

Examining the Presence of Youth-Adult Partnership in Secondary Agricultural Educations: A Longitudinal Study

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Abstract

The CROPS project began seven years ago with the intent of saving the lives of farmers and changing the behavioral safety intentions of teenage farm youth, through secondary agricultural education. Participating teachers from the ten-state region engaged in a three-day training that prepared them for content delivery through the tenets of the Youth-Adult Partnership (YAP) Theory. The purpose of the longitudinal qualitative study was to explore if the teachers a part of the CROPS project were engaging youth in the principles of YAP and to determine what elements of the theory of Authentic Decision-Making (Natural Mentors, Reciprocal Activity, and Community Connectedness) were present, through the interviews of randomly selected participating students (n = 263), over a six-year period, within 69 focus groups. After a thorough coding process, the students revealed 253 examples of YAP present. Natural Mentoring was determined to be the most prevalent and Authentic Decision-Making was deemed to be deficient. The interviews revealed growth in the presence of YAP over the six-year period, which is due to the modifications made in the training process; however, recommendations are provided to further elevate delinquencies and areas where YAP should be improved.

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Introduction

Cost-Effective Rollover Protection Structures (CROPS) is an alternative, provided by the National Institute for Occupational Safety and Health (NIOSH) for purchasing the installation of a commercially available Rollover Protection Structures (ROPS) on seasoned tractors (NIOSH, 2019). In 2013, three secondary agriculture mechanics programs, located in the Appalachian region of Kentucky served as a pilot team on a curricular idea identified as *The CROPS Project* (Mazur et al., 2014). Today, the project has expanded to a ten-state area within the Appalachia and Mississippi Delta regions. These regions have been classified as *high-risk* regarding tractor fatality (NIOSH, 2019). Over seven years, *The CROPS Project* has assisted nearly 70 secondary agriculture classrooms in fabricating 159 CROPS on the tractors of local farmers.

To achieve the objectives of the project (Mazur et al., 2014), CROPS provides secondary agriculture teachers with a curriculum and professional development with a focus on pedagogical approaches of delivery. Additionally, the project provides experiences that engage students, increasing interest on a serious topic that embodies the work they do and is affecting their community (Vincent et al., 2019). The pedagogical approach of Youth-Adult Partnership (YAP) is the delivery focus of the 12-week curriculum, which is modeled to the teachers during the three-day professional development workshop. In addition, the CROPS project provides teachers with online interactive materials, such as a mobile app and a virtual reality simulator (Namkoong et al., 2020); all serving a purpose to further build interest and awareness among the student participants.

The CROPS project provides students with the opportunity to form partnerships with their teachers, collaborate with classmates, and engage with community stakeholders all while taking ownership in the fabrication of a product that could save a life (Hard et al., 2016, Myers, 2020). The strong connection to the agricultural safety curriculum created a firm base for teachers to put into practice the core elements of Youth-Adult Partnership (YAP). The time spent in agricultural mechanization courses creates a foundation of the necessary skills needed to understand the importance of safety, awareness, and civil action regarding a pertinent farming occurrence within their community (Watson et al., 2015). In utilizing YAP, teachers developed partnerships to better equip themselves for educating youth.

