Factors influencing Young Peoples' Career Choice in Agriculture from the Educational Perspective: A Case Study of Kwara State, Nigeria.

By

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Abstract

Agriculture is critical for poverty reduction, job creation, food security, and overall economic growth in Nigeria. The sector is the largest employer of labour, yet its contribution to the Gross Domestic Product (GDP) remains low, while food insecurity and poverty remain high. However, in recent times, various agricultural transformation agenda have been structured to focus on youth and improved technology in agriculture. Nevertheless, little is being done regarding agricultural education. The agricultural education policy states the need to integrate the technical knowledge and skills necessary for agricultural, economic and industrial development. Yet, how effective is the implementation of these policies? In Nigeria, much quantitative research has been done on how young people perceive agriculture and agricultural careers but not comprehensively on educational factors. Therefore, this study adopts a multidisciplinary approach using a qualitative methodology to explore factors influencing career choices in agriculture from the educational perspective.

Fifty-eight participants were selected, including secondary school agricultural students, agricultural teachers, agricultural undergraduates, lecturers, agricultural graduates, public and private agricultural enterprises and curriculum developers from the ministry of education. Data were collected using various qualitative data collection methods, comprising focus group discussions among students, telephone interviews with agricultural graduates, and one-to-one interviews with teachers, lecturers and officials in agricultural enterprises and curriculum developers. Students were also observed on the field during their practical sessions.

The results show that many participants perceive agriculture negatively and do not view it as an academic field of study but a vocational short course for skills acquisition. The secondary school students, with few exceptions, considered it not an option in their academic pursuit but an additional income source in later life. At the same time, the undergraduates and graduates perceived agriculture as a means for self-employment, hence, the motivation to pursue a career in agriculture. Although many view agriculture as farming, their perception was mainly formed by their societal view of farming, childhood agricultural experiences, influence from social actors and educational factors. However, perceptions are changing, especially among undergraduates and graduates with more orientation and a broader view of agriculture, mainly driven by an agri-business mindset and the opportunity for job creation in the face of limited white-collar jobs. Yet, their expectations remain unmet as the learning

experiences are not tailored toward the skills acquisition needed for establishing a successful agricultural business.

Entrance to agricultural courses is still characterised by blanket admission, mainly recruiting those who have failed to access "prestigious courses "such as medicine and engineering, reinforcing students' impression that agricultural courses are for low achievers. The long duration of agricultural courses (five years) with no associated professionalism or title and late specialisation in a chosen aspect of agriculture are discouraging factors. Furthermore, contrary to the curriculum content taught in class, limited and under-developed fieldwork affects students' learning, subjects them to exertion, makes them feel inferior and negatively impacts their academic performance and retention in agricultural careers. An innovative agricultural sector demands high achievers and motivated students. Also, the agricultural transformation plan should include reforming the agricultural education system. Therefore, increasing youth participation requires a holistic approach. Hence, addressing the problem from an educational perspective is more preventive than curative.

Dedication

God the Father, Son, and the Holy Spirit for making this programme possible by all means.

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Table of Contents

List of Tables

List of Figures

List of Acronyms

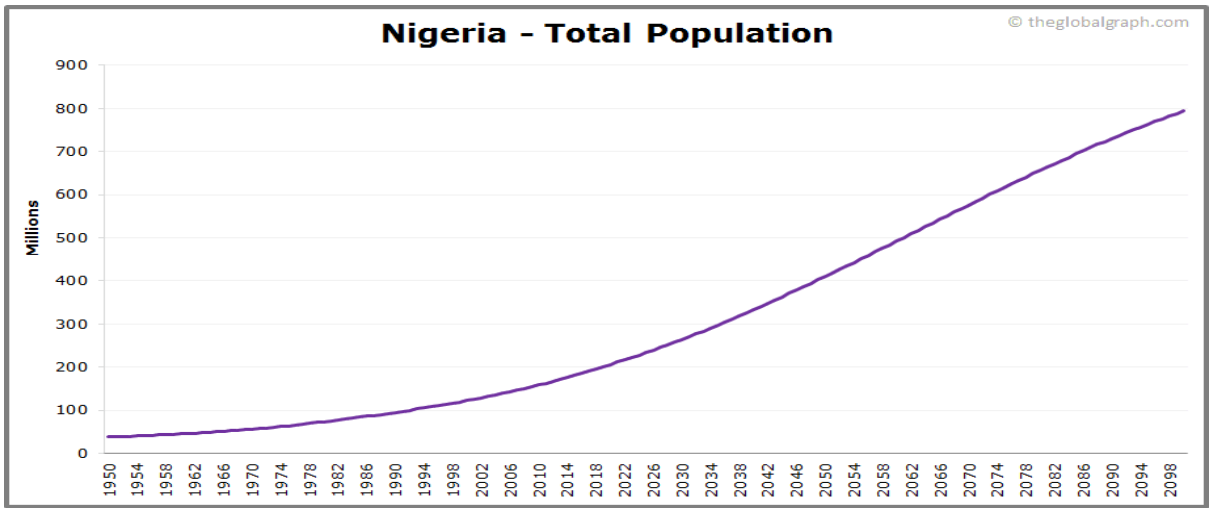
ADP	Agricultural Development Programmes
AE	Agricultural Enterprise
AESPR	Annual Education Sector Performance Report
AG	Agricultural Graduate
AKIS	Agricultural Knowledge Information System
ARCN	Agricultural Research Council of Nigeria
ARMTI	Agricultural and Rural Management Training Institute
ATA	Agricultural Transformation Agenda
BBC	British Broadcasting Corporation
BEC	Basic Education Certificate
CAADP	Comprehensive Africa Agricultural Development Programme
FAO	Food and Agricultural Organisation of the United Nations
.FAOSTAT	Food and Agricultural Organisation Statistics
FGD	Focus Group Discussion
FMA	Federal Ministry of Agriculture
FME	Federal Ministry of Education
FRN	Federal Republic of Nigeria
FMARD	Federal Ministry of Agriculture and Rural Development
GDP	Gross Domestic Product
HND	Higher National Diploma
ILO	International Labour Organisation
LGA	Local Government Authority
NAERLS	National Agricultural Extension Research and Liason Services
NCAM	National Centre for Agricultural Mechanisation
NALDA	National Agriculture Land Development Authority
NECO	National Examination Council
ND	National Diploma
NGO	Non-Governmental Organisation
NIRSAL	Nigeria Incentive-Based Risk-Sharing System
NPE	National Policy on Education
NUC	National University Commission

NYFS	National Young Farmers Scheme
PGD	Post Graduate Diploma
REFILLS	Research Extension and FarmersLinkage System
SCCT	Social Cognitive Career Theory
SEP	Supervised Enterprise Project
SSA	Sub-Saharan Africa
SSS	Secondary School Student
SUBEB	State Universal Basic Education Board
TESCOM	Teaching Service Commission
TPB	Theory of Planned Behaviour
UN	United Nation
UTME	Unified Tertiary Matriculation Examination
WAEC	West Africa Examination Council
WENR	World Education News Reviews
YEAP	Youth Employment in Agriculture Programme
YWAIP	Youth and Women Agribusiness Investment Programme

Chapter 1. Introduction

1.1 Overview

Nigeria has the largest population in Africa, with a projected increase estimated to reach more than 400million by the end of the year 2050 (see fig 1.1), making Nigeria the third-largest population in the world by 2050 (United Nations, 2019). However, the growing population is a critical challenge for food supply to meet demand (Adebayo and Ojo, 2012, Stockbrokers, 2019). Moreover, the importation of staple food to about N3.3 trillion between 2016 and 2019 is nearly four times higher than the export (FAO, 2022), suggesting a lag in food production. Also, 4 out of 10 Nigerians lived below the poverty line (World Bank, 2021), while youth unemployment rose (fig 3.7). Nevertheless, agriculture continues to be relevant to Nigeria's economy contributing approximately 24% of the Gross Domestic Product (GDP) in 2020. Moreover, agriculture remains the primary source of livelihood for 70% of the labour force (FAO, 2022). However, despite the enormous potential, many challenges are restraining agricultural productivity. For example, the sector suffers from climate change, low technology utilisation and insecurity, now aggravated by the global pandemic (COVID-19). In addition, the industry continues to experience low budgetary allocation compared to ten per cent of the total budget agreed in the comprehensive Africa Agricultural Development Programme (CAADP). (Hawkins and Sobukola, 2020; Ayandele, 2022).



