THE VIEWS OF YOUNG FARMERS CLUB MEMBERS ON THEIR CLUBS' ACTIVITIES, THEIR CAREER INTERESTS, AND THEIR INTENTIONS TO PURSUE AGRICULTURE-RELATED CAREER PREPARATION AT THE POST-SECONDARY LEVEL: AN EMBEDDED CASE STUDY OF TWO SECONDARY SCHOOLS IN EASTERN UGANDA

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Abstract:

The study had 102 participants who were members of Young Farmers Clubs (YFCs) from two secondary schools in eastern Uganda. The study's primary purpose was to determine the perceptions of the members of YFCs on their intent to pursue agriculture-related career preparation at the post-secondary school level. A secondary purpose was to describe club members and their reasons for club membership. The study was guided by six research objectives and employed a single case (embedded) design; the selection technique for the case was purposeful. The researcher used cross-sectional survey methodology to collect data.

The findings indicated most of the club members were in senior four, i.e., grade 10, and almost one-third were 16 years of age. Almost all of the clubs' members were *likely* or *highly likely* to continue their education. And a high number indicated they were *likely* or *highly likely* to pursue career preparation in an agricultural field. Most of the members came from a nuclear family with nine or fewer members. One-half of them had at least one parent working in agriculture and a majority had a sibling or another relative employed similarly. Students mainly joined the YFCs to improve their academic performance, for personal interests, and to gain life skills. Most of the members were more interested in pursuing careers related to science and indicated little preference for the social sciences or the humanities. Intrinsic factors were the main factors influencing the club members' career choices, such as perceptions of their ability to succeed in a career or personal goals. The activities of their clubs had less influence on the members' career aspirations. Significant associations were found between student's sex and personal interest, their acquiring life skills as a reason for joining YFCs, and pursuing agriculture-related career preparation at the tertiary level. The Ministry of Education and Sports in Uganda should encourage more schools to establish YFCs to assist students in acquiring life skills, improving their academic performance, and exploring their career interests. Additional research should be conducted on how to attract more females to careers in agriculture requiring tertiary education, especially in developing countries.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

Table Page

LIST OF FIGURES

Figures Page

CHAPTER I

Introduction

Unlike in the past, agricultural education no longer provides vocational training exclusively for students who want to become farmers, or intend to pursue a career in the agricultural industry after graduation from school (Talbert, Vaughn, Croom, & Lee, 2007). In contemporary times, agricultural educators prepare students for careers in science, business, and government (Talbert et al., 2007). Agricultural education must be responsive to the needs of an increasingly diverse customer base, i.e., potential students (Vaughn, 1999). Therefore, a need exists for dramatic change with respect to the emerging trends in society and the agriculture industry.

In developed countries such as the United States (U.S.), agriculture i.e., the production sector, provides employment to only 1.9% of the population, and comprises only 0.7% of the total Gross Domestic Product (GDP), (Dimitri, Effland, & Conklin, 2005). "[A]s a result of the efforts of land-grant institutions, American agriculture and related life sciences have developed into one of the great marvels of the modern world" (Herren & Edwards, 2002, p. 88). Land-grant universities were created by the Morrill Act of 1862; these institutions, under direction of the Smith-Lever Act of 1914, founded the cooperative extension service to disseminate information to farmers learned from the

research of agricultural scientists (Hawkins, Prosser, & Wright, 1951; Herren, 2002; Herren & Edwards, 2002). The land-grant universities were to teach, conduct research, and disseminate new information and innovation to the people through their extension services (Herren, 2002; Herren & Edwards, 2002). In addition, the Smith-Hughes Act of 1917 provided federal funding for instruction in agriculture in the local high schools (Chiasson & Burnett, 2001; Hawkins, Prosser, & Wright, 1951; Herren & Edwards, 2002). All of these developments at the time played a central role in the development and modernization of the agriculture sector in the United States.

Agricultural education in the United States provides a wide range of experiences to students outside of the traditional classroom. This is achieved through 4-H, which was started in 1902 by Graham in Clark, County Ohio as a youth development program (4-H History, 2013), and through the Future Farmers of America (FFA), which was formed in 1928 and is the youth development component of the secondary agricultural education model followed in the United States (Hawkins et al., 1951; National FFA Organization, 2012). The 4-H program is the non-formal arm of the U.S. agricultural education model and FFA is the youth development component of the secondary agricultural education model, which constitutes the formal or in-school delivery part of the system. In the United States, the formal agricultural education program consists of three integrated parts, including classroom and laboratory instruction, FFA, and Supervised Agricultural Experience (SAE). SAE is where the students learn by doing with the help of their agricultural teachers and this may involve a project on entrepreneurship, internship on a farm or ranch or in an agriculture-based business, conducting research or an experiment, or it can be exploring careers in agriculture by attending an agriculture career fair or

creating a documentary on an agricultural career (National FFA Organization, 2012). The integrated aspects of the secondary agricultural education program are illustrated in the Venn diagram, as illustrated below (Figure 1).

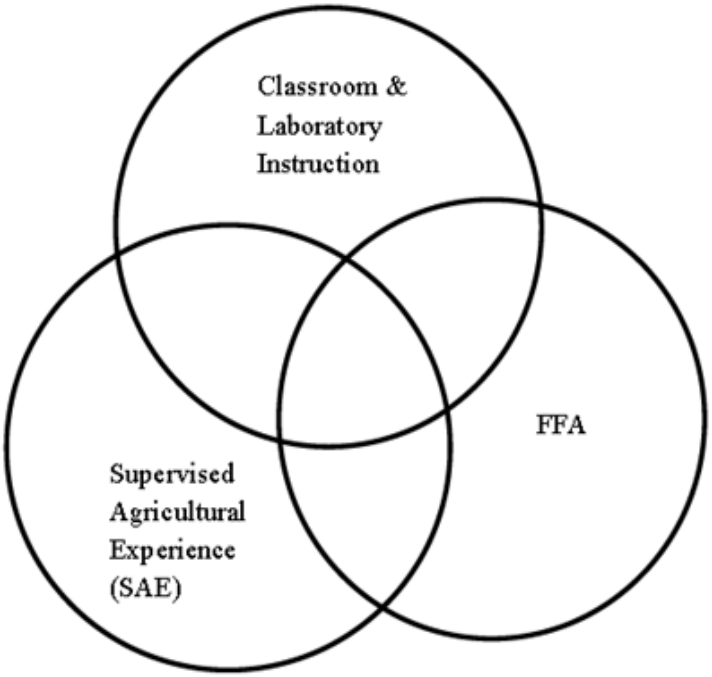

Figure 1. The Three-Circle Model of Agricultural Education (National FFA Organization, 2012).

Conversely, in a developing country such as Uganda, agriculture plays a very vital role in the lives of the populace. According to the Uganda Bureau of Statistics (UBOS), it is the most important sector of the economy, employing approximately 70% of the work force (UBOS, 2010). Further, according to the Food and Agriculture Organization (FAO, 2012), agriculture contributes 17.5% of Uganda's total Gross

Domestic Product. It also constitutes 90% of the country's export earnings (UBOS, 2010).

Most of the Ugandans engaged in agriculture are mainly subsistence farmers who grow crops for home consumption, and, in some cases, may sell a small surplus to purchase other items they need. In 2000, the Government of Uganda set up a Plan for Modernization of Agriculture (PMA), as a multi-sectoral strategy with a vision centered on the transformation of subsistence farmers to commercial entrepreneurs (Diaz, n.d.).

A year later, the Government of Uganda created the National Agricultural Advisory Services (NAADS). NAADS is an autonomous body made possible through the NAADS Act of June 2001, with a mandate to develop a demand-driven, farmer-led agricultural service delivery system targeting poor, subsistence farmers, and focusing on women, youth, and people with disabilities (NAADS, 2011). The overall objective was to ensure that farmers move from subsistence to market-oriented agriculture, thereby, increasing output to ensure food security and reduce poverty. This program works with the farmers at sub county levels, and most of the beneficiaries are illiterate. In most cases, they do not understand the scientific principles of the new innovations from the research stations and frequently reject these new technologies (Kazungu, 2011; Rogers, 2003; Ssegawa, 2011).

Padel (2001) asserted that a close relationship existed between an adopter's social status, such as level of income and education, and his or her adoption of new innovations. This assertion is also supported by Pfeffer (1992), who agreed that adoption behavior is influenced by personal background characteristics such as educational experience which

facilitates understanding, access, and exposure to information associated with a particular technology.

Rogers (2003) classified adopters into five categories, each with its unique characteristics: innovators, early adopters, early majority, late majority, and laggards. The early adopters, for example, are highly respected by peers in the community, have formal education, have higher incomes, have a more favorable attitude toward change and science, and also have higher socioeconomic aspirations when compared to later adopters (Rogers, 2003).

Although one of the target groups for NAADS are the youth of Uganda, no deliberate efforts have been made by the Government of Uganda to promote student interest in agricultural education in secondary schools. Yet, according to Diaz (n.d.), PMA identified six core areas for public action in agriculture and one of them was education in agriculture. It has been argued that schools can be avenues through which new innovations may be passed from agricultural research stations to the community through the students (Okiror, Matsiko, & Oonyu, 2011).

In 2005, the Government of Uganda put more emphasis on the promotion of teaching science subjects, such as physics, chemistry, biology, and mathematics, through the Secondary Science and Mathematics Teachers program referred to as *SESEMAT* with the help of Japan International Cooperation Agency (Nakabugo, Bisaso, & Masembe, 2011; SESEMAT Report, 2008; SESEMAT, 2013). The aim of this initiative was to train students who can develop scientific solutions to the many challenges the country faces, and to bring about job creation, employment, and economic development (Munaabi,

2005; Wamboga, 2005). In the same year, the Government of Uganda passed a science policy which made biology, chemistry, and physics compulsory subjects at the secondary school level (Nakabugo et al., 2011; Wamboga, 2005).

One of the steps SESEMAT took to win the support of stakeholders was publishing a vocational guide focused on agriculture, veterinary medicine, and human medicine, which was distributed nationwide through newspapers and booklets (Gunteese, 2008). However, on the contrary, when it came to the actual implementation of the SESEMAT project, the subject of agriculture, which is the oldest of all sciences and involves the application of most of the knowledge base supporting the life sciences (Duncan, Ricketts, & Shultz, 2011), was left out of the SESEMAT project. Agriculture was also not made part of the compulsory science subjects. According to Ramsey and Edwards (2004) and Edwards, Leising, and Parr (2003), when secondary agricultural education is taught from a student-centric perspective, and instructors skillfully teach relevant curriculum, it has high potential for engaging students in active, hands-on/minds-on learning experiences replete with opportunities for learning science.

In addition, agricultural education in U. S. secondary schools has played an important role in enhancing student achievement in the core curricula areas, particularly science (Chiasson & Burnett, 2001; Phipps, Osborne, Dyer, & Ball, 2008). A study done by Whent and Leising (1988), comparing agriscience students to students in general science classes, found that agriscience students achieved slightly better scores on biology tests than did bioscience students. This finding was also supported by a study conducted by Thompson and Balschweid (2000) who found 98.1% of all the teachers who participated in their study had the opinion that students understood the science concepts

better if the science was integrated into the agricultural education program, e.g., through the curriculum.

Education is an important investment through which people acquire knowledge, skills and abilities (Hartog & Massen van den Brick, 2007; Hornbeck & Salamon, 1991; McFadyen, 2006). The knowledge and skills acquired by individuals is referred to as *human capital* (Becker, 2004; Hartog & Massen van den Brick, 2007; Hornbeck & Salamon, 1991; McFadyen, 2006; Olanyiyan & Okemakinde, 2008; Schultz, 1961) and, for a long time, human capital has been regarded as a prerequisite for the economic growth of countries (Benhabib & Spiegel, 1994; Mincer 1989). Development of human capital requires investment (Becker, 1964, 1994; Olanyiyan & Okemakinde, 2008; Schultz, 1961, 1975) and sacrifice (Mincer, 1989) for which the returns are reaped over a period of time by the individual and the society (Hornbeck & Salamon, 1991; Mcfadyen, 2006; Schultz, 1975; Sweetland, 1996).

Krapp (2002) asserted that, during early childhood, all children at a particular level of development have universal interests. However, as children acquire education, they are exposed to a number of learning experiences which have an impact on their interests and self-efficacy (Lent, Brown, & Hackett, 1994, 2002; Tang, 2008), which, in turn, are transformed into goals (Hirschi, 2010) and influence the career choices of the individuals (Hirschi, 2010; Tang, 2008).

According to Bandura (1986), the experiences acquired during the formative period of an individual's life leave their mark on personal efficacy, which may, in turn, set the future direction of a person's life course by affecting the choices made and the

achievements attained. The perceived efficacy and academic orientations of children determine their perceived self-efficacy to pursue different types of careers and determine which careers they may shun (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Therefore, if students are exposed to scientific principles and experiences through the teaching of agriculture, that could be an avenue by which students' interests and self-efficaciousness in science are developed. This, in turn, may be transformed into career choices later in their lives, as some studies have shown (Bandura, 1986; Bandura et al., 2001; Hirschi, 2010; Tang, 2008; Welsh, 1983).

Problem Statement

The Government of Uganda is interested in an effective and efficient agricultural sector that is market-oriented, thereby, helping to reduce poverty and ensure food security (Benin et al., 2007; NAADS, 2011). This effort is geared toward promoting the teaching of science subjects, i.e., biology, chemistry, physics, and mathematics in secondary schools (Gunteese, 2008; Wamboga, 2005), with the aim of developing citizens who are *job creators* rather than *job seekers*. In other words, the Government wants to produce future scientists and innovators who will find solutions to the challenges being experienced by the country (Ministry of Finance, Planning, and Economic Development, 2012). This would include people who will create jobs and provide employment for the populace with the hope that would lead to economic development similar to the so-called *Asian Tigers* of Hong Kong, Singapore, South Korea, and Taiwan. These countries were able to transform their economies from *third world* to *first world* status through education, high productivity, and subsidies to agriculture (Lukwago, 2010; Sarel, 1996).

Although the youth are one of the major focus groups in agricultural development and science, agricultural education in Uganda has not been accorded the emphasis needed to facilitate improved student performance in the sciences (Chiasson & Burnett, 2001; Phipps et al., 2008; Thompson & Balschweid, 2000; Whent & Leising, 1988). Agriculture is the oldest science through which abstract science concepts can be taught to students through their Supervised Agricultural Experiences (SAE). Throughout history, learning in agricultural education has been hands-on and minds-on in its intent, design, and delivery (Parr & Edwards, 2004). One of the ways Uganda's Government could address this discrepancy would be to change its policy so that agricultural education is used as a curriculum vehicle for learning science in *context* for the career development of future scientists, including agricultural specialists, beginning at the secondary school level or even before.

Gerber, Cavallo, and Marek (2001) asserted that informal learning experiences that could improve students' scientific reasoning ability include a variety of school and community activities, such as volunteer groups, 4-H, and partnership activities between the school and community. This is supported by a related study conducted by McLaughlin (2000) who found that students who participated in community-based organizations (CBOs) were more likely to succeed academically than non-participants. Therefore, co-curricular activities involving student organizations, such as Young Farmers Clubs (YFC) in schools and in communities, could be avenues through which students achieve academic success, their career aspirations are recognized and stimulated, and future scientists are realized.

According to Phipps et al. (2008), school years are a critical time for adolescents to engage in career exploration and development. How and where people begin their working careers has a major influence on the general nature of their work for many years to come (Phipps et al., 2008).

Although a number of studies have not found a statistically significant relationship between age and adoption of new technologies (Rubas, 2004), numerous studies have revealed that early adopters of new innovations tend to be more highly educated than non-adopters (Ganzel, 2007; Gershon, Just, & Zilberman, 1985; Rogers, 2003; Rubas, 2004). The youth of Uganda could be avenues through which development and scientific innovations in agriculture are passed to the communities because they may be more receptive to change, including the use of new innovations. Research, however, is needed regarding how this kind of approach to youth development and its role in the diffusion and adoption of innovations (Rogers, 2003) by farmers, especially subsistence and smallholder producers in Uganda, may occur best. Moreover, this implies that an ample number of youth are invested in preparing themselves for careers in agriculture and, then, pursuing related career paths. Therefore, increased understanding is needed of the role of youth organizations involving agriculture and the role they may have in fomenting the career interests and aspirations of youth regarding post-secondary education, including the agricultural disciplines, and careers in Uganda's agriculture sector.

Purpose of the Study

The primary purpose of this study was to determine the perceptions of the members of Young Farmers Clubs on their intent to pursue agriculture-related career preparation at the post-secondary school level. A secondary purpose was to describe club members and their reasons for joining Young Farmers Clubs.

Objectives

1. Describe select personal characteristics of the Young Farmers Club members.
2. Determine why the students joined Young Farmers Clubs.
3. Determine the career interests of the Young Farmers Club members.
4. Determine the factors that influenced the career choice/aspirations of the members of the Young Farmers Clubs.
5. Describe the level of intent of the Young Farmers Club members to pursue agriculture-related career preparation after graduating from secondary school.
6. Describe differences between Young Farmers Club members by sex (e.g., reasons for joining clubs, career interests, career choice/aspirations, and intent to pursue agriculture-related career preparation after graduation from secondary school).

Significance of the Study

The world's population has increased tremendously to seven billion (United Nations Population Fund, 2011) and it is projected to reach 9.2 billion in the year 2050 (World Watch Institute, 2013). Uganda is one of the countries with the highest population growth rates and is predicted to increase from its current population of 34.5 million (69.9% ≤ 24 years) to 103.2 million by 2050 (Oluka, 2011). The world today is faced

with a challenge of finding ways to feed a growing population with a declining number of agriculturists, especially individuals engaged in food production. A need exists to have more agricultural scientists and agricultural practitioners who are educated properly in the sciences undergirding agriculture to find ways of feeding the growing population, reducing poverty, and improving livelihoods, especially in developing countries such as Uganda.

The findings of the study will help practitioners of education, including teachers, school-based career guidance counselors, and administrators, as well as policymakers in the Government of Uganda and worldwide to draft policies that will enhance agricultural education and also provide more funds to support it. The youth of developing countries in particular may become more motivated to prepare for and to pursue careers in the agriculture, food, fiber, and natural resources sector as a result of such policies.

Assumptions and Limitations of the Study

1. The study's population was limited to only two schools, one school in Jinja and another in Iganga in Uganda, which had active Young Farmers Clubs.
2. The study used survey questionnaires as its method of data collection. As a consequence, it is a probable that some YFC members may not have completed the questionnaire.
3. It was expected that the student participants would answer the researcher's questions truthfully and to the best of their abilities.

4. The study's questionnaires were administered by a third party rather than the researcher, and this may have presented some challenges in the data collection process.

Definition of Terms

4-H Youth Development: This is primarily a youth organization administered through cooperative extension in the United States. It is the largest non-formal youth education program in the world with nearly seven million members between the ages of 5 and 18 who participate in a wide range of projects and experiences (4-H Organization, 2013).

Agricultural Education: This is a "program of instruction in and about agriculture and related subjects" (Talbert et al., 2007, p. 4). It includes plant and animal production, horticulture, soil science, mechanics, forestry, economics, and agribusiness.

Agriculture: "The science, art, business, and technology of the plants, animals, and natural resources systems" (Talbert et al., 2007, p. 509).

Agriscience: The "application of scientific principles and new technologies to agriculture" (Burton & Cooper, 2007, p. 6).

An Organization is a "stable system of individuals who work together to achieve common goals through a hierarchy of ranks and a division of labor" (Rogers, 2003, p. 475).

Asian Tigers are territories and nations that were noted for maintaining high growth rates and rapid industrialization between the early 1960s and 1990s, and they include Taiwan, Hong Kong, South Korea, and Singapore (Sarel, 1996).

Career: The AVA-NVGA commission on career Guidance and Vocational Education (1973) defined "career" as a "time–extended working out of a purposeful life pattern through work undertaken by the individual" (Tennyson, 1975, p. 17).

Career Development: The "total constellation of psychological, sociological, educational, physical, economic, and chance factors that combine to shape the career of any given individual" (Isaacson, 1986, p. 13).

Career Guidance: This refers to "services and activities intended to assist individuals of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers" (Hansen, 2006, p.1).

Co-curricular Activities refer to "a series of activities related with the school program, which help to bring out all round development of the students, outside the subjects for examination schedule" (Mehmood, Hussain, Khalid, & Azam, 2012, p. 140).

Development refers to "[a] widely participatory process of social change in a society intended to bring about both social and material advancement (including greater equality, freedom, and other valued opportunities) for the majority of people through their gaining greater control over their environment" (Rogers, 2003, p. 474).

Diffusion "the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers, 2003, p. 5).

Extra-curricular Activities are those legitimate activities of the school not otherwise provided for (Fretwell, 1931). They are sometimes referred to as "extra-curriculum," or

"co-curricular," or "extra-class," or "socializing-integrating," or "collateral student activities" (Fretwell, 1931, p. 6).

FFA (formerly known as Future Farmers of America) is a national student organization in the United States of America, dedicated to making a "positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education" (National FFA Organization, 2012, para. 1).

Food Security was defined by the World Food Summit of 1996 as having access to sufficient, safe, nutritious food to maintain a healthy and active life (World Health Organization, 2011).

Innovations are "Ideas, practices, or objectives that are perceived as new by an individual or another unit of adoption" (Rogers, 2003, p. 12).

Intracurricular meaning "within the curriculum; an integral part of the program or curriculum" (Talbert et al., 2007, p. 516).

Motivation is "the energy and direction given to behavior" (Talbert et al., 2007, p. 226).

Poverty is defined by the United Nations as a denial of choices and opportunities, including lack of enough food to feed and clothe a family, not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living, and not having access to credit (Gordon, 2005).

Secondary Science and Mathematics Teachers (SESEMAT) is a program set up by the Government of Uganda through the Ministry of Education and Sports with assistance

from the Japanese Government, through Japan International Cooperation Agency (JICA), to enhance the quality of teaching and learning of science and mathematics through in-service education training for science and mathematics teachers (SESEMAT report, 2008).

Supervised Agricultural Experiences (SAE) are "planned, sequential agricultural activities of educational value conducted by students outside of class and laboratory instruction for which systematic instruction and supervision are provided by their teachers, parents, employers, or others" (Phipps et al., 2008, p. 438).

Vocational Education in Agriculture is a systematic instruction in agriculture at the secondary, post-secondary, or adult level for the purpose of preparing persons for initial entry or reentry into agricultural occupations; it is known today as career and technical education in the same (Phipps et al., 2008).

Young Farmers Clubs are student organizations in secondary schools, found in some countries involving students between the ages of 13 and 26 years where young people are encouraged to learn about farming under the guidance of agriculture teachers (Adebo, 2009).

Youth are defined by the United Nations as young people between the ages of 15 and 24 years, although each region of the world may have its own age range for what it calls people of this group (Annan, Blattman, & Horton, 2006).

CHAPTER II

Review of Literature

This section of the manuscript reviews relevant literature on the topics that supported undertaking this study, including literature on human capital, history of human capital theory, theory of planned behavior, factors which influence learners/students choice of a career, student organizations in schools, the evolution of agricultural clubs, the study's conceptual/theoretical framework, and a summary of the literature reviewed.

Human Capital

Human capital is very crucial in the development of a nation's economy. The "emergence of human capital thought began in 1776 when Adam Smith wrote *The Wealth of Nations"* (Zula & Chermack, 2007, p. 247), and, for a long time, human capital has been regarded as a prequisite for economic growth (Benhabib & Spiegel, 1994). Stanfield (2009) asserted that in 1959 during the conference of the Organization for Economic Co-operation and Development (OECD) at the Hague, Netherlands, "it was suggested that a correlation existed between qualified manpower and economic growth, [and, therefore], expenditure on education [ought] to be [taken] as an investment" (p.1). The physical and human capital stock of any nation is the basis on which economic prosperity depends (Olanyiyan & Okemakinde, 2008).

"[H]uman capital refers to [all] the acquired skills, knowledge, and abilities of human beings" (Hornbeck & Salamon, 1991, p. 3), as attained by means of education and training for their productive potential (Hartog & Van den Brick, 2007; Hornbeck & Salamon, 1991; Mcfadyen, 2006). Similarly, Herr (2008) described human capital as,

> How one chooses to commit or express one's ability (knowledge, skill, talent), behavior (how we perform in contributing to a task), effort (the conscious application of our mental and physical resources to accomplish particular tasks, our work ethic), time (how much time we are willing to invest in a particular job or task). And what the worker expects as a return on investment (e.g., intrinsic job fulfillment, opportunity for growth, recognition for accomplishment, financial rewards). (pp. 58-59)

According to Hartog and Van den Brick (2007), human capital is now a familiar concept, which is often used in public debates and is a favorite phrase among the politicians who want to stress the relevance of development and dissemination of new knowledge for maintaining high levels of welfare and livelihoods.

According to Becker (2008), "economists regard expenditures on education, training, and medical care . . . [as] human capital because people cannot be separated from their knowledge, skills, health, or values in the way they can be [secerned] from their financial and physical assets" (para. 2). However, it was Schultz (1960) who first proposed the treatment of education as an investment in mankind and treatment of all the consequences arising from it as,

> . . . human capital. Since education becomes a part of a person receiving it, I shall refer to it as human capital. Since it becomes an integral part of a person, it cannot be bought or sold or treated as property under our institutions. Nevertheless, it is a form of capital if it renders a productive service of value to the economy. (p. 571)

In addition, Schultz (1972) asserted that the components of human capital are classified as such "because it is a source of future earnings or of future satisfactions, or both . . ." (p. 5). "At the national level human capital can be viewed as a factor of production [coordinated] with physical capital, [therefore, implying] that its contribution to growth is greater than the volume of physical capital (Mincer, 1981, p. 2).

"Economists have [for] known that people are an important part of the wealth of nations" (Schultz, 1961, p. 2). Moreover, if a community is to compete successfully and hold its place in a world economy characterized by increasing global competition, its enterprises must use the latest efficient technology available and this calls for a labor force (i.e., human capital) that is educated and trained to use such technology (Margolis, Plug, Simonnet, & Vilhuber, 2004; Woodhall, 1987).

The differences between the growth and development of different countries have been attributed to differences in the accumulation of human capital over time (Lucas, 1988; Schultz, 1961; Zhang, Wu, Zhang, & Wang, 2009). Schultz (1961) stated that the acquisition of knowledge and skills is in a "greater part the product of investment" in people "and, combined with other human investments, [they] account for the productive superiority of the technologically advanced countries" (p. 3). A case in point is the rapid growth in East Asia (i.e., countries such as Hong Kong, Korea, Singapore, and Taiwan)

whose "economic growth and development has been" attributed to their enormous investment in education and human capital (Olanyiyan & Okemakinde, 2008, p. 480).

"Human capital plays a double role in the process of economic growth" (p. 31) which includes stocks of knowledge resulting in technological change, and also the formation of adaptable skills in the workforce that were induced as a result of technological changes (Mincer, 1989). Increases in technological change results in heightened market demand for the human capital necessary to produce such technologies (Mincer, 1989).