Theoretical Framework

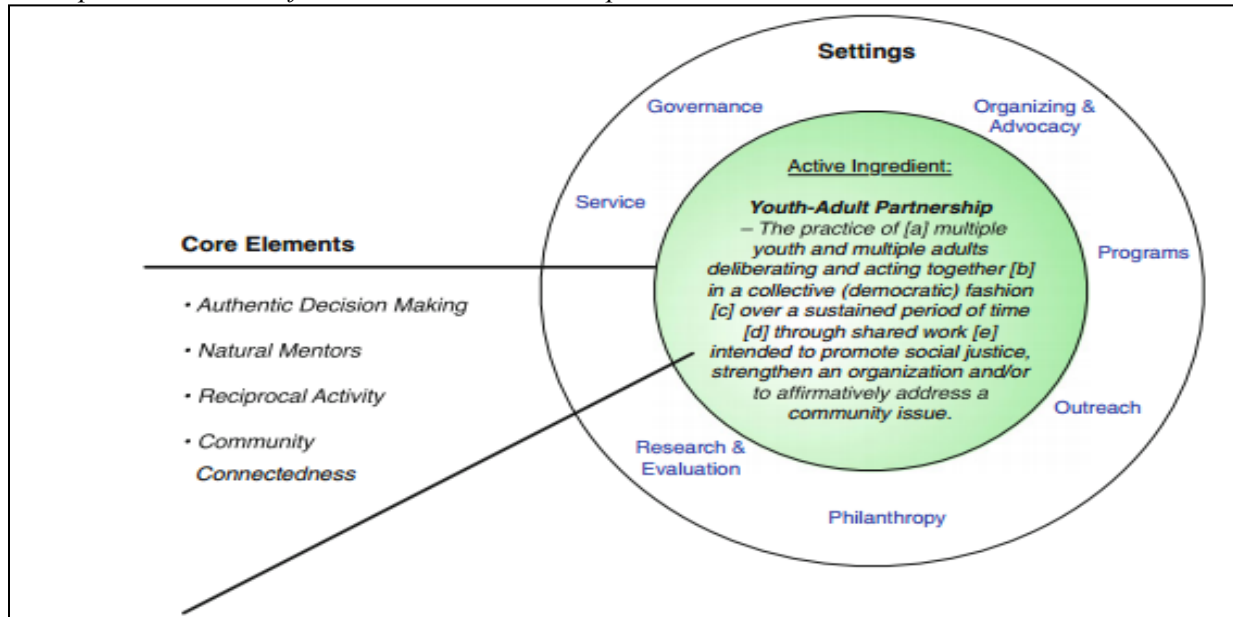
Youth-Adult Partnership (YAP) is viewed as a community practice and a developmental process with a goal where shared leading and learning take place (Camino, 2000; Zeldin et al., 2012). Zeldin et al. (2012) divides YAP into four core elements: a) Authentic Decision-Making, b) Reciprocal Activity, c) Community Connectedness, and d) Natural Mentors. See Figure 1. Within YAP, teaching and learning between adults and youth happens simultaneously. This relationship is evident in a study conducted by Jones (2009) as they sought to evaluate the relationship occurring at the Georgia Youth Summit. The scholars concluded youth learned leadership and self-confidence and adults learned working with youth and diversity, while engaged in the same learning activity. Further supporting a mutual learning environment, Henness et al. (2013) believed that youth and adults develop a deeper understanding for youth and adult's ability to learn from one another through partnering together and engaging in their community. Youth developed a deeper attachment to their community and with adult leaders.

The simultaneous relationship and the gained knowledge and skills of youth help distinguish YAP from other relationships between youth and adults such as parent-child (Camino, 2000). Ramey et al., (2017) explained how the partnership engages participants in collaborative, shared decision making in areas such as governance, program planning, and advocacy. The implementation of YAP outside of school organizations, as is facilitated by youth development programs such as 4-H, supports that it is a pedagogical approach for a variety of settings (Jones, 2009; Weybright et al., 2017), including civic engagement and

community change (Zeldin et al., 2013). The experiences and insight youth bring to YAP is a resource to teachers and the community (Camino, 2000; Zeldin et al., 2005).

Figure 1

Conceptual Framework for Youth-Adult Partnership



Note. From “The psychology and practice of youth-adult partnership: Bridging generation for youth development and community change,” by S. Zeldin, B.D. Christens, and J.L. Powers, 2012, *Society for Community Research and Action*, 51, p. 390 (<https://doi.org/10.1007/s10464-012-9558-y>). Copyright 2012 by the Society for Community Research and Action. Reprinted with permission.

Authentic Decision-Making

Within the Authentic Decision-Making (ADM) element, youth are given the opportunity to take on responsibilities and are trusted to exercise their judgment to make decisions that directly influence the goal or task at hand (Heffernan et al., 2017). Authentic Decision-Making allows youth, or in the case of CROPS, the students, the empowerment to take on a leadership role with the project or organization. As tasks are completed, students monitor their progress, recognize their peer’s efforts and make calls on future directions (Jennings et al., 2006). Studies by Akiva et al. (2014) and Deschenes et al. (2010) evaluated youth decision-making in outside-of-school programs finding that youth involved in decision-making processes can lead to benefits for youth in program retention and program motivation; thus, preparing them for becoming responsible citizens and accepting civic responsibility as they transition into adulthood (Manning, 2020).