Source: Globalgraph, 2021

Figure1.1 The Nigeria Population

Note: Expected annual increase by 7,059,000 people, with an average growth rate of 2.09% for the next 50 years (Global graph, 2021)

However, the government has embarked on various projects in the past, having realised the relevance of agriculture to Nigeria's economy and the need to diversify the economy from reliance on oil to attain food security and job creation, especially among the young people(Federal Republic of Nigeria 2014). A more recent programme is the Agricultural Transformation Agenda (ATA), launched in 2013, aimed at promoting agricultural business, diversifying the economy from reliance on oil and ensuring food security by creating jobs, especially for the youth. Also, some of the components include increasing agriculture entrepreneurs, reducing post-harvest loss, adding value to agricultural products, providing rural infrastructure, and consolidating bank investment in agriculture to encourage commercial agriculture (Federal Republic of Nigeria, 2014). The core part of this programme is a youth-led initiative and growing the value chain of some priority crops which aims to create 3.5million jobs.

The success of ATA requires a vibrant and coordinated Agricultural Knowledge and Innovation System (AKIS). AKIS describes how people and organisations join together to promote mutual learning, generate, disseminate and use agriculture-related knowledge and information. The system supports agriculture production, marketing, post-harvest handling of agricultural products and management of natural resources. Many people are involved in creating an agricultural knowledge Innovation system, including farmers, advisers, researchers, education and training providers, input suppliers, retailers, media services, and ministries. These are all part of a national or regional AKIS. The projects support agricultural research and education activities, which are increasingly viewed as components of an inter-related system (European Commission, 2018)

However, ATA requires a holistic approach and collaboration among the components of AKIS. Hence, ATA will miss out on a vital part of its objectives without incorporating the agricultural education system into its plan. The programme's goals centre on improving agricultural production methods and creating employment opportunities, especially among young people. The question is, what effort is being directed toward developing agricultural education in the ATA? This research proposes a vision focusing on preparing agricultural students capable of leading a change in the agricultural transformation agenda.

Furthermore, many young people negatively perceive agricultural careers (Apantaku, 2004, Onuekwusi and Okorie, 2008, Adekunle et al., 2009, Ayanda *et al.*, 2012). Reasons for the societal status of agricultural career (Ayanda *et al.*, 2012) poor remuneration, poor rate of return and lack of basic farm knowledge (Adekunle, Adefalu et al., 2009). Nonetheless, this perception is changing as young people pay keen attention to the trends. They are beginning to see agriculture as an essential sector to meet food demand and employment opportunities in the face of limited white-collar jobs (Onuekwusi and Okorie, 2008). With this understanding, they intend to seek careers in agriculture with agribusiness in mind for self-employment. However, their desires are unmet as the education system fails to meet learners' needs for skills acquisition to establish an agricultural enterprise. Additionally, researchers have not paid much attention to the educational factors limiting young people from achieving their career goals.

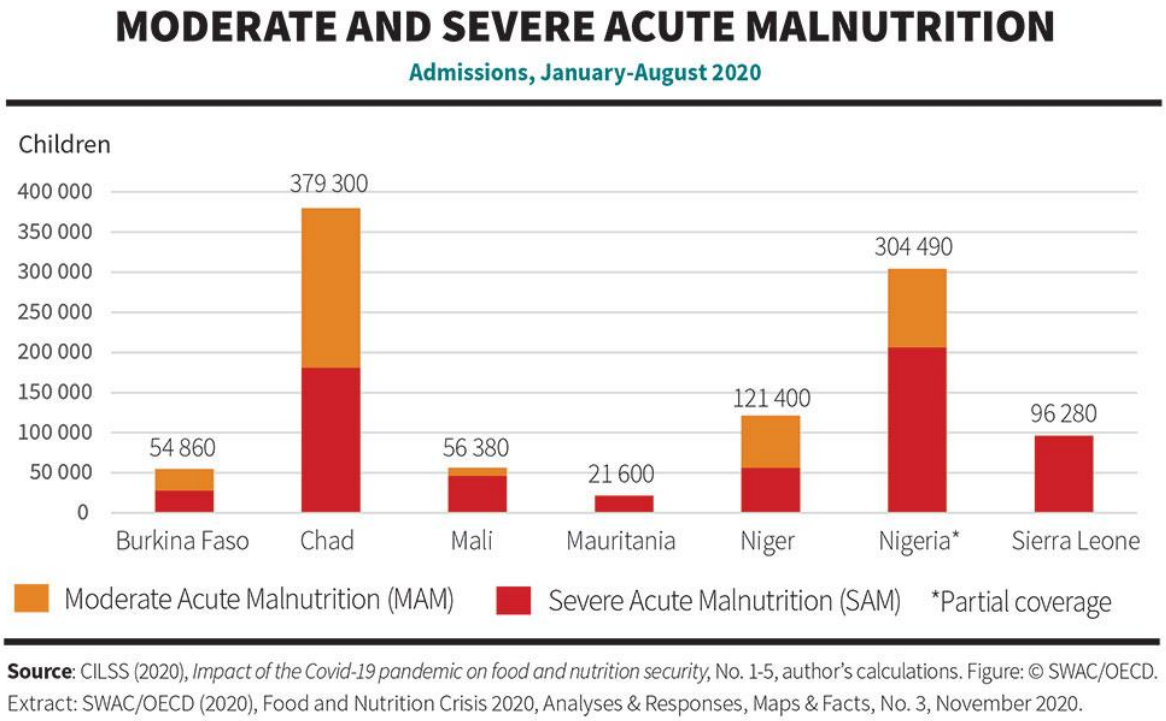
Therefore, the main focus of this study suggests a proactive approach to ATA via a reformed agricultural education and training system to turn out agricultural professionals capable of leading change.

1.1.1 Why Agricultural Transformation in Nigeria?

The agriculture sector in Nigeria has been dwindling over the years. Nigeria was notable for being one of the world's largest producers of cocoa, cotton, rubber, timber, groundnut, etc. In the 1960s, Nigeria was the world's largest exporter of groundnut, the second-largest exporter of cocoa and palm products and a significant exporter of rubber and cotton (Sekunmade, 2009). Despite the neglect, agriculture is the mainstay of the economy, employing more than 70% of the populace (World Bank, 2022). It is estimated that approximately 84 million hectares of Nigeria's total land area have the potential for agriculture; however, only about 40% of this is cultivated (FMARD, 2016).

The agricultural sector has several untapped potentials for growth and development in the availability of land, water, labour and its large internal markets. Agriculture, being diverse, can curb unemployment among young people. However, amidst the opportunity of an agile workforce, unemployment persists as around 11 million young people enter the labour market every year (World Bank, 2014). Poverty remains one of the country's most critical challenges, while population growth rates have meant a steady increase in the poor. Nigeria is considered one of the highest food importers in Sub-Saharan Africa (Idachaba, 2004). For example, Nigeria still imports about $3 to $5 billion of food annually, especially wheat, rice,

fish and sundry items, including fresh fruits (FMARD, 2016). Therefore, limited access to food results in a surging state of malnutrition. As a result of the high cost of food products, many compromise their eating habit as they focus on eating to survive. Also, the situation was further aggravated due to Covid. For instance, during the pandemic, the country ranks second globally for malnutrition in children under five. Over 200,000 children under five suffer from severe acute malnutrition due to poor nutrition and poor food habits (See fig1.2).



