs identified above. The findings of this study suggest that an investment in program expansion would lead to an increased number of students experiencing greater school connectedness which may lead to higher rates of student retention and graduation.

Overview

Jones Valley Teaching Farm began in 2002 as a 501(c)(3) nonprofit with the goal of providing access to locally grown, fresh produce to residents in the urban center of Birmingham, Alabama. The farm began as a garden in the Southside community but expanded its footprint in 2007 by moving to a three-acre vacant lot downtown. Since then, Jones Valley Teaching Farm has expanded its mission to include not only food access but also food education.

Jones Valley Teaching Farm accomplishes this aspect of its mission by partnering with Birmingham City Schools to provide students with “innovative and rigorous hands-on food and nutrition education” (Jones Valley Teaching Farm, n.d., para 1.). Jones Valley Teaching Farm currently has Teaching Farms on the grounds of five Pre-K–8 schools and one high school in the Birmingham City Schools System. A seventh partner school uses the original downtown farm site as its Teaching Farm. A summary of partner schools can be seen in Table 1.

Table 1

*Characteristics of Birmingham City Schools that Partner with Jones Valley Teaching Farm**

| School | Enrollment | Free/Reduced Lunch Rate |
|-----------------------------|------------|-------------------------|
| Avondale Elementary School | 560 | 62.85% |
| Glen Iris Elementary School | 835 | 51.78% |
| Hayes K-8 School | 953 | 81.60% |
| Oliver Elementary School | 444 | 80.29% |
| Phillips K-8 Academy | 732 | 30.67% |
| Putnam Middle School | 285 | 76.14% |
| Woodlawn High School | 806 | 71.71% |

*Alabama State Department of Education, 2016-2017

Good School Food

The primary Pre-K–12 education program offered through Jones Valley Teaching Farm is Good School Food; this program is staffed by one Good Food Instructor and one Teaching Farm Fellow (JVTF staff members) at each site. Throughout the year, students in partner schools participate in Good School Food lessons taught by JVTF staff members. Lessons are planned in

collaboration with classroom teachers to maximize the relevance to the academic content standards at each grade level.

In addition to standards-based lessons delivered during the school day, students gain hands-on experiences in three afterschool programs, Farm Lab Club, Cooking Club, and Farmer's Market Club, as well as through a summer program called Camp Grow! Student interns also manage the day-to-day operations and marketing of the Woodlawn High School Urban Farm. Since 2012, more than 17,000 students have participated in hands-on food and nutrition education programs through Jones Valley Teaching Farm. Three specific programs designed to engage students in learning outside of the classroom emerged as the focus of this investigation: Farm Lab Club, Farmer's Market Club, and the Woodlawn High School Urban Farm. Short descriptions of each program are provided below.

Farm Lab Club

Farm Lab Club is an experience-based activity in which students learn farming and gardening skills in outdoor classrooms (i.e., Teaching Farms) which are co-located on school grounds. In addition to learning the practical skills of food production, Farm Lab Club activities are designed to support students' socio-emotional growth by giving them responsibilities in the Farm Lab and fostering a team-based approach to learning. All Farm Lab Club activities are guided by JVTf staff members who are assigned to specific schools and interact frequently with students both inside and outside the classroom.

Farmer's Market Club

Farmer's Market Club provides opportunities for students to sell produce to the public during seasons of peak productivity. In addition to learning about fresh produce, students gain a real-world understanding of operating a small business. Farmer's Market Club targets the 21st

century learning skills of: communication, marketing, financial literacy, and quality customer service. Similar to Farm Lab Club, Farmer's Market Club is supervised by JVTF staff members who interact with students one-on-one and as a team.

Woodlawn High School Urban Farm

Completed in 2015, this two-acre urban farm is managed by a Program Director and Farm Manager and staffed by six high school student interns who are juniors and seniors at Woodlawn High School. Features of the farm include a greenhouse, bio-retention pond, office and teaching space, and produce processing and storage facilities. Student interns are responsible for all aspects of food production and sales.

Setting

Alabama is a culturally rich and economically diverse state with approximately 4.8 million residents spread across 67 counties. Located in Jefferson County, Birmingham is the most populous city in the state with approximately 212,000 residents. The majority of residents in Birmingham self-identifies as Black/African American (73.4%) or White (22.3%) with 3.6% identifying as Hispanic or Latino of any race (U.S. Census, 2010).

The city of Birmingham occupies Jones Valley, a 100-mile long basin that runs northeast to southwest and is flanked by the trailing ends of the Appalachian foothills (Armes, 1910; Dubose, 1887). In the mid-19th century, Jones Valley was bisected by the principal railroad corridor which led to the growth of Birmingham as an industrial center in the Southeast with major industries in iron and steel production.

Between 1960 and 2010 the population of Birmingham dropped precipitously from approximately 341,000 to 212,000 residents, due in large part to *white flight* from the city to surrounding suburbs as well as the loss of jobs following the restructuring and closure of steel

production and related industries. The reported median household income for Birmingham residents is \$31,061, approximately \$20,000 lower than the national median household income, and nearly 31% of Birmingham residents live in poverty (American Community Survey, 2011-2015).

Birmingham City Schools System

The Birmingham City Schools System serves 23,320 students in grades K-12 as well as 750 preschool students. Jones Valley Teaching Farm programs reach approximately 4,600 students in Pre-K–12. Collectively, the student population of Jones Valley Teaching Farm partner schools is 85% African American. Five of these partner schools (Avondale Elementary, Oliver Elementary, Hayes K-8, Putnam Middle School, and Woodlawn High School) are part of the Woodlawn Innovation Network (WIN). WIN is an initiative which seeks to transform education in the five schools in the Woodlawn High School feeder pattern. Working with elementary and middle school students who matriculate to Woodlawn High School provides Jones Valley Teaching Farm staff members a unique opportunity to develop long-term relationships with students for greater impact (Pre-K–12).

As demonstrated in Table 1, the free/reduced lunch rate among Jones Valley Teaching Farm partner schools ranges from 31% to 82%. The poverty rate of Birmingham City School students is 49% which stands in stark contrast to the much lower poverty rates of students in neighboring school districts. Every school in the Birmingham City Schools System qualifies for Title I, a federal program designed to provide funding to improve the academic achievement of students who are at risk due to poverty. The system qualifies for a Title I Concentration Grant which is available to local educational agencies (LEAs) where the number of at-risk students

exceeds 6,500 or 15% percent of the total school-age population (U.S. Department of Education, 2015).

Literature Review

Despite its progress in recent years to regain control of operations from the state due to financial mismanagement (Stewart, 2015), the Birmingham City Schools System is emblematic of other urban schools in the United States. These school districts and systems continue to struggle to provide resources and opportunities for students of color and students from low-income families who now comprise the majority of urban public school students in the United States (DeArmond et al., 2015). Furthermore, the achievement gap between black and white students has remained relatively unchanged over the past 50 years in spite of national legislation and policy initiatives (Camera, 2016).

Shifting Mindset

Dropout rates among African Americans are especially acute in areas of concentrated poverty (Allen, 2014). However, rather than focusing on demographic characteristics as predictors of dropping out, researchers and policymakers are now looking at “student behavior, attendance, and failure in core subjects like math and English as early as sixth grade” (Finkel, 2010, para. 23), which suggests that issues of student involvement and retention must be addressed at increasingly earlier grade levels. According to the experts, people are beginning to recognize that early identification and intervention among elementary and middle school students, especially those attending high-poverty urban schools, is critical to combatting student disengagement and increasing graduation rates in the United States (Balfanz, Herzog, & Mac Iver, 2007; Thiessen, 2007).

DeArmond et al. (2015) encouraged academic and city leaders to aggressively search for new evidence-based solutions that address the complex challenges that face public education in the United States. Specifically, the authors called for strategies that are “outside the traditional boundaries of public education” in order to develop “pragmatic, equitable, and promising approaches to address the complex challenges facing public education” (p. ii). Urban farming may very well represent a nontraditional route to promoting engagement and retention of at-risk youth in urban centers.

Urban Farming

Urban agriculture in the United States is not a new concept; rather, its development can be traced back to events of the late 19th and early 20th centuries in which social and economic needs called for increases in food production beyond rural farming operations, such as Liberty Gardens during World War I, subsistence farms during the Great Depression, and Victory Gardens during World War II (Lawson, 2005).

More recently, urban agriculture has been recognized for its positive contributions to public health, economic development, and education (Williams & Dixon, 2013). While the research literature is replete with examples of the benefits of urban agriculture, such as enhancing a community’s food security and increasing the social and emotional well-being of its residents (Lovell, 2010; Tieg et al., 2009; Walker, Keane, & Burke, 2010), less is known about the use of urban farming to promote school connectedness among students in economically disadvantaged urban areas.

School Connectedness

Monahan, Oesterle, and Hawkins (2010) described school connectedness as consisting of “two primary and interdependent components: (a) attachment, characterized by close affective

relationships with those at school; and (b) commitment, characterized by an investment in school and doing well in school” (p. 3). While the concept of school connectedness may seem like an indirect approach to school improvement, especially in this current era of school accountability, Blum (2005) argued that school connectedness may have a substantial impact on measures of student retention and achievement.

Moreover, while connecting students to school is important at all grade levels Blum (2005) suggested that it may be especially crucial during the adolescent years when students are increasingly exposed to health-compromising behaviors. Consistent with recommendations from the National Research Council and the Institute of Medicine (2004), Blum identified a number of factors that were positively associated with school engagement including opportunities for students to participate in (a) experiential, hands-on learning; (b) service learning and community service projects; and (c) mentoring relationships, as well as experiences that promote positive and purposeful peer support and peer norms.

Multiple authors have provided evidence that school connectedness is related to behavioral, emotional, and academic outcomes (Eccles et al., 1998; Osterman, 2000; Resnick et al., 1997). Additionally, Monahan et al. (2010) demonstrated that school connectedness actually predicts positive development among youth. The authors further stated that in addition to the school environment, parents and peers play important roles in encouraging strong school connection among adolescents.

Despite the potential of school-based urban farms to foster school connectedness by promoting positive peer-to-peer, peer-to-instructor, and peer-to-parent relationships; enhancing students’ social-emotional growth and development; and providing students with opportunities to engage in hands-on, experience-based learning activities, there is paucity in the research

literature on the topic. This descriptive case study seeks to add to the extant literature on urban farming among students in economically disadvantaged urban areas.

Methodology

The social and reciprocal nature of Jones Valley Teaching Farm activities made a qualitative method of inquiry an appropriate choice for exploring student and parent/guardian [herein referred to as “parent”] experiences with Jones Valley Teaching Farm (Creswell, 2009; Hatch, 2002). Further, the emergent design of qualitative research allowed the researcher to gather information and make interpretations from multiple sources of data (Creswell, 2007). The researcher used a descriptive case study method to conduct semi-structured focus group interviews and supplement these data with interpretations of data transcripts from individuals whose primary language was other than English and school-based evaluations of teachers, administrators, parents, and students.

Data Collection

The researcher regarded the case study method to be a suitable research design based on its ability to capture rich data of a single phenomenon (Merriam, 1998; Savin-Baden & Major, 2013). Parent and student focus groups were guided by semi-structured interview protocols (see Appendices A & B); the focus group structure allowed individuals to share their own unique perspectives while also facilitating conversations among participants about similarities and differences with the phenomenon.

The researcher facilitated five student focus groups and four parent focus groups and a note-taker recorded focus group notes by hand; all focus group sessions lasted 60 minutes. Following each focus group, the note-taker and facilitator reviewed notes for missing or incomplete data and corrected any misspellings or unclear statements.

Setting and Participant Selection

This research was conducted at two elementary schools, one middle school, one K-8, and one high school, all of which are part of the Birmingham City Schools System. Several criteria were used to select specific, information-rich participants for this study to ensure an accurate representation of student and parent experiences with Jones Valley Teaching Farm. To be eligible for consideration, all student participants had to be enrolled in one of the aforementioned schools. These students would have received instruction in the Teaching Farms as part of the school curriculum, including at least five lessons per semester during the school year.

Furthermore, student focus group members participated in Farm Lab Club, Farmer's Market Club, or the Woodlawn High School Urban Farm. Many of these students also participated in cooking demonstrations or a summer program. Parents had to have at least one student participating in Jones Valley Teaching Farm activities to be invited to join a focus group.

A total of 33 students participated in student focus groups: 12 elementary school, eight K-8, nine middle school, and four high school students. Twenty-five parents participated in parent focus groups. Parent and student focus groups were conducted separately from one another, and all were convened in students' respective schools. In appreciation for their time, all parents who participated in a focus group received a \$25.00 pre-paid Visa card. Jones Valley Teaching Farm also received written responses from eight parents whose primary language was other than English; questions and transcripts for these individuals were translated by a professional, third party vendor.

Data Analysis

For this investigation, the researcher used a text-to-table application in Microsoft Word to organize emergent codes and themes. The researcher analyzed data using constant comparative

and thematic analysis techniques as articulated by Savin-Baden and Major (2013). Line-by-line coding allowed the researcher to extrapolate recurring words, actions, phenomena, and thoughts from focus group notes (McKinney & Morris, 2010). Trustworthiness of data was established through peer review, triangulation of data sources and methods; and the use of an audit trail (Denzin, 1978; Lincoln & Guba, 1985).

Findings

Three overall themes emerged from parent and student focus groups regarding their experiences with Jones Valley Teaching Farm, including: *responsibility/accountability*, *relationships*, and *self-efficacy*. For each theme, the researcher provides sub-themes and representative quotes to highlight findings.

Responsibility/Accountability

Across focus groups, students talked about the important roles they played in planting and tending to their gardens in the school-based Teaching Farms and the larger downtown and high school gardens. Students who were not involved directly in Farm Lab Club discussed the multiple responsibilities they had for marketing and selling fruits and vegetables through Farmer's Market Club. Students seemed to take a great deal of pride in the time and effort they invested in these gardens and in fostering relationships with community members to develop a regular clientele for their products.

There was consensus among students at multiple schools that participating in Jones Valley Teaching Farm activities, especially Farm Lab Club, had taught them to be more responsible. For example, one student said:

You have responsibility as a gardener to water the plants (and) put them in a place that they can get sunshine and air. When you're done using your tools, you have to put them up and then get another out. You need to wash tools, too.

Other students noted that they had learned to be “gentle” with the vegetables by not running in the gardens or pulling off leaves. One student described the proper way to pick kale—by the stem instead of the leaves—to preserve the integrity of the plant. Students also discussed the importance of following the rules and working together to accomplish a goal that was bigger than any one of them could achieve on his or her own.

Similarly, students who participated in Farmer's Market Club described the various roles and responsibilities of operating an active fruit and vegetable stand. Students said they developed strategies for promoting Farmer's Market Club and events to the larger community and took turns talking with customers, taking orders, delivering produce to clients at the local YMCA, handling money, and taking inventory. One student stated, “There is a lot of trust. We treat it like our professional jobs.” Another said that her favorite thing about Farmer's Market Club was that students were afforded the opportunity to run all aspects of the operation. She quickly added that Jones Valley Teaching Farm staff members were always on hand “to make sure things didn't collapse.”

Parents also recognized the value-added benefits of their children participating in Jones Valley Teaching Farm activities. One parent observed that her daughter starting picking up after herself at home which she attributed to the lessons her child learned in Farm Lab Club. Another suggested that her son and his friends experienced a greater sense of accountability through farm activities since each of them had specific tasks to accomplish. She said, “If you out there playing, you're not doing your job.”

A number of parents also noted increased interest by their children in planting gardens at home or expanding the variety of vegetables in existing home gardens. Several parents happily admitted to learning new techniques from their children to improve their gardens. One indicated that her plants were “ten times bigger from him (son) tending to them.” Another parent said that her son planned their home garden and selected both the plants as well as the appropriate soil. She said, “He’ll ask if it’s going to rain cause if it doesn’t he tells me I need to water the plants today.” In general, parents indicated that their children took their commitments to Farm Lab Club and Farmer’s Market Club quite seriously.

Relationships

Student participants agreed that Jones Valley Teaching Farm activities provided them opportunities to meet and sustain relationships with their peers as well as JVTTF staff members. Additionally, students and parents identified positive ways in which their family’s relationships with one another had grown over time as a result of student participation in Farm Lab and Farmer’s Market Club.

Peer-to-peer. Many of the middle and high school students described the benefits of Jones Valley Teaching Farm in terms of social interactions with peers. Farm Lab Club and Farmer’s Market Club provided students with opportunities to spend time with friends while engaging in activities they perceived to be worthwhile. Parents agreed that Farm Lab Club and Farmer’s Market Club were activities their children looked forward to every week and said they were glad their children had found a positive group of peers to spend time with through Jones Valley Teaching Farm.

In describing peer-to-peer relationships at the high school level, one of the students said quite simply, “We work with great people. We’re a family.” Others commented on the ease with

which they had developed and maintained friendships through Jones Valley Teaching Farm. They demonstrated a sense of trust and camaraderie with one another by poking fun or “throwing shade” on other members of the group. In fact, one student noted that their teacher, who is also the program director, “throws the most shade of everybody.”

Peer-to-instructor. Students consistently talked about the positive interactions they had with JVTF staff members. Some of the words students used to describe these individuals included kind, patient, supportive, helpful, knowledgeable, hardworking, dependable, and creative. Several students said they would feel comfortable asking for assistance even if the topic was not farming related. Overall, students communicated a level of trust and respect for JVTF staff members and described their relationships with these individuals in ways that seemed deeply personal and cherished. Moreover, students easily recalled the names of previous JVTF staff members with whom they had interacted in the past.

Similarly, parents spoke highly of JVTF staff members and expressed appreciation for the care and concern these individuals showed to their children. One parent said, “If they (students) don’t get the love they need at home, they get the love they need here. Farm Lab is everything to them”. A parent at a different school added, “They (JVTF staff members) are concerned about them (students). They hug them. They know all the kids by name.”

One of the high school students maintained that his teacher, the program director, had changed his life. He said:

Before farming I wasn’t a good noodle. He [teacher] invested and saw something in me that I didn’t see in myself. Problems at home or at school, when I need them, they’re there. Looking up to people is extremely important but if you’re there when I need you, that’s all I can ask.

Student-to-parent. In addition to experimenting with new foods and recipes at home, parents identified multiple ways in which their child's involvement in Jones Valley Teaching Farm had impacted their families. One parent said that her son's requests for healthier snacks had changed the way their family eats, a common sentiment expressed across parent focus groups. Likewise, parents noted increased involvement by their children in making grocery lists and shopping for food.

Students reported having a better understanding of seasonal foods and how they are supposed to taste. One student stated, "Tomatoes are grown ahead of time before they are put in the store. It makes you question how long it has been before they actually decide to sell it." Students suggested that being more knowledgeable about food allowed them to help their parents make better food purchases.

Even at the high school level, students noted dynamic changes in the ways they interacted with their parents due to Jones Valley Teaching Farm. One student described the first time he brought home peppers from the farm. According to this student, his mom said, "Tadpole, what am I supposed to do with this?" Since then, however, his family has become more amenable to preparing fresh vegetables, including collards, turnips, and carrots.

Another high school student indicated that she does the majority of the cooking for her family. She said, "We have a choice of fast food or go to the store and make something at home." Since she plans the meals, this student noted that she incorporates vegetables into their meals and uses fresh herbs for seasoning.

Self-efficacy

At all levels of the educational spectrum, students identified multiple ways in which their participation in Jones Valley Teaching Farm activities helped them grow as individuals by

moving outside of their comfort zone. Students described learning new skills, trying unfamiliar foods, and working with individuals with whom they might not have otherwise interacted. Several students shared experiences in which they made self-discoveries, including career interests, while others discussed life skills that they thought might serve them well in the future.

Personal growth. One middle school student made it clear that she had not planned on spending time working outdoors in a school garden. She stated:

Before I started doing Jones Valley Teaching Farm, the thought of being outside with dirt—I was like, no, I didn't do that stuff...I'm a girly-girl and bugs and dirt, no. It was because I had friends that I didn't have classes with and I liked being there with my friends. They had to convince me to do stuff but I wasn't a hands-on person.

Despite her initial reservations, this student acknowledged that she was glad her friends had “made” her participate in Farm Lab Club; she further noted that she actually enjoyed spending time in the garden.

Across focus groups, students shared experiences in which they learned new skills, such as effective farming techniques and new ways to prepare foods. In commenting on his mom's plants at home, one student shared the advice he had given to her, “I told her she shouldn't make the holes that deep cause they (plants) wouldn't be able to grow.”

Both students and parents had similar stories in which students either prepared new foods at home or offered suggestions and guidance in the kitchen, like adding vegetables to pasta or substituting olive oil for butter. One parent said that her elementary school son was really excited about cooking after Farm Lab Club. She said, “He came home one day and said mom, don't worry about cooking tomorrow, I got it!”

Students and parents also talked about the different fruits and vegetables they tried as a result of student participation in Jones Valley Teaching Farm activities. Focus group participants identified their favorite new foods, from kale and kohlrabi to peppers and persimmons, and observed that Jones Valley Teaching Farm had introduced them to fruits and vegetables they had never before seen. While students rated some foods as more appetizing than others they said that they were now more willing to try new foods because of their experience. Moreover, parents noted that students were eager to try new recipes at home, frequently employing healthier strategies such as sautéing and roasting vegetables instead of frying them.

Life skills. In addition to learning how to grow and prepare their own food, which students and parents all agreed were important life skills, students commented on other proficiencies they had developed through their involvement with Jones Valley Teaching Farm. Students described the value of teamwork in maintaining a farm and provided numerous examples in which they had worked together to complete their tasks.

At the same time, students acknowledged that occasionally conflicts arose that they had to deal with. Students said that they did not necessarily have to agree with or even like another person to work with him or her. Neglecting or avoiding their responsibilities, however, was not an appropriate solution. In this respect, students suggested that Jones Valley Teaching Farm staff members were extremely supportive in helping them resolve issues and mediate conflict.

Students in Farmer's Market Club identified communication and marketing as skills they had learned from Jones Valley Teaching Farm. Additionally, they noted that good salesmanship required them to be knowledgeable about the items they were selling. For them, it was not enough to simply know the prices; rather, they recognized that they could increase sales by

understanding the similarities and differences between vegetables and discussing ways to prepare these items properly.

While students at the high school acknowledged learning new skills through Jones Valley Teaching Farm, many of these skills were related to planting and harvesting food. They did, however, identify an important role they played in mentoring younger students through Farm Lab Club. One said, “We tell them what we are doing and then show them and then we do it.”

Career exposure. For a select number of students, participation in Jones Valley Teaching Farm activities provided insights and exposure to career fields that they had not previously considered. For example, one parent noted that her child was deeply involved in developing and designing architectural plans as well as writing grants and speaking to potential donors to support the Greenhouse Project at her school.

According to this parent, the activities associated with the Greenhouse Project boosted her daughter’s self-confidence and enhanced her public speaking skills. Furthermore, she suggested that these activities demonstrated to students real-world applications of math and science and introduced students to building professionals (e.g., contractor, architect, engineer) who served as both mentors and role models.

One of the high school students said that she discovered her passion for working with food through her involvement with Jones Valley Teaching Farm and intended to pursue a career in the culinary arts. In addition to leading cooking demonstrations and marketing Jones Valley Teaching Farm events, she noted that she also works for another local nonprofit catering company. She intimated that Jones Valley Teaching Farms had broadened her horizons and put her in contact with several nationally and internationally renowned local chefs. Her ultimate goal, she said, is to be a restaurant owner who serves locally sourced produce.

Community engagement. Students described the many ways in which Jones Valley Teaching Farm brought the community together through activities and events and encouraged students to become change agents with their own community. Since the downtown market is close in proximity to the YMCA Youth Center, students explained how they went to the YMCA and filled orders as part of Farmer’s Market Club. Students also discussed providing food samples at a YMCA-sponsored health and wellness fair.

Similarly, one of the high school students described an event that Jones Valley Teaching Farm hosts in the spring, summer, and fall to promote health awareness, food, and local entertainment. She said:

I saw the purest form of food bring community together... at the end of the day so many people were smiling and the kids were having so much fun and that was a good thing to see. Our hard work paid off in the end.

The student further described Jones Valley Teaching Farm as “the most amazing thing that could happen to this community.”

The high school students agreed that the Woodlawn High School Urban Farm served as an anchor for the community, a place where community members could purchase fresh produce at affordable prices. Students viewed the recently completed farm as a source of pride for the area. One student described the location of the current farm as a previously active area for crime. He suggested that since the farm was built crime had diminished. Another stated, “Being a part of something great like this, I see how things transitioned and made things more positive...It (Jones Valley Teaching Farm) changed me for the better and the community for the better.”

Discussion and Implications

Students and parents alike discussed the value of Jones Valley Teaching Farm and what it meant to them as individuals as well as members of the larger community. One parent noted that the Birmingham City Schools System is rarely recognized for the good things it does. Consequently, the needs of students often get overlooked. This parent suggested that the presence of Jones Valley Teaching Farm in the downtown area showed that people care about urban communities. In recounting their experiences, students and parents reached a similar conclusion: Jones Valley Teaching Farm is a *catalyst* for student and community engagement.

Consistent with the literature on school connectedness, Jones Valley Teaching Farm provides rich opportunities for students to develop meaningful relationships with peers, instructors, and parents in the context of positive school experiences. Parents observed that their children looked forward to school in order to participate in Farm Lab Club and Farmer's Market Club. In fact, one parent noted that her daughter had not missed a day of school since participating in Farm Lab Club.

Relationships between students and JVTF staff members seemed to be especially valuable to students in the elementary and middle school grades. While these staff members maintained supervisory roles for classroom lessons and daily operations of the Farm Labs, students did not perceive them to be authority figures in the same way as traditional teachers or parents. Rather, JVTF staff members played an important mentoring role that was akin to an older and wiser sibling. These relationships, especially among urban youth, are well-supported by the research literature (DuBois & Rhodes, 2006; Karcher, Zhola, Avera, & Johnson, 2016; Jarjourna, 2013).

Similarly, focus group participants described the benefits of Jones Valley Teaching Farm activities in terms of the experiential, hands-on learning opportunities they provided; factors that Blum (2005) and the National Research Council and the Institute of Medicine (2004) identified as best practices for student engagement. Even though farming is hard work, students consistently talked about the joy they experienced through Jones Valley Teaching Farm activities, activities that were literally in their own backyard.

Moreover, one of the high school interns described the Woodlawn High School Urban Farm as a type of temporary reprieve from life's daily struggles. He noted that his life, and the lives of other minority students growing up in poverty, is not fair. He said, "I can have the worst day at school, but when I get in this space, it all goes away. Two hours later it's back, but when I'm here it goes away." This finding may suggest that this student experienced self-efficacy as a form of self-care. While beyond the scope of this current study, this topic would be worth further exploration in future research.

Even at the earliest grades, students described ways in which they had become more responsible as a result of participating in Jones Valley Teaching Farm activities. Students discussed their roles in completing individual tasks as well as the value of working as a team, which many of them expressed in terms of group accountability. One parent observed that her daughter had gained a sense of responsibility through Farmer's Market Club to do "the best at whatever you are assigned to do;" lessons that her daughter had carried back to the home and into the community.

Despite these many benefits, Jones Valley Teaching Farm is not without its challenges. Parents of students at the elementary and middle school levels expressed concern that there were no male Teaching Farm Fellows this past academic year. These parents noted that the boys in the

program had responded especially well to previous Teaching Farm Fellows who were male and suggested that their children—both boys and girls—would benefit from positive male role models (Lynch, 2016).

In a different focus group, parents lamented the lack of participation of fathers in Farm Lab and Farmer's Market Clubs. In fact, of the 25 individuals who participated in parent focus groups, only one was male. Again, parents suggested that greater involvement by males would enhance program offerings and foster more meaningful experiences for boys and young men. Jones Valley Teaching Farm program planners may be able to close this *opportunity gap* by further developing the skills of male high school students to intentionally mentor students at the elementary and middle school levels (Hidden Curriculum, 2014).

Furthermore, despite widespread agreement among students and parents that Farm Lab and Farmer's Market Clubs had led to significant and positive experiences for participating students, involvement was limited due to budgetary and staffing restrictions. Ideally, all students would have access to such high intensity, hands-on learning experiences. Current resources, however, has made program expansion cost prohibitive.

Even across schools there were differences in the amount of time JVTF staff members had to spend with students. Not surprisingly, students who engaged with Instructors and Teaching Farm Fellows more frequently and for longer durations of time described more meaningful and enriching experiences. Jones Valley Teaching Farm administrators are encouraged to establish minimum standards of interactions and frequency to achieve further program success. Similarly, future researchers may wish to consider appropriate *dose response* for programs like Jones Valley Teaching Farm (Kaplan, Spittel, & David, 2016).

Limitations

The researcher acknowledges that the findings from this study were based on the experiences of a purposeful sample of students and parents who were actively involved with Jones Valley Teaching Farm through Farm Lab Club, Farmer's Market Club, and the Woodlawn High School Urban Farm. Therefore, findings from the study cannot be generalized beyond the context in which the research was conducted.

Furthermore, experiences gathered from a different combination of students and parents may have yielded different results. However, the rigorous methods employed to collect and analyze data as well as high levels of agreement both within and across focus groups lend credibility to the research findings and increase the likelihood of their transferability to other settings (Creswell, 2005; Creswell & Miller, 2000).

Conclusions

The public education system in the United States faces significant challenges in preparing students to be college and career ready (Bromberg & Theokas, 2016; DeArmond et al., 2015). The Birmingham City Schools System is no exception. Nevertheless, there is reason for hope. Now more than ever, academic and community leaders are encouraged to seek new and innovative strategies to engage students in meaningful learning experiences that promote positive affective relationships and involvement in school activities. Jones Valley Teaching Farm programs and activities are excellent examples of evidence-based strategies that meet both of these criteria.

According to Lake (2015), Director of the Center on Reinventing Public Education, "America is at a profound moment of social struggle...School improvement cannot wait for us to solve poverty or racial injustice. We can create great school options now for young people that

can help mitigate these other social challenges” (p. 5). The results of this study suggest that Jones Valley Teaching Farm provides intentional and meaningful opportunities for at-risk students to thrive in an educational environment that typically offers few opportunities for hands-on learning.

Despite its size, Jones Valley Teaching Farm reaches approximately 25% of students in partner schools through standards-based classroom lessons. However, due to limited financial and other resources fewer students participate in the highly interactive and hands-on afterschool programs that appear to yield the greatest advantages for students. Nevertheless, *all students* in the Birmingham City Schools System would benefit from these types of experiences. The findings of this study suggest that an investment in program expansion would lead to an increased number of students experiencing greater school connectedness which may lead to higher rates of student retention and graduation.

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Appendix A: JVTF Focus Group Protocol – Students

- Introductions
 - Ground rules
 - Questions
1. What grade were you in when you started with Jones Valley Teaching Farm? (need to record current grade)
 2. What activities have you been involved with through JVTF? (i.e., Farm Lab club, farmer’s market [club], lessons in class, cooking club, summer programs?)
 3. What JVTF activities have you enjoyed the most? Why?
 4. What is your favorite vegetable?
 - How do you prepare it? (eat it raw, cooked)
 - Is this something that was grown in your school garden?
 - Had you tried it before JVTF?
 5. Have you tried other new vegetables during an activity with JVTF?
 - Which ones?
 - How were they?
 6. Have you learned any new cooking or food preparation skills during an activity with JVTF? (e.g., chopping, washing)
 7. Have you learned anything from JVTF that has helped you shop for groceries or cook with your family?
 8. Is there a connection between food and community? In what ways?
 9. What does it mean to you to have JVTF in your school?
 10. What is one new thing you would like to learn from JVTF?
 11. How do you think you will use the knowledge you gained from JVTF in the future?
 12. Tell me about your experiences with JVTF staff members.

Appendix B: JVTF Focus Group Protocol – Parents/Guardians

- Introductions
 - Ground rules
 - Questions
1. How long has your child been involved with programs through Jones Valley Teaching Farm? (i.e., Farm Lab club, farmer’s market [club], lessons in class, cooking club, summer programs?)
 2. Describe the Jones Valley Teaching Farm activities that your child found to be most exciting?

(Cues: Activities children talked about at home, things they learned, activities that changed attitudes/behaviors, children visibly excited)
 3. What made these activities exciting for your children?
 4. What has your child learned as a result of participating in JVTF activities? (e.g., how plants grow from seeds, counting money)
 5. What can your child do as a result of participating in JVTF activities? (e.g., gardening skills, cooking skills, decision-making skills)
 6. In what ways has your child’s participation in JVTF activities changed your child’s attitudes or behaviors at home? (e.g., asking for healthier foods, eating new foods, planting a garden)
 7. In what ways has your child’s participation in JVTF activities changed your family’s attitudes or behaviors at home? (e.g., eating new foods, changing shopping habits, trying new recipes)
 8. What is the value of having your child participate in JVTF activities?
 9. Has the presence of JVTF had an impact on your child’s school culture? If yes, in what ways? (e.g., sense of pride, sense of community)
 10. As a result of your child’s participation in JVTF, has your child or family planted a garden at home? Other activities (e.g., new cooking or food preparation technique)

11. What do you think can be done to increase healthy food options...
 - at school
 - in the community
 - in your home

12. What suggestions would you make to improve the programs JVTf currently offers?