Reciprocal Activity

Reciprocal Activity (RA) derives from the belief “mutuality” (Camino, 2000, p.12) and both adults and youth bring different, yet valuable, perspectives and life experiences to a group or project (Libby et al., 2005). YAP gives peers and adults alike the chance to foster a relationship through the work being done to reach a common goal. Furthermore, this commonality allows the feeling of being a part of something bigger, which stimulates a feeling of group solidarity and can create a group identity of membership (Kirshner, 2009).

Natural Mentors

Influential youth relationships can be built through valuing their voice and active participation (Zeldin et al., 2012). *Natural Mentors* (NM) provide respect and influence for both adults and youth. When adults employ different tasks to provide youth with hands-on experiences, youth can begin to develop as engaging citizens through Authentic Decision-Making and reciprocal activities (Wu et al., 2016). Not every adult within a program or organization can serve as a Natural Mentor in the context of a YAP. For an adult to serve as a Natural Mentor, they must respect and be supportive of youths' ability to make decisions (Kirby et al., 2003). To demonstrate this respect and support, there are times when Natural Mentors in a YAP will have to create or increase opportunities for youth to have a say or decide in instances and/or settings where youth has previously not been able to do so (Subramaniam & Moncloa, 2003).

Community Connectedness

The final core element of YAP that this study explores is Community Connectedness. *Community Connectedness* (CC) is an element determined to have the highest positive change in how youth are perceived to other adults in their communities (Zeldin et al., 2012). When the previous three elements of YAP are met, the youth's connection to the community increases because they have been held in positions allowing them to make decisions to invoke a positive influence (Whitlock, 2007).

Programs that empower youth to intrinsically give back to their community along with working with supportive adult partners improve skill development and gain efficacy toward leading initiatives to invoke change (Reischl et al., 2011). Youth-Adult Partnerships create stronger ties by creating opportunities for youth to gain access to social capital and networking that were potentially not available, serving as a strong predictor for youth to become engaged citizens (Heck & Fowler, 2008).

Purpose and Objectives

This longitudinal qualitative (Menard, 2002) study sought to explore the manifestation of you of Youth-Adult Partnerships and its four core elements (Authentic Decision-Making, Reciprocal Activity, Community Connectedness, and Natural Mentors) within the CROPS project. The following questions guided our research:

- 1) Over the duration of the CROPS project, how did the core elements of YAP emerge?
- 2) What approaches within Zeldin et al., (2012) four core elements of YAP emerged throughout the duration of the CROPS project?

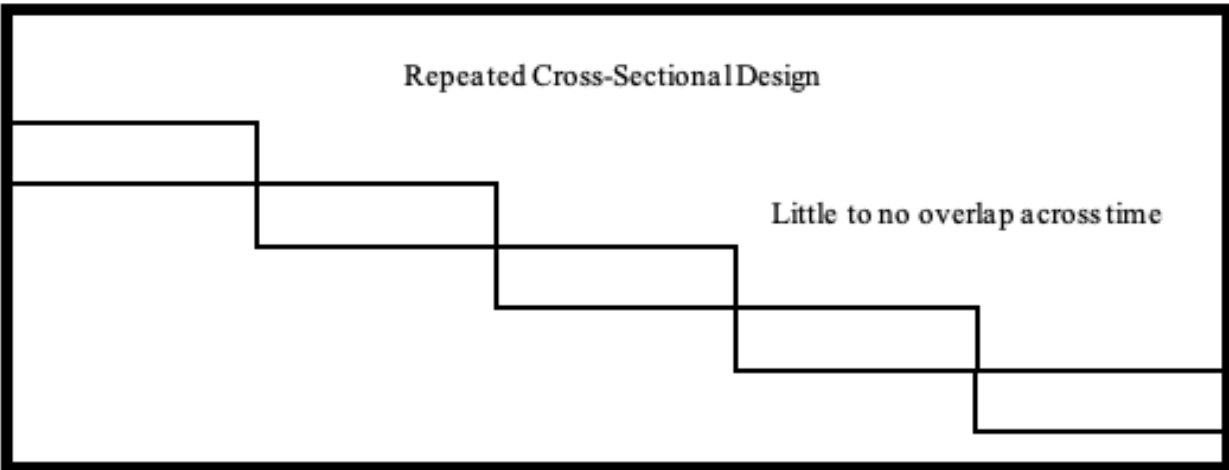
Methodology

Longitudinal research is a methodology common among scholarship yet emerged over the last 30-years (Given, 2008). In the essence of the current study, longitudinal research utilizes the recorded interview conversations that occurred annually at the completion of a school's facilitation of the CROPS curriculum. To qualify as *longitudinal* a study must consist of one or more of the following: (a) data are collected for each item or variable for two or more distinct time periods; (b) the subjects or cases analyzed are the same or at least comparable from one period to the next; or (c) the analysis involves some comparison to data between or among periods (Menard, 2002).