Source: CILSS (2020), *Impact of the Covid-19 pandemic on food and nutrition security*, No. 1-5, author's calculations. Figure: © SWAC/OECD.
Extract: SWAC/OECD (2020), Food and Nutrition Crisis 2020, Analyses & Responses, Maps & Facts, No. 3, November 2020.

Figure 1.2 Malnutrition in children under five

Scholars argue that Nigeria's current state of agriculture is due to weak and inappropriate policies aside from the neglect of agriculture after the oil boom (Adebayo and Ojo, 2012, Iwuchukwu and Igbokwe, 2012). While others identify the problem of poor management, poor implementation, corruption, political interferences, weak institutional linkages, and inadequate funding (Sanni and T, 2009, Adeoye, Yusuf et al., 2011, Daneji, 2011, Adebayo and Ojo, 2012, Akinbamowo, 2013), resulting in dwindling agricultural development despite formulating several policies. Moreover, the sequence of projects emerges from political power change, whereas the agenda is not different (Iwuchukwu and Igbokwe, 2012), thereby making monitoring and evaluation of projects challenging; hence programmes suffer from a lack of continuity.

Furthermore, the inability to harness stakeholders in developmental programmes poses a significant drawback.

1.1.2 Young people in agriculture

Young people or youth are used interchangeably and vary from country to country. However, there are no universally agreed-on definitions of youth; most reports assign age, perhaps for statistical consistency. For example, United Nations defined youth as the period of transition of dependence from childhood to adulthood and the awareness of interdependence as community members and people between the ages of 15 and 24 (United Nations, 2021). Since then, all UN statistical representations of youth have been within this age category**.** Many countries also describe youth as the age at which a person is given equal treatment under the law (Krishnan and Sethuramalingam, 2017). This age is commonly 18 in many countries; anyone from 18 and above is considered an adult.

Nonetheless, the operational definition of youth varies from country to country, depending on relative sociocultural, institutional, economic and political factors (Krishnan and Sethuramalingam, 2017). From a sociological point of view, the definition of youth cognizance of these factors as a transition from childhood to adulthood can take longer in a poor society(International Labour Organization, 2006). Hence, perhaps the older age range category of youths in developing countries is the reason. For example, in Nigeria, youths are people between the ages of 15-35; until the 2019 youth policy that adopted a lower age range of 15-29, the modality for this change is still a debate.

Besides classifying youth by age or sociological perspective, young people are distinguished for their strength, innovativeness, proactiveness and agility. They are the successors of the farming generation and the future of food security in Nigeria. However, ageing smallholder farmers are less likely to adopt the new technologies needed to sustain agricultural productivity. Therefore an indication of a pressing need to engage young people in ways that envisage a promising future in agriculture and pursue careers in agriculture-based industries (NIRSAL, 2017).

There is growing interest in young people's involvement in agriculture and why agricultural career is not attractive to the youth. According to (Adekunle, Adefalu et al., 2009), such reasons include inadequate credit facilities, lack of agricultural insurance, poor returns on agricultural investment, lack of basic farming knowledge, and insufficient access to equipment. On the other hand, Tijani (2014) suggests that youths will find agriculture

attractive if the government partners with the private sector in establishing modern agriculture villages. Furthermore, the provision of modern agricultural tools with agricultural training skills to bridge the gap caused by the outdated curriculum of tertiary institutions. By contrast, others argue that the rural-urban drift, especially among young people, is due to the absence of basic amenities (Adesiji, Omoniwa et al.,2009), while Yohanna (2014) identified that lack of interest in agriculture is a determinant factor for rural-urban drift.

However, young people's negative perception of agricultural careers is not haphazard. Instead, they are formed due to underlying factors, including the societal status of agricultural jobs, low return on investments, a crude method of operation, and childhood agricultural experiences. Perhaps the trend of research findings birthed the agricultural transformation agenda. In recent times, young people are developing a different perception of agricultural careers as a job creation strategy to tackle the unemployment problem among young people. At the same time, fundamental educational-related inhibitors make students doubt their traditional or modern agriculture competence. Therefore, the study highlights the academic factors impeding young people's career goals in agriculture and underscores the urgent need for agricultural education reform.

1.1.3 Agricultural Education in Nigeria

The importance of education in national development cannot be overemphasized. The ability of Nigeria to realise the vision of becoming one of the 20 largest economies in the world is mainly dependent on the capacity to transform its young people into highly skilled and competent citizens capable of competing globally (FME, 2012). To achieve this, the primary responsibility of such a workforce rest on the education sector.

Agricultural education teaches students to gain a wide variety of skills in science, management, communications, technology and leadership, depending on the level of education. It entails the study of applied sciences like biology, chemistry, physics and business management principles aimed at using knowledge and skills from several disciplines in agriculture. At the tertiary level, various skills are acquired through multiple learning experiences in the classroom, laboratory, leadership and experiential learning (Encyclopedia of Education, 2022). Thereby, Agricultural education prepares students for a successful career in global agriculture and food systems through learning experiences in science background of agricultural concepts (Kidane and Worth, 2012). Agricultural graduates can work as agricultural entrepreneurs, manage farms, plant or animal breeders/geneticists, soil

scientists, etc. Formal programmes in agricultural education are conducted at secondary schools, colleges, and universities.

Agricultural education in Nigerian schools, especially at the secondary level, can encourage young people into agriculture by providing career guidance to students from the secondary level where career choices are made. For example, most science students have a limited career vision of studying medicine, which strongly indicates the need for career counselling in secondary schools. Agriculture is usually termed crop farming by a layman. However, there are aspects of agriculture that young people can find more exciting and attractive if they are well-informed and guided.

According to the National Policy on Education (NPE), agriculture is one of the subjects offered in Junior and Senior Secondary Schools as a vocational elective (National Policy on Education, 2013). Therefore, the curriculum content of the senior school level was structured to focus on these major areas: food production, agronomy, forestry, agricultural economics and farm management. In the same vein, the NPE recommended guided discovery, which emphasises learning by doing. Therefore, the overall objective of the revised curriculum is to provide students with adequate knowledge and skills that will enable them to discover their talents and enrich agricultural science education in Nigeria. Specifically, the objective of senior secondary agricultural education is to: stimulate and sustain students' interest in agriculture; impart functional knowledge and practical skills in agriculture to students; prepare students for further studies in the area of agriculture; and prepare students for a profession in Agriculture (National Policy on Education, 2013). However, how effective is the curriculum implementation in achieving the National Policy on Education's goal to make education both practical and valuable? (Ikeoji *et al.*, 2006).

Similarly, higher education plays an essential role in national development by providing knowledge and developing the nation's human capital (Opara, 2013). Howbeit, the education sector face challenges of poor funding, insufficient facilities for the acquisition of practical skills (Ekezie and Owo, 2019), inadequate personnel, inadequate infrastructures (Egun, 2010; Amadi and Lazarus, 2017) and curriculum-related issues (Chakeredza, Temu et al., 2008, Opara, 2013). Therefore, an appropriate policy focusing on commercial agriculture is necessary for agricultural productivity (Lokpobiri, 2019), while agricultural education and training are critical elements to facilitate this innovative move. Furthermore, although the ATA components include informal out-of-school training, agricultural education also has a

vital role as it provides a ready platform for youth involvement in the ATA. Thereby, this research suggests agricultural educational reform capable of promoting the agricultural transformation agenda.