Education enhances a person's skill level and when the skill level increases in the workforce, so does its productive capacity (Hartog & Van den Brick, 2007). However, despite the fact that individuals gain knowledge and skills, through training, education, and informal life experiences, not all of the acquired skills are considered a form of human capital (Schultz, 1961).

Investments made in human capital help to generate future incomes or outputs that justify the amount spent on it (Hornbeck & Salamon, 1991; Schultz, 1972). Investment simply means "the sacrifice of current resources for future returns" (Schultz, 1972, p. 15), and Becker (1994) stressed that one way in which investment in human capital can be made is through improvement in the physical and emotional health of the people.

Schultz (1972) classified investment in human capital into different forms which included investment in (a) "schooling and higher education," (b) "post schooling training and learning," (c) "preschool learning activities," (d) "migration," (e) "health," (f)

"information," and (g) "investment in children" (i.e., the future workforce) (p. 4). According to Schultz (1961), "schooling is more than a consumption activity, in a sense that it is not taken solely to obtain satisfactions or utility while attending school" (p. 31) but rather should be looked at as productive stock that is embodied in the people who will provide services in the future.

On the other hand, Mincer (1981) described human capital investments as "a life cycle chronology," including resources allocated for "child care and child development" as representative of "pre-school investments" (p. 3). These two overlap each other but "are followed by investments in formal education," "in labor market mobility," in "job choice," in "job training," and in the "work effort" that occurs "during the [individuals'] working lives"; and, finally, "investments in health and other maintenance activities that continue throughout [their lives]" (Mincer, 1981, p. 3). According to Mincer (1981), "[m]uch of a person's human capital accumulation takes place at home, [especially] during the pre-schooling stage of the life cycle" and the parents' education levels have "a significant influence in this process" (p. 5). However, Schultz (1972) and Mincer (1981) seemed to agree on the need for similar human capital investments, such as pre-schooling, health care, job training after school, and labor mobility or migration opportunities.

Mcfadyen (2006) asserted that future incomes and contributions to societal economic growth vary according to the amount of education investment and, therefore, individuals can invest in themselves for long-term personal profit and gain. In related research, Van der Merwe (2010) conducted a study about the expectations of individuals who went to specific universities in South Africa and found that the participants at

universities viewed education as an investment with higher future returns. According to Borjas (2005), a positive relationship existed between education, lower unemployment rates, and higher earnings. People who were highly educated had lower rates of unemployment and tended to earn higher incomes than individuals who were less educated. Gao (2008), for example, reported that the unemployment rate in 2002 amongst school dropouts in the United States, was almost three times higher than that of college graduates. In addition, attainment of higher education has been associated with higher social mobility (Deary et al., 2005; Haveman & Smeeding, 2006).

According to Shultz (1961, 1972) young people who are educated had higher productivity and their income was higher than people who had fewer years of education, which he attributed to human capital investment. "Young people have more years ahead of them than older workers during which they can realize on such an investment" (Shultz, 1961, p. 7). However, according to Mincer (1981), "barriers to occupational choice and job mobility [reduced] the opportunities for investment in human capital," but when these barriers were eliminated it increased an individual's economic potential "and the overall efficiency of the allocation of resources in the economy" (p. 9).

In studies executed by Mincer (1981) and Psacharopoulos (1985), it was found that the returns on education as an investment were higher in developing countries than in developed countries. Mincer (1981) attributed these findings to the shortage of capital in the developing countries, and the scarcity of human capital being greater in developing countries than in the developed countries. Psacharopoulos (1985) also pointed out that the highest private returns accrued to primary education, and that private returns on

university education was higher than for secondary education but primary and secondary education combined had higher social returns than did tertiary education.

In addition to the above findings, Psacharopoulos (1985) and Psacharopoulos and Patrinos (2004) also indicated that overall females had higher returns on education than did males in the developing countries. Olanyiyan and Okemakinde (2008) asserted that investment in human capital through education leads to higher returns and it is on this basis that the advocates of the human capital theory regard it equal to or even more important than physical capital. Mincer (1981) maintained that the returns on education were higher than physical capital only if financial and social hindrances to education were greater in the alternative areas of investment. Economists, however, have for a long time emphasized the challenges of using borrowed money to plow back in human capital because it cannot be used as security to acquire bank loans (Becker, 1994).

Babalola (as cited in Olanyiyan & Okemakinde, 2008) affirmed that the philosophy behind investing in human capital is essentially founded on three reasons:

1) that the new generation must be given the appropriate parts of the knowledge which has already been accumulated by the previous generations;
2) that new generation should be taught how existing knowledge should be used to develop new products, to introduce new processes and production methods and social services; and
3) that people must be encouraged to develop entirely new ideas, products, processes and methods through creative approaches. (p. 2)

When investments are made in human capital that increase the general efficiency, and, society, as a whole, gains from the social and economic resources that were not captured by the market because they were accrued to society in general rather than to only the individuals who acquired the skills or to their employers (Hornbeck & Salamon, 1991; Van der Merwe, 2010; Zhang et al., 2009). Hornbeck and Salamon (1991) pointed out some of the benefits that accrued to society as a result of having an educated citizenry, which may include people being better consumers, parents, voters, and members of their communities. Similarly, Schultz (1960) stated that education helped "to develop individuals [who are] competent and responsible citizens by giving men and women an [opportunity] to acquire an understanding of the values they hold, and [also] an appreciation of what [these values] mean to [the quality of their lives]" (p. 572).

According to Olanyiyan and Okemakinde (2008), efforts to promote investment in human capital resulted in the promotion of rapid economic growth for society. However, though the society as a whole benefited from the human capital investments, the private returns for an individual were higher than the social returns (Psacharopoulos & Patrinos, 2004).

More than two centuries ago, the economist Adam Smith pointed out that a crucial part of a nation's wealth lies in its people, and the market place not only can reward those who succeed in educational pursuits but education and training allows for greater productivity and income (Hornbeck & Salamon, 1991; Mcfadyen, 2006; Schultz, 1961). Smith suggested that investments in acquiring abilities are the primary means of generating revenues (Zula & Chermack, 2007).

Schultz (1981) in his book, *Investing in People*, professed that the main factors of production for the betterment of poor people were not necessarily space, energy, or cropland but rather those factors that improved the quality of the populace in terms of education and advancements to its base of knowledge. When capital is availed to the poor countries from outside, most of it goes toward the formation of structures, equipment, and sometimes, into inventories, but little is availed to human capital investment; and, as a result, human capabilities do not stay commensurate with the physical capital and eventually they become a limiting factor in promulgating more economic growth (Schultz 1961).

Margolis et al. (2004) noted that early career experiences have an impact on the type of job a person has in the future and also the importance of these initial experiences in preventing later career outcomes diminishing with time. Ben-Porath (1967) posited that the greatest investments in learning were made at the start of an individual's career and the returns, therefore, could be realized over time.

Human Capital Theory

Human capital theory was born more than five decades ago as a result of the scholarly works of Theodore Schultz, Gary Becker, and Jacob Mincer (Hartog & Brick, 2007; Haveman, Bershadker, & Schwabish, 2003; Olanyiyan & Okemakinde, 2008; Stanfield, 2009). According to Zula and Chermack (2007), "these scholars ventured away from the four main factors [that formed] the production model of physical capital, i.e., labor, land, and management, to focus their attention on a residual factor that would be called [*human capital*]" (p. 247). Schultz (1961) is the one who first identified the residual factor as human capital and he proffered that,

> [t]he failure to treat human resources explicitly as a form of capital, as a produced means of production, as the product of investment, has fostered the retention of the classical notion of labor as a capacity to do manual work requiring little knowledge and skill, a capacity with which, according to this notion, laborers are endowed about equally. (p. 3)

However, it is Adam Smith who is considered as the economist who "pioneered the concept that a nation's capital stock included the inhabitants' acquired [knowledge] and abilities based on his observation that human skills [increased] wealth for society [as a whole as well as] for the individual [in particular]" (Schick, 2008, p. 14). Moreover, Fitzsimons (1991) concluded that Smith set a foundation for what would "become the science of human capital" and the axiom that prevails in "modern human capital theory[:] all human behavior is based on the economic self-interest of individuals operating within freely competitive markets" (p. 1).

According to Nafukho, Hairston, and Brooks (2004), "Schultz defined human capital as the knowledge and skills that people acquire through education and training as being a form of capital, and this capital is a product of deliberate investment that yields returns" (p. 547). Zula and Chermack (1997) asserted that all the "definitions of human capital theory," as espoused by different scholars, encompass similar and important themes: "investing in acquired education/schooling; on job training and development; and other knowledge which [had] a positive impact on [the] productivity and wages [of workers]" (p. 250). Schultz (1960) added that "education can be [classified as] pure consumption or pure investment, or it can serve both purposes" (p. 571). Moreover, "[h]uman capital analysis deals with acquired capacities which are developed through

formal and informal education at school and at home, and through training, experience, and mobility in the labor market" (Mincer, 1981, p. 3).

"Human capital theory suggests that individuals and society derives economic benefits from [investing] in people" (Sweetland, 1996, p. 341). The theory promotes education and training as a powerful individual and social lever that also benefits a nation's economy (Fitzsimons, 1991; Mcfadyen, 2006; Olanyiyan & Okemakinde, 2008; Van der merwe, 2010; Zula & Chermack, 2007), and the accumulation of human capital is perceived to contribute to the health and nutritional wellbeing of a nation's citizens (Schultz, 1963). Further, Schick (2008) maintained that "education and experience were key demographic characteristics underlying the concept of human capital" (p. 6).

Mincer (1989) stated that human capital theory is the economist's approach to analyzing the skills of individuals and the quality of their labor. According to Mincer (1989), "[t]he central idea is that human capacities are, [to] a large [extent], acquired [and] developed through [both] informal and formal education", which occurs at school and at home, as well as "through training, experience, and mobility in the labor market" (p. 27). The abovementioned "activities are costly," however, "as they involve [both] direct expenses and earnings or consumption," which is often foregone by families, students, and trainees, as well as by workers as they undergo the process of labor mobility (Mincer, 1989, P. 27).

Becker (1993) asserted that schooling, medical care, training, and education lead to an improvement in a person's quality of life, and are all regarded as capital because they improve an individual's health, income and wellbeing over his or her lifetime.

"Positioning the unique skills and knowledge that an individual acquires through schooling in the same category as physical assets of an organization forms the basis [of the] human capital theory," and, similar to other assets, "these skills and knowledge can be invested" to result in higher returns to the person and his or her society (Schick, 2008, p. 15).

Mincer (1958) stated that the returns foregone on work to pursue education were rationally compensated with higher earnings after attainment of education and those occupations requiring higher levels of education afforded higher compensation. The earnings were sufficient enough to ensure that lifelong receipts equalized the present value of compensation received by workers with less education (Mincer, 1989). In addition, Mincer (1989) found that an individual's economic growth is described by his earnings/wage profile, and that a typical wage profile is *concave*. It is seen to grow "rapidly during the first decade of working life, decelerates subsequently, and then levels off or declines ultimately" (Mincer, 1989, p. 27).

Becker (1964) considered education to be a good for investment; before that, "advanced levels of education were considered to be consumption status [goods]" (Schick, 2008, p. 15). This was because "the ability to consume more non-compulsory education was" seen as "a privilege often exercised by the middle and upper classes," and, in so doing, it signified "higher social standing," according to Machin and Vignoles (as cited in Schick, 2008, p. 15). Similarly, according to Herren and Edwards (2002), before the "latter half of the 1800s," attainment of "university education was generally reserved for affluent white males who comprised the [upper class] of the [United States]" (p. 90).

According to Gao (2008), three distinctive areas of focus predominate in "[h]uman capital studies: the schooling model, the screening model, and the post-school/on-the-job training model" (p. 19). The schooling model is based on the assumption that education improves workers' productivity, which, in turn, translates into increased wages and the workers who improved their education "attainment will maximize" their lifetime earnings despite their earnings having been "reduced during the time they [were] in school" and removed from the workforce (Gao, 2008, p. 20). The "screening model argues education does not [necessarily] increase a worker's productivity," but if a person attains a degree or diploma through education, it "signals to a potential employer that the degree holder may have higher innate ability and can do [good] work" (Gao, 2008, p. 20).

The human capital theory dichotomizes on-the-job training as general training versus firm-specific training (Gao, 2008; Zula & Chermack, 2007). General training, according to Gao (2008), is the type of training that increases a worker's productivity even when he or she switches jobs whereas firm-specific training enhances a workers productivity on one particular type of job. This has very important implications for Human Resource Development (HRD) personnel, because it is they who are responsible for providing these investments (i.e., training) to employees, and evaluating the impacts of these interventions on a firm's workforce (Zula & Chermack, 2007). Numerous workers continue to invest in their human capital after completing formal education, especially through the on-the-job training approach (Gao, 2008). Hayek (2011) asserted that organizations are likely to offer such training and expect to witness the effects of their investment in the form of improved employee performance. The positive effects of

training on productivity have been found to exist at both the individual level and the organizational level (Bartel, 1994).

According to Becker (1992), the human capital theory led to creation of a uniform and acceptable framework to analyze both the returns on education and also to calculate an organization's return on investments as HRD practitioners attempt to assess such impacts. Becker (1992) proposed a theory of human investment that calculated the relationship between levels of education, income, and economic growth. Becker (1992) based this on the study of income disparities between ethnic groups in the United States which he suggested were caused by differing levels of human capital investment. Zula and Chermack (2007) formulated a model on human capital theory to illustrate the relationship between the inputs and the outputs, as shown in Figure 2.

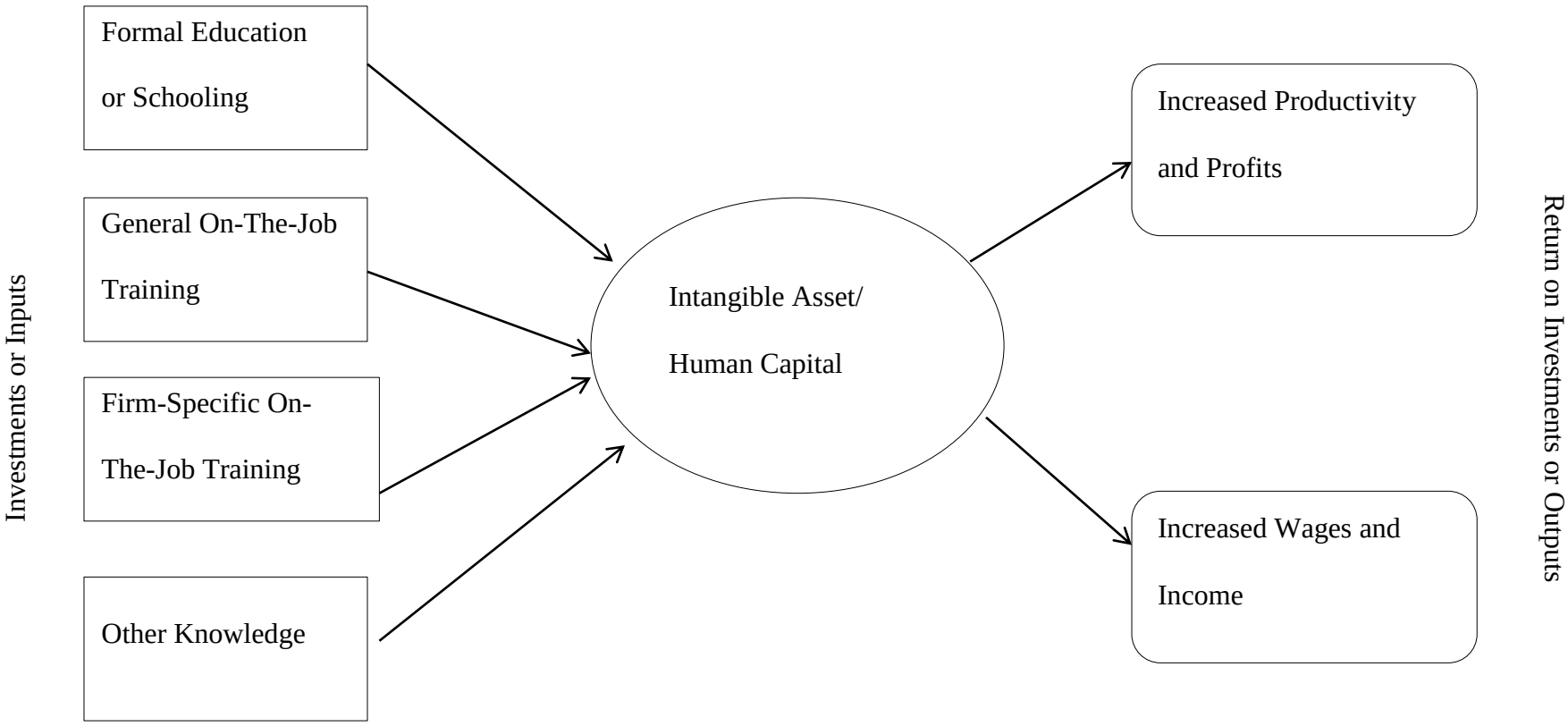

Figure 2. Model of human capital theory and the associated investments or inputs and the associated return on investment or outputs (Adapted from Zula & Chermack, 2007, p. 251)

Education or training increases a worker's productivity by imparting useful knowledge and skills, which, in turn, increases his or her future income by increasing the person's lifetime earnings potential (Becker, 1994). "The earnings of more educated people are almost always well above average, although the gains are generally larger in less developed countries" (Becker, 1994, p. 4). Further, "[e]ducation and training are the most important investment in human capital" (Becker, 1993, p. 17). People are motivated to invest in their education because they expect such an investment will bring more career success, and organizations are motivated to invest in employee training with the expectation that this investment will increase their productivity and profitability (Hayek, 2011). Employees who are highly educated receive higher pay from their employers, because they are perceived to have more skills and also to be more productive than their less educated counterparts (Mincer, 1981). However, on the contrary, having a highly skilled workforce does not necessarily result in a profitable organization (Bowles & Gintis, 1975).

Human capital theorists assert that the differences which exist in earnings are related to the levels of capital investments made in human capital, and more highly educated workers are oftentimes more productive than their less educated counterparts (Baptiste, 2001; Becker, 1964; Mincer, 1974). Becker (1994) contended that in the more developed countries, earnings were much more geared toward knowledge than to physical strength which was not the case in earlier days; however, in many developing nations, an individual's strength may still have a significant influence on his or her earnings.

Schultz (1961) asserted a primal relationship existed between education and human capabilities; he also hinted on a wide range of other types of human capabilities which were less well known, other than education. These capabilities included

1) health facilities and services, broadly conceived to include all expenditures that affect the life expectancy, strength and stamina, and the vigor and vitality of a people;
2) on-the-job training, including old-style apprenticeship organized by firms;
3) formally organized education at the elementary, secondary, and higher levels;
4) study programs for adults that are not organized by firms, including extension programs notably in agriculture; and
5) migration of individuals and families to adjust to changing job opportunities. (p. 9)

According to Mcfadyen (2006), capitalists suggest that school-based education can be a way to expand economic capacity of an individual and a nation at large. However, despite the fact that people invest in schooling and job-training as a form of human capital enhancement, analysts contend formal education plays a complementary role to job-training in producing human capital (Mincer, 1989). Mcfadyen (2006) summarized the version of the human capital theory from post-1980 to the first decade of the 21st century through eight precepts:

1) [h]uman capital is an investment in any activity able to raise a worker's productivity:

2) [w]idespread investment in human capital leads to a labor force and skill base which are necessary for economic growth;
3) [h]uman capital incorporates technology as a factor that mediates the relationship between human capital and productivity;
4) [p]ersonal income varies according to the amount of human capital investment;
5) [h]uman capital investment for workers involves direct costs and costs in foregone earnings;
6) [i]nvestment decisions compare the possible future incomes and consumption abilities to costs of training and deferred consumption;
7) [s]ocietal investment is calculated in the same way; and
8) [h]uman capital advocates for private over public investment in education. (p. 36)

Mincer (1989) asserted that, although human capital theory can be applied in many fields, it should not be taken as the only principle factor in proving any particular field; moreover, the lack of statistics on job training resulted in emergence of "alternative theories that attempted to explain the upward slopes of wage profiles" (p.27 . Fitzsimons (1991) espoused that human capital theory is based on two fundamental factors. The first pillar being "the idea that the economy is an analytically separate realm of society that can be understood in terms of its own internal dynamics" (p. 2), and second that individuals often act rationally to maximize their utilities, although economists are well "aware that individuals are capable of acting irrationally or in pursuit of goals other than the [maximization] of utility" (Fitzsimons, 1991, p. 2). These two foundational aspects

have been criticized, however. Economic sociologists, for example, take issue with the initial factor and argue that social system cannot be separated from the economy; i.e., the social system shapes the characters and preferences of an individual and also social factors influence economic contractual transactions (Fitzsimons, 1991). As for the second factor, in modern human capital theory, it is maintained "that all human behavior is based on the economic self-interest of individuals operating within freely competitive markets" (Fitzsimons, 1991, p. 3).

Stanfield (2009) criticized the human capital theory for not distinguishing "between government investment and private investment," and also attempting to "claim that some government investment in education must be better than none," which "incorrectly implies that without government intervention investment in education would cease to exist" (p. 1). Stanfield (2009) also disagreed with the assertion made by Garry Becker in 1989 that, investment "in human capital is one of the most effective ways to raise" people out of poverty "to decent levels of income and health" (p. 1). On the contrary, Stanfield (2009) asserted "that government investment in human capital is one of the least effective ways to raise the poor to [higher] levels of income and health [because it] is more likely to prevent and pervert the growth of human capital instead of promoting it" (p. 1).

Theory of Planned behavior

The theory of planned behavior stipulates three conceptually independent determinants of an individual's intention: *attitude towards behavior*, i.e., the level at to which an individual evaluates his or her ability to conduct or not to conduct a behavior;

subjective norm, i.e., the social pressure felt by an individual to conduct or not to conduct out a behavior; *perceived behavioral control*, i.e., the perceived ease or challenges by an individual to conduct a behavior, which is presumed to be a reflection of prior experiences in addition to expected challenges (Ajzen, 1987, 1999, 2002, 2006; Ajzen & Madden, 1986). Regarding presumed behavioral control, an individual's beliefs related to a certain action also may be affected by secondhand knowledge about the behavior, as a result of experiences of acquaintances or friends, as well as by other attributes that increase or decrease the anticipated challenges of conducting the behavior under consideration (Ajzen, 1987; Ajzen & Madden, 1986). In addition, Bandura (1986) asserted that a person's prior experience acts as a resource for information about controlling a behavior under consideration.

In the theory of planned behavior, the central factor is considered to be an individual's aim to actualize a behavior (Ajzen, 1987). Intentions capture the motivational factors impacting the behaviors associated with how hard people are willing to try, and how much of an effort they are willing to exert to perform the given behavior (Ajzen, 1987; Ajzen, 1991; Ajzen & Madden, 1986). According to Ajzen and Madden (1986), when a person has strong intentions to actualize a behavior, he or she is likely to try harder and hence the higher the likelihood the behavior will be actualized.

Ajzen and Madden (1986) pointed out that "[a] strong association between intention and behavior is dependent on three prerequisites" (p. 455). The prerequisites included (1) "the measure of intention must correspond in its level of generality to the behavioral criterion"; (2) "intention must not have changed in the interval between the time at which it was assessed and time at which the behavior is observed"; and (3) "the

behavior under consideration must be under volitional control" (Ajzen & Madden, 1986, p. 455). Further, based on the rule of correspondence, one is able to foretell an individual's behaviors towards a particular goal by measuring his or her mental outlook towards that behavior (Ajzen, 1987). However, mental outlook towards a behavior may fail to capture the influence of other factors or not fully capture their influence towards a behavior (Ajzen, 1987).

Ajzen (1991) asserted that "perceived behavioral control, together with behavioral intention can be used to predict behavioral achievement" (p. 184). Similarly, when a single behavior is observed on repeated occasions, it "can provide information about a person's tendency to perform that particular behavior but it usually cannot provide a valid basis for inferring a broad response disposition" (Ajzen, 1987, p. 12). It should be noted that "the more favorable the attitude and subjective norm with respect to a behavior, [the greater an individual's] perceived behavior control" (Ajzen, 1987, p. 44; 1991, p. 188; 2002, p.1; 2006, p. 1), and the greater his or her perceived intentions to perform the said behavior (Ajzen, 1987, 1991, 2002, 2006).

The theory of planned behavior is based on salient information or beliefs which include three aspects: (a) *Behavioral beliefs* represent "the likely outcome of a behavior and evaluation of the outcomes [which, in turn, influence attitude towards a behavior]"; (b) *Normative beliefs* which are "normative expectations of others and motivation to comply with these expectations"; and (c) *Control beliefs* which are "beliefs about the presence of [other] factors that may facilitate or impede performance of the behavior and the perceived power of these factors" (Ajzen, 2002, p. 1, 2006, p. 1).

When a decision to conduct or not to conduct a behavior is based on and individual, it is said that the said behavior is completely under his or her control (Ajzen, 1987, 1991). However, if the "behavior is contingent on the presence of appropriate opportunities or on [the] possession of adequate resources ([i.e.,] time, money, skills, cooperation from other people . . .), the less it is under a person's volitional control" (Ajzen & Madden, 1986, p. 455).

Perceived behavior control can help predict the attainment of a goal without behavior intention; similarly, "when an individual has control over" the behavioral performance, then "intentions alone should be sufficient to predict behavior . . ." (Ajzen, 1991, p. 185). However, both intentions and perceived behavior "control can make significant contributions to the prediction of behavior, but in any given application, one may be more important than the other and, in fact, only one of the two predictors may be needed" (Ajzen, 1991, p. 185).

A number of factors "interfere with control over intended behavior" and these may be internal such as "skills, abilities, knowledge," and "adequate training" and others may be external, including "time, opportunity," and "dependence on cooperation with other people" (Ajzen & Madden, 1986, p. 456). "The resources and opportunities available to an individual must to some extent dictate the likelihood of behavioral achievement" (Ajzen & Madden, 1986, p. 456). People with more resources and opportunities tend to be in control of their behavior than those with less (Ajzen, 1991; Ajzen & Madden, 1986).

Bandura et al. (2001), in their concept of self-efficacy, posited that the behavior of an individual is controlled by a belief in an individual, together with the individual confidence in his or her capacity to exercise a given task. The idea of self-efficacy, according to Ajzen (1991) and Ajzen and Madden (1986), is related to the general principle of the theory of planned behavior which places a relationship among a person's beliefs, attitudes, intentions, and behaviors.

According to Ajzen (1991), past behavior has an influence on future behavior which is "independent of the effects of beliefs, attitudes, subjective norms, and intentions" (p. 203). However, this can only be possible if the factors that determine a given behavior are known and remain unchanged (Ajzen, 1991):

> Specifically, the assumption usually made is that repeated performance of a behavior results in the establishment of a *habit*; behavior at a later time then occurs at least in part habitually, without the mediation of attitudes, subjective norms, perceptions of control, or intentions. (p. 203)

Interest and Motivation for Career Choice

Interests and motivations have been a major field of study for educational psychologists (Roth & Hsu, 2008), and, during the "past decades, educational [researchers have] increasingly studied the influence of interest on learning and development in various educational settings" (Krapp, 2002, p. 384). Motivation refers to behaviors and decisions which are difficult to explain based on ability alone (London, 1983). Krapp (2002) defined "interest as an interactive relation between an individual" learner and his or her environment, which may include objects, events, and ideas (p. 387).

During the development and growth of both children and adolescent, they speak about interests and learn to compare those specific situations in life related to particular body conditions, e.g., stress, feelings, and emotions (Roth & Hsu, 2008). Bandura (1986) asserted that interests may arise from self-evaluation of consequences that develop as a result of accomplishing personal goals rather than the tangible rewards. Similarly, Lent, Brown, and Hackett (1994) posited that an individual's interests in a particular career was dependent on the expectations (outcomes) the person had from participating or choosing a given career and the value he or she attached to those expectations.

Lent et al. (1994, 2002) asserted that interests develop primarily out of self-efficacy beliefs and expected outcomes arising from specific learning experiences. These interests transform into goals which "are also directly influenced by self-efficacy beliefs" and may influence an individual's choice of career (Hirschi, 2010, p. 224).

Ajzen (1987, 1991), in the theory of planned behavior, asserted that an individual's aim is a product of inspirational factors which affect behavior. Haase and Lautenschlager (2011) classified motivational/inspirational factors into cognitive and contextual or environmental factors that exert influence on a person's anticipated career, and their specific combination and interaction may shape an individual's decision to select a given career field. When a person has stronger aims to conduct a behavior, he or she is more likely to try and, therefore, the higher the chances that the said behavior will be actualized (Ajzen & Madden, 1986).

Lent et al. (1994) argued that "[i]nteractions with or observation of family members, peers, teachers, other significant persons, cultural and religious institutions,

and print and electronic media sources provide much of the context for imparting values and personal standards of behavior" (p. 91). According to Ajzen (1987), when a single behavior is observed repeatedly over a period of time, it "can provide information about" the observed individual's "tendency to perform that particular behavior" (p. 12). "As has often been observed, the best predictor of future behavior is usually a measure of the same behavior taken earlier" (Ajzen, 1987, p. 41).

Before the industrial revolution, as it unfolded in the developed world, choosing a career was not a big problem for many people as the traditional societies offered few occupational choices (Savicakas, 2008). However, rapid changes in the economy brought by the industrial revolution led people to move away from farms to towns in search of jobs, and, as a result, people had to choose one major work activity instead of the variety they had likely practiced in the village, which became a big challenge for many (Savicakas, 2008).

Exploring and planning for post-secondary career options is one of the major challenges facing high school students (Tang, Pan, & Newmeyer, 2008). Career choice is a complex and multi-faceted process that involves both conscious and unconscious choices (Pines & Yanai, 1999). The foundation of an individual's career development and interests are believed to start in childhood (Hartung, Porfeli, & Vondracek, 2005). Teenagers begin to be aware of their own interests and career aspirations at about the age of 14 (Sastre & Mullet, 1992).

Ricketts (1997) pointed out that choosing a career when a person is still young was a better choice than when it is made later in life, because it helps to give direction to

an individual's life and studies, although the person's choices may change later in life. "Many students decide once they enter college that they want to be a veterinarian, doctor or engineer. That decision ought to start in the eighth grade or earlier" (Ricketts, 1997, p. 412).

According to London (1983), career motivation is a "multidimensional construct" (p. 626) that is internal to an individual but is influenced by his or her situational context, and is "reflected in the [person's] decisions and behaviors" (p. 620). Farmer (1976) identified some differences in motivation as a result of low "academic self-confidence for girls in college", "fear of success in college and high school women," "vicarious achievement motivation . . .," "home career conflict . . .," "myths about women and the world of work…," "lower risk-taking behavior lower in girls than in boys," "sex-role orientation . . . ," "the availability of resources . . .," and "family socialization . . ." (pp. 13-14). Welsh (1983) elaborated that career aspirations of women were not fundamentally different from those of men but the choice of a career for women was "vastly more complex" (p. 2) than it was for men because of the socialization that women experienced.

In addition, London (1983) stated that career motivation ought to "be understood in terms of relationships amongst an individual's characteristics" (i.e., the needs, interests, and personal variables relevant to the person's career), "career decisions, behaviors, and situational conditions" (p. 620). London (1983) went on to state these dimensions as three domains:

1) career identity which reflects the direction of career motivation and is central to one's career;
2) career insight which involves the extent to which a person is realistic about perceptions of him or herself and the organization and relates these perceptions to his/her career goals; and
3) career resilience which basically involves one's resistance to career disruption in a less than optimal environment. (p. 621)

According to Super (1990), high school students are at an exploration stage and where they attempt career-related activities through courses, work experiences, hobbies and also start making tentative decisions on career choice and skill development. Leung (2008) affirmed that adolescents at this stage have to cope with three primary vocational development tasks: (a) crystallization, "a cognitive process involving an understanding of one's interests, skills, and values, and to pursue career goals consistent with that understanding"; (b) specification, which involves "making tentative and specific career choices"; and (c) implementation, which involves "taking steps to actualize career choices through engaging in training and job positions" (pp. 120-121).

In addition, Donald Super proposed a career model which has five life and career development stages; he referred to the model as the Life-Career Rainbow (Leung, 2008; Super, 1980): (a) *Growth* is the first stage and ranges from 0 to 14 years and this involves the "[d]evelopment of self-concept, attitudes, needs and general world of work"; (b) *exploration stage* (15 to 24 years), which involves "[t]rying out through classes, work experiences, hobbies. Tentative choice and skill development"; (c) *establishment stage* (25 to 44 years) involving "[e]ntry-level skills building, and stabilization through work

experience"; (d) *maintenance stage* (45 to 64 years) involves "[c]ontinual adjustment process to improve in position"; and (e) *decline stage* (65+years), mainly characterized with a "[r]educed output and preparation for retirement" (as cited in Careers New Zealand, 2012, p. 1).

Super's 1980 model, the Life-Career Rainbow, as illustrated in Figure 3, is based on the belief that self-concept changes over time, and changes with an individual's life experience.

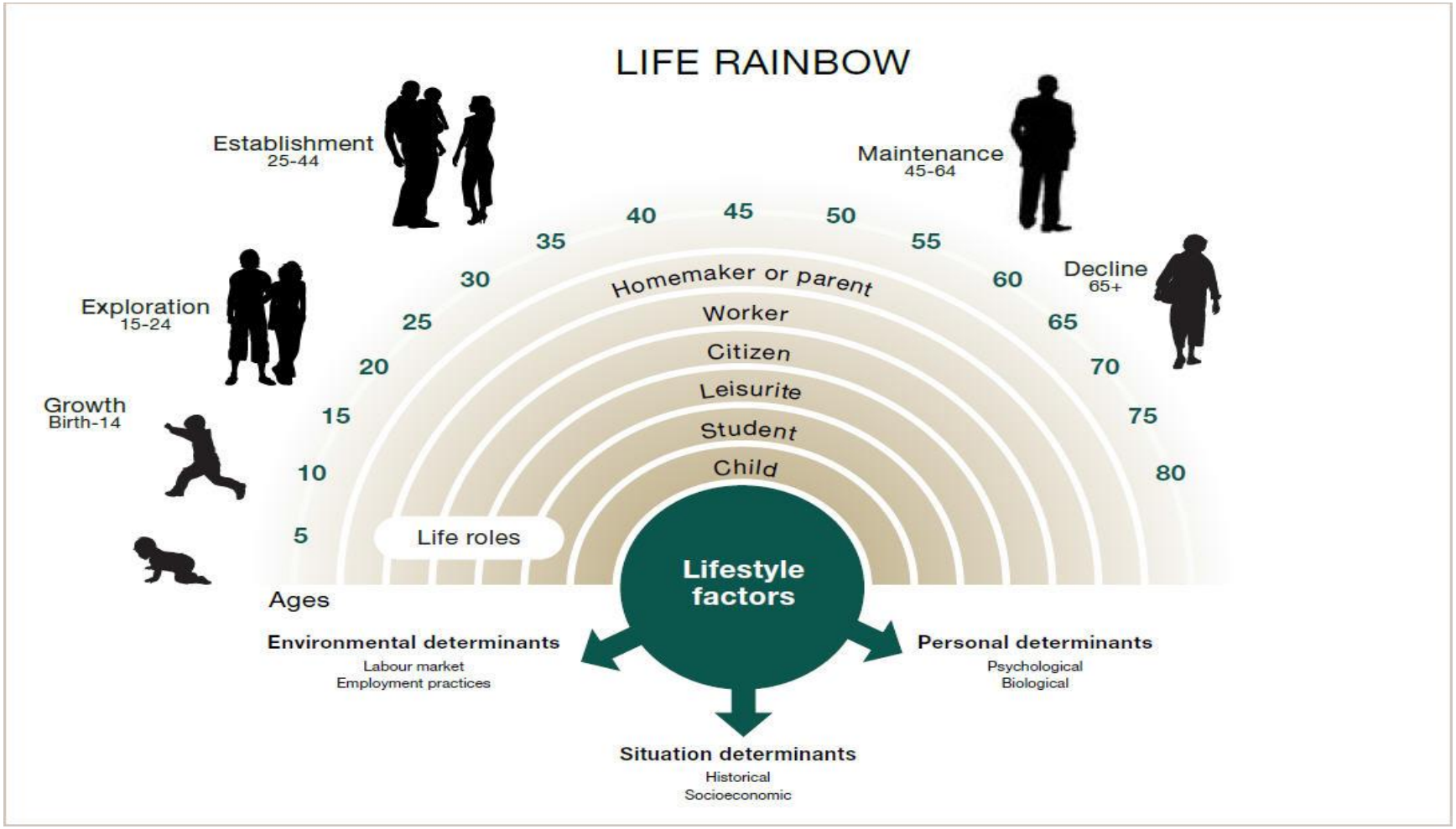

Figure 3. Donald Super's Career Model: The Life-Career-Rainbow. (as cited in and adapted from Careers New Zealand, 2012)

Astin and Myint (1971) argued that, although significant instability of career planning occurs between the senior year of secondary school and five years later, early patterns and interests predict later career success outcomes. Similarly, Schroder, Rodermund, and Arnaud (2011) asserted that "longitudinal studies following individuals from childhood to adulthood have demonstrated the predictive value of [an individual's] characteristics in childhood and adolescence for [developmental] outcomes" (p. 1).

According to Bennett-Smith (2011), early identification of the factors that influence choice of careers helps parents dialogue with their adolescents about career choices and also for educators to tailor their programs and courses so that they enable students to address their career development needs. However, most of the students in secondary schools lack the accurate information about career opportunities that is required to make appropriate career choices (Kochung & Migude, 2011), even though the decisions made in the earlier years of growth may determine the direction of their lives (Bandura, 1986; Bandura et al., 2001). Such choices affect which potentialities people choose to cultivate and what they leave undeveloped, and amongst these options are those that stand to affect their life paths and career choices (Bandura et al., 2001). Bandura et al. (2001) also asserted that "the children's perceived efficacy and academic orientations shape their perceived efficacy for different types of career pursuits, which, in turn, plays a determinant role in the career they choose and those they actively shun" (p. 188).

Children learn better when they are well prepared and even minor discrepancies in preparation made by their families may repeatedly multiply later into large differences on reaching adolescence (Becker, 1994). According to Becker (1994), severe beating of children by parents can lead to greater negative effects, and those parents at the other end

of the spectrum, who are sympathetic but provide firm help and guidance, create motivating environments for their children.

Bennett-Smith (2011) explained that most young people form their attitudes toward work as a result of interaction with their family and this, in turn, had an effect on career choice. The ability of young people to choose an appropriate career and function successfully as an adult depends usually on their relationships with important people in their lives, especially their parents in the formative years (Natalie, 2006; Pines & Yanai, 1999; Taylor, Harris, & Taylor, 2004). "[P]arents exert influence on the career choices and development of their children through the impact they exert on their children's self-efficacy appraisals, educational aspirations, and scholastic achievement" (Bandura et al., 2001, p. 189). Further, the "[i]nterests and skills developed during [an individual's] school years are translated into career selections" despite the fact that "social and economic factors frequently intervene," therefore, affecting "the level and content of [the] choices pursued" (Lent et al., 1994, p. 81). In addition, Pines and Yanai (1999) argued people often choose careers that will "enable them to replicate important childhood experiences," to satisfy needs not met during childhood, or to "actualize dreams passed on to them by their familial heritage" (p. 502).

According to Welsh (1983), capable students are likely to be perceptive about their own interests and aptitudes at an early age and this helps them to make career choices that are realistic and appropriate to their personal qualities. Adolescents develop career choice intentions that they perceive to be consistent with their abilities, values, and interests (Kracke, 2002). Ricketts (1997) outlined seven steps individuals ought to consider as they make career choices:

1) consider your interests, abilities, and other characteristics;
2) narrowing the field of jobs;
3) study the requirements of the job;
4) plan for alternative occupations;
5) prepare a plan for career preparation;
6) be willing to pay the price for success;
7) getting working experience. (pp. 411-412)

Tang et al. (2008) asserted that an individual's background or contextual factors, coupled with their characteristics, influenced his or her learning experience, and, consequently, the person's self-efficacy. Self-efficacy influences interests and outcome expectations which, in turn, influences an individual's career choice (Tang et al., 2008). In addition, Hackett and Betz (1981) hypothesized that self-efficacy percepts had an influence on an individual's career choice. Kerka (2000) identified personality, interests, self-concept, cultural identity, globalization, social support, socialization, role models, and resources (i.e., finances and information) as some of the factors which affect an individual's career choice. However, a study carried out by Kochung and Migunde (2011), including four secondary schools in Kisumu Municipality, Kenya, found that the availability of advancement opportunities and learning experiences played a big role in influencing career choices made by the students. But according to Osipow (1990), most vocational outcomes are a result of the person's environment.

Further, Bandura et al. (2001) argued that a relationship existed between occupational efficacy, interests, and career choices. "[D]ifferent types of occupational

self-efficacy were predictive of both adoption and rejection of particular classes of career pursuits" (Bandura et al., 2001, p. 197). Bandura et al. (2001) asserted that,

> [c]hildren with high scientific–technical efficacy would select professorial careers, creative architectural and design pursuits, but the technologically oriented are unlikely to be much attracted to child mentoring and rehabilitative care . . . [this] therefore predicted that they would shun careers committed to child care, patient care, and routinized public service. Children with high medical educational efficacy would choose occupations providing medical and mentoring services while avoiding mechanized and manual ones. Children who judge themselves to be efficacious in the creative arts would pick literary and artistic careers as their calling. A high sense for business operations and management of public services would foster career choices in business, finance, mentoring, and attendant service jobs but disfavor professional medical careers or those placing heavy demands on manual labor. Perceived self-efficacy in [the] military–policing domain . . . [c]hildren with this form of perceived efficacy would regard themselves as ill-suited for child-mentoring occupations. Perceived self-efficacy in the agricultural-horticultural sphere encompassed farming . . . , gardening, and creative work of plant nurseries and florists. Children with a self-efficacy bent toward a life of cultivating crops and plant life . . . would select agricultural occupations . . . .[For] the gendered traditionality career orientations it was hypothesized that boys would have a higher sense of efficacy for scientific, mechanical, and quantitative activities whereas girls would judge themselves to

be more efficacious for social service, mentoring, and health related pursuits. (pp. 190-191)

Bandura (1986) also contended that individuals chose tasks for which they perceived themselves to be competent and avoided those tasks they viewed they could not accomplish based on self-judgment and personal characteristics, and this he referred to as *self-efficacy*. Bandura (1986) identified four factors that influenced an individual's self-efficacy, i.e., verbal persuasion, vicarious learning, task performance, and psychological arousal. However, he identified task performance to be the most influential factor. In a related hypothesis regarding the career choice of females, Welsh (1983) pointed out that,

> [c]areer choices during adolescence may be related to the personal characteristics of these young women–to their values, interests, life goals, abilities, and self-images. If these personal characteristics were identified early in secondary school experience, possibly more girls would make appropriate career decisions and be appropriately prepared to attain their educational and career goals. (p. 4)

Similarly, Baird (1982) asserted that personal characteristics, extracurricular activities, and career choice were related, and, according to Splaver (1977), it is important for an individual to have a good understanding of himself or herself before they are in position to make intelligent career plans. This may involve an individual understanding his or her interests, abilities (both mental and physical), and also future

aspirations (Splaver, 1977). Splaver listed mental abilities as verbal comprehension, word fluency, spatial ability, reasoning ability, as well as numerical ability and memory.

Tyler (1964) professed that girls who were career-oriented exhibited higher abilities and achievement at the different stages of development when compared to girls who were not career-oriented. Tyler (1964) concluded that career orientation started to take shape at the age of 14. Finally, Welsh (1983) maintained that students' participation in academics and in co-curricular activities influenced their choices of careers.

Student Organizations and Clubs in Schools

"There is possibly no other part of the school program which offers so rich and varied opportunity for self-development and group participation as clubs" (Gruber & Beatty, 1954, p. 148). When clubs are well administered in a secondary school, they serve to enrich the classroom activities and also to supplement them (Gruber & Beatty, 1954). Shumow (2003) asserted that student organizations and "clubs provide opportunities for youth to participate [in a number] of activities" and "interact with [their] peers in a supervised setting," and it also helped youth to form relationships with adults (p. 317). In addition, this kind of interaction helped youth to develop both their physical and cognitive capabilities (Shumow, 2003).

Gruber and Beatty (1954) argued that, although "all the subjects and activities in the secondary school curriculum are calculated to contribute to a realization of the outcomes of secondary education, club activities contribute[d] in a unique way" (p. 140). This was possible because the clubs were initiated by the students and all the activities were run by the students which encouraged self-realization, gave them practice in

exercising civic responsibility, and helped to develop human relations skills (Gruber & Beatty, 1954). According to Fretwell (1931), clubs must be voluntary, interesting, and worthwhile from the student's point of view.

According to a study conducted by Shumow (2003), 25% of adolescents in U.S. high schools join music–oriented clubs and "20% join academic"-oriented or "career-related clubs," "such as science clubs," Spanish clubs, or FFA (formerly known as the Future Farmers of America) (p. 317). The school clubs were found to have more participants of "children from middle class families" (Shumow, 2003, p. 317) than children from families with low incomes, and it was observed that participation in these clubs was higher for females from two-parent families, which had higher socioeconomic status (Shumow, 2003).

Shumow (2003) and Johnston (1952) reported a number of reasons which students gave for their participation in club activities: (a) clubs helped to supplement curriculum; (b) clubs taught members valuable skills that could enrich the formal knowledge acquired in schools; (c) clubs provided leadership skills which is valuable experience; and (d) clubs helped to nurture and build relationships with adults and peers which are very important in providing social support, friendship, talent and career development, and mentorship. "Every club sponsor has had the experience of seeing a shy, retiring pupil blossom out when given a chance to do something in which he [or she] excels" (Johnston, 1952, p.115). Clubs in schools also served "as an exploration of occupational interests," especially in situations where the work in the clubs involved practical applications of learning experiences, for example, 4-H, entrepreneurship clubs, Journalism clubs, and the FFA (Johnston, 1952, p. 115).

Shumow (2003) asserted that programs in youth organizations provided opportunities for individuals "to develop skills and interests, to learn," to plan, to perform, and to create products (p. 320). The safe nurturing environment created as a result of interaction between adults and peers helped adolescents to develop a sense of belonging, trust, and security (Heath & McLaughlin, 1991). Fretwell (1931) postulated that clubs help students find new friends, learn how to be a friend by interacting with others and can supplement a possible range of student's exploratory activities. Further, Fretwell (1931) asserted that clubs' activities provided students with favorable opportunities: "[t]o learn how to work together," to "explore fields of interest, and fortunately these fields of explorations may lead to higher fields of interest," "[t]o explore himself or herself," and to interpret (pp. 276-278) their experiences.

Students who participated in academic clubs were reported to have improved in their academic achievement (Barber & Eccles, 1999; Gerber, 1996; Mehus, 1932, Shumow, 2003). Student organizations also encouraged many students to stay in school, therefore, reducing the number of school dropouts (Heath & McLaughlin, 1991; Mahoney & Cairns, 1997; McNeal, 1995; Zaff, Moore, Papillo, & Williams, 2003). Barber and Eccles (1999) stated that students who participated in extracurricular activities such as sports, performing arts, and academic clubs had higher grade point averages in grade 12 when compared to their grade point averages in grade 10.

Heath and McLaughlin (1991) described some of the characteristics of successful youth organizations as being "able to adopt an approach that is both firm and flexible," "empower[ing] rather than infantiliz[ing] youth," and having clear "goals and rules of membership" (p. 625). In addition, Shumow (2003) pointed out adolescents valued

organizations that encouraged leadership, community service, honesty, strong work ethics, and healthy lifestyles. Gruber and Beatty (1954) outlined three characteristics that constituted a good club activity:

1) Flexibility: the club should be sensitive to changing community conditions and to the needs of its members.
2) Immediacy: the club should seize upon contemporary problems and activities and assist students to participate in them effectively.
3) Interest: the club should appeal to the interests of its members. No club should be allowed to continue after the student interest has fallen below the levels necessary for efficient operation. (p. 140)

History and Evolution of Agriculture Clubs around the World

In the United States, agricultural clubs developed as a result of competition for special occasions, or awards, and the names given to each club differed greatly based on the objectives that were carried forward (Howe, 1910). According to Howe (1910), because of the variation in objectives, a number of clubs were formed (i.e., corn clubs, cotton clubs, potato clubs, fruit clubs, poultry clubs, livestock clubs, bird study, home culture, and high school improvement clubs), all of which were mostly agricultural in their purpose (Howe, 1910).

Early agricultural clubs were often comprised of boys and girls between the ages of 12 and 18 (Dadisman, 1921; Howe, 1910). In the corn-growing clubs, boys often competed on who would grow the most or the best corn on a certain area of land based on definite rules of planting, cultivation, and, also, on the exhibition of their product

(Dadisman, 1921; Howe, 1910). This was also true for the cotton-growing clubs undertook similar competitions to produce the best yield of cotton under prescribed conditions (Dadisman, 1921; Howe, 1910). On the other hand, the girls often competed in baking of bread, sewing, or had joint contests with boys in gardening, or raising of poultry (Howe, 1910). According to Howe (1910), most of the conditions for cultivating crops were determined by State Universities, such as Cornell University in New York (i.e., Cornell Farm Boys' and Girls' Clubs), the Ohio State University, throughout other parts of the United States. The organization and work of the different clubs, in many cases, took on the role of school Extension work in agricultural education (Howe, 1910).

The 4-H organization is the non-formal education arm of the agricultural education delivery model, as well as the largest youth organization in the United States (4-H Organization, 2013). 4-H evolved from the boys' and girls' clubs that were involved with agriculture, home economics, and related subjects, when the U.S. Congress passed the Smith-Lever Act of 1914, which created the Cooperative Extension Service at the United States Department of Agriculture (4-H Organization, 2013). The boys' and girls' clubs became organized as 4-H clubs in 1924 (4-H Organization, 2013).

4-H has an expansive reach, serving youth in rural, urban, and suburban communities in all states across the United States (4-H Organization, 2013). 4-H-type programs have spread across the globe, with about 103 such organizations in 82 countries outside the United States, with Canada 4-H leading the first expansion between 1905 and 1913. Thereafter, the idea spread to Sweden in 1918, and England-Wales also adopted the idea when it formed its Young Farmers Club in 1921 (National 4-H History Preservation Program, 2013). Kenya was the first country in Africa to champion youth development

programs in agriculture, when it formed the Young Farmers of Kenya in 1949, which was based on the U.S. 4-H model (National 4-H History Preservation Program, 2013).

The Future Farmers of America (FFA) was formed in 1928 by a group of young farmers (Hawkins et al., 1951; National FFA Organization, 2012), and it brought together students, teachers, and agribusiness to solidify support for vocational agriculture education in the United States (National FFA Organization, 2012).FFA is the youth development component of the secondary agricultural education model, which constitutes the formal delivery part of the U.S. pre-college, agricultural education system. The original mission of FFA was to prepare future generations for the challenges of feeding a growing population (National FFA Organization, 2012). But, in 1988, when the official organization name was changed from Future Farmers of America to the National FFA Organization, its mission statement was also changed to making a "positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education" (A brief history of the National FFA Organization, 2013, para. 15). Originally, "FFA was for young men who were studying vocational agriculture in public secondary schools," however, "a new organization was designed [to continue] to develop agricultural leadership, character, thrift, scholarship, cooperation, citizenship and patriotism" (A brief history of the National FFA Organization, 2013, para 4).

According to Connors (2013), when the "Future Farmers of America grew in size and scope, agriculture educators from around the world took notice of the impact the organization was having with rural agricultural youth in the United States" (p. 60). The success and impact of the FFA on U.S. agriculture and youth aroused the interest of a

number of in stakeholders from various countries and development organizations to learn about the management and activities of the FFA (Connors, 2013). This eventually lead to the establishment of similar youth organizations in different countries, some retaining related names while others took on completely different names but they still maintained "similar symbols, rituals, skill development events, and leadership development activities" (p. 60). Connors (2013) stated that the various organizations include the "Future Farmers of Japan" (being the most outstanding); "Future farmers of Greece"; "Future Farmers of Canada"; "Future Farmers in Southeast Asia and the Pacific"; "Future Farmers in Africa and the Middle East"; and "Future Farmers in Central and South America" (pp. 63-67).

Lindley (1993) asserted that, 4-H and FFA programs have had a tremendous positive impact in all areas of the world wherever they have been introduced. "In every country where youth programs have been introduced, there has been a positive [effect] on the lives of thousands of young men and women" (Lindley, 1993, p. 8).

In the United Kingdom, the National Federation of Young Farmers' Clubs (NFYFC) is the largest rural youth organization (i.e., youth from 10 to 26 years) that brings together all of the different Young Farmers Clubs (YFC) in the United Kingdom (National Federation of Young Farmers' Clubs, 2013a; Wilkes, 2002). The YFC provides exciting events, competitions as well as experiences in which members build lifelong relations, e.g., making friends, and learning new skills, which make a positive impact in the communities and the world, especially in the field of agriculture (National Federation of Young Farmers' Clubs, 2013a).

The first Young Farmers Club was started in 1921 in Hemyock, Devon England, where children reared calves, and competed for prizes that were given to those who achieved the highest standard. A decade later, more clubs were opened to provide agricultural education with a focus on growing and raising of crops, calves, pigs, poultry, and bees (National Federation of Young Farmers' Clubs, 2013b). According to National Federation of Young Farmers' Clubs (2013b), in the 1970s, the YFC worked very hard to develop international networks and exchange programs, and the clubs' members joined the Council of European Young Agriculturalists.

In Australia, the Young Farmers Clubs evolved when educators were not contented with curriculum that was not keeping-up with the needs of their citizens or the educational advancements in other parts of the world (Stockman, 1935). A need existed to teach children subject matter that would enable them to face the challenges of the *real world* and make a living (Stockman, 1935). However, prior to this, calf clubs had been conducted successfully, and they aroused the interest of many people in the farming community (Stockman, 1935). In 1927, Ballarant, a Rotarian, started Young Farmers Clubs in schools with help from Rotary Clubs, which provided financial support to the clubs, giving them a solid foundation (Stockman, 1935). According to Stockman (1935), the members of Young Farmers Clubs show-cased their cattle, sheep, pigs, poultry, and potatoes on field days and were often supported by members of the community, which ensured their success.

In Nigeria, according to Adebo (2009), a number of youth organizations are involved in agriculture (i.e., Young Farmers Clubs, 4-H Clubs, Children/Youth in Agricultural Program, and Youth Alliance in Nigeria), and their main objective is to

equip boys and girls with better skills in agricultural production. Kenya has both the Young Farmers' Clubs and 4-H clubs, and both are involved in youth and agricultural development (Foeken, Owuor, & Mwangi, 2007). Young Farmers Clubs in Kenya are a critical ingredient of its formal education system in the secondary school agriculture curriculum (Vandenbosch, 2006). The Young Farmers Clubs provide hands-on experiences for learners, which helps to reinforce what has been taught in class, and helps the learners acquire positive attitudes toward agriculture (Vandenbosch, 2006). The clubs also connect with farming communities where the students engage in field tours and compete in farm production and livestock judging competitions (Vandenbosch, 2006).

Conceptual Framework

This study was guided mainly by the human capital theory which evolved more than five decades ago from the scholarly works of Schultz, Becker, and Mincer (Hartog & Brick, 2007; Haveman, Bershadker, & Schwabish, 2003; Olanyiyan & Okemakinde, 2008; Stanfield, 2009). In addition, integrating the theory of planned behavior and factors which influence career choice broadened the study's understanding of the synergy between human capital theory and career choice. Human capital theory encompasses all the knowledge and skills that people acquire through education and training as a result of deliberate investments by society and the individual, which, in turn, yield returns to both (Nafukho et al., 2004). Human capital theory puts emphasis on education and training as a powerful individual and social lever, which also benefits a nation's economy (Fitzsimons, 1991; Mcfadyen, 2006; Olanyiyan & Okemakinde, 2008; Van der merwe, 2010; Zula & Chermack, 2007).

Mincer (1989) asserted that human capacities are developed through both formal and informal education, both at school and at home through training, experience, and mobility in the labor market. Because human capital is based on education, training abilities, and experiences, from the review of literature, the researcher observed that a relationship exists between investment in human capital (through education) and an individual's career choice.

According to Ben-Porath (1967), the largest investments are made at the beginning of a person's career and the benefits are reaped over a long period of time thereafter. Margolis et al. (2004) noted that early career experiences impacted the types of jobs an individual had in the future, i.e., the earlier experiences influenced the person's career choice. People invest in human capital with the hope of getting returns in the future, and this can be categorized under the economic factors that exert influence on an individual's choice of careers (Lent et al., 1994). The key traits that make up human capital include skills, knowledge, abilities, and experiences, and have been identified as influencing career choice. A conceptual framework model illustrating the relationship between human capital theory and career choice can be derived from the literature, as illustrated in Figure 4

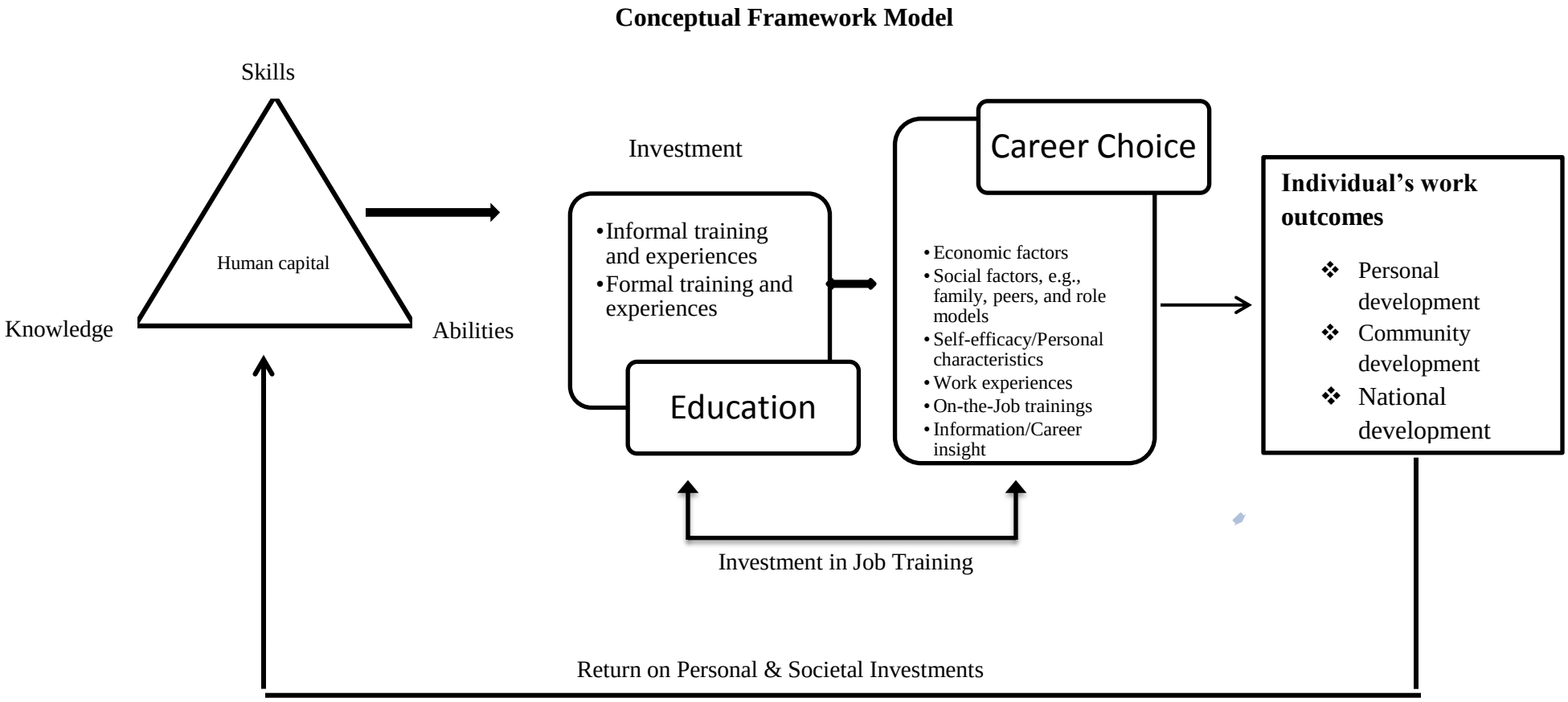

Figure 4. Model showing the relationship between human capital theory, education, and career choice.

Explanation of the Study's Conceptual Model

Human capital encompasses all skills, knowledge, and abilities acquired by persons through deliberate efforts of investing in their education (Nafukho et al., 2004). Individuals get education through formal and informal learning experiences. Individuals in the process of acquiring education are exposed to numerous people who may influence their choice of careers, these persons may include teachers, peers, family members, and role models (classified as social factors in the model; see Figure 4). The educational experiences also improve their self-efficacy, and exposes them to information about careers, e.g., through counseling, career fairs and career day events, and guest speakers who address career topics.

When organizations invest in human capital through on-the–job training, for example, it improves on the personal efficacy of their employees. Similarly, when students participate in extracurricular activities such as clubs, supervised agricultural experiences, games and sports, drama, debating clubs, they improve on both their physical and cognitive capabilities, explore occupational interests, and improve on their grades, which leads to increased learning and higher academic achievement (Barber & Eccles, 1999; Gerber, 1996; Johnston 1952; Mehus, 1932, Shumow, 2003). The self-efficacy of the students increases vis-à-vis the activities they experienced. Moreover, Bandura et al. (2001) posited that personal efficacy values had an influence on the career choice of an individual.

Welsh (1983) pointed out that the career choices of adolescents were related to a person's interests, abilities, and school experiences, all of which are central to human

capital. “The best predictors of future high-level, real-life accomplishments in writing, science, art, music, and leadership appear to be similar accomplishments, albeit at a lower level, in previous years” (Welsh, 1983, pp. 1-2). The career choices made lead to employment and income (i.e., returns), which are earned by individuals from their employers. These benefits from the job, arising out of the initial investments made in education, are reaped over a long period of time into the future (Ben-Porath, 1967), which, in turn, leads to personal development, community, and national development (see Figure 4). Society, as a whole, benefits from investments in human capital, even though the private returns to an individual are higher than the returns to the individual’s society (Psacharopoulos & Patrinos, 2004). The returns to human capital realized through educational investments are high, and this continues to provide a justification for individuals to make investments in their educations (Becker, 1992, 1993; Hornbeck & Salamon, 1991; Mcfadyen, 2006; Schultz, 1972; Van der Merwe, 2010).

Summary

Human capital is very critical for the development of a nation and only can be achieved through deliberate efforts of investing in education (Becker, 2008; Mincer, 1981; Olanyiyan & Okemakinde, 2008; Schultz, 1960), which may be formal, informal, or both (see Figure 4). Education can take place both at school and at home through training, experiences, and mobility in the labor market (Mincer, 1981, 1989; Schultz, 1961), where individuals move from one job to another. Individuals are motivated to invest in their educations because they expect such an investment will bring about increased career success, and organizations are motivated to invest in employee training with the expectation that their investments will increase employee productivity and the

organizations' profitability (Hayek, 2011). It should be noted, however, that having a highly skilled workforce does not necessarily result in a profitable organization in all instances (Bowles & Gintis, 1975).

The experiences and trainings acquired through education improve on the self-efficacy of an individual and this, in turn, influences his or her career choice (Bandura, 1986; Bandura et al., 2001; Hirschi, 2010; Tang, 2008). These experiences include students' participation in extracurricular trainings such as those provided by clubs, supervised agricultural experiences, games and sports, drama, and debating clubs. The behavior of an individual, according to Bandura et al. (2001), is influenced by a belief in one's self, together with his or her confidence in the ability to perform a given task. The concept of self-efficacy, according to Ajzen (1991) as well as Ajzen and Madden (1986), is similar to the general framework of the theory of planned behavior in which a relationship exists amongst an individual's beliefs, attitudes, intentions, and behaviors, and that past behavior has an impact on future behavior, including a person's choice of careers.

The participation of students in organizations and clubs provides enriched and varied opportunities for self-development (Gruber & Beatty, 1954). The clubs helped to supplement the school curriculum, provided leadership experiences, provided a safe nurturing environment for the students through interaction with adults and peers, and also provided opportunities for career exploration and development, including academic achievement (Barber & Eccles, 1999; Gruber & Beatty, 1954; Heath & McLaughlin, 1991; Johnston, 1952; Shumow, 2003). Agricultural clubs worldwide evolved from the corn-growing boys' clubs and girls' clubs that were organized into U.S. 4-H clubs in

1924 (4-H Organization, 2013). The 4-H program spread across the globe to various countries such as Australia, Canada, England-Wales, Kenya, Nigeria, and Tanzania (National 4-H History Preservation Program, 2013). In East Africa, Uganda and Kenya have Young Farmers Clubs. These agriculture clubs have various names around the globe, such as Agricultural Clubs, Young Farmers Clubs, 4-H, and FFA, but they still have similar objectives, i.e., youth development and promotion of agricultural education, including supervised educational experiences. This study sought to describe the perceptions of YFC members in two schools in Eastern Uganda to understand better the role of club participation on their career interests, especially in regard to preparing for and entering the agricultural sector.

CHAPTER III

Methodology

In this chapter, the methodology used in the study is explained, including a description of the study's design, the study's participants, Uganda's schools and its national examination schemes, preparation of Uganda's secondary school teachers, case selection, development of the study's instrument, field testing of the instrument, procedures for collecting the study's data, and the coding and analysis of the study's data.

Purpose of the Study

The primary purpose of this study was to determine the perceptions of the members of Young Farmers Clubs on their intent to pursue agriculture-related career preparation at the post-secondary school level. A secondary purpose was to describe club members and their reasons for joining Young Farmers Clubs.

Objectives

1. Describe select personal characteristics of the Young Farmers Club members.
2. Determine why the students joined Young Farmers Clubs.
3. Determine the career interests of the Young Farmers Club members.
4. Determine the factors that influenced the career choice/aspirations of the members of the Young Farmers Clubs.

5. Describe the level of intent of the Young Farmers Club members to pursue agriculture-related career preparation after graduating from secondary school
6. Describe differences between Young Farmers Club members by sex (e.g., reasons for joining clubs, career interests, career choice/aspirations, and intent to pursue agriculture-related career preparation after graduation from secondary school).

Institutional Review Board

Federal regulations and Oklahoma State University policy require the Institutional Review Board to review and approve all research involving human subjects. The researcher submitted the research proposal (i.e., the purpose statement, script, guardian permission form, student consent form, and the permission request letter) to the Oklahoma State University Institutional Review Board (IRB). The IRB reviewed the proposal and found it met all of the requirements needed for research involving human subjects, approved the study on November 29, 2012, and designated the study's IRB number as AG1256 (Appendix A).

Research Design

The study employed a single case (embedded) study design (Yin, 2009). Yin (2009) asserted that a single case study may involve more than one unit of analysis. Further, no matter how many units are selected, the resulting design is called an embedded case study design (Yin, 2009). An embedded case study design can serve as an important device for focusing a case study inquiry, and the subunits embedded often add significant opportunities for extensive analysis, thus enhancing the insights gained into a single case (Yin, 2009). This study involved a survey of members of Young Farmers Clubs in two boarding secondary schools (i.e., Kiira College Butiki and Iganga Girls'

School), which were the only schools found to have active Young Farmers Clubs in the eastern region of Uganda at the time of the study (February 11 and 12, 2013). These schools represented a unique case of having active Young Farmers Clubs which was of interest to the researcher. According Yin (2009), the rationale for using a single case includes a situation where a case represents an extreme or unique case, and when the case is a representative or a typical case of interest.

The study used cross-sectional survey methodology where the researcher collected data at one point in time (Creswell, 2011; Gay, Mills, & Airasian, 2009) by administering the study's questionnaire only once. According to Creswell (2011), the cross-sectional survey procedure can be used to compare two or more groups in terms of attitudes, beliefs, opinions, and practices. Cross-sectional surveys are helpful in providing fast data which makes it possible for the researcher to analyze and draw conclusions quickly (Gay et al., 2009). This investigation was also a cohort study where participants were all members of the Young Farmers Clubs and who joined the clubs voluntarily based on their personal interests and goals. According to Creswell (2011) and Gay et al. (2009), in cohort studies, the researcher identifies a sub population based on some specific characteristics, and the population is selected at the same time period for the purpose of data collection. Therefore, because the study's participants were members of the Young Farmers Clubs, attended the same type of schools (i.e., single sex, Government-owned boarding schools), and the schools were located in similar settings, such as rural areas of eastern Uganda, they were considered a cohort.

Study Participants, Uganda's Schools, and the National Examination Scheme

A total of 102 research participants were recruited for the study, from two high schools (secondary schools) in eastern Uganda. These schools were Iganga Girls' School (located in Iganga District) and Kiira College Butiki (located in Jinja District). Iganga Girls' School had a total of 83 members in its Young Farmers Club (J. Isoba, personal communication, February 9, 2013), and Kiira College Butiki had a total of 50 members (A. Wanyana, personal communication, June 10, 2012). Twenty-nine students from Iganga Girls' School did not participate in the final study because they were part of the study's field testing group, two members of the Young Farmers Club had not yet returned from their homes after the third term holidays (J. Isoba, personal communication, February 12, 2013), leaving 52 girls who participated in the final study. Kiira College Butiki is a boys' only boarding school, whereas Iganga Girls' School is an all-girls boarding school.

In Uganda, boarding schools refer to those schools where the students move away from their homes and live at their respective schools for about three months, three times per year. The boarding schools can be coeducational schools or single sex schools. The students visit their parents or guardians only during holidays, which are often brief and may last no more than three weeks to four weeks. According to the principal of Iganga Girls' School (I. A. N. Balina, personal communication, February 12, 2013), the school has a student population of 1200. Similarly, according to the principal of Kiira College Butiki (D. D. Kaima, personal communication, February 11, 2013), Kiira College Butiki also has a student population of about 1200 students. The secondary student enrollment where these two schools are located, according to Uganda's education statistical abstract

(2011), was 32,609 for the Jinja district (i.e., 17,056 males and 15,553 females), and was 27,892 for Iganga District (i.e., 14,531 males and 13,361 females), which was a total enrollment of 60,501 for the two districts combined in 2011. Uganda's total secondary student enrollment (Uganda Educational Statistical Abstract, 2011) was 1,210,870 students in 2011 (i.e., 649,738 male and 561,132 female students).

The participants in this study were students who ranged from senior two to senior six (i.e., an equivalent of 8th to 12th grade in the U.S. high school system), with an age range of 14 to 19 years. At the time of administering the study's questionnaires, the senior one and senior five students (i.e., 7th and 11th grade, respectively) had not yet returned to school from the primary seven and senior four vacation/holiday period, respectively. These students were waiting for their national examination results to be released by the Uganda National Examinations Board (UNEB) before they could join/start secondary education, i.e., senior one/7th grade, or continue with secondary education, i.e., senior five/11th grade (I. A. N. Balina, personal communication, February 12, 2013). In Uganda, UNEB administers all national examinations to mark a transition from one education level to the next and these include Primary Leaving Examinations (PLE), Uganda Certificate of Education (UCE), and Uganda Advanced Certificate of Education (Nakabugo et al., 2011; Openjuru, 2010; UNESCO-International Bureau of Education, 2010).

The Primary Leaving Examinations (P.L.E) allows students to join or matriculate to secondary schools (Openjuru, 2010; UNESCO-International Bureau of Education, 2010). Uganda's secondary education is divided into two cycles (i.e., lower secondary/Ordinary level, and the upper level/Advanced level). The lower secondary

aims at linking the learner with what they have learned at primary level, while preparing him or her for further education (UNESCO-International Bureau of Education, 2010). The students study for four years after which, at senior four (i.e., 10th grade), they sit for a national examination, which is called the Uganda Certificate of Education (Openjuru, 2010; UNESCO-International Bureau of Education, 2010). Thereafter, depending on their performance, students can advance to senior five (i.e., 11th grade) or join vocational training institutes such as the primary teachers colleges where they would prepare to become primary/elementary teachers (Nakabugo et al., 2011; UNESCO-International Bureau of Education, 2010).

The students who opt to continue with secondary education, study for another two years and during their senior year (i.e., senior six/12th grade), they sit for the national college entrance examinations, the Uganda Advanced Certificate of Education (Openjuru, 2010; UNESCO-International Bureau of Education, 2010). The Uganda Advanced Certificate of Education (UACE) is the principal examination required for enrolling in a university or another tertiary institution (UNESCO-International Bureau of Education, 2010). However, all of the national examinations are very critical in Uganda's education system because they determine the student's ability to advance from one level of education to the next (Openjuru, 2010).

Training and Certification of Uganda's Secondary School Teachers

In Uganda, the preparation of instructors for teaching at the secondary school level is done at National Teachers Colleges (NTCs), and Universities where, upon completion, the teachers obtain Diplomas (i.e., an Associate degree), and Bachelor's degrees, respectively (Republic of Uganda, National Development Plan [2010/11-

2014/15], 2010; UNESCO-International Bureau of Education, 2010). Membership in the teaching profession in Uganda is open to anyone who has successfully completed an approved teacher training program, received a teaching certificate, and has been entered into the registry for teachers (Uganda's Teacher Code of Conduct, n.d.).

After going through the teacher training process, all teachers in Uganda are required to register with the Ministry of Education and Sports, and receive certification before they are allowed to teach (Education Act, 2008). Teachers with a Diploma (i.e., an Associate's degree) are mainly responsible for the teaching in the lower secondary school whereas upper secondary school teaching requires instructors to have a Bachelor's degree or a postgraduate Diploma in education (Nakabugo et al., 2011.). According to the Uganda Education Statistical Abstract (2009), the total number of teachers registered to be teaching in all secondary schools was 65,045 (i.e., 50,575 male and 14, 473 female teachers) in 2009.

All secondary school teachers in Uganda undergo the same mode of teacher preparation, and each teacher is required to specialize in two teaching subjects, for example, biology and chemistry, or physics and math. However, agriculture teachers only specialize in the teaching of one subject (i.e., agriculture) which is referred to as agriculture double main (S. G. Kalya, personal communication, April 25, 2013). They are trained to be advisors/supervisors of students during the co-curricular activities that are related to agriculture, such as Young Farmers Clubs and agricultural clubs.

Case Selection

The selection technique used in this study was purposeful, where a researcher intentionally selects a group of study participants that he or she perceives to be

representative of the population of interest (Creswell, 2011; Gay et al., 2009). In the case of this study Kiira College Butiki and Iganga Girls' School were the only schools found to have active Young Farmers Clubs in the eastern region of Uganda at the time of the study. Therefore, readers are urged to be cautious if generalizing the study's findings beyond the members of the Young Farmers Clubs who participated in this investigation.

Yin (2009) maintained that, similar to single experiments, the findings derived from cases should not be generalized beyond the sample (s) providing the data, however, they can be generalized to theoretical prepositions. Similarly, Stake (1995) asserted that the real business of a case study is particularization *not* generalization. "We take a particular case and come to know it well, not primarily as to how it is different from others but what it is, what it does" (Stake, 1995, p. 8).

Case studies allow researchers to retain holistic and meaningful characteristics of real-life events such as school performance and small group behavior (Yin, 2009). Stake (1995) exemplified case studies as "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). Researchers study a case when it is of very special interest and they look for the details of interaction with its contexts (Stake, 1995). And finally, quantitative case studies involve a collection of descriptive variables (Stake, 1995), which was the data collection procedure for this study, i.e., a survey questionnaire.

The Study's Instrumentation

The development of the survey questionnaire (Appendix B) was done by the researcher and a panel of experts from the Department of Agricultural Education, Communications, and Leadership of Oklahoma State University, including three faculty

members. The questionnaire was written in English, because English is the official language used in Uganda, and it is also the medium of instruction in all secondary schools in Uganda (Openjuru, 2010). According to Gay et al. (2009), questionnaires are efficient, need less time to get the data, permit the collection of data from a large sample, and they are cheaper to use. These merits made it an ideal instrument to use in this study.

In the questionnaire (Appendix B), a number of different question formats were used, including open-ended questions, closed-ended questions, and semi-closed ended questions. Creswell (2011) asserted that when using close-ended questions, a researcher poses a question with preset responses to which the participant is asked to make a selection. Whereas for the open-ended questions, the researcher does not provide response options and the participants are asked to give their own responses (Creswell, 2011). And, for semi-closed questions, responses are provided to the participants but with options for them to give additional responses if they wish to do that (Creswell, 2011).

The participants were required to respond to questions measuring their attitudes using categorical and ordinal scales. The response scales were used to measure participants' attitudes or preferences (Gay et al., 2009). According to Gay et al. (2009), attitude scales "measure what an individual believes, perceives, or feels about self, others, activities, institutions, or situations" (p. 150), and thus such scales were appropriate for this study.

The questionnaire (Appendix B) consisted of three parts. Part one of the questionnaire had nine questions asking about the activities of the Young Farmers Club, why students joined the Young Farmers Club, level of parental support, and the activities that the Club was not doing, but, the members wished their Club would start. Part two of

the questionnaire had four questions about the career choices that members of the Young Farmers Clubs were interested in pursuing at the post-secondary level; factors influencing their choice of careers; intentions about the participants' intentions to continue their education at the post-secondary level; and the likelihood of the members studying a field related to agriculture at the post-secondary level. And part three had nine questions that asked the participants about their personal characteristics, i.e., class level, age, sex, description of their family and home environment, how often they missed school due to lack of tuition, and if any member of their family had an agricultural career.

Validity of the Study's Instrument

Validity refers to "the degree to which a test measures what it is supposed to measure and, consequently permits appropriate interpretation of scores" (Gay et al., 2009, p. 154). The results yielded by the instrument must be accurate. The questionnaire was reviewed by a panel of three agricultural education experts in the Department of Agricultural Education, Communications, and Leadership of Oklahoma State University, and by three agriculture teachers in Uganda, for its content and face validity. The edits and content revisions required by the panelists and Ugandan agriculture teachers were made to the instrument by the researcher.

Gay et al. (2009) argued that construct validity is crucial as it reflects the degree to which a questionnaire measures the intended hypothetical construct. Construct validity determines the significance, meaning, purpose, and the use of scores from the questionnaire, whereas content validity is used to evaluate the extent to which the questions in the instrument and scores from these questions represent the possible questions that should be asked about the given attitude or skill (Creswell , 2011). Gay et

al. (2009) defined face validity as "the degree to which a test appears to measure what it claims to measure" (p. 155) from the viewpoint of the individual who will take the instrument.

Gay et al. (2009) defined reliability as "the degree to which a test consistently measures whatever it is measuring" (p. 158). Similarly, Creswell (2011) affirmed that the scores must be nearly the same and consistent when researchers administer the same instrument multiple times to individuals with similar cognitive aptitude for answering the questions. Yin (2009) asserted that the goal of reliability is to minimize the errors and biases in a study. According to Gay et al. (2009), although all test scores have some degree of measurement error, the smaller the amount of error, the higher the reliability and the more confidence researchers have in the instruments' stability.

In the case of the questionnaire's ordinal scales, only frequencies and percentages, and, in some cases, strength of associations via calculating Cramer's *V* are reported, i.e., no summation of mean scores or other tests of central tendency was done. Therefore, no test of internal consistency, such as Cronbach's alpha, was appropriate. By design, this study was intended to describe the particular *case* of the two schools investigated, therefore, caution should be exercised if generalizing the study's findings to other settings.

Field Testing of the Study's Instrument

According to Creswell (2011), field or "pilot" testing helped to determine if the individuals in a sample were capable of completing the survey instrument and also whether they understood the questions. Gay et al. (2009) asserted that when questionnaires are pilot-tested, the test helps to provide information about deficiencies

and suggestions for improving the instrument. Pilot testing helps a researcher to make changes in an instrument based on the feedback from a small number of individuals who complete and evaluate the instrument (Creswell, 2011). The individuals selected for pilot testing must be thoughtful, critical, and similar to the intended research participants (Gay et al., 2009).

In December 2012, the questionnaire was field-tested at Iganga Girls' School by 29 students who were members of the school's Young Farmers Club but who would not participate in the final study. This group included eight senior six students, i.e., seniors in high school/12th grade, who were about to take their college entrance examinations, 13 senior three students, i.e., freshman/9th grade, and eight senior five students or junior/11th graders. These students shared similar characteristics as the participants recruited for the final study except that they were all females.

The field test helped the researcher to make minor adjustments to the final instrument used in the study. During the field test, it was discovered that one of the participants did not follow or understand the ranking of career choices and the participant instead selected all the five careers, and marked all as her number one choice instead of ranking the choices 1 through 5. The same respondent deviated from other participants by indicating that her Young Farmers Club met twice a week, where all the others indicated once. The researcher decided not to use this participant's responses in analyzing the field test results. This left 28 usable responses from the field test. The researcher also discovered that two of the career choices indicated in the questionnaire, i.e., Dietician and Nutrition and Dietetics, were understood to be similar. Therefore, a revision was made to the final questionnaire to combine these two career choices into one response. In

addition, changes were made to the career choice of being a lawyer to include related legal professions, i.e., magistrate and being a judge, because some students had indicated being a judge as one of their "other" career interests that could be inclusive to the legal profession item. From the responses received to the instrument's field test, the researcher determined that its directions and items were clear and understood by the participants who completed it, i.e., notwithstanding the abovementioned issues.

Research Assistant

The study employed one research assistant who is an agriculture teacher in Uganda. The research assistant was sensitized about research ethics and all of the procedures a researcher is supposed to follow conducting a study involving human subjects. The researcher also had a meeting with the research assistant during July of 2012 and briefed him about the study's purpose and objectives, and how the data should be collected and secured to ensure the confidentiality of the respondents.

Data Collection

The data were collected using the questionnaire on separate days from students at the two schools, i.e., February 11 and 12, 2013. The questionnaires together with the letters (Appendix B, C, D, E, & F) requesting for permission to conduct the study were sent as electronic mail attachments to the research assistant. The questionnaires were printed by the research assistant and the assistant administered the questionnaires to members of Young Farmers Clubs in the two schools.

The research assistant had made contact with the head teachers (i.e., principals) of the two schools, and patrons of the Young Farmers Club (i.e., the clubs' advisors) and determined an appropriate day to administer the questionnaire. The principals authorized

that the study could be conducted in their schools (Appendix G & H), and written permission was sought and obtained from the students who participated in the study before the questionnaires were administered (Appendix E). The principals signed for each of the student participants as their legally authorized guardian, therefore, allowing the students to take part in the study. In Uganda, when students attend boarding schools, the parents entrust the head teachers with the responsibility of guardianship and they are responsible for the welfare of the students in their charge.

Writing pens engraved with the words Oklahoma State University, College of Agricultural Sciences and Natural Resources were given to each of the students to use in filling the questionnaires; the participants were given the pens as a souvenir and "thank you" for participating in the study. The research assistant was provided with transportation and facilitation costs which was $100 USD, and also an additional $100 USD was provided to him to ship the questionnaires to the researcher using an international shipping service. The research assistant shipped the questionnaires to the researcher on February 14, 2013 and the researcher received the shipping package on February 18, 2013. The package of questionnaires was tracked online via the shipping services' website by both the researcher and the research assistant.

Coding and Data Analysis

The data were analyzed using the Statistical Package for Social Scientists (SPSS) version 21. The answers to questions, as provided by the students, were hand-entered by the researcher into an SPSS data file on his computer which was password protected to ensure confidentiality of the data. The data were coded and entered as *1 = YES*, and *2 = NO* for questions one and two in part one of the questionnaire, and for question nine in

part three; the number of times the club members met for question three, part one, was coded and entered as *1 = Once a week, 2 = Twice a months, 3 = Once a month, 4 = Once or twice a school term,* and *5 = Never*. The response scale for question four of part one and question two of part two of the questionnaire were coded and entered as *5 = Strongly agree,* 4 *= Agree, 3 = Neutral/undecided, 2 = Disagree,* and *1 = Strongly disagree*. Question seven regarding the level of parental support was coded and entered as *5 = Very supportive, 4 = Supportive, 3 = Neutral, 2 = Not very supportive,* and *1 = Not supportive at all*.

Students' answers to question one, part two of the questionnaire (i.e., the position ranks for their career choices) were coded and entered as *1 = first career choice, 2 = second career choice, 3 = third career choice, 4 = fourth career choice,* and *5 = fifth career choice*. Questions three and four (i.e., in part two of the questionnaire) were coded and entered as *5 = Highly likely, 4 = Likely, 3 = Not sure/Undecided, 2 = Unlikely,* and *1 = Not likely at all*. Part three, question one, (i.e., the students' classifications) were coded and entered as *1* for *S.1*, *2* for *S.2*, *3* for *S.3*, *4* for *S.4*, *5* for *S.5*,and *6* for *S.6* ("S." = Senior).

The question that asked the biological sex of the participants was coded and entered as *1 = Male, 2 = Female*. Description of the students' home environments were coded and entered as *1 = Town, 2 = Rural, 3 = Mixed/Peri-urban*; the item describing family type was coded and entered as *1 = Nuclear family, 2 = Extended family*. The question in regard to how often the participants missed school because of school fees was coded and entered as *1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very often*. The item that inquired about the students' number of parents with an agriculture-related

career was coded and entered as *1 = One*, *2 = Both*, and *0 = Neither*, and the item that asked about the number of siblings in a student's family was entered as per the numbers provided by the participants, i.e., as a continuous variable.

Descriptive statistics were used for the data analysis. Frequencies and percentages were calculated, and, where appropriate, Cramer's *V* was used to describe selected associations between a student's biological sex and how often members of the Young Farmers Clubs met; sex and each of the factors influencing members to join the Young Farmers Clubs; sex and the level of parental support for members' participation in the Young Farmers Clubs; sex and the likelihood of the members of the Young Farmers Clubs continuing with their education at the post-secondary level; and sex and the likelihood of members of the Young Farmers Clubs to study an agriculture field at the post-secondary level. A Chi-square test was used to determine if significant differences existed in agriculture activities in which students engaged as members of Young Farmers Clubs depending on an individual's biological sex.

CHAPTER IV

FINDINGS

This chapter presents the study's findings from the data collected to address the objectives of the study. Chapter IV is divided into the following sections: (1) the purpose of the study, (2) objectives of the study, (3) findings related to the personal characteristics of the members of two Young Farmers Clubs in Eastern Uganda, (4) findings related to family characteristics of the members of two Young Farmers Clubs in Eastern Uganda, (5) findings related to the management and parental support for two Young Farmers Clubs in Eastern Uganda, as reported by club members, (6) findings of the agricultural activities in which students had engaged as members of two Young Farmers Clubs in Eastern Uganda, (7) findings of the association of student sex and personal interest as a reason for joining Young Farmers Clubs, (8) findings of the association of student sex and academic performance as a reason for joining Young Farmers Clubs, (9) findings of the association of student sex and socializing/making new friends as a reason for joining Young Farmers Clubs, (10) findings of the association of student sex and study trips/agricultural shows as a reason for joining Young Farmers Clubs, (11) findings of the association of student sex and making money as a reason for joining Young Farmers Clubs, (12) findings of the association of student sex and being a school requirement as a

reason for joining Young Farmers Clubs, (13) findings of the association of student sex and being in line with career aspiration/goal as a reason for joining Young Farmers Clubs, (14) findings of the association of student sex and gaining life skills as a reason for Joining Young Farmers Clubs, (15) findings of the association of student sex and other factors given as reasons for joining Young Farmers Clubs, (16) findings of the association of student sex and the level of parental support for participation in the Young Farmers Clubs, (17) findings of the association of student sex and the likelihood of the Young Farmers Club members continuing with their education at the post-secondary level, (18) findings of the association of student sex and the likelihood of the Young Farmers Club members studying an agricultural field at the post-secondary level, (19) findings of the reasons why students joined the two Young Farmers Clubs in Eastern Uganda in rank order by level of agreement, (20) findings of the factors that influenced the career aspirations of the members of two Young Farmers Clubs in Eastern Uganda, (21) findings of the frequencies, percentages, and rankings of career choices/aspirations of students who were members of two Young Farmers Clubs in Eastern Uganda, and (22) findings of the rankings of students' career choices/aspirations by sex and overall as provided by members of two Young Farmers Clubs in Eastern Uganda

Purpose of the Study

The primary purpose of this study was to determine the perceptions of the members of Young Farmers Clubs on their intent to pursue agriculture-related career preparation at the post-secondary school level. A secondary purpose was to describe club members and their reasons for joining Young Farmers Clubs.

Objectives

1. Describe select personal characteristics of the Young Farmers Club members.
2. Determine why the students joined Young Farmers Clubs.
3. Determine the career interests of the Young Farmers Club members.
4. Determine the factors that influenced the career choice/aspirations of the members of the Young Farmers Clubs.
5. Describe the level of intent of the Young Farmers Club members to pursue agriculture-related career preparation after graduating from secondary school.
6. Describe differences between Young Farmers Club members by sex (e.g., reasons for joining clubs, career interests, career choice/aspirations, and intent to pursue agriculture-related career preparation after graduation from secondary school).

Personal Characteristics of the Members of Two Young Farmers Clubs in Eastern Uganda

Based on the responses of 102 participants, it was found that 49.0% of the members of the Young Farmers Clubs were males and 51.0% female (see Table 1). Their ages ranged from 13 to 19 years with 30.4% of the members reporting to be 16 years of age. The youngest age reported was 13 years (1.0%) and the oldest age was 19 years (2.0%); 2.9% of the participants did not report their ages (see Table 1). A majority of participants in the Young Farmers Clubs were in the senior four class (54.6%); senior two had the fewest number of participants (4.9%) in the clubs (see Table 1).

Note. Senior one and senior five classes were not reported because, at the time of the study, those students had not returned to school from the primary seven and senior four vacation/holiday periods, respectively.

About four-in-ten members (39.2%) of the Young Farmers Clubs reported they *never* missed school because of lack of school fees, and only a small number reported they missed school *very often* (2.9%) or *often* (8.8%) because of lacking school fees (see Table 1). A majority of the members of the Young Farmers Club (77.5%) reported they were *highly likely* to continue with their education at the post-secondary level; none of the participants reported he or she was *not likely at all* to continue with their education at the post-secondary level. However, 2.9 % reported they were *unlikely* to continue with their education at the post-secondary level (see Table 1). A high number of respondents (70.6%) reported they were either *highly likely* or *likely* to pursue an agricultural field at the post-secondary level. Only 1.0% of the club members indicated that possibility was *not likely at all* (see Table 1).

Table 1

Personal Characteristics of the Members of Two Young Farmers Clubs in Eastern Uganda

	f	%
Sex		
Male	50	49.0
Female	52	51.0
Age		
13	1	1.0
14	6	5.9
15	15	14.7
16	31	30.4
17	20	19.4

Table 1 Continued

	f	%
18	24	23.5
19	2	2.0
No response	3	2.9
Class*		
Senior two	5	4.9
Senior three	19	18.6
Senior four	56	54.6
Senior six	22	21.6
Missing school due to lack of fees		
Very often	3	2.9
Often	9	8.8
Sometimes	29	28.4
Rarely	21	20.6
Never	40	39.2
Intent to continue with education at the post-secondary level		
Highly likely	79	77.5
Likely	18	17.6
Not sure/Undecided	2	2.0
Unlikely	3	2.9
Not likely at all	0	0.0

Table 1 Continued

	f	%
Intent to pursue an agricultural field at the post-secondary level		
Highly likely	35	34.3
Likely	37	36.3
Not sure/Undecided	23	22.5
Unlikely	6	5.9
Not likely at all	1	1.0

Note. *Senior means Senior Secondary in Uganda's Education System. Grades levels at the senior secondary school level include what would be grades 7 to 12 in the U.S. education system.

Family Characteristics of the Members of Two Young Farmers Clubs in Eastern Uganda

Regarding the family characteristics of the respondents, 63.7% of the members of Young Farmers Clubs indicated they came from a nuclear family compared to only 36.3% who indicated they were members of extended families (see Table 2). The number of family members reported by the members of Young Farmers Clubs ranged from a low of two family members to a high of 21 family members (see Table 2). Either seven or eight family members was the most frequent response; both responses were tied at 12.7%. Fewer than one-in-ten of the respondents indicated they had more than 16 family members (see Table 2).

One-half of the members of Young Famers Club reported one of their parents had a career related to agriculture, 20.6% reported both parents had a career related to agriculture, and 29.4% indicated neither of their parents had a career related to agriculture (see Table 2). Nearly six-in-ten (59.8%) of the club members indicated a

sibling or another relative had an agriculture-related career compared to 40.2% who reported they did not have a sibling or another relative with an agriculture-related career (see Table 2).

Table 2

Family Characteristics of the Members of Two Young Farmers Clubs in Eastern Uganda

	f	%
Family type		
Nuclear	65	63.7
Extended	37	36.3
Number of siblings in the family		
3	2	2.0
4	5	4.9
5	10	9.8
6	11	10.8
7	13	12.7
8	13	12.7
9	10	9.8
10	9	8.8
11	4	3.9
12	9	8.8
13	2	2.0
15	5	4.9
16	3	2.9
17	1	1.0

Table 2 Continued

	f	%
18	2	2.0
20	2	2.0
21	1	1.0
Parents with an agriculture career		
Both	21	20.6
One	51	50.0
Neither	30	29.4
Sibling or another relative with an agriculture career		
Yes	61	59.8
No	41	40.2

Management and Parental Support for Two Young Farmers Clubs in Eastern Uganda, as reported by Club Members

The respondents were asked to indicate whether they paid club dues and slightly more than one-half reported they did, i.e., 51.0%, and 48.0% indicated they did not pay club dues. One percent of the respondents did not provide an answer to this question (see Table 3). (*Note.* This dichotomy was aligned with the students' club membership, i.e., depending on the school they attended.) Nearly all of the respondents indicated their club met once a week (97.1%) and 2.9% of the participants did not provide a response (see Table 3). Nearly three-fourths of the respondents (74.5%) indicated their parents were either *very supportive* or *supportive* of their participation in the Young Farmers Clubs,

and only 7.9% of the respondents reported their parents were either *not very supportive* or *not supportive at all* of their participation in the clubs (see Table 3).

Table 3

Management and Parental Support for Two Young Farmers Clubs in Eastern Uganda, as Reported by Club Members

	f	%
Members pay dues		
Yes	52	51.0
No	49	48.0
No response	1	1.0
Frequency of Club meetings		
Once a week	99	97.1
Twice a Month	0	0.0
Once a Month	0	0.0
Once or twice a school term	0	0.0
Never	0	0.0
No response	3	2.9
Level of parental support		
Very supportive	41	40.2
Supportive	35	34.3
Neutral	18	17.6
Not very supportive	6	5.9
Not supportive at all	2	2.0

Agricultural Activities in Which Students had Engaged as Members of Two Young Farmers Clubs in Eastern Uganda

A large majority of the respondents (98.0%) indicated their Young Famers Clubs kept cattle: (all of the female members reported *yes*); only 1.0% of the respondents indicated their club did not keep cattle, i.e., one male member (see Table 4). All of the respondents reported they reared poultry as one of their club activities (see Table 4). Nearly all of the respondents (99.0%) indicated they did not keep rabbits (see Table 4).

All of the members of both Young Farmers Clubs (99.0%) who responded to the activity of keeping bees indicated their clubs did not keep bees (see Table 4). Nearly all of the respondents (98.0%; male and female) indicated they did not do fish farming as one of their clubs' activities; 1.0% (a male member) indicated his club did fish farming as a club activity (see Table 4).

All of the members of the Young Farmers Clubs who responded (99.0%) indicated their clubs conducted soil and environmental conservation as one of their activities (see Table 4). Nearly all (98.0%) of the clubs' members reported they planted trees as part of their clubs' activities, and 1.0% (one male member) reported his club did not (see Table 4). Nearly all of the clubs' members except one (i.e., 99.0%) reported they did not participate in the building of farm structures such as fencing; 1.0% (a male member) indicated his club did build farm structures as a club activity (see Table 4). All of the respondents, male and female (100.0%), reported crop production was a part of their clubs' activities (see Table 4). All of the female club members reported their club participated in livestock management practices; however, only one male club member reported that his club participated in livestock management practices. Most of the other

male club members (96.0%) reported their clubs did not participate in livestock management activities (see Table 4).

Table 4

Agricultural Activities in Which Students had Engaged as Members of Two Young Farmers Clubs in Eastern Uganda

Agricultural activities	**Male**				**Female**				**Overall**[a]			
	Yes		**No**		**Yes**		**No**		**Yes**		**No**	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Cattle keeping (e.g., zero grazing, dairy farming)	48	96.0	1	2.0	52	100.0	0	0.0	100	98.0	1	1.0
Poultry keeping (e.g., feeding birds, picking eggs)	50	100.0	0	0.0	52	100.0	0	0.0	102	100.0	0	0.0
Keeping rabbits	0	0.0	49	98.0	0	0.0	52	100.0	0	0.0	101	99.0
Bee keeping	0	0.0	49	98.0	0	0.0	52	100.0	0	0.0	101	99.0
Fish farming	1	2.0	48	96.0	0	0.0	52	100.0	1	1.0	100	98.0
Soil and environmental conservation	49	98.0	0	0.0	52	100.0	0	0.0	101	99.0	0	0.0
Tree planting	48	96.0	1	2.0	52	100.0	0	0.0	100	98.0	1	1.0
Building farm structures, e.g., cattle crush, fencing	1	2.0	49	98.0	0	0.0	52	100.0	1	1.0	101	99.0
Crop production, e.g., growing maize, banana plantation	50	100.0	0	0.0	52	100.0	0	0.0	102	100.0	0	0.0

Table 4 Continued

Agricultural activities	Male				Female				Overall[a]			
	Yes		No		Yes		No		Yes		No	
	f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Livestock management practices e.g., castration, tick control[b]	1	2.0	48	96.0	52	100.0	0	0.0	53	52.0	48	47.1
Others	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Note. [a]Where percentages for *Yes* and *No* combined do not equal 100.0%, one or more participants did not respond to the question.

[b]An independent samples, Mann-Whitney U test revealed a significant difference ($p < .05$) between groups for this variable.

Student Sex and Association with Selected Variables

A student's sex was significantly associated with personal interest as a reason for joining the Young Farmers Clubs (Cramer's *V* = .357, sig. = .013) (see Table 5). More females than males *strongly agreed* that personal interest was a reason that influenced them to join their Young Farmers Club. Forty-nine of the females either *agreed* or *strongly agreed* compared to only 39 of the males who either *agreed* or *strongly agreed* (see Table 5). This association demonstrated that females were more strongly motivated to join the Young Farmers Clubs because of their personal interests than were the male members.

Table 5

Association of Student Sex and Personal Interest as a Reason for Joining Young Farmers Clubs

Sex	Personal interest						Cramer's *V** / *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	2	2	6	18	21	49	
Female	0	2	0	13	36	51	
Total	2	4	6	31	57	100	.357 / .013

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and academic performance as a reason for joining Young Farmers Clubs (Cramer's *V* = .183, sig. = .502) (see Table 6). Academic performance was a reason for joining a Young Farmers Club regardless of a club member's sex. Almost all members *agreed* or *strongly agreed*

that academic performance was one of the reasons for joining Young Farmers Clubs (see Table 16).

Table 6

Association of Student Sex and Academic Performance as a Reason for Joining Young Farmers Clubs

Sex	Academic performance						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	0	1	2	16	30	49	
Female	1	2	3	23	23	51	
							.183
Total	1	3	5	39	53	100	.502

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between a student's sex and socialization or making friends as a reason for joining the Young Farmers Clubs (Cramer's *V* = .269, sig. = .132) (see Table 7). The students' responses were somewhat uniformly distributed across the categories of agreement regardless of sex. More females than males, however, *agreed* or *strongly agreed* that socialization and making new friends was one of their reasons for joining Young Farmers Clubs, i.e., 39 female to 24 male respondents (see Table 7).

Table 7

Association of Student Sex and Socializing/Making New Friends as a Reason for Joining Young Farmers Clubs

Sex	Socialize/Making New Friends						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	5	7	11	15	9	47	
Female	2	4	6	23	16	51	
							.269
Total	7	11	17	38	25	98	.132

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and study trips/agricultural shows as a reason for joining Young Farmers Clubs (Cramer's *V* = .186, sig. = .499) (Table 8). Students' responses to study trips or agricultural shows being a reason for joining Young Farmers Clubs were roughly evenly distributed across the categories of agreement, although the female club members did agree more (see Table 8).

Table 8

Association of Student Sex and Study Trips/Agricultural Shows as a Reason for Joining Young Farmers Clubs

Sex	Study Trips/Agricultural Shows						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	5	5	8	19	12	49	
Female	3	8	6	24	7	48	
							.186
Total	8	13	14	43	19	97	.499

*Note.** Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size);

Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and making money as a reason for joining Young Farmers Clubs (Cramer's *V* = .210, sig. = .357) (see Table 9). Students' responses, regardless of sex, to making money as a reason for joining Young Farmers Clubs were somewhat similarly distributed across the response categories of agreement. Most either *strongly disagreed* or *disagreed* with that as a reason for club membership, although female members *agreed* more than males (see Table 9).

Table 9

Association of Student Sex and Making Money as a Reason for Joining Young Farmers Clubs

Sex	Making money						Cramer's *V** *Sig.*
	Strongly Disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	22	15	4	6	0	47	
Female	21	11	6	13	1	52	
							.210
Total	43	26	10	19	1	99	.357

*Note.** Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and joining Young Farmers Clubs due to that being a school requirement (Cramer's *V* = .217, sig. = .330) (see Table 10). A majority of the students, irrespective of sex, either *strongly disagreed* or *disagreed* that it was a school requirement to join their Young Farmers Clubs (see Table 10).

Table 10

Association of Student Sex and Being a School Requirement as a Reason for Joining Young Farmers Clubs

Sex	A school requirement						Cramer's *V** *Sig*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	19	14	5	6	2	46	
Female	26	19	4	3	0	52	
							.217
Total	45	33	9	9	2	98	.330

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and being in line with the student's career aspiration as a reason for joining Young Farmers Clubs (Cramer's *V* = .274, sig. = .105) (see Table 11). Most of the students *agreed* or *strongly agreed*, irrespective of their sex, that they joined Young Farmers Clubs because membership was in line with their career aspirations.

Table 11

Association of Student Sex and Being in Line with Career Aspiration/Goal as a Reason for Joining Young Farmers Clubs

Sex	Being in line with my career aspiration/goal						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	1	3	6	14	26	50	
Female	1	6	6	25	14	52	
							.274
Total	2	9	12	39	40	102	.105

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size);

Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

A student's sex was significantly associated with gaining life skills as a reason for joining the Young Farmers Clubs (Cramer's *V* = .490, sig. = .000) (Table 12). More than twice as many females compared to males *strongly agreed* gaining life skills was a reason that influenced them to join their Young Farmers Club: 42 of the females *strongly agreed* compared to only 17 of the male club members (see Table 12). This association demonstrated that significantly more females joined their Young Farmers Club for the purpose of gaining life skills than did males.

Table 12

Association of Student Sex and Gaining Life Skills as a Reason for Joining Young Farmers Clubs

Sex	To gain life skills						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	6	3	5	18	17	49	
Female	0	2	1	7	42	52	
Total	6	5	6	25	59	101	.490 .000

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No Cramer's *V* was computed for the *other* factors indicated by the students to have influenced them to join the Young Farmers Clubs. This was because the factors were constant for both sexes, and all of the respondents *strongly agreed* on the other factors they indicated.

Table 13

Association of Student Sex and Other Factors given as Reasons for Joining Young Farmers Clubs

Sex	Other reasons given for joining the club						Cramer's *V** *Sig.*
	Strongly disagree	Disagree	Neutral/ Undecided	Agree	Strongly agree	Total	
Male	0	0	0	0	2	2	
Female	0	0	0	0	3	3	
Total	0	0	0	0	5	5	

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between student sex and parental support for student participation in the Young Farmers Clubs (Cramer's *V* = .177, sig. = .527) (see Table 14). Most of the students, irrespective of their sex, indicated their parents were *very supportive* or *supportive* of their participation in the Young Farmers Clubs. However, twice as many male club members than females were not sure or *neutral* about their parents' support of club membership (see Table 14).

Table 14

Association of Student Sex and the Level of Parental Support for Participation in the Young Farmers Clubs

Sex	Parental support						Cramer's *V** *Sig.*
	Not supportive at all	Not very supportive	Neutral	Supportive	Very supportive	Total	
Male	1	3	12	17	17	50	
Female	1	3	6	18	24	52	
Total	2	6	18	35	41	102	.177 .527

*Note.** Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

No significant association was found between a student's sex and the likelihood of students in the Young Farmers Clubs continuing with their education at the post-secondary level (Cramer's *V* = .219, sig. = .181) (see Table 15). Almost all of the students, irrespective of sex, reported they were *highly likely* or *likely* to continue with their education at the post-secondary level. Only three male club members and no female members indicated they were *unlikely* or *not likely at all* to continue with their education at the post-secondary level (see Table 15).

Table 15

Association of Student Sex and the Likelihood of the Young Farmers Club Members Continuing with Education at the Post-secondary Level

Sex	Continuation with education at the post-secondary level						Cramer's *V** *Sig.*
	Highly likely	Likely	Not sure/ Undecided	Unlikely	Not likely at all	Total	
Male	35	11	1	3	0	50	
Female	44	7	1	0	0	52	
							.219
Total	79	18	2	3	0	102	.181

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

A significant association was found between a student's sex and studying an agricultural field at the post-secondary level (Cramer's *V* = .370, sig. = .007) (see Table 16). Male club members indicated they were more *likely* or *highly likely* and less *undecided* than females to study an agricultural field at the post-secondary level. One-half of the males responded as being *highly likely* but only about one-fifth of the female club members indicated the same (see Table 16).

Table 16

Association of Student Sex and the Likelihood of the Young Farmers Club Members Studying an Agricultural Field at the Post-secondary level

Sex	Likelihood of studying an agricultural field at the post-secondary level						Cramer's *V** *Sig.*
	Highly likely	Likely	Not sure/ Undecided	Unlikely	Not likely at all	Total	
Male	25	15	6	3	1	50	
Female	10	22	17	3	0	52	
							.370
Total	35	37	23	6	1	102	.007

Note. *Cramer's *V* ranges in value from -1 to +1
Values near 0 indicate a very weak relationship, and values near 1 indicate a very strong relationship. Cramer's *V* = .10 (small effect size); Cramer's *V* = .30 (medium effect size); Cramer's *V* = .50 (large effect size) (Green, Salkind, & Akey, 1997)

Reasons Why Students Joined the Two Young Farmers Clubs in Eastern Uganda in Rank Order by Level of Agreement

According to the respondents, the highest ranked reason that influenced them to join Young Farmers Clubs was to improve on their academic performance; 90.2% of the students indicated they either *agreed* or *strongly agreed* with that reason (see Table 17). This selection was followed by personal interest in second place with 86.3%, and gaining life skills, such as leadership, communication, and team work, followed closely in third place with 82.3%. Of note, however, the gaining of life skills choice had the highest percentage of *strongly agree* responses (i.e., 57.8%) among the nine possible choices (see Table 17).

Only 19.6% of the respondents indicated they joined the Young Farmers Clubs to make money; 67.7% or more than two-thirds either *disagreed* or *strongly disagreed* with this reason (see Table 17). Very few club members (10.8%) either *agreed* or *strongly agreed* that it was a school requirement to join the Young Farmers club and a large

majority (i.e., 76.6%) *disagreed* or *strongly disagreed* with that reason (see Table 17). Finally, a few members of the Young Farmers Club (4.9%) indicated *other* factors influenced them to join the Young Farmers Clubs (see Table 17).

Table 17

Reasons Why Students Joined the Two Young Farmers Clubs in Eastern Uganda in Rank Order Level of Agreement

Rank*	Reasons	Strongly agree		Agree		Neutral/ Undecided		Disagree		Strongly disagree		No response	
		f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
1 90.2%	**To improve my academic performance**	53	52.0	39	38.2	5	4.9	2	2.0	1	1.0	2	2.0
2 86.3%	**Because of personal interest**	57	55.9	31	30.4	6	5.9	4	3.9	2	2.0	2	2.0
3 82.3%	**To gain life skills, e.g., leadership, communication, team work**	59	57.8	25	24.5	6	5.9	5	4.9	6	5.9	1	1.0
4 77.4%	**Because it is in line with my career aspirations/goals**	40	39.2	39	38.2	12	11.8	9	8.8	2	2.0	0	0.0
5 62.3%	**To socialize and make new friends**	25	24.5	38	37.8	17	16.7	11	10.8	7	6.9	4	3.9
6 60.8%	**Study trips/attend agricultural show**	19	18.6	43	42.2	14	13.7	13	12.7	8	7.8	5	4.9
7 19.6%	**To make money from club activities**	1	1.0	19	18.6	10	9.8	26	25.5	43	42.2	3	2.9

Table 17 Continued

Rank*	Reasons	Strongly agree		Agree		Neutral/ Undecided		Disagree		Strongly disagree		No response	
		f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
8 10.8%	**Because it was a school requirement**	2	2.0	9	8.8	9.0	8.8	33	32.4	45	44.2	3	2.9
9 4.9%	**Because of other factors**[a]	5	4.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Note. *Ranking of the reasons why students joined the Young Farmers Clubs was based on summation of the percentages of the *strongly agree* and *agree* responses.

[a] The other factors identified by the students included "to teach others," "because of the patron of the Club," "to pass time," "to know the problems affecting agriculture," "to learn how to increase on farm production at home," "to exercise my ability," "to build my curriculum vitae," "love for the club," and "to learn more about farming."

Factors that Influenced the Career Aspirations of the Members of Two Young Farmers Clubs in Eastern Uganda

Regarding the factors influencing career aspirations of the members of the Young Farmers Clubs, 94.1% *agreed* or *strongly agreed* that perceptions of their ability to succeed in a given career was the number one factor influencing their choice or aspiration (see Table 18). This was followed closely by personal goals for which 93.1% of the respondents *agreed* or *strongly agreed* that the personal goals they held were a major factor influencing their career aspirations. Ranked third was the desire or "love" held for the career choice with 91.2% of the respondents *agreeing* or *strongly agreeing* that this factor influenced their career aspirations. Of note, it had the highest percentage of *strongly agree* responses (82.4%) among all of the factors (see Table 18).

Exposure to or awareness of the career was ranked fourth; 85.3% of the respondents indicated either *agree* or *strongly agree* regarding this factor influencing their career aspirations (see Table 18). Education was ranked fifth; 80.4% of the respondents *agreed* or *strongly agreed* that education was a major factor influencing their career aspirations (see Table 18).

Availability of career advancement opportunities and other people's experiences tied for sixth: 75.5% of the respondents indicated they either *agreed* or *strongly agreed* that these factors influenced their career choices (see Table 18). Club members' perceptions of financial benefits associated with the career choice ranked seventh with 75.4%, and the factor of parents/family ranked eighth with 71.6% of the respondents indicating either *agree* or *strongly agree* (see Table 18). Five of the six lowest ranked factors influencing career aspirations of the club members were childhood experiences

when growing up (56.8%), training outside of school (53.9%), friends and peers which tied with teachers at 42.2%, and prestige and social status (37.2%). And ranked last of all the factors was co-curricular activities with only 36.2% of the club members having indicated either *agree* or *strongly agree* (see Table 18).

Table 18

Factors that Influenced the Career Aspirations of the Members of Two Young Farmers Clubs in Eastern Uganda

Rank*	Factor	Strongly agree		Agree		Neutral/ Undecided		Disagree		Strongly disagree		No response	
		f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
1 94.1%	**My ability to succeed in the career**	65	63.7	31	30.4	2	2.0	2	2.0	1	1.0	1	1.0
2 93.1%	**Personal goals**	80	78.4	15	14.7	1	1.0	1	1.0	1	1.0	4	3.9
3 91.2%	**My desire/ "love" for the career**	84	82.4	9	8.8	3	2.9	0	0.0	3	2.9	3	3.9
4 85.3%	**Exposure/ awareness and information about the career**	46	45.1	41	40.2	6	5.9	2	2.0	5	4.9	2	2.0
5 80.4%	**Education in school**	41	40.2	41	40.2	7	6.9	4	3.9	4	3.9	5	4.9
6[a] 75.5%	**Other people's experiences in the career (role models)**	36	35.3	41	40.2	14	13.7	4	3.9	7	6.9	0	0.0

Table 18 Continued

Rank*	Factor	Strongly agree		Agree		Neutral/ Undecided		Disagree		Strongly disagree		No response	
		f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
6[a] 75.5%	**Availability of advancement opportunities**	30	29.4	47	46.1	12	11.8	8	7.8	3	2.9	2	2.0
7 75.4%	**Financial benefits**	39	38.2	38	37.2	7	6.9	9	8.8	3	2.9	6	5.9
8 71.6%	**Parents/family**	31	30.4	42	41.2	13	12.7	9	8.8	5	4.9	2	2.0
9 56.8%	**Childhood experiences while growing up**	24	23.5	34	33.3	20	19.6	14	13.7	7	6.9	3	2.9
10 53.9%	**Training outside school**	21	20.6	34	33.3	20	19.6	13	12.7	9	8.8	5	4.9
11[a] 42.2%	**Peers/friends**	16	15.7	27	26.5	18	17.6	17	16.7	20	19.6	4	3.9
11[a] 42.2%	**Teachers**	11	10.8	32	31.4	22	21.4	19	18.6	9	8.8	9	8.8

Table 18 Continued

Rank*	Factor	Strongly agree		Agree		Neutral/ Undecided		Disagree		Strongly disagree		No response	
		f	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
12 37.2%	**Prestige/Social status**	9	8.8	29	28.4	14	13.7	23	22.5	24	23.4	3	2.9
13 36.2%	**Co-curricular activities, e.g., games and sports, clubs**	8	7.8	29	28.4	27	26.5	25	24.5	12	11.8	1	1.0

Note. *Ranking of the factors influencing career aspirations was based on summation of the percentages of the *strongly* agree and *agree* responses.
[a]Sum of percentages of the *strongly agree* and *agree* responses combined were tied.

Frequencies, Percentages, and Rankings of Career Choices/Aspirations of Students who were Members of Two Young Farmers Clubs in Eastern Uganda

Top Three First Choice Career Rankings

According to the male club members, their highest ranked number one career choice (aspiration) was human medicine/nursing/pharmacy (20%) (see Table 19). This was followed by agricultural engineering as the second most frequently selected career choice with 12%. Three choices tied for third highest ranked among the males' first choice of career, i.e., agriculture, agribusiness, and veterinary medicine with 10% each (see Table 19).

In the case of the female club members, the highest ranked number one career choice was also human medicine/nursing/pharmacy (42.3%) and it was followed by agricultural engineering with 9.6% as the second highest ranked first choice (see Table 19). In the third position, three choices tied with 5.8% each; these were finance/banking/accounting, lawyer/related legal professions, and veterinary medicine (see Table 19).

The top first choice ranking for all club members (i.e., sexes combined) was human medicine/nursing/pharmacy with 31.4%; this was followed by agricultural engineering with 10.8% as the second highest first ranked choice overall (see Table 19). Veterinary medicine was the third highest, first ranked choice for the club members overall with 7.8% (see Table 19).

Top Three Second Choice Rankings

Among male club members, the first ranked second choice was agricultural engineering (14%) (see Table 19). This was followed by agricultural economist and veterinary medicine which tied with 12% each as the second highest ranked number two

choice of careers. Three choices tied for third place among the second career choices for the male club members, i.e., chemist and material scientist, human medicine/nursing/pharmacist, and lawyer and related legal professions with 6% each (see Table 19).

In the case of female club members, the highest ranked career among the second choices was veterinary medicine (11.5%). Two career choices tied for the second position with 9.6% each, i.e., finance/banking/accounting and human medicine/nursing/ pharmacist, among the second ranked career choices (see Table 19). Three careers tied for the third position among the second ranked choices, i.e., agribusiness, computing/information technology, and electrical engineering with 7.7% each (see Table 19).

For the club members overall, the first career aspiration among the second ranked choices was veterinary medicine with 11.8%, and it was followed in the second position by human medicine/nursing/pharmacist with 7.8% (see Table 19). Four choices tied for the third position among the second ranked career choices with 5.9% each: agricultural economist, chemist and material scientist, computing/information technology, and lawyer and related legal professions (see Table 19).

Top Three Third Choice Career Rankings

Regarding the third choice of career rankings, the number one career choice among the male club members was veterinary medicine (10.0%), and it was followed by agricultural engineering (8.0%) in the second position (see Table 19). Four career choices among the third choice rankings tied for the third position with 6.0% each: agricultural extension (NAADS), chemist and material scientist, environmental conservation/wildlife

management, and human medicine/nursing/pharmacist (see Table 19).

Among the female club members, the first ranked career aspiration among their third choice rankings was finance/banking/accountant (13.5%). Two career aspirations tied for the second position with 7.7% each: chemist and material scientist and dietician/nutrition and dietetics (see Table 19). The third highest ranked selections for the female members' third choice included six careers that tied at 5.8% each: agriculture, agricultural economist, electrical engineering, food processing, human medicine/nursing/pharmacist, and mechanical engineering (see Table 19).

The first ranked career aspiration or choice among the third choices for all club members was finance/banking/accountant (8.8%), and it was followed in the second position by the choice of chemist and material scientist (6.9%) (see Table 19). In the third position among the third choice of careers, a three-way tie existed at 5.9%: agricultural engineering, human medicine/nursing/pharmacist, and veterinary medicine (see Table 19).

Top Three Fourth Choice Career Rankings

Among the fourth highest ranked career choices, within the male club members, environmental conservation/wildlife management was ranked number one by 12.0%, and two career aspirations tied for second place with 10.0% each, i.e., electrical engineering and forestry (see Table 19). In third place among the fourth highest ranked career choices for the males, two choices tied with 8.0% each: agricultural engineering and veterinary medicine (see Table 19).

For the female club members, four career aspirations tied for the first position among the fourth ranked choices with 7.7% each: agricultural economist,

dietician/nutrition and dietetics, finance/banking/accountant, and hotel/catering/restaurant (see Table 19). The second choice among the fourth highest ranked choices was environmental conservation/wildlife with 5.8% (see Table 19). Ten choices tied for the third position among the fourth ranked career selections with 3.8% each: agribusiness, agricultural engineering, computing/information technology, crop production, customer service representative, electrical engineering, human medicine/nursing/pharmacist, marketing/business, mechanical engineering, and veterinary medicine (see Table 19).

The highest ranked career aspiration among all club members within the fourth choice ranking was environmental conservation/wildlife (8.8%), and it was followed in the second position by electrical engineering with 6.9% of the respondents indicating that career choice (see Table 19). In the third position among the fourth highest ranked choices for all club members was a tie between two careers with 5.9% each: agricultural engineering and veterinary medicine (see Table 19).

Top Three Fifth Choice Career Rankings

Among the fifth highest ranked career aspirations, male club members indicated human medicine/nursing/pharmacist (10.0%) as their number one fifth choice, and it was followed by two career aspirations that tied for second place with 8.0% each: dairy/animal production and forestry (see Table 19). In third position for the fifth ranked choices among the males, four were tied at 6.0% each: agricultural economist, food processing, environmental/wildlife management, and veterinary medicine (see Table 19).

In the case of female club members, the first ranked career aspiration among their fifth career choice was crop production (11.5%). Six career aspirations among the females tied for the second position at 5.8% each: agribusiness, agricultural economist,

education/teaching, environmental conservation/wildlife management, marketing/business, and mechanical engineering (see Table 19). The third highest ranked selection for their fifth choice included seven choices that tied at 3.8% each: electrical engineering, entertainment/musician/actor/dancer, food processing, leisure and hospitality, media/journalism, social scientist, and veterinary medicine (see Table 19).

The highest ranked career aspiration among the fifth choice rankings for club members overall was crop production with 6.9% of the respondents indicating that choice (see Table 19). Three career aspirations tied for second position among the club members' fifth choice at 5.9% each: agricultural economist, environmental conservation/wildlife management, and human medicine/nursing/pharmacist (see Table 19). In third position for the club members' fifth choice, four careers were tied at 4.9% each: education/teaching, food processing, forestry, and veterinary medicine (see Table 19).

Lowest Ranked Career Choices

The following career choices received the lowest rankings overall (i.e., 5.9% or less) from the club members: hotel/catering/restaurant; soil scientist; customer service representative; entertainment/musician/actor/dancer; social scientist; leisure/hospitality; military/police/law enforcement. The least preferred career choice was plant breeding with only 2.0% of club members indicating it as a career choice among their top five selections (see Table 19). (*Note*. The careers with the lowest rankings were obtained by adding the percentages of the five career ranking possibilities). One career choice (i.e., "guidance and counseling") was indicated by 1.0% of the respondents among *others*, and it ranked seventh among the career aspirations in the fifth choice category (see Table 19).

See Table 19 for a complete listing of the club members' career choice rankings. Table 19 shows the rankings for each of the club members' top five career choices by sex and combined (i.e., male and female rankings together).

Table 19

Frequencies, Percentages, and Rankings of Career Choices/Aspirations of Students who were Members of Two Young Farmers Clubs in Eastern Uganda

Career Choices/Aspirations	**1st**			**2nd**			**3rd**			**4th**			**5th**		
	f	**%**	**Rank[a]**	***f***	**%**	**Rank[a]**	***f***	**%**	**Rank[a]**	***f***	**%**	**Rank[a]**	***f***	**%**	**Rank[a]**
Agribusiness															
Male	5	10.0	3^t	1	2.0	5^t	0	0.0	NR	1	2.0	6^t	1	2.0	5^t
Female	1	1.9	5^t	4	7.7	3^t	0	0.0	NR	2	3.8	3^t	3	5.8	2^t
Combined	6	5.9	4	5	4.9	4^t	0	0.0	NR	3	2.9	6^t	4	3.9	4^t
Agriculture															
Male	5	10.0	3^t	1	2.0	5^t	0	0.0	NR	0	0.0	NR	2	4.0	4^t
Female	0	0.0	NR	0	0.0	NR	3	5.8	3^t	0	0.0	NR	1	1.9	4^t
Combined	5	4.9	5^t	1	1.0	7^t	3	2.9	6^t	0	0.0	NR	3	2.9	5^t
Agricultural economist															
Male	2	4.0	5^t	6	12.0	2^t	1	2.0	5^t	1	2.0	6^t	3	6.0	3^t
Female	1	1.9	5^t	0	0.0	NR	3	5.8	3^t	4	7.7	1^t	3	5.8	2^t
Combined	3	2.9	7^t	6	5.9	3^t	4	3.9	5^t	5	4.9	4^t	6	5.9	2^t

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Agricultural engineering															
Male	6	12.0	2	7	14.0	1	4	8.0	2	4	8.0	3^t	1	2.0	5^t
Female	5	9.6	2	1	1.9	6^t	2	3.8	4^t	2	3.8	3^t	1	1.9	4^t
Combined	11	10.8	2	8	7.8	2^t	6	5.9	3^t	6	5.9	3^t	2	2.0	6^t
Agricultural extension (NAADS)															
Male	2	4.0	5^t	1	2.0	5^t	3	6.0	3^t	1	2.0	6^t	0	0.0	NR
Female	1	1.9	5^t	2	3.8	5^t	2	3.8	4^t	0	0.0	NR	1	1.9	4^t
Combined	3	2.9	7^t	3	2.9	5^t	5	4.9	4^t	1	1.0	8^t	1	1.0	7^t
Animal breeding															
Male	2	4.0	5^t	2	4.0	4^t	1	2.0	5^t	0	0.0	NR	1	2.0	5^t
Female	1	1.9	5^t	1	1.9	6^t	1	1.9	5^t	0	0.0	NR	1	1.9	4^t
Combined	3	2.9	7^t	3	2.9	5^t	2	2.0	7^t	0	0.0	NR	2	2.0	6^t

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Chemist and material scientist															
Male	2	4.0	5^t	3	6.0	3^t	3	6.0	3^t	3	6.0	4^t	0	0.0	NR
Female	2	3.8	4^t	3	5.8	4^t	4	7.7	2^t	1	1.9	4	1	1.9	4^t
Combined	4	3.9	6	6	5.9	3^t	7	6.9	2	4	3.9	5^t	1	1.0	7^t
Computing/Information technology															
Male	1	2.0	6^t	2	4.0	4^t	1	2.0	5^t	1	2.0	6^t	1	2.0	5^t
Female	0	0.0	NR	4	7.7	3^t	1	1.9	5^t	2	3.8	3^t	1	1.9	4^t
Combined	1	1.0	8^t	6	5.9	3^t	2	2.0	7^t	3	2.9	6^t	2	2.0	6^t
Crop production															
Male	1	2.0	6^t	1	2.0	5^t	2	4.0	4^t	0	0.0	NR	1	2.0	5^t
Female	0	0.0	NR	0	0.0	NR	2	3.8	4^t	2	3.8	3^t	6	11.5	1
Combined	1	1.0	8^t	1	1.0	7^t	4	3.9	5^t	2	2.0	7^t	7	6.9	1

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Customer service representative															
Male	0	0.0	NR	1	2.0	5[t]	0	0.0	NR	0	0.0	NR	1	2.0	5[t]
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	2	3.8	3[t]	1	1.9	4[t]
Combined	0	0.0	NR	1	1.0	7[t]	0	0.0	NR	2	2.0	7[t]	2	2.0	6[t]
Dairy/animal production															
Male	1	2.0	6[t]	2	4.0	4[t]	2	4.0	4[t]	2	4.0	5[t]	4	8.0	2[t]
Female	0	0.0	NR	3	5.8	4[t]	2	3.8	4[t]	0	0.0	NR	0	0.0	NR
Combined	1	1.0	8[t]	5	4.9	4[t]	4	3.9	5[t]	2	2.0	7[t]	4	3.9	4[t]
Dietician/nutrition and dietetics															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	2.0	5[t]
Female	0	0.0	NR	2	3.8	5[t]	4	7.7	2[t]	4	7.7	1[t]	0	0.0	NR
Combined	0	0.0	NR	2	2.0	6	4	3.9	5[t]	4	3.9	5[t]	1	1.0	7[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Education/Teaching															
Male	0	0.0	NR	1	2.0	5[t]	1	2.0	5[t]	0	0.0	NR	2	4.0	4[t]
Female	1	1.9	5[t]	0	0.0	NR	2	3.8	4[t]	1	1.9	4[t]	3	5.8	2[t]
Combined	1	1.0	8[t]	1	1.0	7[t]	3	2.9	6[t]	1	1.0	8	5	4.9	3[t]
Electrical engineering															
Male	3	6.0	4	1	2.0	5[t]	2	4.0	4[t]	5	10.0	2[t]	1	2.0	5[t]
Female	2	3.8	4[t]	4	7.7	3[t]	3	5.8	3[t]	2	3.8	3[t]	2	3.8	3[t]
Combined	5	4.9	5[t]	5	4.9	4[t]	5	4.9	4[t]	7	6.9	2	3	2.9	5[t]
Entertainment/ Musician/Actor/Dancer															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR
Female	1	1.9	5[t]	1	1.9	6[t]	0	0.0	NR	1	1.9	4[t]	2	3.8	3[t]
Combined	1	1.0	8[t]	1	1.0	7[t]	0	0.0	NR	1	1.0	8[t]	2	2.0	6[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Environmental conservation/Wildlife management															
Male	0	0.0	NR	1	2.0	5[t]	3	6.0	3[t]	6	12.0	1	3	6.0	3[t]
Female	1	1.9	5[t]	1	1.9	6[t]	0	0.0	NR	3	5.8	2	3	5.8	2[t]
Combined	1	1.0	8[t]	2	2.0	6[t]	3	2.9	6[t]	9	8.8	1	6	5.9	2[t]
Finance/Banking/ Accountant															
Male	0	0.0	NR	0	0.0	NR	2	4.0	4[t]	0	0.0	NR	2	4.0	4[t]
Female	3	5.8	3[t]	5	9.6	2[t]	7	13.5	1	4	7.7	1[t]	1	1.9	4[t]
Combined	3	2.9	7[t]	5	4.9	4[t]	9	8.8	1	4	3.9	5[t]	3	2.9	5[t]
Food processing															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	3	6.0	3[t]
Female	0	0.0	NR	2	3.8	5[t]	3	5.8	3[t]	1	1.9	4	2	3.8	3[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Combined	0	0.0	NR	2	2.0	6[t]	3	2.9	6[t]	1	1.0	8[t]	5	4.9	3[t]
Forestry															
Male	0	0.0	NR	2	4.0	4[t]	1	2.0	5[t]	5	10.0	2[t]	4	8.0	2[t]
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	1.9	4[t]	1	1.9	4[t]
Combined	0	0.0	NR	2	2.0	6[t]	1	1.0	8[t]	6	5.9	4[t]	5	4.9	3[t]
Hotel/Catering/Restaurant															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	2.0	5[t]
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	4	7.7	1[t]	1	1.9	4[t]
Combined	0	0.0	NR	0	0.0	NR	0	0.0	NR	4	3.9	5[t]	2	2.0	6[t]
Human medicine/ Nursing/Pharmacist															
Male	10	20.0	1	3	6.0	3[t]	3	6.0	3[t]	0	0.0	NR	5	10.0	1
Female	22	42.3	1	5	9.6	2[t]	3	5.8	3[t]	2	3.8	3[t]	1	1.9	4[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Combined	32	31.4	1	8	7.8	2[t]	6	5.9	3[t]	2	2.0	7[t]	6	5.9	2[t]
Lawyer/related legal professions															
Male	2	4.0	5[t]	3	6.0	3[t]	2	4.0	4[t]	0	0.0	NR	2	4.0	4[t]
Female	3	5.8	3[t]	3	5.8	4[t]	1	1.9	5[t]	1	1.9	4[t]	0	0.0	NR
Combined	5	4.9	5[t]	6	5.9	3[t]	3	2.9	6[t]	1	1.0	8[t]	2	2.0	6[t]
Leisure/Hospitality															
Male	0	0.0	NR	0	0.0	NR	1	2.0	5[t]	0	0.0	NR	0	0.0	NR
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	1.9	4[t]	2	3.8	3[t]
Combined	0	0.0	NR	0	0.0	NR	1	1.0	8[t]	1	1.0	8[t]	2	2.0	6[t]
Marketing/Business															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	2	4.0	5	0	0.0	NR
Female	1	1.9	5[t]	2	3.8	5[t]	2	3.8	4[t]	2	3.8	3[t]	3	5.8	2[t]
Combined	1	1.0	8[t]	2	2.0	6[t]	2	2.0	7[t]	4	3.9	5[t]	3	2.9	5[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Mechanical engineering															
Male	1	2.0	6[t]	2	4.0	4[t]	2	4.0	4[t]	2	4.0	5[t]	1	2.0	5[t]
Female	2	3.8	4[t]	0	0.0	NR	3	5.8	3[t]	2	3.8	3[t]	3	5.8	2[t]
Combined	3	2.9	7[t]	2	2.0	6[t]	5	4.9	4[t]	4	3.9	5[t]	4	3.9	4[t]
Media/Journalism															
Male	0	0.0	NR	0	0.0	NR	1	2.0	5[t]	3	6.0	4[t]	2	4.0	4[t]
Female	1	1.9	5[t]	1	1.9	6[t]	0	0.0	NR	0	0.0	NR	2	3.8	3[t]
Combined	1	1.0	8[t]	1	1.0	7[t]	1	1.0	8[t]	3	2.9	6[t]	4	3.9	4[t]
Military/Police/Law enforcement															
Male	0	0.0	NR	0	0.0	NR	1	2.0	5[t]	1	2.0	6[t]	0	0.0	NR
Female	0	0.0	NR	0	0.0	NR	1	1.9	5[t]	0	0.0	NR	0	0.0	NR
Combined	0	0.0	NR	0	0.0	NR	2	2.0	7[t]	1	1.0	8[t]	0	0.0	NR

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Petroleum engineering															
Male	0	0.0	NR	0	0.0	NR	2	4.0	4[t]	2	4.0	5[t]	1	2.0	5[t]
Female	1	1.9	5[t]	1	1.9	6[t]	1	1.9	5[t]	0	0.0	NR	0	0.0	NR
Combined	1	1.0	8[t]	1	1.0	7[t]	3	2.9	6[t]	2	2.0	7[t]	1	1.0	7[t]
Plant breeder															
Male	0	0.0	NR	0	0.0	NR	1	2.0	5[t]	0	0.0	NR	0	0.0	NR
Female	0	0.0	NR	1	1.9	6[t]	0	0.0	NR	0	0.0	NR	0	0.0	NR
Combined	0	0.0	NR	1	1.0	7[t]	1	1.0	8[t]	0	0.0	NR	0	0.0	NR
Social scientist															
Male	0	0.0	NR	1	2.0	5[t]	1	2.0	5[t]	0	0.0	NR	0	0.0	NR
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	2	3.8	3[t]
Combined	0	0.0	NR	1	1.0	7	1	1.0	8[t]	0	0.0	NR	2	2.0	6[t]

Table 19 Continued

Career Choices/Aspirations	1st			2nd			3rd			4th			5th		
	f	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]	*f*	%	Rank[a]
Soil scientist															
Male	0	0.0	NR	0	0.0	NR	1	2.0	5[t]	2	4.0	5[t]	0	0.0	NR
Female	0	0.0	NR	1	1.9	6[t]	1	1.9	5[t]	1	1.9	4[t]	0	0.0	NR
Combined	0	0.0	NR	1	1.0	7[t]	2	2.0	7[t]	3	2.9	6[t]	0	0.0	NR
Veterinary medicine															
Male	5	10.0	3[t]	6	12.0	2[t]	5	10.0	1	4	8.0	3[t]	3	6.0	3[t]
Female	3	5.8	3[t]	6	11.5	1	1	1.9	5[t]	2	3.8	3[t]	2	3.8	3[t]
Combined	8	7.8	3	12	11.8	1	6	5.9	3[t]	6	5.9	3[t]	5	4.9	3[t]
Other (choices)[c]															
Male	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR
Female	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	1.9	4[t]
Combined	0	0.0	NR	0	0.0	NR	0	0.0	NR	0	0.0	NR	1	1.0	7[t]

Note. [a]The career choices/aspirations categories' rankings by sex and with the sexes combined.
[b]National Agricultural Advisory Services. [c]*Other* career choices identified by the students included "guidance and counseling."

NR = No ranking.
See Table 20 for an overall ranking of students' career choices/aspirations by sex and combined.

Rankings of Students' Career Choices/Aspirations by Sex and Overall as Provided by Members of Two Young Farmers Clubs in Eastern Uganda

The overall ranking of the career choices as indicated by members of the Young Farmers Clubs showed that human medicine/nursing/pharmacist was the number one overall career choice for the respondents (i.e., 52.9%); however, by sex, the rankings differed. This choice was ranked third (42.0%) by the males, but for the females it was ranked first by 63.5% (see Table 20). The second overall career choice was veterinary medicine with 36.3% but still a difference existed between the sexes (see Table 20). Males indicated it as their first career choice (46.0%) compared to females who ranked the choice third with 26.9% (see Table 20).

The third overall career choice of the respondents was agricultural engineering with 32.4%, although differences were exhibited between the sexes. Twice as many males (44.0%) as did females (21.2%) indicated agricultural engineering with the career choice ranking second for males and tied for fifth by the females, respectively (see Table 20). Ranked fourth overall was electrical engineering with 24.5% of the respondents indicating it as one of their higher career choices. Almost equal numbers of each sex indicated it as one of their top career choices, i.e., 25.0% of the females and 24.0% of the males ranked electrical engineering fourth and fifth, respectively. In the case of male club members, this choice tied with the selection of forestry (see Table 20).

The career choice of agricultural economist tied with finance/banking/accountant at fifth overall with 23.5% each (see Table 20). However, by sex, a few more males (26.0%) than females (21.2%) indicated agricultural economist as one of their top career choices; it was ranked fourth and fifth, respectively, for each sex (see Table 20). In the case of both sexes, the choice was tied with another selection (see Table 20). Also,

regarding the choice of finance/banking/accounting, the number of females who indicated the selection as one of their top career choices was five times that of the males (i.e., 20 to 4); it was ranked second for the females but only twelfth by the males and tied with another choice (see Table 20).

The least selected career aspirations overall for the respondents were plant breeder (2.0%), military/police/law enforcement (2.9%), leisure and hospitality (3.9%), social scientist (3.9%), entertainment (4.9%), and customer service representative (4.9%). Only 1.0% of the respondents indicated a career other than the choices provided which was "guidance and counseling" (see Table 20). See Table 20 for a complete listing of all career choice rankings combined and by club members' sex.

Table 20

Rankings of Students' Career Choices/Aspirations by Sex and Overall as Provided by Members of Two Young Farmers Clubs in Eastern Uganda

Career Choices/ Aspirations	**Male**			**Female**			**Overall Responses Combined (Male & Female)**		
	f	**%**	**Rank**	***f***	**%**	**Rank**	***f***	**%**	**Rank**
Agribusiness	8	16.0	8^t	10	19.2	6^t	18	17.6	8^t
Agriculture	8	16.0	8^t	4	7.7	11^t	12	11.8	14^t
Agricultural economist	13	26.0	4^t	11	21.2	5^t	24	23.5	5^t
Agricultural engineering	22	44.0	2	11	21.2	5^t	33	32.4	3
Agricultural extension (NAADS)	7	14.0	9	6	11.5	9	13	12.7	13
Animal breeder	6	12.0	10^t	4	7.7	11^t	10	9.8	16^t

Table 20 Continued

Career Choices/ Aspirations	Male			Female			Overall Responses Combined (Male & Female)		
	f	%	Rank	*f*	%	Rank	*f*	%	Rank
Chemist and material scientist	11	22.0	6^t	11	21.2	5^t	22	21.6	6
Computing/ Information technology	6	12.0	10^t	8	15.4	7^t	14	13.7	12^t
Crop production	5	10.0	11^t	10	19.2	6^t	15	14.7	11
Customer service representative	2	4.0	14^t	3	5.8	12^t	5	4.9	19^t
Dairy/animal production	11	22.0	6^t	5	9.6	10^t	16	15.7	10
Dietician/ nutrition and dietetics	1	2.0	15^t	10	19.2	6^t	11	10.8	15^t
Education/ Teaching	4	8.0	12^t	7	13.5	8	11	10.8	15^t
Electrical engineering	12	24.0	5^t	13	25.0	4	25	24.5	4
Entertainment (musician/ actor/dancer)	0	0.0	NR	3	9.6	10^t	5	4.9	19^t
Environmental conservation/ Wildlife management	13	26.0	4^t	8	15.4	7^t	21	20.6	7
Finance/ Banking/ Accountant	4	8.0	12^t	20	38.5	2	24	23.5	5^t

Table 20 Continued

Career Choices/ Aspirations	Male			Female			Overall Responses Combined (Male & Female)		
	f	%	Rank	*f*	%	Rank	*f*	%	Rank
Food processing	3	6.0	13[t]	8	15.4	7[t]	11	10.8	15[t]
Forestry	12	24.0	5[t]	2	3.8	13[t]	14	13.7	12[t]
Hotel/ Catering/ Restaurant	1	2.0	15[t]	5	9.6	10[t]	6	5.9	18[t]
Human medicine/ Nursing/ Pharmacist	21	42.0	3	33	63.5	1	54	52.9	1
Lawyer/ related legal professions	9	18.0	7	8	15.4	7[t]	17	16.7	9
Leisure/ Hospitality	1	2.0	15[t]	3	5.8	12[t]	4	3.9	20[t]
Marketing/ Business	2	4.0	14[t]	10	19.2	6[t]	12	11.8	14[t]
Mechanical engineering	8	16.0	8[t]	10	19.2	6[t]	18	17.6	8[t]
Media/ Journalism	6	12.0	10[t]	4	7.7	11[t]	10	9.8	16[t]
Military/ Police/Law enforcement	2	4.0	14[t]	1	1.9	14[t]	3	2.9	21
Petroleum engineering	5	10.0	11[t]	3	5.8	12[t]	8	7.8	17
Plant breeder	1	2.0	15[t]	1	1.9	14[t]	2	2.0	22

Table 20 Continued

Career Choices/ Aspirations	Male			Female			Overall Responses Combined (Male & Female)		
	f	%	Rank	*f*	%	Rank	*f*	%	Rank
Social scientist	2	4.0	14^t	2	3.8	13^t	4	3.9	20^t
Soil scientist	3	6.0	13^t	3	5.8	12^t	6	5.9	18^t
Veterinary medicine	23	46.0	1	14	26.9	3	37	36.3	2
Others*	0	0.0	NR	1	1.9	15	1	1.0	23

Note. *An *other* career choice/aspiration identified by one student was "guidance and counseling."
NR = No ranking.

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CHAPTER V

SUMMARY OF THE STUDY, SUMMARY OF KEY FINDINGS, CONCLUSIONS, AND IMPLICATIONS, RECOMMENDATIONS FOR PRACTICE AND FOR FUTURE RESEARCH, AND DISCUSSION

This chapter consists of four sections: a summary of the study; a summary of the study's key findings, conclusions, and implications; recommendations for practice and recommendations for future research; and discussion. The summary of the study section includes the purpose of the study, research objectives, significance of the study, and the study's methods and procedures. Section two includes a summary of the study's key findings as well as conclusions based on these findings and related implications. The third section presents recommendations for future practice and recommendations for future research. Finally, section four presents a discussion of aspects of the study in regard to the phenomenon investigated.

Summary

Purpose of the Study

The primary purpose of this study was to determine the perceptions of the members of Young Farmers Clubs on their intent to pursue agriculture-related career preparation at the post-secondary school level. A secondary purpose was to describe club members and their reasons for joining Young Farmers Clubs.

Objectives

1. Describe select personal characteristics of the Young Farmers Club members.
2. Determine why the students joined Young Farmers Clubs.
3. Determine the career interests of the Young Farmers Club members.
4. Determine the factors that influenced the career choice/aspirations of the members of the Young Farmers Clubs.
5. Describe the level of intent of the Young Farmers Club members to pursue agriculture-related career preparation after graduating from secondary school.
6. Describe differences between Young Farmers Club members by sex (e.g., reasons for joining clubs, career interests, career choice/aspirations, and intent to pursue agriculture-related career preparation after graduation from secondary school).

Significance of the Study

The world's population has increased tremendously to seven billion (United Nations Population Fund, 2011) and it is projected to reach 9.2 billion in the year 2050 (World Watch Institute, 2013). Uganda is one of the countries with the highest population growth rates and is predicted to increase from its current population of 34.5 million (69.9% ≤ 24 years) to 103.2 million by 2050 (Oluka, 2011). The world today is faced with a challenge of finding ways to feed a growing population with a declining number of agriculturists, especially individuals engaged in food production. A need exists to have

more agricultural scientists and agricultural practitioners who are educated properly in the sciences undergirding agriculture to find ways of feeding this growing population, reducing poverty, and improving livelihoods, especially in developing countries such as Uganda.

The findings of this study stand to help practitioners of education, including teachers, school-based, career guidance counselors, and administrators, as well as policymakers in the Government of Uganda and worldwide to draft policies that will enhance agricultural education and also provide more funds to support it. The youth of developing countries in particular may become more motivated to prepare for and to pursue careers in the agriculture, food, fiber, and natural resources sector as a result of such policies.

Research Design

The study employed a single case (embedded) study design (Yin, 2009). Yin (2009) asserted that a single case study may involve more than one unit of analysis. Further, no matter how many units are selected, the resulting design is called an embedded case study design (Yin, 2009). An embedded case study design can serve as an important device for focusing a case study inquiry, and the subunits embedded often add significant opportunities for extensive analysis, thus enhancing the insights gained into a single case (Yin, 2009). This study involved a survey of members of Young Farmers Clubs in two boarding secondary schools, i.e., Kiira College Butiki and Iganga Girls' School, which were the only schools found to have active Young Farmers Clubs in the eastern region of Uganda at the time of the study (February 11 and 12, 2013). These

schools represented a unique case of having active Young Farmers Clubs which was of interest to the researcher.

The study used cross-sectional survey methodology where the researcher collected data at one point in time (Creswell, 2011; Gay, Mills, & Airasian, 2009) by administering the study's questionnaire only once. According to Creswell (2011), the cross-sectional survey procedure can be used to compare two or more groups in terms of attitudes, beliefs, opinions, and practices. This investigation was also a cohort study where participants were all members of the Young Farmers Clubs and who joined the clubs voluntarily based on their personal interests and goals. According to Creswell (2011) and Gay et al. (2009), in cohort studies, the researcher identifies a sub population based on some specific characteristics, and the population is selected at the same time period for the purpose of data collection. Therefore, because the study's participants were members of the Young Farmers Clubs, attended the same type of schools (i.e., single sex, Government-owned boarding schools), and the schools were located in similar settings, such as rural areas of eastern Uganda, they were considered a cohort.

Case Selection

The selection technique used in this study was purposeful, where a researcher intentionally selects a group of study participants that he or she perceives to be representative of the population of interest (Creswell, 2011; Gay et al., 2009). In the case of this study, Kiira College Butiki and Iganga Girls' School were the only schools found to have active Young Farmers Clubs in the eastern region of Uganda at the time of the study. Therefore, readers are urged to be cautious if generalizing the study's findings beyond the members of the Young Farmers Clubs who participated in the investigation.

Yin (2009) maintained that, similar to single experiments, the findings derived from cases should not be generalized beyond the sample(s) providing the data, however, they can be generalized to theoretical prepositions. Similarly, Stake (1995) asserted that the real business of a case study is particularization *not* generalization. "We take a particular case and come to know it well, not primarily as to how it is different from others but what it is, what it does" (Stake, 1995, p. 8). In this case study, the researcher wanted to determine the perceptions of the members of Young Farmers Clubs on their intent to pursue agriculture-related career preparation at the post-secondary school level and their reasons for joining Young Farmers Clubs.

Case studies allow researchers to retain holistic and meaningful characteristics of real-life events such as school performance and small group behavior (Yin, 2009). Stake (1995) exemplified case studies as "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). Researchers study a case when it is of very special interest and they look for the details of interaction with its contexts (Stake, 1995). Finally, quantitative case studies involve a collection of descriptive variables (Stake, 1995), which was the data collection procedure for this study, i.e., a survey questionnaire was used.

Research Assistant

The study employed one research assistant who was an agriculture teacher in Uganda at the time of this study. The research assistant was sensitized about research ethics and the procedures a researcher is supposed to follow when conducting a study involving human subjects. The researcher met with the research assistant during July of

2012 and briefed him about the study's purpose and objectives, and how the data should be collected and secured to ensure the confidentiality of the participants.

Data Collection

The data were collected using the questionnaire on separate days from students at the two schools, i.e., on February 11 and 12, 2013. The questionnaire together with the letters (Appendices B, C, D, E, & F) requesting permission to conduct the study were sent as electronic mail attachments to the research assistant. The questionnaires were printed by the research assistant and the assistant administered the questionnaires to members of Young Farmers Clubs at the two schools.

The research assistant shipped the completed questionnaires to the researcher on February 14, 2013, and the researcher received the shipping package on February 18, 2013. The package of questionnaires was tracked online via the shipping service's website by both the researcher and the research assistant.

Data Analysis

The data were analyzed using the Statistical Package for Social Scientists (SPSS) version 21. The answers to questions, as provided by the students, were hand-entered by the researcher into an SPSS data file on his computer which was password protected to ensure confidentiality of the data. Descriptive statistics were used for the data analysis. Frequencies and percentages were calculated, and, where appropriate, Cramer's V was used to describe selected associations between a student's biological sex and variables of interest to the researcher.

Summary of the Study's Key Findings, Conclusions, and Implications

The study's findings were used to arrive at conclusions and implications as explained below in accord with each of the study's six research objectives.

Research Objective # 1

Describe select personal characteristics of the Young Farmers Club members.

From the findings in Table 1, it can be concluded that almost an equal number of females and males participated in the study. Their ages ranged from 13 to 19 years and almost one-third of the participants were 16 years of age (30.4%) (see Table 1). Most of the members of Young Farmers Clubs were in senior four (54.6%) and senior six (20.6%) in terms of their grade levels (see Table 1).

Most of the members of the Young Farmers Club rarely missed school because of the inability to pay school fees. This may imply they came from families with a higher socio economic status. Almost all members of Young Farmers Clubs (95.1%) were *likely* or *highly likely* to continue their education at the post-secondary level (see Table 1). A high number of the club members (70.6%) also indicated they were *likely* or *highly likely* to pursue career preparation related to an agricultural field at the post-secondary level (see Table 1).

Most of the club members came from a nuclear family (63.7%), with most families having from six to nine members (see Table 2). One-half of the members of the Young Farmers Clubs had at least one parent who worked in an agriculture-related field (see Table 2), and a majority of the club members had a sibling or relative employed in agriculture (see Table 2). Male club members did not pay club dues but females did (see Table 3). The respondents' Young Farmers Clubs held meetings once every week (Table

3). Most of the club members (74.5%) indicated their parents supported them participating in the Young Farmers Clubs' activities (see Table 3).

Research Objective #2

Determine why the students joined Young Farmers Clubs.

The main reason why members joined the Young Farmers Clubs was to improve their academic performance (90.2%) (see Table 17). This was followed by personal interest (86.3%), and gaining life skills was the third reason why students joined Young Farmers Clubs (82.3%) (see Table 17).

These findings implied that students who joined the Young Farmers Clubs saw membership as an opportunity to learn and improve their academic performance; the members were driven primarily by their personal interests. Also, the students perceived the clubs' activities were opportunities to learn life skills such as leadership, communication, and team work; this was especially true for the female members (see Table 12). The students' schools did not make club participation a requirement; it was voluntary.

Most of the findings about students' reasons for club membership resonated with several previous studies such as Gruber and Beatty (1954) who indicated one of the characteristics of a good club is that "the club should appeal to the interest of its members" (p. 140). Moreover, students who participated in academic clubs were reported to have improved in their academic achievement (Barber & Eccles, 1999; Gerber, 1996; Mehus, 1932; Shumow, 2003). In addition, Shumow (2003) and Johnston (1952) concluded that clubs encouraged life skills such as leadership, community service, honesty, strong work ethics, and healthy lifestyles among their members. The findings of

this study support the researchers' conclusions. Fretwell (1931) asserted that clubs helped students make new friends and learn how to relate with each other, club membership should be voluntary (not compulsory or a requirement), interesting, and worthwhile from the student's point of view. The findings of this study were also congruent with several of Fretwell's (1931) assertions.

Research Objective #3

Determine the career interests of the Young Farmers Club members.

Highest ranked career choice/aspiration of the club members

Many of male club members indicated they were interested in pursuing a career in veterinary medicine (46%; see Table 20) making it the top career choice/aspiration among the males. Most of the female club members indicated they were interested in a career related to human medicine/nursing/pharmacist (63.5%; see Table 20) thus making it their top career choice of interest. The top career choice of interest overall for members of the Young Farmers Clubs was human medicine/nursing/ pharmacist (52.9%; see Table 20).

Second ranked career choice/aspiration of the club members

The second highest ranked career choice of interest among the male club members was agricultural engineering at 44% (see Table 20). The female club members indicated that their second highest ranked career choice/aspiration was finance/banking/accountant (38.5%; see Table 20). The second highest ranked career choice of interest overall for members of the Young Farmers Clubs was veterinary medicine (36.3%, see Table 20).

Third ranked career choice/aspiration of the club members

The third highest ranked career choice of interest of the male club members was human medicine/nursing/pharmacist (42%; Table 20). In the case of female club members, the third highest ranked career choice of interest was veterinary medicine (26.9%; see Table 20). The third highest ranked career choice of interest overall for members of the Young Farmers Clubs was agricultural engineering (32.4%; see Table 20).

Fourth ranked career choice/aspiration of the club members

For the male club members, two career choices of interest tied for the fourth highest ranked position at 26.0% each, i.e., agricultural economist and environmental conservation/wildlife management. The fourth highest ranked career choice of interest for the female club members was electrical engineering at 25.0% (see Table 20). The fourth highest ranked career choice of interest overall for members of the Young Farmers Clubs was electrical engineering at 24.5% (see Table 20).

Fifth ranked career choice/aspiration of the club members

The fifth highest ranked career choice of interest for the male club members was a two-way tie at 24.0% each, i.e., electrical engineering and forestry. Also, in the case of the female club members, the fifth highest ranked career choice of interest was a three-way tie at 21.2% each (see Table 20), which included the choices of agricultural economist, agricultural engineering, and chemist and material scientist. The fifth highest ranked career choice of interest overall for members of the Young Farmers Clubs was a two-way tie at 23.5% each, i.e., agricultural economist and banking/finance/accountant (see Table 20).

Least preferred career choice/aspirations overall of the club members

Most of the clubs members, irrespective of their sex, indicated low interest in pursuing careers related to plant breeding (2%); military/police/law enforcement (2.9%); leisure and hospitality (3.9%); social scientist (3.9%); entertainment (4.9%); and customer service representative (4.9%) (see Table 20).

In general, members of the Young Farmers Clubs were interested in pursuing careers related to science, e.g., human medicine or veterinary medicine, agricultural engineering, electrical engineering, or a social science in the case of agricultural economics (see Table 20). However, one science field, plant breeding, garnered very low interest from the club members (see Table 20). A majority of the club members indicated little preference for fields in the other social sciences or in the humanities, i.e., law enforcement, leisure and hospitality, social scientist, entertainment, and customer service (see Table 20). Female club members had more interest in careers related to human medicine than did the males who indicated more preference for veterinary medicine. In the main, relatively small differences were exhibited in the career aspirations of the male and female club members.

The finding about female club members' interests in medical-related fields is similar to Welsh's (1983) findings. Welsh (1983) conducted a study on characteristics and career choices of adolescent girls and reported that most of the girls in her study were interested in "health and medical career[s]" (p. 3). Welsh (1983) elaborated that, although career aspirations of women were not fundamentally different from those of men, the

choice of a career for women was "vastly more complex" (p. 2) than it was for men because of the socialization process that women experienced.

Some of this study's results support the findings of a similar study by Apantaku (2004), which assessed senior secondary agricultural science students' interests in agriculture as a career in Nigeria. Apantaku reported that most of his study's participants indicated a strong preference for careers in medicine and little preference for careers in catering or in the armed/police forces.

Research Objective #4

Determine the factors that influenced the career choice/aspirations of the members of the Young Farmers Clubs.

The members of Young Farmers Clubs agreed that their perceptions of ability to succeed in a given career influenced their aspirations. This factor of influence was followed by club members' personal goals and their desire or "love" for a career. These top three factors were personal, i.e., internal/intrinsic, to the respondents and all achieved the status of *agree* or *strongly agree* by more than 90% (see Table 18). Other factors influencing career choice were being exposed to and becoming aware of the possibility of a given career, education in school, role models, perceptions of the availability of advancement opportunities, perceptions of financial benefits, and students' family/parents (see Table 18).

The club members' were less in agreement, however, about the influence of childhood experiences on their career aspirations (see Table 18). The students' teachers, their peers and friends, their perceptions of prestige or social status associated with the career, and their participation in co-curricular activities had less influence on the career

aspirations of the members of the Young Farmers Clubs studied (see Table 18). Most of the other factors were extrinsic/external to the club members. These findings implied that the members of the Young Farmers Clubs were more influenced by internal/intrinsic factors regarding their career aspirations or choices than by extrinsic forces, which supports Bandura's (1986, 2001) theory of self-efficacy. In addition, the expression of a positive attitude, i.e., the level at which an individual evaluates his or her ability to succeed in a given career, personal goals, and desire or "love" for a career, is supported by to the theory of planned behavior as posited by Ajzen (1991) and Ajzen and Madden (1986).

Self-efficacy influences interests and outcome expectations which, in turn, influence an individual's career choice (Tang et al., 2008). Moreover, Hackett and Betz (1981) hypothesized that self-efficacy percepts had an influence on an individual's career choice. The club members' revelations about their perceptions of advancement opportunities associated with a choice as a factor influencing their career aspirations also supports similar findings by Kochung and Migunde (2011). Finally, individuals chose tasks for which they perceived themselves to be competent and avoided those tasks they viewed they could not accomplish based on self-judgment and personal characteristics (Bandura, 1986; Bandura et al., 2001).

In the case of childhood experiences, slightly more than one-half (56.8%, see Table 18) of the members of the Young Farmers Clubs indicated it was a factor influencing their career aspiration. These findings provided some support for previous studies that postulated childhood experiences were a major influence on individuals' career choices (Pines & Yanai, 1999).

Co-curricular activities experienced by the members had the least influence on their career aspirations (36.2%; see Table 18). These findings contradicted Johnston (1952) and Fretwell (1931). For example, Johnston (1952) asserted that club activities, which were practical in nature, provided learning experiences and opportunities for learners to explore areas of vocational interest.

Research Objective #5

Describe the level of intent of the Young Farmers Club members to pursue agriculture-related career preparation after graduating from secondary school.

A high number of members (70.6%) of the Young Farmers Clubs were *highly likely* or *likely* to pursue agriculture-related career preparation on graduation from secondary school (see Table 1). Slightly more than one-in-five of the club members were *not certain* about their pursuing agriculture-related career preparation after graduating from secondary school. This implied that most of the members of the Young Farmers Clubs were interested in pursuing career-related preparation in agriculture at the tertiary level.

Research Objective #6

Describe differences between Young Farmers Club members by sex (e.g., reasons for joining clubs, career interests, career choice/aspirations, and intent to pursue agriculture-related career preparation after graduation from secondary school).

A significant association was found to exist between student's sex and personal interest as a reason for joining Young Farmers Clubs (see Table 5). More girls than boys *strongly agreed* that personal interest was a reason why they joined their Young Farmers Club. A significant association also existed between a student's sex and acquiring life

skills as a reason for joining Young Farmers Clubs. More females joined their Young Farmers Club to gain life skills than did males (see Table 12). In addition, a significant relationship existed between a student's sex and pursuing agriculture-related career preparation after graduation from secondary school. Male club members indicated they were more likely to pursue agriculture-related career preparation after graduation from secondary school than did their female counterparts (see Table 16).

No significant associations existed between student sex and the other reasons for joining the Young Farmers Clubs: academic performance (see Table 6); socialization and making of friends, however, more females than males *agreed* or *strongly agreed* that they joined the Young Farmers Clubs to make friends (see Table 7); joining Young Farmers Club for study trips and agricultural shows (see Table 8); to make money from club activities (see Table 9); because it was a school requirement (see Table 10); because club membership was in line with their career aspirations, i.e., all members regardless of sex *agreed* or *strongly agree* in this regard (see Table 11).

These findings implied that about as many female as male club members were likely to join Young Farmers Clubs to improve their academic performance, to socialize and make new friends (although the females may have been more social than the males), to go on study trips/agricultural shows, and to not necessarily make money associated with club activities. In addition, club members' perceptions of the clubs' activities being in line with their career aspirations and that joining their clubs was voluntary were similar for both sexes. Another implication of these findings may be that the females were more passionate about their club and, therefore, more motivated to join. Further, it may be the

females perceived they were acquiring more life skills through their club membership than did the males, such as leadership roles, team work, and communication skills.

Recommendations for Practice

Career guidance counselors, teacher, parents, and other stakeholders should take into consideration the individual interests and abilities of learners when trying to guide them about career choices. Leung (2008) and Super (1980) asserted that adolescents are at a stage when they start developing attitudes toward work, start making choices, and are also developing some skills. Teenagers begin to be aware of their own interests and career aspirations at about the age of 14 (Sastre & Mullet, 1992; Tyler, 1964).

The patrons (advisors) of Young Farmers Clubs in Uganda, and other co-curricular clubs, should provide meaningful learning experiences to their clubs' members to enable them to explore and discover their career interests and related abilities. These learning experiences may lead to improved personal self-efficacy which, in turn, impacts an individual's career aspirations (Bandura et al., 2001; Bandura, 1986; Hirschi, 2010; Tang, 2008). Welsh (1983) professed that capable students are likely to be perceptive about their own interests and aptitudes at an early age and this helps them to make career choices that are realistic and appropriate to their personal qualities.

Based on the findings of this study, it was found that a majority of club members were in the upper secondary classes and fewer members populated the lower classes of their schools (see Table 1). The clubs' patrons/advisors should devise ways of encouraging the students in the lower classes to join their clubs, and also the school authorities should encourage students to join clubs to improve their academic

performance, to socialize with school peers, and to develop life skills. The skills and education received from the clubs may contribute to the human capital of the members which stands to bring about higher returns to the individual, community, and nation over time (Becker, 1994; Schick, 2008; see Figure 4).

The Ministry of Education and Sports in Uganda should encourage more schools to establish Young Farmers Clubs as this could be a venue where students may acquire life skills, improve their academic performance, and also explore their career interests (Fretwell, 1931; Gruber & Beatty, 1954; Johnston, 1952; Leung, 2008; Shumow, 2003; Super, 1980). This could be done by developing policies that encourages more student participation in co-curricular activities in Uganda's schools. Margolis et al. (2004) noted that early career experiences have an impact on the type of job a person has in the future and also the importance of these initial experiences in preventing career outcomes diminishing with time. Schick (2008) maintained that "education and experience were key demographic characteristics underlying the concept of human capital" (p. 6); see Figure 2. Further, Mincer (1981) posited that formal and informal learning experiences at school and at home help to build human capital (see Figure 4).

The clubs' patrons (advisors) should develop and incorporate appropriate activities and experiences into their clubs that would enable the club members to acquire life skills, such as leadership, public speaking, writing, teamwork, and conflict resolution (Fretwell, 1931; Gruber & Beatty, 1954; Johnston, 1952; Shumow, 2003). This could be done through competitions on report and speech writing, ensuring that all members participate in a leadership position within or outside their clubs, and contests within the clubs and outside of the clubs' schools.

Patrons (advisors) should also devise meaningful club experiences/activities such that students can make a *transparent connection* between the activities and possible career preparation or choices. This could be done through the inviting of appropriate guest speakers to club meetings, career-focused field trips, supervised agricultural experiences, and job-shadowing or internships with appropriate firms depending on the club members' interests and abilities. These activities may be similar to programmatic aspects of secondary agricultural education in the United States, i.e., intra-curricular activities (see Figure 1) (Connors, 2013; Hawkins et al., 1951; Lindley, 1993; National FFA Organization, 2012). This could go a long way toward the club members, especially the female members, developing positive attitudes about pursuing post-secondary career preparation in agriculture after graduation from secondary school as well as support the creation of a viable labor force (i.e., human capital) for Uganda's agriculture sector. In support, Psacharopoulos (1985) and Psacharopoulos and Patrinos (2004) indicated that females had higher returns on education overall than did males in the developing countries.

The Ministry of Education and Sports in Uganda should also formulate policies that encourage teachers, club patrons (advisors), and other educators to use co-curricular activities as a way to enhance instructional goals and objectives. Club activities should be used to supplement the formal teaching and learning process, especially in regard to practical application of theories taught in the classroom. The provision of meaningful learning activities and related experiences may enable the students to comprehend better the principles and concepts taught in their classrooms by engaging in practical, hands-on application of such (Barber & Eccles, 1999; Edwards et al., 2003; Gruber & Beatty,

1954; Heath & McLaughlin, 1991; Johnston, 1952; Ramsey & Edwards, 2004; Shumow, 2003; see Figure 1). In addition, the practical experiences stand to increase the vocational knowledge and skills of the students, bring about a better quality of human capital, and result in higher returns on related investments, which would contribute to the economic development of Uganda. Mincer (1981) and Psacharopoulos (1985) asserted that the returns on education as an investment were higher in developing countries than in developed countries. Mincer (1981) attributed this condition to the shortage of human capital in the developing countries and that scarcity being greater than in the developed countries.

Club patrons (advisors) of Young Farmers Clubs should cooperate to provide valuable, career-themed experiences for their clubs' members. This could be done through inter-school competitions where the club members show case the knowledge and skills they have acquired through their club activities. These activities may include but would not be limited to speech contests, debating, writing and reporting on issues pertaining to agricultural trends/policies in Uganda and the world at large, and livestock and poultry judging (evaluation) competitions. In doing this, the link between these activities and career preparedness should be stressed to the club members who participate. These activities may increase student involvement and interest in their clubs and lead to the founding or renewal of Young Farmers Clubs in other schools in Uganda.

The schools' administrators together with the patrons of the Young Farmers Clubs should bring the parents of the clubs' members on board to further increase support for their children's participation. This may be more important for male club members because some of them indicated they were *neutral* or *uncertain* about their parents'

support for club participation (see Table 14). Per this, establishment of a parent advisory group and/or an advisory council should be considered. This may also place parents in a better position to guide their children's career aspirations as related to their involvement in the Young Farmers Clubs.

The colleges and universities involved in the training of human capital for teaching agriculture in the secondary schools of Uganda should place an emphasis on club management and student advising, including career guidance, as part of their preparation programs. This would increase the likelihood that club patrons (advisors) are well-prepared to handle the challenges of establishing and managing student clubs in the schools where they are hired to teach. In addition, in-service training for teachers in secondary schools should be provided to equip them with the knowledge and skills needed to manage student organizations. On-the-job training is crucial for capacity building and improving the personal efficacy of employees and can bring about better results for the organization (Gao, 2008; Zula & Chermack, 2007).

Agriculture teachers should form a professional association to enhance the coordination and management of the Young Farmers Clubs, to support resource sharing, as well as to increase the likelihood of their professional networking and development in Uganda. This could enhance their ability to advocate for favorable policies and resource support from various stakeholders, including the Government of Uganda. Such an organization could give the club patrons/advisors a unified voice to lobby for support and recognition of Young Farmers Clubs in regard to their potential for contributing to the modernization of Uganda's agriculture sector (Diaz, n.d; NAADS, 2011). Further, it could be an avenue for educating stakeholders on the importance of engaging the youth in

productive experiences at an early age to increase the likelihood of their contributing to national development and providing human capital for the future of Uganda's agriculture sector (see Figure 4). This would be essential in addressing the country's challenges in regard to food insecurity, climate change, and unemployment.

The club patron (advisor) for the male club members studied should incorporate livestock management practices, such as castration, tick control, and drenching of livestock, among that club's activities. This would ensure that the male club members acquired experiences in how to care and manage livestock as well as keeping them healthy and productive.

Recommendations for Future Research

Similar studies should be conducted with other secondary student organizations or clubs in Uganda and other parts of Sub-Saharan Africa to determine the impact of these groups on the career aspirations of their members. These could be informal youth organizations such as 4-H clubs, as found around the world (National 4-H History Preservation Program, 2013), or more formal organizations such as FFA in the United States (Connors, 2013; Lindley, 1993). In addition, longitudinal studies should be conducted to make a follow-up of students who were involved in co-curricular activities, such as school clubs, and the career preparation they actually pursued as well as the careers they entered. A mixed-methods approach (Creswell, 2011) could be useful, e.g., survey questionnaires and personal interviews and focus groups, to triangulate the phenomenon and understand more deeply the students' career interests and their reasons for organization or club membership and participation.

More studies should be done to assess how much impact childhood experiences have in stimulating the career interests of adolescents, especially in developing countries such as Uganda. Most of the related studies have occurred in developed countries (e.g., Hartung et al., 2005; Pines & Yanai, 1999; Schroder, et al., 2011). This could provide more meaningful insight on childhood experiences as a factor influencing individuals' career aspirations, especially those supporting students' interests in pursuing agricultural careers. Researchers should also examine teachers' attitudes and perceptions regarding the use of co-curricular activities in facilitating the teaching and learning process, and the actual impact these activities have on students' learning and achievement in science (Gerber et al., 2001) and in agriculture (Edwards et al., 2003).

Attracting more females to careers in agriculture requiring post-secondary education is an issue of concern in many developing countries and perhaps most acutely in Sub-Saharan Africa. According to Beintema (2006), "only one in five agricultural researchers in the developing world are female" (p. 1). In addition, the need for more females to enter the agricultural extension services in Sub-Saharan Africa is very acute (Kanté, 2010). This study found the female club members were less certain than their male peers about pursuing additional education that would involve the study of agriculture (see Table 16). More educated females, however, may bring about increased returns to their communities and to Uganda at large, as previous researchers have indicated (Psacharopoulos, 1985; Psacharopoulos & Patrinos, 2004).

Discussion

The members of Young Farmers Clubs in this study indicated their clubs had little influence on their career aspirations but according to previous researchers (Baird, 1982;

Gruber & Beatty, 1954; Welsh, 1983) co-curricular activities, such as clubs, provided experiences that impacted students' career aspirations. Could it be that students in this study failed to correlate their clubs' activities and their future career aspirations or was it that the clubs were not providing the kind of learning experiences likely to stimulate the students' career aspirations? Additional studies may be needed to examine this uncertainty.

Another important finding to consider further was that, although parents influenced the club members' career aspirations, their impact was not as pronounced as the intrinsic factors, e.g., personal interests. The students' intrinsic factors were identified as more important to their career aspirations than most of the extrinsic factors, including the influence of parents. The findings of other researchers suggested that parents, childhood experiences, and teachers have a strong influence on the career aspirations of adolescents (Bandura et al., 2001; Bennett-Smith, 2011; Natalie, 2006; Pines & Yanai, 1999; Taylor et al., 2004). Could it be that the club members' parents were letting their children make career choices based on their interests or the parent-child relationships were such that the parents were not having much influence on their children in regard to career choice? Or, as adolescents, was this merely a reflection of their need for and pursuit of independence from their parents?

In addition, the finding that personal interest was more of a major factor influencing females to join their Young Farmers Club than it was the males aroused the researcher's curiosity to discover if the females were more passionate about their club. Further, more female club members strongly agreed that they joined Young Farmers Clubs to gain life skills, such as leadership and communication skills. Could it be that the

Young Farmers Club of which the females were members was providing them more opportunities to acquire life skills than the club to which the boys belonged?

According to the study's findings, more males than females were *highly likely* or *likely* to pursue agriculture-related career preparation after graduation from secondary school. Moreover, one-in-three females were uncertain about their likelihood to pursue agriculture-related career preparation after graduation. Why was it the female club members were less certain about the possibility of pursuing post-secondary education in agriculture than their male peers? Additional studies may be warranted to explore this difference.

Can the Government of Uganda, in its efforts to promote commercialization of the agriculture sector, revive Young Farmers Clubs in secondary schools to equip the youth with entrepreneurship skills and the science knowledge needed to tackle the challenges of unemployment, food security, and climate change? Further, based on the findings of this study, most of the club members indicated their career interests related to human medicine/nursing/pharmacist, agricultural engineering, veterinary medicine, or other science-based careers. Could Young Farmers Clubs be appropriate avenues for introducing students to scientific principles, knowledge, and concepts given the fact that agriculture is the oldest of all sciences and involves the application of much of the knowledge base supporting the life and physical sciences (Duncan et al., 2011; Edwards et al., 2003; Ramsey & Edwards, 2004)?

Could the Government of Uganda, in its efforts to promote the teaching of science, incorporate agriculture subjects into its SESEMAT project (Gunteese, 2008; Nakabugo, Bisaso, & Masembe, 2011; SESEMAT report, 2008; SESEMAT, 2013) to

enhance the teaching of science? To this end, Thompson and Balschweid (2000) and Edwards et al. (2003) asserted that students can learn science better when it is taught in the *context* of agriculture. In addition, informal learning experiences, such as volunteer groups, 4-H, and partnership activities between the school and community, can improve students' scientific reasoning ability (Gerber et al., 2001). Club members, through community outreach programs, could serve as the source of information for farmers and other stakeholders about new and innovative agricultural practices that rely on their understanding of science. Therefore, the activities of Young Farmers Clubs in Uganda may assist in interesting students in science-based careers, including those involving agriculture, as well as prepare students to pursue the same at the post-secondary school level.

A large number of participants in this study indicated that one or both of their parents had a career related to agriculture, and they had a sibling or relative employed in agriculture. Also many of the students indicated they were *likely* or *highly likely* to pursue career preparation related to agriculture. This left the researcher wondering whether the students in this study were under any social pressure from their parents and other relatives, i.e., *subjective norm* (Ajzen, 1987, 1999, 2002, 2006; Ajzen & Madden, 1986), to take up careers related to their occupations. Or could it have been that the students viewed their parents and relatives as role models (Kerka, 2000), and they were inspired to pursue similar careers?

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APPENDICES

APPENDIX A

Institutional Review Board Approval

Oklahoma State University Institutional Review Board

Date:	Thursday, November 29, 2012
IRB Application No	AG1256
Proposal Title:	Perceptions of Young Farmers Club Members on Their Intent to Pursue Agriculture-Related Career Preparation at the Post-Secondary Level
Reviewed and Processed as:	Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/28/2013

Principal Investigator(s):

Stephen Mukembo
911 Tobacco Road
Stillwater, OK 74075

Michael Craig Edwards
456 Ag Hall
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI, advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Sheila K. Kennison

Sheila Kennison, Chair
Institutional Review Board

APPENDIX B

Questionnaire

Perceptions of Young Farmers Club members on their intent to pursue agriculture-related career preparation at the post-secondary level

QUESTIONNAIRE

Your answers to this questionnaire will be kept confidential and anonymous. Your participation is voluntary. **Do not write your name anywhere on this paper to keep your identity anonymous (secret).**

Part One

1. In the table below, indicate in which of the following agriculture activities you have engaged as a Young Farmers Club member (YFC). (Tick Yes or No, whichever is applicable)

Agriculture activity	Yes	No
Cattle keeping (e.g., zero grazing, dairy farming)		
Poultry keeping (e.g., feeding birds, picking eggs)		
Keeping rabbits		
Fish farming		
Bee keeping		
Soil and environmental conservation		
Tree planting		
Building farm structures, e.g., cattle crush, fencing		
Crop production, e.g., growing maize, banana plantation		
Livestock management practices e.g., castration, tick control		
Others (please specify)		

2. Do members of your Young Farmers Club pay dues?

☐ ☐

Yes No

3. Please tick the box that best describes how often your club meets?

☐ Once a week ☐ Twice a month ☐ Once a month

☐ Once or twice a school term ☐ Never

4. The following are some of the reasons students give for joining clubs. As a member of a YFC, indicate the level to which you ***Agree/Disagree*** with the reasons influencing you to join your club.

	Strongly agree	**Agree**	**Neutral/ Undecided**	**Disagree**	**Strongly disagree**
Because of personal interest					
To improve my academic performance					
To socialize and make new friends					
Because it was school requirement					
To make money from club activities					
Study trips/attend agricultural show					
Because it is in line with my career aspirations/goals					
To gain life skills, e.g., leadership, communication, team work					
Others (please specify) and indicate the level of agreement					

5. What activity does your club do that you wish it would do more?

   _____

6. Identify an activity your club <u>does not</u> do that you think it should start?

   _____

7. Rate your parents' level of support for your participation in the YFC.

   ☐ Very supportive ☐ Supportive ☐ Neutral ☐ Not very supportive
   ☐ Not supportive at all

8. If you could invite a guest speaker who is an expert in a specific agricultural field to speak to your club, what would be that person's specialty or field of work?

   _____
   _____
   _____

9. Why would you invite an expert from that field of work?

   _____
   _____
   _____
   _____
   _____

Part Two

1. From the list of careers provided below (on the next page), select the **<u>five</u>** career choices or aspirations in which you are most interested by putting a tick in the corresponding column. **For example, if Agriculture is your number one, you tick *agriculture* under column 1. If teaching is your number two, you tick in column 2 for *teaching,* and so forth until you have selected <u>five careers</u>. If your career interests are not listed, please write your choice(s) and provide a rank (position).**

Career choice/Aspiration	Position (Rank)				
	1	2	3	4	5
Agriculture					
Agribusiness					
Agricultural economist					
Agricultural engineering					
Agricultural extension (NAADS)					
Animal breeder					
Chemist and material scientist					
Computing/Information technology					
Crop production					
Customer service representative					
Dairy/animal production					
Dietician/nutrition and dietics					
Education/Teaching					
Electrical engineering					
Entertainment (musician/actor/dancer)					
Finance/Banking/Accountant					
Food Processing					
Forestry					
Environmental conservation/Wildlife management					
Hotel/Catering/Restaurant					
Human medicine/Nursing/Pharmacist					
Lawyer/related legal professions e.g., a judge or a magistrate					
Leisure/Hospitality					
Marketing/Business					
Mechanical engineering					
Media/Journalism					
Military/Police/Law enforcement					
Petroleum engineering					
Plant breeder					
Social scientist					
Soil scientist					
Veterinary medicine					
Others (please specify)……					

2. In the list below are some of the factors thought to influence people's choices of careers. Indicate how much you **Agree/Disagree** with the factor influencing your career choices/ aspirations by ticking in the corresponding column for each.

Factors	**Strongly agree**	**Agree**	**Neutral /Undecided**	**Disagree**	**Strongly disagree**
Parents/family					
Peers/friends					
Teachers					
Personal goals					
My desire/"love" for the field					
My ability to succeed in the career					
Co-curricular activities, e.g., games and sports, clubs					
Financial benefits					
Other people's experiences in the career (role models)					
Childhood experiences while growing up					
Prestige/Social status					
Exposure/awareness and information about the career					
Availability of advancement opportunities					
Education in school					
Training outside of school					
Others (please specify)…					

3. How likely are you to continue your education at the post-secondary level (University or college)?

☐ Highly likely ☐ Likely ☐ Not sure/Undecided
☐ Unlikely ☐ Not likely at all

4. How likely are you to study an agricultural field at the post-secondary school level?

☐ Highly likely ☐ Likely ☐ Not sure/Undecided
☐ Unlikely ☐ Not likely at all

Part Three

Personal profile

1. Indicate your class level by ticking the one which is applicable.

☐ S.1 ☐ S.2 ☐ S.3 ☐ S.4 ☐ S.5 ☐ S.6

2. State your age in years _____

3. Sex ☐ MALE ☐ FEMALE

4. Which of the following best describes your home environment (the place where you stay with your parents or guardian when not at school)? (Tick the answer that applies.)

☐ Town ☐ Rural ☐ Mixed/Peri-urban (near town)

5. Which of the following best describes the type of family where you stay? (Tick the one that applies.)

☐ Nuclear family (mother, father, brothers and sisters)

☐ Extended family (father, mother, step parents, step brothers and step sisters, uncles, aunts, cousins, grandparents, in-laws, etc.)

6. Indicate the total number of people with whom you stay in your home?

   _____

7. How often do you miss school because of fee problems?

   ☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Very often

8. Did/does one of your parents do agriculture as a career? (e.g., working with NAADS, keep cattle, grow crops for sale, teach agriculture, or work in an agriculture-related organization)

   ☐ One ☐ Both ☐ Neither

9. Did/does a brother, sister, or a member of your extended family do agriculture as a career?

   ☐ Yes ☐ No

Thank you for your participation and honest responses!!

APPENDIX C

Guardian Consent Form

Perceptions of Young Farmers Club members on their intent to pursue agriculture-related career preparation at the post-secondary level

GUARDIAN (HEADMASTER) PERMISSION FORM

Dear Guardian,
Your student's Young Farmers Club has been selected to participate in a research study being conducted by researchers from Oklahoma State University, USA. This study seeks to determine the perceptions of the members of Young Farmers Club on their intent to pursue agriculture-related career preparation at the post-secondary school level and also to find out the reasons why they joined the Young Farmers Clubs.

The students will be asked about what activities are carried out by their clubs, what made them join the club, what their career aspirations are, and what factors have influenced their career aspiration. Some questions such as your student's age, class, and where they stay when away from school also will be asked. The student's identity will remain anonymous as no names will be written on the questionnaire nor will they write anything that can be used to identify them on the questionnaire. The results of this study will be used only for research purposes and will not in any way affect your student's club participation or school grades. Further, please be advised that no information collected during this research will be released to the school or any other persons and will be destroyed at the end of the study.

Your student's participation in this research project is voluntary and you may request that he or she be withdrawn from the study at any time with no penalty.

If you have any questions about this research project, I can be reached at +14055894378 or at Stephen.mukembo@okstate.edu. If you have questions about your student's rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) chair, Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

If you agree on your student's participation in this study, please complete and sign the attached consent form and give it to my research assistant.

Sincerely

Stephen Mukembo

Ford Foundation International Fellow

Master of International Agriculture Program (MIAP)

Oklahoma State University

CONSENT DOCUMENTATION:

I have been fully informed about the procedures listed here. I am aware of what my student and I will be asked to do and of the benefits of my participation. I also understand the following statements:

I have read and fully understand this permission form. I sign it freely and voluntarily.

A copy of this form will be given to me. I hereby give permission for my student's _____

_____ (insert student's name here) to participate in this study.

_____ _____

Signature of Legal Guardian Date

APPENDIX D

Script

Perceptions of Young Farmers Club members on their intent to pursue agriculture-related career preparation at the post-secondary level

Script

Good morning, my name is Oketch Dominick. I am a teacher of Agriculture at a different Secondary School, St. Kalemba. I am very glad to be with you today!!!

I'm here today to ask you to participate in a study we're doing to better understand your thoughts about your Young Farmers Club, the activities you participate in, your career aspirations and what is influencing your career choices.

The questionnaire has three parts. The first part is about the activities of your Young Farmers Club (what you do), why you joined the club and what you think about the club. The second part is about your career aspirations and what factors have generally attracted you to aspire for a specific career. The last section includes a few questions about you and your family. This will help us to know more about members of the Young Farmers Club generally. You will be provided with a pen which you will use to answer the questions. This pen will become yours at the end of the study as a token of appreciation.

Your participation in this study is strictly voluntary but it would be greatly appreciated by me, and by the College of Agricultural Sciences and Natural Resources at Oklahoma State University in the USA.

In no way will your answers affect your school grades or the activities of your club!!!

But we do hope the study will help us to make recommendations to various stakeholders about the activities of Young Farmers Clubs in schools and how best they can support their establishment in other schools. This study also will be very useful in making recommendations to career guidance counselors in schools to best prepare students for career opportunities in the future, including the agriculture sector.

If you are going to participate, please, read the consent information form and sign it before you start completing the questionnaire. As stated on that form, your answers will be entirely confidential and anonymous. The approximate time of completing this questionnaire is 20 minutes.

DO NOT write your name on the questionnaire!!! When you begin filling in the questionnaire, please, write directly on it.

Please, remember, we are asking for your honest opinions.

Please, hand back the completed questionnaire to me as you finish.

If there is a question that you do not understand, please raise your hand and I will be glad to come make the clarification for you.

Are there any questions? (Answer questions as needed.)

Please, begin.

APPENDIX E

Student Consent Form

Perceptions of Young Farmers Club members on their intent to pursue agriculture-related career preparation at the post-secondary level

Student consent form

Dear Student,
We are interested in learning about the activities of the Young Farmers Club in your school and your career aspirations. Your head teacher and patron of the club are aware of this project. Please understand that you do not have to do this. You do not have to answer any questions that you do not want to. You may stop at any time and go back to your classroom.

Please check one of the following boxes

☐ I consent to participate in this study about the activities of the Young Farmers Club and my career aspirations being conducted by researchers from Oklahoma State University.

☐ I do not consent to participate in this study about the activities of Young Farmers Club career aspirations being conducted by researchers from Oklahoma State University.

_____
Print Name

_____
Signature

_____
Date

Okla. State Univ.
IRB
Approved 11/29/12
Expires 11/28/13
IRB # AG-12-56

APPENDIX F

Letter to the Head Teachers Requesting Permission to Conduct the Study

Perceptions of Young Farmers Club members on their intent to pursue agriculture-related career preparation at the post-secondary level

Head Teacher (Principal) Permission Request letter

Dear Sir/Madam,

Re: Request to carry out a study on the members of Young Farmers Club in your school

I am Mukembo Stephen, a teacher of agriculture by profession but currently doing my master's degree in International Agriculture at Oklahoma State University, USA.

I humbly request you allow me to carry out a study on the members of the Young Farmers Club in your school. This study will seek to determine the perceptions of the members of Young Farmers Club on their intent to pursue agriculture-related career preparation at the post-secondary school level and also to find out the reasons why they joined the Young Farmers Clubs. This questionnaire will be offered to all members of the Young Farmers Club in your school.

A research assistant (Oketch Dominick) will work with your club's patron to ask students to participate in the study, administer the questionnaires and collect the questionnaires.

The students will be asked about what activities they carry out as club members, what made them join the club, what their career aspirations are, what factors have influenced their career aspirations, and also some questions about their age, class, and where they stay when away from school will be asked. The student identity will remain anonymous as no names will be written on the questionnaire nor will they write anything that can be used to identify them on the questionnaire. The results of this study will be used only for research purposes and will not in any way affect students' participation in the club or their grades. Further, please be advised that all the information collected during this study will be used solely for research and all the questionnaires will be destroyed at the end of the study.

Your students' participation in this research project is voluntary and you may request them to be withdrawn from the research at any time with no penalty.

Contacts: If you have any questions about this research project, I can be reached at +14055894378 or at Stephen.mukembo@okstate.edu. If you have questions about your student's rights as research volunteers, you may contact the Oklahoma State University Institutional Review Board (IRB) chair, Dr. Shelia Kennison, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu

If you agree on your students' participation in this research project, my research assistant Mr. Oketch Dominick will contact you to arrange a day and time to administer the study's questionnaire.

Sincerely

Stephen Mukembo

Ford Foundation International Fellow

Master of International Agriculture Program (MIAP)

Oklahoma State University

APPENDIX G

Letter of Authorization to Conduct the Study from the Head of Teacher Kiira College Butiki

KIIRA COLLEGE BUTIKI

Tel: 0392 - 748348
Fax: 0392 - 748349

P. O. Box 1181,
JINJA.

Our Ref: .....

Your Ref: .....

13/02/2013

Stephen Mukembo,
Ford Foundation International Fellow,
Master of International Agriculture Programme (MIAP)
Oklahoma State university.

Dear Sir,

RE: ACCEPTANCE LETTER PARTINING THE RESEARCH STUDY QUESTIONAIRE ABOUT THE YOUNG FARMERS CLUB MEMBERS AND AGRICULTURE RE – RELATED CAREER PERCEPTIONS.

I take the opportunity to welcome, thank and allow you carry out the research study at Kiira College Butiki.

It is a healthy venture and as a school which treasures in Agriculture, exposure of our students to any Academic programmes is highly welcome.

KIIRA COLLEGE BUTIKI
FEB 2013
P. O. BOX 1181, JINJA

Daniel Douglas Kaima
HEADMASTER

APPENDIX H

Letter of Authorization to Conduct the Study from the Headmistress of Iganga Girls Senior Secondary School

IGANGA SECONDARY SCHOOL

Our Ref: ISS/ADM/89

Your Ref:

Date: 12th February 2013

To.
Mr. Mukembo Stephen
Ford Foundation International Fellow
Oklahoma State University

RE: PERMISSION TO CARRY OUT A STUDY ON THE MEMBERS OF YOUNG FARMERS' CLUB.

Reference is made to your letter dated 5th February 2013, seeking permission to carry out research on the members of Young Farmers Club in Iganga SS on their intent to pursue agriculture-related career preparation at post primary level.

The purpose of this communication is to inform you that you have been granted permission to carry out your research from Iganga SS. We thank you for the interest you have shown in our organization and we hope that the data collected shall be of help to you for your research.

Yours in Service,

Mrs. Balina Nseko Idah Annet
HEADMISTRESS

VITA

STEPHEN CHARLES MUKEMBO

Candidate for the Degree of

Master of International Agriculture

Thesis: THE VIEWS OF YOUNG FARMERS CLUB MEMBERS ON THEIR CLUBS' ACTIVITIES, THEIR CAREER INTERESTS, AND THEIR INTENTIONS TO PURSUE AGRICULTURE-RELATED CAREER PREPARATION AT THE POST-SECONDARY LEVEL: AN EMBEDDED CASE STUDY OF TWO SECONDARY SCHOOLS IN EASTERN UGANDA

Major Field: International Agriculture

Biographical:
Personal data: Born in Kamuli District, Uganda on December 26, 1982
Married to Kevin Mukembo
Son of Charles and Rebecca Mukembo
Children: Arthur C. Muwanguzi and Rebecca A. Mukisa

Education:

Completed the requirements for the Master of International Agriculture at Oklahoma State University, Stillwater, Oklahoma in May, 2013

Completed the requirements for the Bachelor of Vocational Studies in Agriculture with Education at Kyambogo University, Kampala, Uganda in 2005

Experience:

Taught agriculture in high schools in Uganda for six years and was worked in agriculture extension for five years

Professional Memberships:

International Agriculture and Rural Development
Ford Foundation International Fellow