Within longitudinal research, emerges a more modern concept that is amendable to studying a broad spectrum of settings and situations and characterizes contemporary social life. Longitudinal Qualitative Research (LQR) captures the conditions and processes of inter-cohort and intra-cohort variations and is vital to identifying and characterizing trajectories, turning points, and interpretive stances that cover both short and long periods of time (Hermanowicz, 2016). LQR answers qualitative questions about the lived experience of change; the focus is not a view at one point across time but to center interviews in assessing

processes and changes that can be analyzed backward and forwards along with data timelines (Calman et al., 2013). We implemented a repeated cross-sectional design (Menard, 2002) that uses independent probability samples at each measurement period of the study containing different sets of cases for each period (see Figure 2).

Figure 2
Repeated Cross Sectional Design



Note. Visual image of Repeated Cross-Sectional Design. Reprinted from *Longitudinal Research, Second Edition*. (p. 27), by Menard, S., 2002, Sage. Copyright 2002 by Sage University Papers series on Quantitative Applications in the Social Sciences.

Each year, teachers were selected to participate in the CROPS project due to a selection criterion of a) location within the 10-state service region; b) school was within a two-county radius from a tractor fatality over the course of 12-months; and c) the school was in a resource-depleted school, based upon socio-economic data provided by the US Census. Once a school agreed to participate, the teacher attended a three-day curriculum training and agreed to teach the entirety of the curriculum, including the fabrication of a tractor safety device to be installed on tractors within their community. Teachers who selected to not participate once equipment and materials were delivered were responsible for transporting materials back to the sponsoring university.

Over the six-year period, the LQR participants were secondary students enrolled in agricultural mechanization course that were at the completion of the CROPS curriculum project. Since each year consisted of a different group of student participants, the longitudinal design was considered trend data (Neale, 2021). As the research team arrived at a participating school, student participants enrolled in the course, and provided informed consent, as approved by the university's IRB, completed a quantitative questionnaire regarding the knowledge of their work and of the curriculum. Six to eight student participants were randomly selected at each participating school and interviewed. Students were asked questions about their experience working with the agriculture teacher, their level of involvement on the project, if the student had a connection to tractor/farming accidents in the community, and attitudes towards the CROPS project's impact on them personally and their community.

To establish reliability within inter- and intra-cohort variation (Jaworski & Sauer, 1985), we selected schools that resided in the same socioeconomic region of the United States who had completed the CROPS curriculum within a week of the cite visit (Inter-cohort). The participants selected all came from the school of a teacher who had attended the three-day training and had never missed a day of the curriculum delivery (Intra-cohort)

Face-to-face interviews occurred in a focus group format no larger than four at the participating schools at each location. A total of sixty-nine ($n = 69$) focus groups, composed of 263 secondary agriculture students were selected by us through randomization from the course roster. Interviews were conducted with each of us responsible for different tasks. The interviews resembled guided conversations rather than structured queries. Rubin and Rubin (2011) believed that the actual stream of questions in a study is likely to be fluid rather than rigid, also referred to as “unstructured interviews” (Weiss, 1994, p. 207-208).

Prior to interviews, we kept memos to help with what they were thinking, questions to be asked and the approach to handling potential responses (Birks et al., 2008). After the interviews were conducted and recorded, the research team transcribed all interviews collected, using AQUAD 8.0. Inductive coding occurred as we transitioned the transcriptions to salient points. Since the research team utilized the sound fundamental four core elements of YAP, the salient points were placed into deductive codes. Each deductive code was calculated into a magnitude code to approach research question 1. Finally, axial coding occurred to best respond to research question 2. The coding process followed Saldaña’s (2016) and led by the Youth-Adult Partnership theory. A codebook (Creswell & Creswell, 2018) was developed, and four members of the team participated in the coding process. All focus group interview transcriptions were coded twice to ensure the codebook was interpreted correctly. The four team members maintained an intercoder reliability score of 74.6%, which is deemed acceptable (Morrissey, 1974).

Results

Research question 1 sought to determine which elements of YAP emerged over the course of the CROPS Project. According to Table 1, Natural Mentors ($f = 87$; 34.4%) emerged the most during the student interviews. Consistently, Natural Mentors continued to resonate among the students. Within the 2016-2017 cohort, a student described their teacher as someone who helped them through the CROPS project:

Without [our teacher], we wouldn’t know how to use half of the [equipment] in [the shop]. He talked us through [the CROPS project] and helped us out when we needed it, but he didn’t do it all, he just helped us through it.

A similar message was echoed among the students over the course of the project. In 2017-2018 a student recalled a Natural Mentor occurrence “Mostly [the teacher] didn’t really tell us what to do next, but we would come up with what we wanted to do next between ourselves. Then, we would go ask [the teacher]”. In 2018-2019 a participant provided a detail of their teacher as a Natural Mentor in relation to providing mentorship to the students by saying, “[The teacher] has the knowledge to do it by himself, but he pushes us to [complete the tasks]. If we mess up, he picks us back up and shows us how to do [the task]”.

Table 1*Frequency of YAP Elements (n = 253)*

Element of YAP	Year <i>f</i> (%)						Totals (<i>n</i>=69)
	2014-2015 (<i>n</i> =6)	2015-016 (<i>n</i> =1) ^a	2016-2017 (<i>n</i> =18)	2017-2018 (<i>n</i> =15)	2018-2019 (<i>n</i> =17)	2019-2020 (<i>n</i> =12) ^b	
Authentic Decision-Making	2 (5%)		3 (7.5%)	13 (32.5%)	13 (32.5%)	9 (22.5%)	40 (15.8%)
Natural Mentors	11 (12.6%)	1 (1.14%)	24 (27.5%)	20 (22.9%)	14 (16.09%)	17 (19.5%)	87 (34.4%)
Reciprocal Activity	1 (1.75%)		11 (19.29%)	21 (36.8%)	18 (31.57%)	6 (10.5%)	57 (22.5%)
Community Connectedness	1 (1.44%)		15 (21.7%)	18 (26.08%)	18 (26.08%)	17 (24.63%)	69 (27.3%)

Total Examples of YAP: 253

^a Funding for graduate students was not available to visit all school locations; thus, only one school participated in the LQR study.

^b COVID-19 impacted the ability to collect interviews

Corresponding with Table 1, Community Connectedness ($f = 69$; 27.3%) was the second most represented element of YAP found in the student responses. In 2019-2020 a student described their connection as, “[The CROPS staying in the community] hits closer to home because it is home.” Similar comments occur throughout the interviews, as one student in the 2016-2017 cohort stated, “[The CROPS project] saves lives, it is all about saving lives”. A similar phrase was reverberated among students over the course of the project. As a student from the 2018-2019 cohort said, “[The CROPS projects] keeps people in the community safer than they were.” This same awareness of Community Connectedness is found again in the 2017-2018 cohort, “knowing [that CROPS] is going to stay in the community. Someone is actually going to use it.”

Reciprocal Activity ($f = 57$; 22.5%) was the second least represented element in the student interviews. In the 2018-2019 cohort, a student described the teacher-student dynamic as, “We all were equal, [the teacher] would listen to us and we would listen to [the teacher]”. Similarly, a student from the 2019-2020 cohort described the work environment as, “students and teacher working side-by-side” In 2016-2017, a participant described a Reciprocal Activity lesson as, “how important it is to work together, learn, and stuff like that.”

Correlating with Table 1, Authentic Decision-Making ($f = 40$; 15.8%) emerged the least prevalent out of the four elements of YAP. One student from the 2016-2017 cohort described their experience with decision-making as, “[Students] made [their] own decisions, but [the teacher] helped [them] out. Like if we couldn’t [the teacher] would help us.” Within the 2018-2019 cohort, a student echoed a similar experience with Authentic Decision-Making stating, “[The teacher] would let [students] figure it out ourselves. As much as [the teacher] possibly could. [The teacher] didn’t stand over us and tell us what to do.” In later

cohorts a sense of ownership began to emerge as described by a student within the 2017-2018 cohort, “It was our project.” a similar statement was made by a student in the 2019-2020 cohort “[The teacher] let us play the bigger role”. Authentic Decision-Making is present through these testimonies, and by utilizing YAP, teachers can empower students in making their own decisions.

Research question 2 sought to explain the approaches within Zeldin et al. (2012). Four core elements of YAP emerged throughout the duration of the CROPS project.

Natural Mentor

In the element of Natural Mentors ($f = 87$; 34.4%), themes of support and respect were present. We identified that Natural Mentors must provide support and respect toward youth when working together (Zeldin et al., 2012; Wu et al., 2016; and Kirby et al., 2003). The current study found students’ responses to exhibit these themes as well.

Support

Through these testimonies, students describe their teacher as a supportive individual in the CROPS project. One student described the teacher and student partnership as, “[The teacher] would be like in the backseat but let us take the project on as our own but would be there if we needed help.” As one student described their teacher, “I could always count on [the teacher] to help me.” students felt they knew their teacher was there to support and assist them, but this did not mean they were always given the answer, “[The teacher] would ask us questions to try to get us to answer.” Teachers that support students to take ownership of projects allow the Natural Mentor element to emerge in the classroom.

Respect

A sense of mutual respect for both students and adults are an essential characteristic of Natural Mentors. Through the interview process, the feedback became evident students wanted to gain the respect of their teacher. One student stated, “I want to be able to gain [the teacher’s] respect. So, like when he says go build something, he doesn’t have to worry about me messing it up or something going wrong.” From this example, we posit that students aspire to gain the respect of their teacher. Teachers who practiced Natural Mentorship see students intrinsically motivated to respect their teacher because the students’ decisions were respected.

Community Connectedness

Over the six years of data collection within the CROPS project implementation, two themes emerged for Community Connectedness ($f = 69$; 27.3%), student desire to keep the community safe and sense of motivation. According to Reischl et al. (2011), programs that motivate youth to give back to their communities lead to positive change created by the students. The CROPS curriculum connects students to the community by identifying a local farmer to receive the CROPS. The two themes that emerged create a desire to complete the project to positively impacts a community member’s life.

Desire to keep the community safe

The first theme that coalesced under the Community Connectedness element was the desire to keep community members safe by providing CROPS to farmers. One student describes this desire by saying, “It meant more because it leaves more of an impact on our community. I mean this is where we are from. It’s not just a random place.” Comments like these are found throughout the interviews. Concurrently, one student describes his aspiration for the CROPS project, “Just to keep people in the community safer than it was.” There is heightened importance of this project to the students because they know the direct and positive impacts their agriculture program could have in improving the safety of community members. This message is brought to life by teachers inviting, per suggestion of the curriculum, the local Emergency Medical Services (EMS) to come and convey the importance of proper tractor and farm safety through real-life accounts. As one student describes this sense of importance, “Like imagine if something [were] to

happen with [a tractor] and it saved the [farmers] life then that would be a good impact on us.” Students having a clear vision of the community impact brings a strong community connection to the classroom and increases students' consciousness about creating a lasting change. One student stated:

Helping another farmer, making sure he stays safe while on his tractor in case a rollover does happen. Also, spreading awareness. If another farmer sees that he [has] a ROPS on his older tractor. Maybe it will influence him to get one.

Through Community Connectedness, the desire to keep the community safe is possible through community engagement that the teacher provides in their classroom.

Motivation

Students are motivated in their work because they know they are improving a farmer's life in their community. As one student describes, “I was really motivated because I knew what I was doing, and that I was [going] be able to actually help someone’s life.” Another student said, “It was more of a mission for me to do it right, knowing that somebody around here would get it, and if they did have an accident, then I wouldn’t have to hear about somebody getting hurt because of my work.” Students being connected to the farmer and being motivated through the farmer receiving the completed CROPS, allows students to see the direct impact their work has on those in the community.

Reciprocal Activity

Within the element of Reciprocal Activity ($f=57$; 22.5%) themes of teacher-to-student teamwork, student-to-student teamwork, and trust emerged. The CROPS project and agriculture mechanics classes are often a learning environment that fosters a teamwork atmosphere to complete projects. Libby et al. (2005) identified youth and adults being able to work together to reach a common goal as a core component of the Reciprocal Activity. A feeling of group solidarity and creation of a group identity was also identified by Kirshner (2009) as a characteristic of the Reciprocal Activity element. Throughout data collection, students discussed how important working as a team and trusting one another was to complete the CROPS project.

Teacher-to-student teamwork

Students found themselves working in teams and learning from one another to create the CROPS. One of the themes of Reciprocal Activity is teamwork dynamic between teachers and students, as one student described the dynamic as, “It was a student and teacher [working] together kind of thing. We were working as a team.” Teacher and students working together was further demonstrated when they were charged to creating solutions on the project as mentioned by one student, “[The teacher] would have his way of doing things but he said if we had a different way to do it then [the students] could do what worked better for us.” Students and teachers working together in a team setting helps increase the Youth-Adult Partnership and foster a more vital understanding of Reciprocal Activity.

Student-to-student teamwork

A definite sense of teamwork was also created between students to complete the CROPS project. This student-to-student teamwork led to peers teaching and holding each other accountable to complete their work. One student described this “We were supposed to work together as a group if someone couldn’t figure something out, we would go to them and help them out.” Student-to-student teamwork was continued throughout the interview process as stated by one student, “you would help each other out but make sure they were doing their work. Everyone helped each other out, everyone.” Student-to-student teamwork allows the students to guide one another in enhancing a greater understanding of mutuality while working together. Reciprocal Activity allows the students to learn from one another, while completing a shared responsibility.

Trust

Another theme within Reciprocal Activity was trust. Trust carried into the Reciprocal Activity element as one student described the dynamic in the shop as, “We kind of trusted in each other's abilities.” With another student taking this one step further to say, “If one of us saw someone doing something wrong, we had to tell and step in and help them out.” Trust in helping classmates was often present in the interviews, consequently leading to Reciprocal Activity being the second most frequent YAP element.

Authentic Decision-Making

Within the element of Authentic Decision-Making ($f= 40$; 15.8%), many students expressed themes of ownership in the project and collaboration in the decision-making process. Being able to assume responsibilities and exhibit judgment calls in making decisions is a crucial characteristic of Authentic Decision-Making, as identified by Heffernen et al. (2017). As students gain confidence in decision-making, this empowers students to continue making decisions (Jennings et al., 2006), as revealed to us through the student interviews.

Ownership

Teachers who excite students to take ownership of the CROPS project allowed them to decide which steps were next. As one student described, “We made our own decisions, but [the teacher] was there to help us out if we needed him”. In many instances, students felt like their teachers were giving them the ability to make decisions and take ownership of the project as exhibited by this students’ experience stating that, “Mostly [the teacher] didn’t really tell us what to do next, [the teacher] left that up to us, so we would come up with what we needed to do next between ourselves.” Allowing students to take ownership in their work by utilizing Authentic Decision-Making, teachers allow the students to work together in completing a shared task.

Collaboration

Students also expressed how their teacher would let them falter and then challenge them to fix any issues that would arise. Collaboratively, the students and the teacher worked together to make decisions regarding the CROPS project. For example, one student said that “If [a student] messed up [the teacher] would tell us it was wrong, and we had to figure out how to fix it on our own.” Allowing students to make their own mistakes and rather than simply giving students the answer or fixing the problem for students, teachers would challenge students to take ownership of how to solve the problem themselves. Throughout the interviews, we noticed a similar theme: students felt valued when their teacher listened to their input toward the CROPS project. As one student stated that they felt like they, “had a voice in the project.” Collaborating with students and implementing student decisions enhances the Authentic Decision-Making element and allows students to work together with their teacher and peers to complete the CROPS project.

Conclusions, Discussion, and Recommendations

Once only looked at for community organizations, YAP theory has a place in the classroom, and CROPS is a mechanism for YAPs implementation. Some might argue that the power dynamic between students and teachers will not allow YAP within classrooms. However, giving students the ability to have Authentic Decision-Making, experiencing Natural Mentorship, participating in a Reciprocal Activity, and having a sense of Community Connectedness enhances student learning (Zeldin et al., 2013). The purpose of this study was to explore the manifestation of you of Youth-Adult Partnerships and its four core elements (Authentic Decision-Making, Reciprocal Activity, Community Connectedness, and Natural Mentors) within the CROPS project.