Key Actors in Agricultural Transformation Agenda

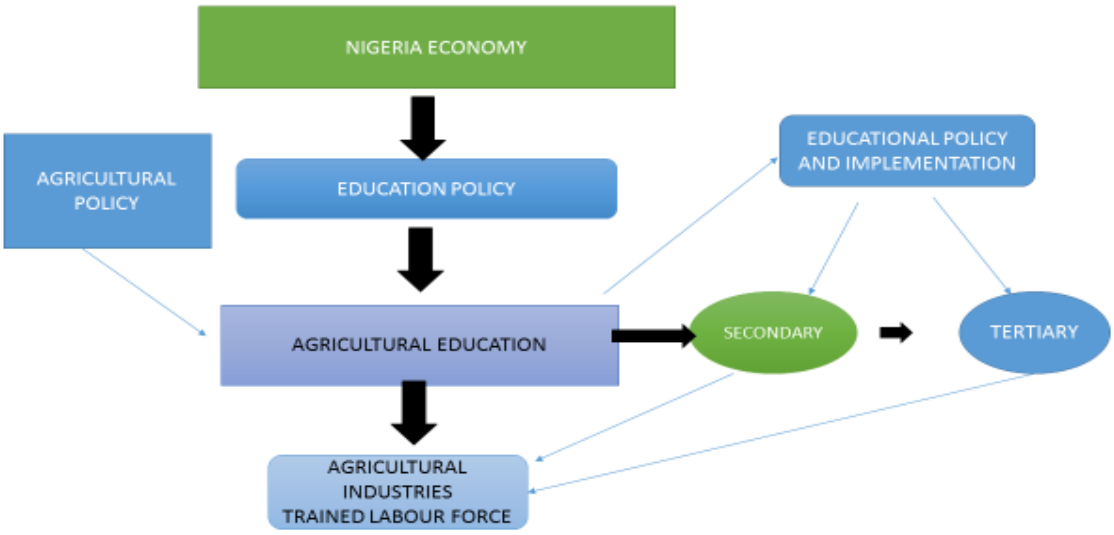


Figure 1.3 Key actors in the agricultural transformation agenda

1.2 Contribution of this research: Research aims and objectives

Nigeria urgently needs agricultural productivity, especially during the current recession, food insecurity, malnutrition and the high unemployment rate among young people. Education is paramount in agricultural development, whereas ATA has not given too much attention to developing agricultural education in its plan. Also, many factors have been identified as factors influencing young people's perception of agricultural careers. Most research relies on quantitative research methodology to answer this social phenomenon. Therefore, this study engages a qualitative method to reveal salient factors not captured in previous research, especially regarding the educational and institutional factors informing young people's career choices in agriculture. Subsequently, the study demonstrates the need to take advantage of the youth bulge and the changing perception about agricultural careers by addressing concerns around agricultural education by preparing students and graduates capable of leading ATA to produce innovative agribusiness entrepreneurs.

The research, therefore, investigates the following research questions

1. How do participants perceive agricultural careers?
2. What are the institutional factors influencing their choice of careers in agriculture?
3. What are the constraints to agricultural careers?
4. What are the strengths and weaknesses of agricultural education?

The specific objectives of the study are:

i. To examine the participants' perception of agricultural careers
ii. To determine factors influencing participants' choice of profession in agriculture
iii. To identify barriers in agricultural careers.
iv. To identify the strengths and weaknesses of the current agricultural education system and make recommendations as to how this may be improved.

1.3 Thesis Structure

This thesis comprises eight chapters. Chapter one introduces and states the research objectives. Next are two sections (two and three) consisting of a literature review discussing career aspirations and the role of education in agricultural development, respectively. Chapter four presents the study area, and chapter five explains the research methodology. Then, chapters (six and seven) present an analysis and interpretation of the data; chapter six discusses perceptions of agricultural careers, while chapter seven highlights institutional factors influencing career choices in agriculture. The last chapter (chapter eight) presents the research insight, recommendations, and areas for further research.

Chapter 2. Career Concepts

2.1 Introduction

Chapter one highlighted the motivation for this research with research questions and objectives. However, to address the purposes of this study, it is essential to build on the existing literature on the topic to make a credible contribution to the body of knowledge. Therefore, this chapter provides background to the research and buttresses the reason for the study. The section (literature review) is divided into two chapters (2 and 3). This chapter presents career definitions, theories on careers, factors influencing career choices, career choices in agriculture and the summary.

2.2 The Concept of Career

People have different meanings for the term career, making it challenging to develop a particular definition. Over the years, the terms career, job, occupation and profession have often been used interchangeably. By the dictionary definition, a job is a routine task or work, while occupation means engaging in an activity or occupying a position. A profession is defined as paid work requiring training or formal qualification. At the same time, a career is an individual's occupation over a significant period, usually with an opportunity for progression. Although many view a career as requiring formal qualification, several researchers propose broadening this conceptual definition to include pre-vocational and post-vocational activities and other life roles and contexts (Patton, 2014). Drawing inference why many emphasise professional work as a career could be deduced from the meaning of a career as a job or occupation that one does for a significant period of life with an opportunity for progression and development. Whether a vocation will be considered a career may depend on its prospect for advancement. A career is not limited to position, hierarchy or work cadre; it is an intentional choice of work related to individual interest, passion and skill.

Similarly, from a psychological point of view, some refer to work as a means through which an individual exhibit a self-concept **(**Super, Savickas et al., 1996**).** Baruch and Bozionelos (2011) explain a career as a work-related experience over a particular period. If a career is an intentional decision, engaging in specific work at a time may not mean a career (Patton, 2014). Many people work for survival, which may not contribute to more than need fulfilment, as opposed to personal and public identity and fulfilling a "calling" (Kenny, Blustein et al., 2006**)**. A career is an individual expression of self (Inkson, 2008). However, limited information is found concerning how long one can sustain a job if motivated only by

financial gain and meeting needs. Since a career is what one does for a substantial part of life, it is worth more than working to earn a living. A career becomes sustainable and fulfilling when initiated by what one finds enjoyable and desirable. A career decision is a vital aspect of life because it implies an individual pattern of life, occupation and life fulfilment (Schoon and Parsons, 2002; Ashby and Schoon, 2012; Beal and Crockett, 2013). In other words, a career is described as a work an individual does over a substantial period, fulfilling and reflecting personality and identity(Schoon and Parsons, 2002). Perhaps the reason for much interest in career development, fulfilment and consequences of career inaction(Verbruggen and Vos 2020). However, while many focus on career development, Verbruggen and Vos (2020) argue about the knowledge gap of career inaction and its lifelong implication.

However, some career aspirations may not emerge without prior information or exposure to specific work opportunities, highlighting the significance of social, economic and environmental factors. Similarly, Ingold (2000) affirms that careers rarely happen in isolation but are constructed through interaction with the environment. Ingold further argues that individuals develop skills that are not innate or acquired; instead, they are grown and influenced by their environment. Thus, career development is a process and product of interaction with the environment. However, an arguable weakness is that there may be no growth of a trait if there is no seed (innate) of such a feature, even under favourable environmental conditions.

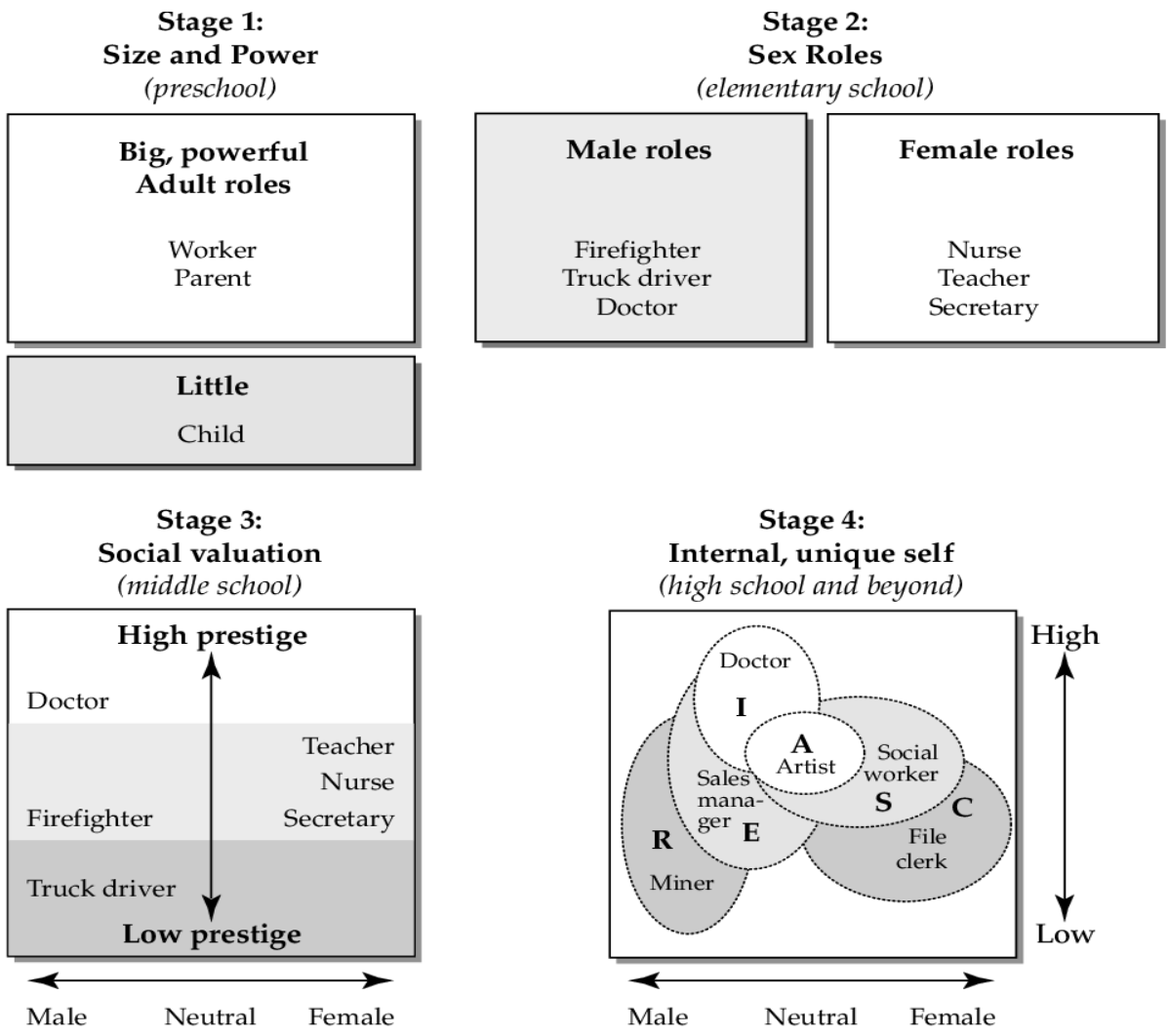
2.3 The Review of Relevant theories

The work of Parson in 1909 had a significant influence on career theories. The theory identified three essential elements for career guidance. These include self-knowledge, knowledge of the world of work and the ability to match the two. In other words, knowing any of the three elements is not mutually exclusive. However, understanding the three is paramount to finding a suitable career. For example, individuals may have discovered their interests but lack exposure or knowledge of relevant jobs. Over the years, several theories have emerged with increasing interest in the cognitive component of career development (Lent and Brown, 2021). The trend shifted from vocational psychology to how cognition dictates career behaviour—accompanying the era by the belief that people are active factors in their career outcomes based on their ideas about themselves, their environment, and their career. An example is the Social Cognitive Career Theory (SCCT), which emphasises a self-driven approach to career development(Lent and Brown, 2008). This chapter discusses the

Gottfredson theory, SCCT, Theory of Planned Behaviour (TPB) and Anderson's information integration theory.

2.3.1 Gottfredson Theory

Gottfredson (2005) explains the effect of cognitive development on career aspirations. Although lent et al. (2002) argue that career development is not a mental exercise, intrinsic and extrinsic barriers exist to choosing careers. The Gottfredson theory of circumscription and compromise (see fig 2.1) explains how young people recognise and deal with career outcomes. As much as chance would have played a part in the career path, the product is not haphazard or new (Esters and Retallick, 2013). Gottfredson affirms that no matter the differences in social origins, children will have a similar view of occupations by distinguishing them primarily by gender roles and socially desirable or prestigious jobs. The theory explains the role of social and biological factors in constructing a career (Gottfredson 2002, Gottfredson, 2005). As a result, some may discover their interests while some will be forced to take jobs that are not of interest to them. The theory explains how an individual compares self and the knowledge of the occupation by including the factors of the person-environment fit model (Luke and Redekop, 2014). However, the world is changing; the theory fails to account for the changing perceptions of jobs due to diverse development and the influence of social media. Also, this may not always be the case, for example, in societies with less emphasis on gender roles, where children, irrespective of sex, are exposed to similar activities and where every profession is equally important. Hence in such situation children are less likely to describes a job as prestigious.



Source: Gottfredson, 2004

Figure 2.1 Gottfredson's theory of circumscription and compromise

Gottfredson also explains the cognitive development in career choice in the theory of circumscription and compromise. It suggests four developmental processes that are key to understanding the pattern of career aspirations. The idea view career choices as a matching process whereby individuals seek occupations that match their interests, goals, and works for which they possess skills, abilities, and temperament. This process entails young people learning the relevant attributes of different occupations and their development and discerning which rewards and requirements will match their still-evolving interests, abilities, values, and goals (matching process). Therefore, adequate awareness of different occupations is crucial for a broader scope when choosing careers. The theory stresses the importance of four

developmental stages in the matching process, which requires cognitive growth encompassing all six levels of Bloom's taxonomy (See fig 2.2) of the cognitive tasks in teaching and learning (Anderson & Krathwohl, 2001). The learning process starts from the lowest to the highest mental ability by remembering isolated facts, spotting and understanding similarities and differences, and applying what has been learnt. Then, analyse information and evaluate which choices are better than others to plan to meet a goal. Therefore, adequate cognitive development of individuals will improve their decision-making on their career choices. Children's level of reasoning increases with chronological age from birth as they gradually figure out the world around them over time. However, an account should be given to internal and external barriers to change, growth and choice (Lent, Lopez Jr et al., 2008).

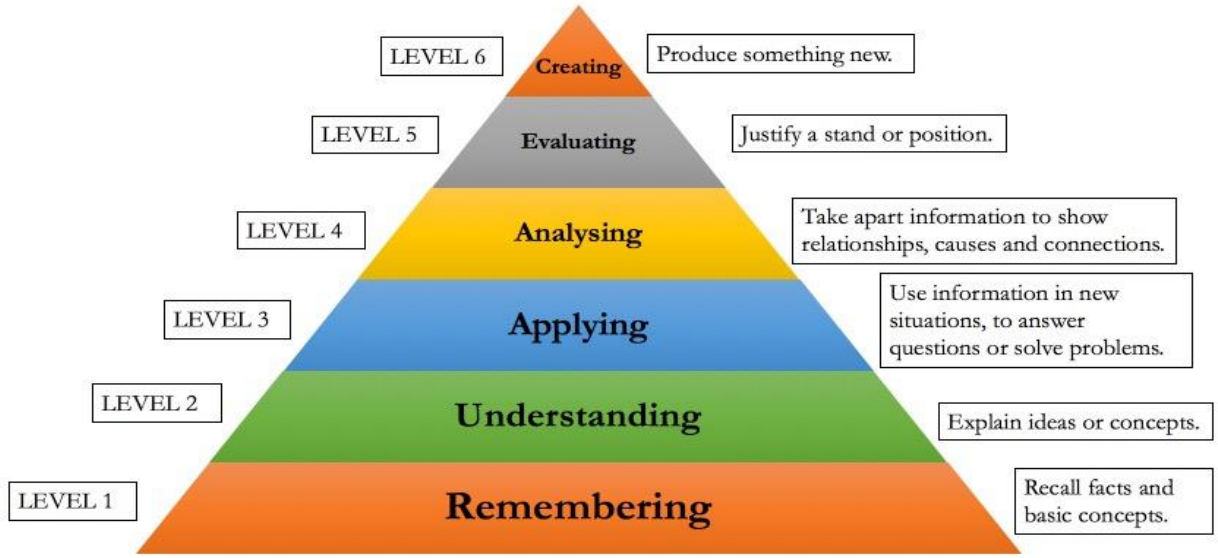


Figure 2.2 Bloom's taxonomy

Note: Bloom's taxonomy provides a hierarchical ordering of cognitive skills starting from the lowest (1) to the highest level of cognition (6)

The cognitive theory further explains career decisions from childhood by drawing inferences from people and the job using concrete and visible attributes as a yardstick and connecting this to why some children prefer prestigious jobs like doctors and lawyers because of the visual attributes. However, this cannot be generalised, although childhood perception may influence career choices in adulthood. For example, Jones et al. (2017) ascertain that agriculture has been less desirable than other fields primarily because of the negative

perception of agriculture, as people see it as farming and a profession for poor people. Evidence shows that this perception has been formed from childhood and persists into adulthood (Chakeredza, 2008). Moreover, not being exposed to a particular aspect of life is not as detrimental as having a negative experience in an area; such childhood experiences may create a negative perception that may last over a lifetime, even when it matches one's abilities.

All children have a self-concept, but not with an already-developed self to observe. We are neither a product of nature nor nurture but a combination of both (Gottfredson, 2005). People biologically related and raised together tend to be similar in genetic and environmental components but not necessarily the same personality. Everyone has a unique aspect that makes one different from the other. Betsworth, Cooper et al. (1994) believe that shared environments significantly influence culture-specific personal attributes, including interests, attitudes, and particular skills. Career choices or interests are fairly general products of the close relationship between nature and nurture. Still, their emergence is more culturally compliant and experience-dependent than the essential personality traits and abilities (Betsworth, Cooper et al.,1994). The more individuals are exposed to different learning experiences, the better they discover their potential and interests. Unfortunately, many lack sufficient exposure to find or verify their interests, abilities, and skills. As Bouchard, Lykken, Tellegen, & McGue (1996) propose, in the theory of gene-drive-experience, children grow and increasingly take an active and independent role in selecting, shaping and interpreting their environment. Children tend to choose experiences more in line with their genetic makeup, therefore attracting or repelling some people, activities, and things based on their genetic makeup. However, individuals should be given as much freedom and exposed to a wide range of activities that will create self-life aspirations.

Gottfredson's theory also explains gender's influence on career development from childhood. It affirms that most girls would have ruled out some occupations like engineering, building contractor, agriculture, hardware sales, and military to the far left on the map as too masculine. In contrast, boys would have ruled out occupations like receptionist, nursing and librarian, to the right, as not manly enough. Similarly, Correll (2001) argued that the career choice process occurs throughout life as individuals embark on career exploration. However, people focus primarily on the later stages when individuals enter *jobs* rather than the earlier stages of childhood. At the same time, gender differences in selecting activities constrain occupational choices that often occur earlier in the life cycle, broadly because societal

expectations have already defined roles as gender-specific, reflecting on young people's aspirations and career choices. Nonetheless, due to development and exposure, this pattern is changing. Although there may be an existing gender stereotype, some jobs still depend on individual self-efficacy and the ability to overcome perceived challenges (Bandura, Barbaranelli et al., 2001, Lent, Brown et al., 2002).

2.3.2 Social Cognitive Career Theory (SCCT)

Albert Bandura started the social cognitive career theory(SCCT) as a Social Learning Theory(SLT) in 1960. It developed the social cognitive theory in 1986 with a fundamental belief that learning occurs in social context and interaction with a person, behaviour and the environment (Cynthia Vinney, 2019). There have been many changes in career development theory over the years. Among such trends is the focus on cognitive variables and how they influence career development. This cognitive paradigm shift in career development has significantly overhauled vocational psychology, focusing on the fit between individual abilities and job specifications. The cognitive revolution views people as a critical factor in career development and connects cognition, interpersonal factor, self-direction and external factors (Lent, Lopez Jr et al., 2008).

Similarly, SCCT posits that people develop career outcomes based on what they discovered about themselves, their environment, and suitable careers (see fig 2.3), like many other theories acknowledging the interaction of individuals and the environment on career development. However, the SCCT differs from the trait-oriented view in person and environment interaction (Lent, Brown et al. 2002). The theory explains that understanding the dynamic nature of the self-system is vital in career guidance. However, trait-oriented approaches do not account for this, limiting an individual's capacity for personal development. |SCCT theory emphasises an individual’s ability to determine their career, although there may be barriers due to factors beyond their control that hinder career discovery. These intrinsic and extrinsic factors, such as social and economic conditions, individual differences, culture, gender, and genetic endowment, are beyond individual control. Other factors like health status or disabilities also affect individual cognition and career possibilities (Lent, Brown et al., 2002).

The theory makes a remarkable contribution to describing the emerging nature of a career as people develop self-concept through different sources of information and throughout a lifetime

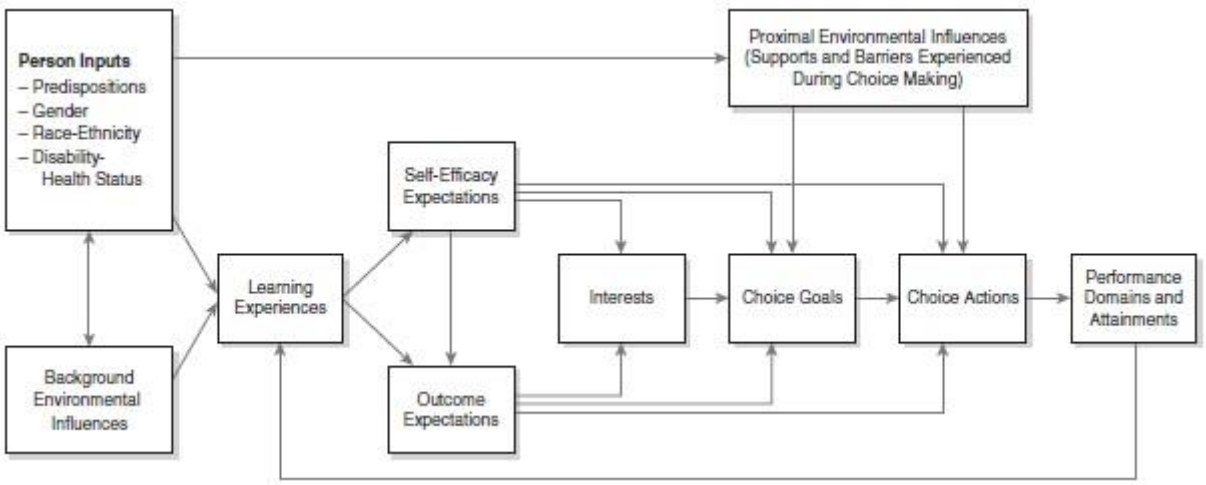


Figure 2. 3 Social Cognitive Career Theory

2.3.3 Theory of Planned Behaviour

The theory of planned behaviour (Ajzen, 1991) started as a theory of reason action, emphasising intention formation (Conner and Sparks, 2015). Behavioural intention (fig 2.4) indicates a personal drive or conscious effort to carry out a task. (Conner & Armitage, 1998). The theory postulates that though individual intentions determine decisions, it results from the interaction between personal attitudes, perceived behavioural control, and the subjective norm. Implying that intention is a critical component in explaining the probability of an occurrence of behaviour and exhibition of actual action (Zakaria et al., 2014). The theories of planned behaviour and reason action have helped predict how people make decisions and what informs their actions. However, perceived social factors influence decisions, hence the emergence of TPB due to its limitation in dealing with behaviour over which people have incomplete volitional control in the theory of reason action (Ajzen,1991).

Theory of Planned Behaviour

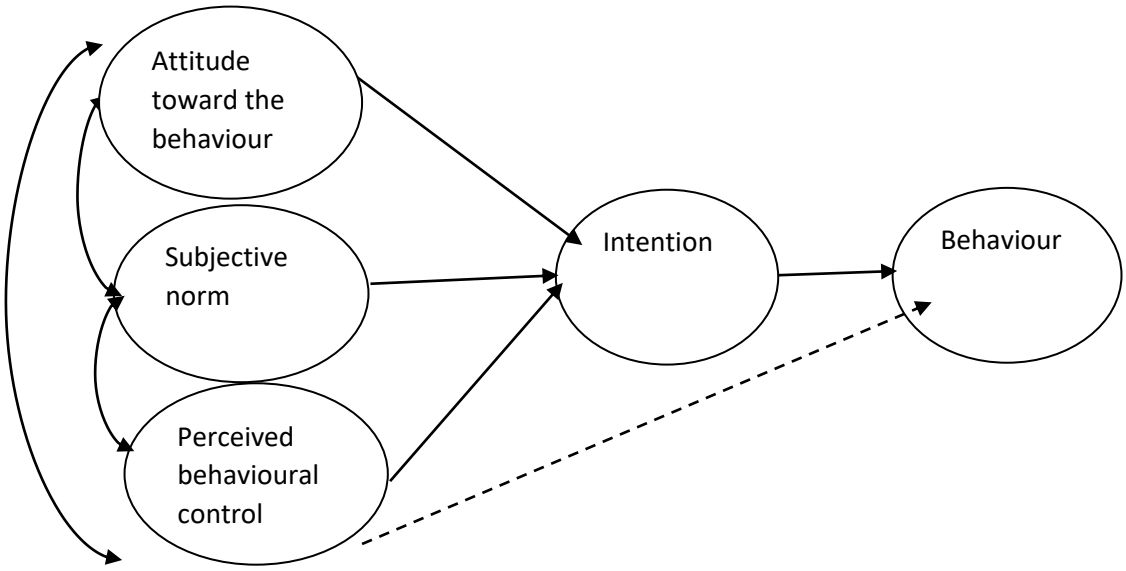


Figure 2.4 The Theory of Planned Behaviour

The TPB explains that intention indicates how hard people are willing to try or how much effort they plan to perform the behaviour. Therefore, the more substantial the intention, the more likely people will engage in a task (Ajzen, 1991). The implication is that there may not be enough drive to do something out of compulsion, coercion, or decisions that come arbitrarily due to the only available options. Although some actions are habitual, that is, informed by doing things over time, they may be triggered automatically by situations (Bargh, 2006; Wood Neal, 2007).

Nevertheless, forming intentions can be crucial for securing long-term goals and aspirations (Baumeister & Bargh, Kuhl & Quirin, 2011). This implication in career development is that stronger intentions about a career are more likely to develop a lifelong career pathway. Moreover, studies suggest that choices can translate into behaviour depending on how easy or difficult the task is (Sheeran, Trafimow, & Armitage, 2003). According to the TPB theory, although individual intentions are central in performing a given behaviour, most depend on other motivational factors, such as the availability of requisite opportunities and resources like time, money and skills. Conner, McEachan, et al. (2013) refer to these factors as goal difficulty. People consider the time and resources needed to achieve such career goals, skills, and available opportunities. However, there are exceptions; some will make career decisions

for socially acceptable prestigious jobs without considering their abilities or the time and effort it takes to achieve the goal. Reasons because they have already formed a positive feeling based on the perceived outcome of such decisions.

2.3.4 Anderson's Theory of Information Integration

Anderson's information integration theory explains how attitudes are formed and changed by integrating new information with existing knowledge or thought, accounting for why decisions are not fixed, including career aspirations. The research of Shulman and Nurmi (2010) corroborates this assertion; career choices can change over time as individuals discover self-identity, personalities, passion, and exposure to new opportunities, learning experiences and areas that match their interests. In addition, this is in line with SCCT providing a possibility for personal development in career study (Lent, 2002). Again, therefore, relying on individual abilities to judge what is suitable and their desire at a point in time.

2.4 Factors influencing career choices

Choosing a career is challenging for young people and adults as some may switch jobs anytime. People have things that motivate them into particular careers, while some procrastinate or are anxious when required to make a career decision. Some end up settling for any job that comes their way (Gottfredson, 2005). Edwards (2011) also describes career decision-making as a complex task for students because they face problems aligning their career choices with their abilities and strength. Apart from childhood fantasies and dreams, real career choices occur when a child has developed cognitively to make career decisions.

Choosing a career is not limited to career planning but includes a comprehensive exploration before making a suitable career choice (Edwards and Quinter, 2011). However, career development becomes more complicated without appropriate career guidance. As indicated in a study conducted in Kenya, Edwards and Quinter (2011) reveal that most secondary school students do not have accurate information about occupational opportunities to help them make appropriate career choices. Although individuals play a vital role in the decisions that affect their lives, no one grows in isolation; there is significant external influence. For instance, limited opportunities and exposure will give an individual a narrow view of careers. Also, children trained by an authoritative parent may have less freedom to make career decisions due to much control.

2.4.1 Internal (Individual) factors

Paixão and Gamboa (2017) distinguish students' career decisions using a person-centred approach to recognise individual factors by construing the classification of motivational profile as self-determined, non-self-determined and externally regulated. The findings indicate that the profile categories differentiate between individual career exploration and decision-making, highlighting the importance of a person-centred strategy in career intervention. Career development involves self-awareness and environment exploration to discover career suitability (Flum and Blustein, 2000; Savickas, 2013). However, this process depends on individual characteristics such as openness to experience, career goals, ego identity, personality and self (Rogers and Creed, 2011). For example, Paixao (2017) classifies self-determined students as having favourable career behaviour, as shown in their exploration of information regarding alternative careers. The students in this category are self-driven in their decision making and highly involved in the career exploration process.

Similarly, the works of Guay, Senécal et al.(2003), and Kiener(2006) also corroborate this assertion that students who are more autonomous and explorative have lower career indecision levels. Unlike the non-self-determined students and externally regulated categories with a low level of career exploration, they are highly indecisive and possess unfavourable career behaviour (Boiché, Sarrazin et al., 2008). There is agreement among social scientists that students with non-self-determination and externally regulated persons are more likely to have a more significant challenge in exploring careers. Being open to external influence complicates the career decision process (Deci and Ryan, 2000; Boiché, Sarrazin et al., 2008; Jung, 2013). The external influence may include friends, families, teachers, or non-human factors -environment, institutions, culture, financial gain, job opportunities etc. (Abbasi and Sarwat, 2014).

2.4.2 External Factors

Careers studies have gained the attention of many researchers, with the realisation of how important it is to individuals and society. Career suitability promotes fulfilment and ensures excellent national development, a reason for potential employers looking out for a self-driven and passionate person that will fit into a role by highlighting requirements around strength and abilities. Therefore, interest is critical whether a characteristic is innate or acquired. It is the same yardstick career counsellors use to assist young people in discovering their career

pathways. In addition, these studies have helped inform the strategic formulation of educational and training policies.

Among numerous studies that have attempted to explain factors influencing career, the result shows the prominence of extrinsic factors. Gender, as much as it appears as an internal factor and more like a fixed individual characteristic, does not singlehandedly influence a career if not empowered by socialisation's social actors and agents (Dick and Rallis, 1991; Mau, 2000, Barnett, 2007; Hui and Lent, 2018). Vocation segregation starts in childhood when children perceive girls as weaker than boys, allot a specific role to a particular sex, and promote gender bias. It is further strengthened by societal beliefs and values emphasising gender differences, as shown in little things like colour—for example, pink shades for girls and blue for boys. Children learn from what they see, although there are exceptional people who will dare to be different. Also, whether children's level of dependency and upbringing is a contributory factor should be a point to note.

Although different groups and societies have different expectations and roles, gender perception of roles has rapidly changed over the years. Modernisation and development in new institutions like social media is beginning to create more awareness, removing the stereotypical thinking regarding gender roles in career choices. According to Barnett (2017), children's interest and confidence in certain subjects stem from the perception formed in the early years, primarily determined by parents and teachers. Therefore, limiting their career exploration, only the self-driven and determined will break out of the circle. The effect of this stereotype of gender restriction becomes more vital when there are significant gender differences in roles and decision-making processes (Mau, 2000). Mutekwe *et al*. (2011) corroborate this and suggest the need to deemphasise gender roles and perceptions in career choices. For instance, females can aspire to careers typically classified as male professions and vice versa. Overall, career aspirations' patterns may vary from culture to culture due to societal beliefs and environmental differences. Thus, the agent of socialisation plays a vital role in the overall development and channelling individuals into appropriate careers. However, an individual is responsible for discovering self and a compatible career.

Among external factors, the family and primarily parental influence on career choices has been consistent in the research (Dick and Rallis, 1991; Mau, 2000; Jones and Larke Jr, 2001; Esters, 2003; Adesiji, Omoniwa et al., 2009; Hewitt, 2010; Edwards and Quinter, 2011; Hui and Lent, 2018). As the first contact for every child, the family has a significant role in an

individual's socialisation process and critical decision-making, including career choice. The strength of influence lies in how intimate and cordial the relationship is; therefore, any family member can influence an individual career choice. Some scholars affirm that parental attachment positively relates to career exploration, a step in gaining career maturity and emotional stability (Lee and Hughey, 2001; Olaosebikan and Olusakin, 2014). Although the study conducted in a white college by Lee and Hughey (2001) reveals the importance of parental attachment in individual self-efficacy, this intimacy may lead to dependency and loss of personal drive. Parental attachment may lead to some form of control rather than advice in career choices. Parents must understand career suitability which will also influence how they signpost their children into exploring careers. Moreover, several factors are playing out; for instance, parental level of education may play a significant role in understanding careers and how they advise their children (Jones and Larke Jr, 2001; Adya and Kaiser, 2005)

Many researchers suggest parental expectations influence adolescents' aspirations (Fisher and Griggs, 1995; Jones and Larke Jr,2001; Lent, Brown et al., 2002; Esters and Bowen, 2005; Edwards and Quinter, 2011; Mutekwe, Modiba et al., 2011). Children also tend to get career inspiration from their parents' jobs (Adya and Kaiser, 2005). Hence, the parent is a role model in career choices (Fouad and Bynner, 2008). For example, the female child may like to take after the mother's career and the male after the father (Mutekwe, Modiba et al., 2011). This may be primarily due to gender disparity in roles and the stereotype that some jobs are gender specific. Another reason may be an existing cordial relationship; the close person will likely have a more significant influence. An attraction to parents' careers could also be because of a successful career pathway, readily available opportunities, or a need for family business continuity (Adya and Kaiser, 2005).

Sometimes, parents may choose and impose a career on their children (Hewitt, 2010). A study conducted in Kenya by Oyamo and Amoth (2008) demonstrates that students in rural areas are more inclined to seek advice from parents than urban students. Parents play a more significant role in students' career choices than teachers. The author also implies more dependence on decision-making from rural areas than in an urban setting and suggests the effect of urbanisation and modernisation in decision-making and goal setting (Arnett, 2000). Parental support and encouragement are essential factors that positively influence career choices, while, in some cases, children may choose what their parents desire to please them (Taylor, Harris et al., 2004). Therefore, career decisions become more complex when there is no adequate or proper guidance from various support systems indicating counselling needs to

significant actors. Career development and goal are not isolated but usually within interrelated environmental and social-cultural influences.

Esters and Bowen (2005) empirically confirm that peers and parents influence individuals' career aspirations. As children grow, society already provides the norms and values for socialisation, many of which have gender implications. As soon as children become aware of the differences in the role and expectations of boys and girls and make friends with same-sex, they aspire to some specific jobs (Olsson and Martiny, 2018). Many will choose professions common among their gender, and only a few will try something different. Societal expectations shape children's motivations, behaviour, and aspirations, beginning in early childhood (Fabes, Hayford et al., 2014). Jackson (2011) also affirms peer influence in career decisions. Similarly, Thielen (2012) agrees that friends influence one another in many ways, including careers.

As much as an individual's social circle plays a significant role in the process, the school has a vital role in exposing students to different opportunities that can help them make the right career decisions that match their abilities and interest. Education is a social system shaping individual knowledge, skills, and attitude. It also helps young people discover suitable career choices (Zakaria, Adam et al., 2014).

Kerka (2000) also identifies other factors influencing career choices. These include personality, interests, self-concept, cultural identity, globalisation, socialisation, role model, social support and available resources such as information and finance. Furthermore, studies have shown that spirituality and religion positively relate to desirable career development outcomes such as career decisions. Faith plays a critical role in career decision-making for many people with spiritual or religious commitments (Dik and Duffy, 2009). For example, in the Christian faith, people believe in the "will of God", sometimes referred to as the purpose of existence of an individual or calling (Hewitt, 2010). This implies that some people are created for a particular profession, and doing anything contrary means opposing the "will of God."

2.5 Career Choice in Agriculture

The population is expected to increase globally to nine billion by 2050, with young people (aged 15–24) accounting for about 14% of this total. With this increase, employment and entrepreneurial opportunities for young people, particularly those living in developing countries, remain limited. Nonetheless, the agricultural sector is recognised as having the

potential to serve as a source of livelihood opportunities for the young. Yet, previous studies have reported that many young people have negative attitudes toward agriculture (Adekunle, Adefalu et al., 2009; Mohammed, 2010; White, 2012; Zakaria, Adam et al., 2014). Adekunle *et al. (*2009) report that the constraints hindering rural young people's participation in agriculture are inadequate credit facilities, lack of insurance, poor returns to agricultural investments, inadequate knowledge of agriculture, and lack of access to tractors and other farm inputs. The insufficient understanding of agriculture and inadequate social amenities is more pronounced in rural areas than in urban areas.

Nevertheless, young people negatively perceive agriculture, even in urban and developed settings (White, 2012). White (2012) examined the perceptions of high school African and American students toward a career in agriculture. The result shows that the students in both countries negatively perceived agriculture. In research conducted in Nigeria, Adebo and Sekunmade (2013) attempt to explain the problems associated with entrance into the agricultural profession; the findings revealed some of the reasons for the drawback are institutional. Many of the students in agriculture courses got there as the last option available when they could not get their preferred course. Sometimes, the university admits students to courses they do not apply for as an alternative for low-score students who intend to study courses like Medicine and Engineering (Chakeredza, Temu et al., 2008).

Despite the vital role agriculture plays in the national economy and individual livelihood in many developing countries, agriculture as a field of study has not received so much attention in many educational systems (Jones et al., 2017). Evidence shows that basic numeracy and literacy skills will improve farmers' livelihood, while inadequate access to information, knowledge, and education has been challenging (FAO, 2009). Education is vital in promoting sustainable agriculture. If the agricultural sector is to experience transformation and encourage young people's participation, an essential key is agricultural training that supports innovation in modern agriculture. In addition, scientific development in agriculture will lessen the stress of agriculture. In contrast, some argue that modern agriculture could reduce employment opportunities as machines replace the workforce (Evenson and Gollin, 2003; Buttel, 2005). First, a country must decide whether to increase productivity with related policies to achieve this goal.

Chakeredza et al. (2008) explain that there has been limited but growing interest in investment in agricultural education and training to prepare an agrarian workforce that

supports economic growth. