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Development of Livelihood Skills through School-Based, Agripreneurship Projects Integrating Youth-Adult Partnerships: The Experiences of Youth Partners in Uganda

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Abstract

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Keywords

entrepreneurship; positive youth development (PYD); project-based learning (PjBL)

Erratum

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**Development of Livelihood Skills through School-Based, Agripreneurship Projects
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Abstract

Equipping young people with livelihood skills is essential for positive youth development and empowerment as they transition into adulthood to become productive and engaged members of their communities. In Uganda, which may be the case in other nations of Sub-Saharan Africa, and elsewhere, even though many youth are becoming better educated and graduating from high schools and colleges, a majority of these graduates remain either unemployed or underemployed. Many have not acquired the necessary skills to transition from school to becoming employable and self-reliant. This phenomenon has been attributed to an outdated curriculum that does not meet the needs of contemporary times. Further, the mode of instruction in most of Uganda's schools is teacher-centered and provides little room for student engagement and creativity to generate new knowledge, to have authentic learning experiences, or to reflect. Such challenges may be overcome through student-centered learning approaches involving School-Based, Agripreneurship Projects (SAPs) that integrate Youth-Adult Partnerships (Y-APs), as were explored in this study. Evaluation of the students' experiences through deductive and inductive thematic analysis indicated that they acquired knowledge in poultry science, business, agripreneurship, and life skills, including better communication, leadership, and conflict resolution practices. Longitudinal studies should be conducted to determine the long-term effectiveness and impact of SAPs facilitated by Y-APs on improving youth livelihoods, especially that prepare them with the life skills necessary to be productive citizens. Such research could involve cohort or panel investigations.

Keywords: entrepreneurship; positive youth development (PYD); project-based learning (PjBL)

Introduction/Review of Literature

Equipping young people with livelihood skills, including cognitive, socio-emotional, and technical competencies, is crucial to building their self-efficacy and empowerment, and stimulating positive youth development [PYD] (Brewer, 2013; Lorenzo et al., 2019; Mueller et al., 2011). Such skills help youth to navigate the challenges they encounter while transitioning into adulthood and becoming productive members of society, including contributing to the economic sustainability and resilience of their communities (Tukundane et al., 2015; Zeldin, 2004). Youth are a community's future and by equipping them with livelihood skills, society is building an asset base to ensure its vitality over time (James-Wilson, 2008).

PYD encompasses both "childhood and adolescent development experiences that provide optimal life preparation for the attainment of adult potential and well-being" (Catalano et al., 2014, p. 423). Catalano et al. (2014) outlined five areas of PYD, including behavioral, cognitive, emotional, moral, and social competence. Youth can be empowered through active participation in community affairs while working with adults of different ages through Youth-Adult Partnerships (Y-APs) to address the needs of their communities (Akiva & Petrokubi, 2016; Mukembo & Edwards, 2020; Zeldin et al., 2013). For example, through youth organizations such as 4-H, Distributive Education Clubs of America (DECA), and Young Farmers Clubs (YFCs), young people engage in leadership and entrepreneurial projects in communities while working alongside adults to find innovative solutions to society's needs (Christens & Dolan, 2011; Mukembo et al., 2014, 2015; Mukembo, 2017). Also, through Y-APs, youth learn to work in teams, develop social and problem-solving skills, hone leadership and communication skills, and acquire technical skills relevant to the projects in which they are involved, and can use these skills to improve their livelihoods and communities (Mukembo, 2017; Mukembo & Edwards, 2020).

However, in spite of the increasing number of youth completing secondary and post-secondary education (Africa Economic Outlook, 2012), many developing nations, including Uganda, experience challenges on how to best prepare youth with livelihood skills to mitigate their high levels of unemployment (Mukembo, 2017; Mukembo et al., 2020; Mukembo & Edwards, 2020). In Uganda, only one-in-four college graduates are employed (Arinaitwe, 2014; National Curriculum Development Center [NCDC], 2013, 2016). This condition has been attributed to a mismatch between the skills acquired by youth at the post-secondary level and the needs of the labor market (Mukembo et al., 2020), which exacerbates the problem of unemployment (NCDC, 2020).

To combat the high joblessness rate among secondary school and college graduates, the Government of Uganda embarked on various initiatives, such as *Skilling Uganda* and curriculum reforms at the lower secondary school level (Ministry of Education and Sports, 2011; Namuli-Tamale, 2014; NCDC, 2020; Tukundane et al., 2015), to equip graduates with entrepreneurial skills for self-employment and job creation. The curriculum reforms aim to provide learners with more student-centered/-centric instruction, including opportunities for experiential learning (NCDC, 2020). Further, in the proposed reforms, the current number of 18 subjects taught in secondary schools at the Ordinary level would be reduced to *eight learning areas* (NCDC, 2013, 2014, 2016). Career and technical education subjects, such as agriculture and entrepreneurship, would be merged into one learning area called *technology and enterprise* (NCDC, 2013). As such, the integration of career and technical subjects, including entrepreneurship and agriculture, could be achieved through School-Based, Agripreneurship Projects (SAPs) involving Y-APs to prepare youth with livelihood skills and contribute to community economic development

(Mukembo, 2017; Mukembo & Edwards, 2020). Through SAPs and YFCs, Ugandan youth can become aware of various career opportunities in the agricultural sector beyond the farm gate (Mukembo et al., 2014, 2015); for instance, careers involving value-addition such as food processing and marketing. Mukembo and Edwards (2015) defined agripreneurship as “the application of entrepreneurial principles to identify, develop, and manage viable agricultural enterprises/projects optimally and sustainably for profit and[/or] improved livelihoods” (p. 5). However, effective ways for youth to learn agripreneurship warranted additional investigation.

Purpose of the Study

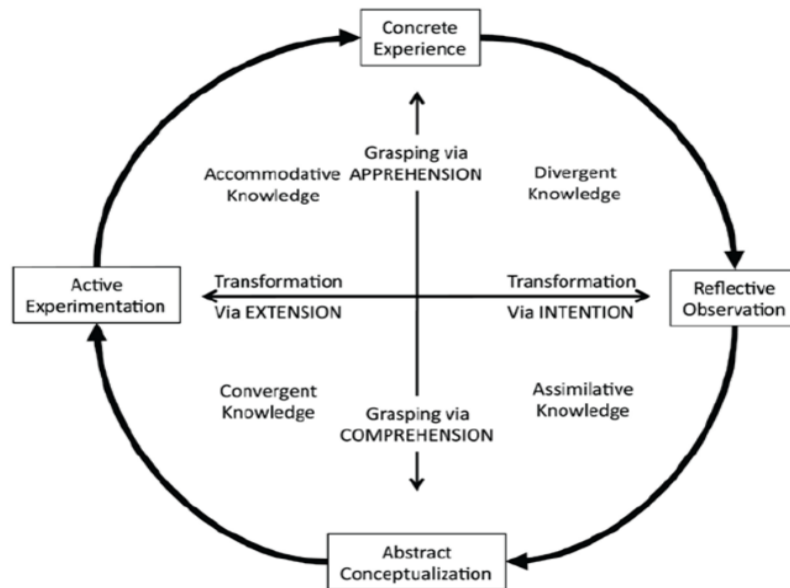
This qualitative study sought to explore the impact of SAPs facilitated by Y-APs on the development of livelihood skills among youth, including the potential of such to improve agricultural practices and livelihoods. As part of a larger mixed method investigation, this portion of the study examined what students experienced and perceived learning from their participation in SAPs that involved partnering with adults in local communities.

Theoretical Lens

The theoretical underpinning of this study was Kolb’s model of experiential learning theory (Kolb, 1981, 1984, 2014). In the learning process, ideas are organic and transformed as individuals encounter new experiences, and they reflect on their experiences to make abstractions leading to the creation of new knowledge and understanding (Baker et al., 2012; Corbett, 2005, 2007; Kolb, 2014; Kolb & Kolb, 2009). Experiential learning embodies a *hands-on, minds-on, learning by doing approach* as advocated by many scholars, including John Dewey (1938). The acquisition of new knowledge and skills occurs when learners have concrete experiences that lead to self-reflection, abstraction, and active experimentation (see Figure 1; Baker et al., 2012; Kolb, 1984, 2014). Kolb and Kolb (2005) asserted that knowledge is constructed through “creative tension among the four learning modes that is responsive to contextual demands” (p. 194). Each learner, however, has a preferred learning style (Kolb, 1984, 2014), and the learning process can occur under the guidance or mentorship of a teacher or any person designated to facilitate or guide the experience. Learning is a continuous process (Kolb & Kolb, 2005) [see Figure 1] involving the reconstruction of learners’ understanding as they undergo new experiences (Dewey, 1929; Kolb, 1984, 2014).

Methodology

The study was approved by Oklahoma State University’s Institutional Review Board to conduct research with human subjects. We employed inductive and deductive thematic analysis to explore the impact of SAPs involving YA-Ps on the development of livelihood skills among youth, including the potential of such to improve agricultural and entrepreneurial practices. Inductive thematic analysis involves the development of themes based on the data set, and deductive thematic analysis incorporates the researchers’ theoretical perspective (Braun & Clarke, 2012, 2018; Guest et al., 2012; Joffe, 2012), with the latter to likely bring more bias to the interpretation of data (Joffe, 2012). For this reason, researchers ought to be aware of the preconceived biases that may influence their objective analysis of findings. However, despite the shortcomings of deductive thematic analysis, Joffe (2012) urged researchers to employ both analytic approaches in developing themes to ensure high quality research results.

Figure 1*Kolb's Model of the Experiential Learning Process*

Note. Adapted from “Experiential Learning: Experience as the Source of Learning and Development” (p. 42), by D. A. Kolb, 1984, Englewood Cliffs, NJ: Prentice Hall, Inc. Copyright 1984 by Prentice Hall, Inc.

Thematic analysis involves the identification and examination of emerging patterns in a data set (Braun & Clarke, 2006, 2012; Joffe, 2012), with the ultimate goal of reporting the “most salient constellations of meanings present” (Joffe, 2012, p. 209) in the form of themes and a related essence (Maguire & Delahunt, 2017). It may be descriptive and exploratory (Braun & Clarke, 2012; Guest et al., 2012), which permits researchers the opportunity to “see and make sense of collective or shared meanings and experiences” (Braun & Clarke, 2012, p. 57). Such analysis is flexible and can be used to provide an in-depth account of a phenomenon (Braun & Clarke, 2018; Maguire & Delahunt, 2017), and it allows investigators to analyze and comprehend their data to determine emergent themes. Moreover, thematic analysis “is still the most useful [approach] in capturing the complexities of meaning within a textual data set” (Guest et al., 2012, p. 10). According to Joffe (2012), thematic analysis “is among the most systematic and transparent forms of such work [qualitative research], partly because it holds the prevalence of themes to be so important, without sacrificing depth of analysis” (p. 210). Themes may be developed from both implicit and explicit patterns during data analysis (Guest et al., 2012).

We employed a six-step framework for thematic analysis (Braun & Clarke, 2006, 2012) to examine multiple sources of information, i.e., a *data corpus* was derived from exploring the phenomenon and analyzed for recurring patterns to develop themes: (i) first, we familiarized ourselves with the data set and took time to deeply understand it; (ii) next, we identified and generated the relevant codes and patterns from the data set; (iii) we searched and assembled related codes to develop themes; (iv) we then reviewed and compared the themes to ensure that such aligned with the data; (v) afterward, we defined and named the themes; and (vi) we developed a write-up of the themes (Braun & Clarke, 2012). However, this was not a linear process (Braun & Clarke, 2006) because of the amount of data, i.e., we went back and forth while analyzing the various data sets to establish emerging themes (Maguire & Delahunt, 2017).

The study's data set included students' journal entries about their SAPs, as well as student-produced short videos and photographs, student work samples such as word puzzles, and transcripts from follow-up focus group interviews with students.

We reviewed and took the time to read, view, and comprehend the content of all the data sources (Braun & Clarke, 2006; Nowelli et al., 2017). The data were part of a large collection that we gathered from youth who attended two single-sex, boarding secondary schools in Uganda, one girls' school and one boys' school, and had participated in SAPs involving the raising of broiler chickens. The students received instruction on poultry science integrated with entrepreneurship concepts for eight weeks from their agriculture and entrepreneurship teachers. During this period, the students had opportunities to apply the knowledge and skills learned in the classroom to the real-world in the context of their SAPs. They kept broiler chickens and collaborated with farmers in their schools' surrounding communities who were poultry producers to learn from one another and to share experiences about raising poultry; this was the study's Y-AP. The students documented their experiences during the SAPs, including interactions with the adult partners, i.e., agriculture and entrepreneurship teachers, poultry farmers, and extension agents (Mukembo & Edwards, 2020). In addition, they recorded visual images and videos that we examined.

We also analyzed instructional artifacts, such as agripreneurship word puzzles, student-made posters, and the project's training syllabus (Charmaz, 2014; Elo & Kyngas, 2008; Nowell et al., 2017). Further, as a follow-up procedure, we conducted two focus group interviews with 22 students, including 10 boys and 12 girls from their respective boarding schools (Groenewald, 2004; Padilla-Díaz, 2015). We conducted the interviews using Skype (Deakin & Wakefield, 2014) and asked open-ended questions (Patton, 2015) about the students' experiences with their SAPs.

As an open coding procedure (Corbin & Strauss, 2014), we used NVivo 11 analysis software (QSR International, 2013, 2016) to identify and organize various codes; statements that conveyed related meanings were grouped together. During this process, we suspended (bracketed) our preconceived ideas about the phenomenon to mitigate potential bias (Moustakas, 1994). We acknowledge such bracketing is not always entirely possible (Kafle, 2011). However, through collaboration, we were able to mitigate biases, which brought multivocality to our analysis and interpretation of the data (Tracy, 2010). In the write-up of the themes, we provided a rich, detailed description with participants' quotes and visual images to enhance the readers' understanding of the phenomenon, as expressed by the youth, which may enhance the transferability of our findings (De Lay & Swan, 2014). Transferability "is achieved when readers feel as though the story of the research overlaps with their own situation and they intuitively transfer the research to their own action[s]" (Tracy, 2010, p. 845).

Reflexivity statement

In qualitative research, the researcher is the instrument (Guba, 1981; Merriam, 1998, 2009); therefore, it is very important to be ethical, truthful, and dependable when conducting and analyzing data to ensure credibility (Lincoln & Guba, 1985; Nowelli et al., 2017; Tracy, 2010). For this reason, because of the principal investigator's background and experience teaching agriculture in Uganda and publications about youth and agricultural development, personal bias could be a factor in this study. Another investigator is an American with experience involving youth and agricultural development, including entrepreneurship, and he had traveled to Uganda with projects that involved adult entrepreneurs. The third researcher is also an American and had

worked on various projects to empower aspiring entrepreneurs in Sub-Saharan Africa. He had also traveled to Uganda to work with adult entrepreneurs. However, through collaboration and by following the six steps supported by Braun and Clarke (2006) and documenting our procedures during data analysis, we ensured that our process is traceable and replicable and could be audited for credibility and trustworthiness (Beck, 1993; Lincoln & Guba, 1985; Nowelli et al., 2017; Tobin & Begley, 2004). In addition, we took time to become deeply familiar with the data, evaluated multiple data sets, and consulted among ourselves during the process of data analysis and theme development, which also helped mitigate potential bias and threats to credibility.

Results

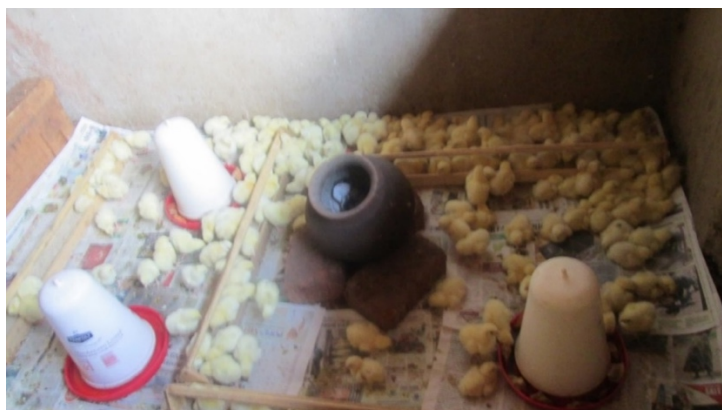
Theme #1: Understanding poultry science and related management practices

Students indicated that they had acquired knowledge, skills, and better understanding of poultry keeping through their hands-on activities and classroom instruction under the guidance and mentorship of the adult partners, including agricultural and entrepreneurship teachers, extension agents, and poultry farmers. The students explained that in the process of raising their broilers, they were able to learn from the adult partners how to properly conduct management practices, such as brooding, feeding, sanitation and disease prevention, and record keeping. During the focus group interviews, one student explained:

We learned to care for one-day-old chicks like the first day when we received chicks; our teacher informed us that when a chick has just been received, we had to give them glucose mixed with water in order to clear up their digestive system. . . . We have learned how to prepare brooders for the chicks, we have learned that these chicks that are in the brooding stage need warmth . . . and that very cold conditions can make the chicks to chill and die (see Figure 2).

Figure 2

Photograph of a Brooder and Broiler Chicks with a Charcoal Pot as the Heat Source



Another student wrote about this experience in her journal: “We cleaned the drinkers, put food and fresh water; we also vaccinated the chicks against Newcastle disease since the chicks were seven days old.” The practice of vaccination was supported by another focus group participant who shared: “I learned to vaccinate the birds. I did not know that you put a drop on eye, so they told us to draw vaccine in the syringe and put a single drop on the eyes which was quite interesting” (see Figure 3).

Figure 3*Students Vaccinating their Broiler Chickens*

Note. Photograph used with permission of the students pictured and their school's administration.

Theme #2: Awareness about agriprenurship and entrepreneurship, including opportunity recognition and idea-generation related to agriculture, as well as the role of agriprenurship in community economic development

Based on our analysis of the data set, we noted that students expressed an increased understanding of the concepts of *agriprenurship* and *entrepreneurship*. In addition, the students described various roles of agriprenurship in community economic development, including related challenges, as explicated by four subthemes.

Descriptions of entrepreneurship, agriprenurship, and agripreneurs

A student wrote in his journal: “Entrepreneurship is a practice of identifying a business opportunity, mobilizing resources required and taking the initiative to exploit the opportunity while bearing risks and uncertainties.” Students also differentiated between entrepreneurship and agriprenurship in that the former focuses on exploitation of any business opportunities, while the latter is associated with opportunities found in the agricultural and food sector.

Personal characteristics and roles played by entrepreneurs/agripreneurs. In their journal writings, the students described several characteristics associated with an entrepreneur/agripreneur (see Figure 4). One student listed 10 attributes in his journal:

- (a) Must have self-confidence; (b) [m]ust be disciplined; (c) [m]ust be opportunity seeking; (d) [m]ust be courageous at taking risks; (e) [s]hould seek information; (f) [m]ust have commitment; (g) [m]ust be good at setting goals; (h) [m]ust be persistent; (i) [s]hould be persuasive; and (j) [m]ust have planning and monitoring skills.

Another student journaled about various skills of agripreneurs such as “search for markets for the goods, keeping records . . . market research, [and] customer care.” This finding was supported by other students who wrote similar journal entries.

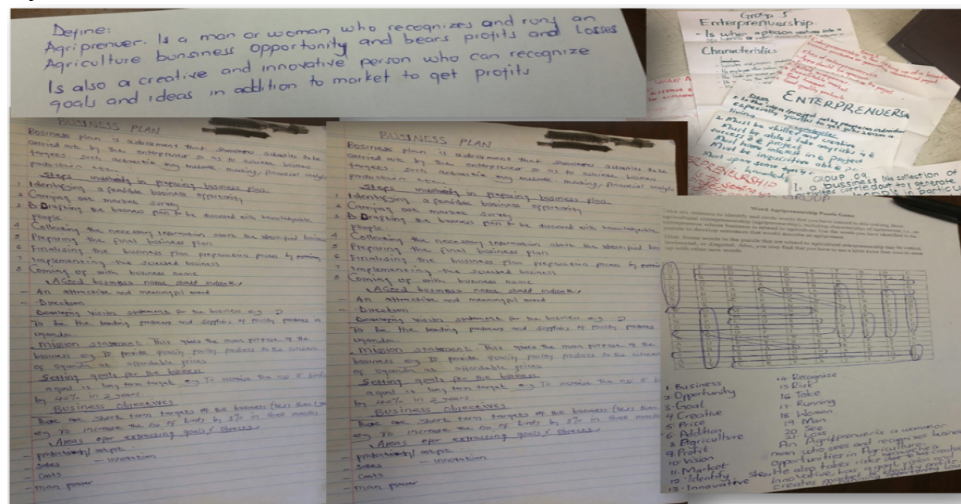
Role of agriprenurship in community economic development

The students shared that agriprenurship creates employment opportunities for community members through the establishment of agro-processing units and other value chain-related enterprises, as they witnessed at the adult partners’ farms. Further, the students realized that agriprenurship created opportunities for relationship building, collaboration, and networking among community members, which promoted peaceful co-existence and civic engagement. They

experienced such collaboration and networking through the relationships developed with their adult partners during the project. In support, a student wrote in his journal that agripreneurship is a “source of employment, . . . source of income, . . . leads to development, . . . unites farmers, provides food, promotes working together, . . . [and is a] source of raw materials.” Another student’s journal entry elaborated on this point: “. . . it leads to self-reliance, leads to diversification and industrial development, rural electrification, [and] promotes unity through trade.”

Figure 4

A Collage of Student Journal Entries, Word Puzzle, Business Plan, and Poster



Challenges and hindrances to agripreneurship

The students outlined a number of challenges impacting agripreneurship development in local communities: bad weather; climate change; drought; high initial capital investment for startups; lack of collateral to secure loans; lack of ready market for their products; lack of skills; and price fluctuations, especially at the time of harvest. Regarding obstacles, a student wrote about “[l]imited funds, shortage of able-bodied young people in rural areas, price fluctuation, limited land, long process to register a business, . . . [and] poor transport service.” Another student listed other hindrances to successful agripreneurship in her journal: “Diseases, poor storage facilities, insecurity, poor quality seeds, taxation of agricultural inputs, . . . lack of mentors, [and] poor planning.” Other students also journaled about these challenges and discussed such during their focus group interviews.

Theme #3: Acquisition of technical skills related to business development and management

All students who submitted journals and those who participated in focus group interviews indicated that as a result of working with the adult partners and implementing their SAPs, they acquired technical skills, including the ability to recognize and evaluate business opportunities. They also described acquiring skills on creating marketing and financial plans, developing vision and mission statements, keeping good records, mitigating risks in agripreneurship, setting goals, and writing business plans. For instance, a student from the boys’ school shared that their project’s goal was “to increase the number of birds by 40% in two years;” and their vision was “to become the leading producers and suppliers of poultry products in Uganda.” In the case of the girls’ school, a student indicated that their business mission was “to provide quality broilers

to the public at pocket friendly [affordable] prices.” And their vision was “to be the leading broiler producers in Uganda.” The students also identified some of the risks likely to impact their SAPs such as accidents, disease, fire outbreaks, theft, and they developed strategies to ensure the projects were protected. Some of the strategies included adequate housing, ordering chicks from reputable, disease-free farms, proper feeding and sanitation procedures, and vaccination regimens. As a reflection of having learned from a direct experience (Kolb, 1984, 2014), after the students lost a few broiler chicks that jumped into their heat source, they put up barriers to prevent others from getting too close to it. A student described the experience:

Its feathers were burnt up, we had to bury it and later put bricks around pots to act as barriers so that other chicks do not jump in [the pot]. From that day, we never got any accident of a chick dying in the fire.

During a focus group interview, a student shared: “I have learned how to take care of business risks and losses and persevere in times of crisis.” And another student journaled: “I have learned a lot that when you are having a project, you don’t need to lose hope when you are caring for your birds and experience some losses. It is part and parcel of doing business.”

Theme #4: Learning life skills

The students indicated learning a variety of life skills, including better communication, conflict resolution, consultation, financial management, leadership, mobilization, networking, teamwork, as well as socializing and working with others and making new friends. They planned to use these skills to improve themselves and become better citizens in their communities. Some of these skills and intentions are evinced in three related subthemes.

Budgeting, financial management, and marketing skills

During the focus group interviews, a student shared that “we have learned budgeting skills; we would come up with a list of items needed for daily use on the project and [calculate] how much money was required for each and we would budget appropriately.” Another student added: “For me, as a treasurer for our project, I have learned how to manage and account for finances. I had to be frugal with [the] project’s money to ensure that we had enough money for feeds and drugs.” To this point, another student explained further during a focus group interview:

We have learned that we have to save. When we had any money that we have got from the birds we have sold, we had to take it to the teacher, and he banks it for us. . . . Good entrepreneurs always have to save [and] invest so that they can get more profits.

Ongoing application of agriprenurship skills to develop future projects

The students indicated that they would apply the agriprenurship skills learned from their partnerships with the adults, including further implementation of their SAPs, and start their own enterprises at home. For example, a student wrote in her journal: “I have benefitted from this project in that I can take care of my own birds; I know how to mix feeds and how to give medicine and vaccination to birds at different stages.” Another student added in a journal entry:

I have seen that agriculture is a business and at the same time a source of employment, in my vacation I can’t suffer, at least I have gained some knowledge and skills where I can start up my own project and take care of it well.

Further, another student, during a focus group interview, shared:

I managed to convince my mom to start her project and also helped her calculate how much income she will get at [the] end of the project. I learned how to look for market for

the birds, take care of them and how to prepare the deep litter system . . . I [also learned that] . . . you don't need to lose hope when you are caring for your birds and some die.

Development of leadership, teamwork, socialization, and conflict resolution skills, among other competencies

The students explained that they participated in the election of leaders for their projects, including the chairperson, secretary, treasurer, project manager, and duty roster manager, among other leadership roles. The students worked together under the guidance of adult partners to ensure the success of their projects through teamwork. During a focus group interview, a student said that "when you work in a group as a team, your work is done easily and in a short time, also you get to learn new ideas through listening and sharing." Through socializing, the students made new friends. For instance, a student journaled: "I also learned that when you have your project, it is good to socialize with other people . . . We need the help of other people."

Theme #5: Community engagement and outreach

The students acknowledged participating in community outreach while partnering with extension agents and the farmers who conducted ventures related to their SAPs. The students and farmers learned about one another's enterprises as illuminated by two subthemes.

Inspiration, networking, and meeting adult role models

The students were inspired when they visited farmers who were doing well with their ventures. The extension agents helped connect the students with poultry farmers and some students established contacts and followed up with them during their school holiday periods. The students were impressed by the output of a female farmer who kept more than 7,000 layers in a highly automated, battery cage system. Many of the female students viewed her as a role model. One student during a focus group interview said: "I made friends with the people we met at these farms . . . she became a role model to me and inspired me to go into agriprenurship." And another student explained during an interview:

When we went out of school to some farm, the entrepreneurial lady explained to us that she began with a small enterprise using a deep litter system and when she realized more profits, she increased on the number of birds. She changed to [a] battery cage system. . . . I learned that with this system, you can . . . [raise] more birds than deep litter. . . . These droppings can also be used as fertilizers in the garden.

Advisory services to adult farmer partners

The students indicated learning from their adult partners' experiences about management practices and gave farmers advice on how to overcome some of the challenges they experienced. As such, a student wrote in her journal:

When we visited farmers in Iganga and Njeru, their broilers were sick and passed out brownish diarrhea, we realized that this could be coccidiosis because we had seen it in our birds and the doctor told us to treat and improve hygiene in the poultry house. We advised the farmers to do the same to reduce losses and costs of treatment.

In addition, the students described that they observed differences in growth rates and weight gain between their birds and those of one adult farmer. Whereas the partner's broilers were the same age as those of the students, they were emaciated and stunted. The students asked him where he had bought the chicks and what he was feeding his birds. The students realized that

the birds were in poor quality and the farmer was not properly mixing the feed. He was trying to save money by putting fewer ingredients in the feed which was affecting the growth rate of his birds. The students advised the farmer to improve his feeding regimen, and to also avoid improperly rationing ingredients if he wanted a good growth rate.

Theme #6: Challenges related to implementation of their business ventures

The students shared that they experienced some challenges while implementing their SAPs. These challenges are highlighted in two subthemes. *Lack of cooperation by some participants.* Some of the projects' student leaders shared during focus group interviews that they had a challenge mobilizing other students to do the work allocated to them based on the duty rosters. These students were not enthusiastic about feeding the birds or doing other work at the farm but were eager to board the bus to visit the adult farmers, according to several of the interviewees. *Balancing time for classwork and their projects.* The students described that, at times, they were challenged in balancing other school activities, including classwork, with their projects' activities. During a focus group interview, a student shared: "At times, it was hard to attend to the birds when you are needed by teachers to go to assembly." Another student added: "Sometimes, the teachers would want us to do other activities on the weekends and yet we were expected to attend the training. We had to always explain to them before they would excuse us."

Theme #7: Advice on how to engage young people in agripreneurship and capacitate them with livelihood skills

The students shared various initiatives that could be undertaken to engage more youth in agripreneurship and equip them with livelihood skills. Two subthemes elaborated this theme.

Curriculum reform involving the integration of entrepreneurship and agriculture: The students indicated the need to reform existing agricultural curriculum, which is mostly theory-based, to engage learners better by applying their learning (Baker et al., 2012; Dewey, 1938; Kolb, 1984, 2014). Further, they urged Uganda's Government to integrate entrepreneurship in the teaching of agriculture so students can relate developing business ventures with the agriculture sector while learning practical skills. During a focus group interview, a student said: "There is need to make young people aware that agriculture is a business worthy pursuing and this can be done by helping students start their own projects in schools such as keeping birds or growing maize which they can sell." This sentiment was echoed by another student who explained: "Young people love working on projects that will bring them income . . . when such opportunities are explained to students during teaching and they implement projects, they start to like the subject." A different focus group participant added: "Instead of giving us a lot of notes in class, it's better we do things practically. It helps us [to] not forget rather than cram notes."

Field trips, exposure to agricultural enterprise opportunities, and role models

The students expressed that their peers could be motivated to learn about agripreneurship through field trips and partnerships with adult entrepreneurs working on ventures related to school projects. A focus group participant shared: "When I went and visited farmers, I saw there was money in agriculture. Such opportunities to visit farmers would open our eyes and see that there is money in agriculture and agriculture was a business." In addition, a student asserted that "more exposure of young people to opportunities in agriculture will inspire and change their attitude toward agriculture." This point was also stressed by another focus group participant who

mentioned: “When we earned [money] from our selling our birds, I felt good to start my projects at home . . . I think this is one way to motivate them [other youth].”

Conclusions, Implications, and Recommendations

Conclusions drawn from the students’ experiences involving SAPs that integrated YA-Ps include them learning cognitive and technical skills related to agripreneurship, business, poultry science, as well as social and other life skills. Most of these competencies were realized through their implementation of and direct participation in SAPs while interacting with adult partners, especially extension agents, poultry farmers, and teachers. Moreover, during their training, the students underwent concrete experiences, which led to reflecting on, observing, and introspectively examining such (see Figure 1) to derive meaning and understanding (Baker et al., 2012; Corbett, 2005; Kolb, 1984, 2014). Based on these conclusions, the *essence* distilled from our thematic analysis of the students’ experiences is *learning by doing*, as supported by John Dewey (1916, 1938) among many other scholars and teachers. Regarding this outcome of a learning experience, Dewey (1916) stated: “. . . give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking, or the intentional noting of connections; learning naturally results” (p. 181).

The students in this study were able to transfer and apply the knowledge acquired from entrepreneurship and agricultural classes to their SAPs, and some indicated that they would use the learning to develop their own enterprises in the future. Therefore, a need exists for teachers of entrepreneurship and agriculture to continue to partner and integrate their curricula so students can use the concept of opportunity recognition (Mukembo, 2017; Mukembo et al., 2020) and other entrepreneurship skills to identify and evaluate agripreneurship ventures to pursue. After graduating, students can apply these skills to identify entrepreneurial opportunities in their communities to exploit for self-employment and job creation that improves livelihoods while enhancing their region’s economic prosperity (James-Wilson, 2008; Tukundane et al., 2015; Uscanga et al., 2019; Zeldin, 2004). Educational policy makers (NCDC, 2020), development partners, and school leaders in Uganda are encouraged to support the implementation of policies and to allocate commensurate resources that would capacitate students with these competencies.

Schools should continue to partner with farmers in their surrounding communities who are working on ventures related to those of students, as was the case in this study. This would create opportunities to build better relationships through outreach collaborations between schools and community members (Akiva & Petrokubi, 2016; Mukembo, 2017; Mukembo & Edwards, 2020; Zeldin et al., 2013). Moreover, such is an avenue by which students can be active learners who engage with adults in their communities to learn from those experiences and be motivated to pursue entrepreneurship and community economic development opportunities. Further, a need exists for teachers to continue to incorporate practical learning experiences that involve applying the concepts learned in classrooms to real-world contexts likely to foment reflection, abstraction, and new experiences (Baker et al., 2012; Kolb, 1984, 2014; Kolb & Kolb, 2009). That approach to learning not only helps students apply what they learned in class, but it also creates avenues for them to gain other life skills essential for continuous social development outside of school while leading to improved livelihoods and greater civic participation (Christens & Dolan, 2011; Zeldin et al., 2013).

The students in this study acquired a variety of skills, both technical and social, through their engagement with SAPs and partnerships with adults. Would other high impact, student-centered, teaching approaches, such as problem-based learning or the case method, create similar

results if used instead of or in conjunction with the SAPs, or would the outcomes differ? More research should examine those approaches for equipping youth with livelihood skills through agripreneurship projects involving Y-APs. A need also exists to conduct longitudinal studies to establish the long-term effectiveness and impact of SAPs facilitated by Y-APs, including the potential to contribute to community economic development and stimulate civic engagement over time. These investigations could involve cohort or panel studies (Creswell, 2012).

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