The most frequent element of YAP in the CROPS program is Natural Mentors. The CROPS curriculum and the project’s design create an environment for teachers to take on a mentorship role. Through the students’ testimonies, the NM element fosters the relationship between the teacher and the

student. Therefore, allowing the students to take the lead on making their own decisions during the CROPS project. We see NM acts throughout agricultural education literature (Lamm, et al., 2017; Ball, et al., 2016; Bird, et al., 2013); however, limited to finding its benefits within curriculum development. The results from the interviews indicate that NM was a comfortable methodology among the agricultural education teachers; however, further research is needed to see if our assumptions have merit.

Reciprocal Activity is another vital element of YAP that is present in the CROPS curriculum. Students' ability to work in teams and learn from one another creates an ideal environment for this element to do well. The CROPS curriculum provides a setting for students to learn from their teachers, peers, and community members. This setting makes the elements of YAP important for, ultimately, changing a behavior toward student's conscious decisions regarding tractor safety. An evaluation of what teachers have learned from students could further strengthen the influence of Reciprocal Activity. We recommend teachers take intentional steps to document successes and failures among student behaviors and within the CROPS curriculum to improve the growth.

The Community Connectedness element of YAP is an area that can be strengthened and even can be the most substantial element of the CROPS project. There are many points in the curriculum where teachers can tie community members into lessons to strengthen the CROPS project's community impact piece. Students must meet the CROPS recipient, as these were the interviews exhibiting the most frequent occurrences of the Community Connectedness element. Teachers must reach out to community EMS workers to highlight real-world examples and consequences of unsafe farm equipment and operating practices. Furthermore, we recommend teachers bring in tractor rollover survivors and family members of tractor rollover victims to connect the impact of the CROPS equipment's life-saving abilities. By doing so, we posit that the community connection with lived experiences will further improve the volume of YAP present, thus assisting in behavioral change among student learning.

The element of authentic decision making seemed to be the hardest for teachers to improve, given the potential dangers of the machinery used to build the CROPS and teachers' desire to keep students safe and prevent any damage. With these concerns, one can justify why teachers would make all the decisions towards the project. Extra materials were provided for student to have mishaps; however, teachers were still not willing to allow the students to have such learning experiences.

Notably, teachers who utilize the four YAP elements see more engagement from their students. The students feel more connected to their teacher and classmates. Concurrently, the students have a sense of belonging to their community because they understand that they help a community member install the CROPS. Youth-Adult Partnership allows teachers to provide relevant and engaging methodologies to enhance the students' learning.

Over the course of the six years teachers who utilized the YAP elements in their classrooms seem to gain richer input from their students and gain more ownership in the project. The four elements, Authentic Decision-Making, Reciprocal Activity, Community Connectedness, and Natural Mentors, work harmoniously together to provide students with a complete learning experience. The data suggests if all four elements were present in a teacher's curriculum, the students were more likely to be engaged in the content and take ownership of their learning.

Past studies show YAP's effectiveness in non-formal educational systems (Weybright et al., 2017). We recommend utilizing YAP as an effective teaching strategy for agricultural science educators who teach in a lab setting (i.e., metal fabrication lab) should implement this theory. Therefore, for YAP elements to be evident in a classroom setting, the educators teaching, and their curriculum must fully engage students' attention. The lab setting allows the teachers to use a curriculum that enables students to have the ability to

have Authentic Decision-Making, become Natural Mentors, participate in the Reciprocal Activity, and have a sense of Community Connectedness.

This study suggests that teachers are experiencing positive student partnerships when serving as Natural Mentors in the CROPS project. Students were continually mentoring each other, and the teacher was there to be a mentor when needed. The support Natural Mentors provide to youth can vary from giving advice about potential careers, education, and providing support all the way to assisting in applying for college or jobs (Van Dam et al., 2017; Erickson et al., 2009). We recommend that schools hire teachers that are Natural Mentors. Teachers that embody this element of YAP. Additionally, post-secondary teacher preparatory programs need to implement a curriculum that aids pre-service teachers in becoming Natural Mentors.

Some of the key characteristics that teachers can exhibit to embody the YAP element of Natural Mentors are accepting the young persons or students, offering continuous encouragement, being reliable, and helping when needed by the student (Collins et al., n.d.). Once teachers meet this criterion, they are more willing to take ownership of their projects and work together with their peers to finish a project collectively. As a result, we recommend that teachers must work with the students' knowledge and abilities to fully form a relationship with their students to adequately embrace the Natural Mentorship element. Concurrently, once a teacher has gained Natural Mentorship, students will feel more empowered to become Natural Mentors.

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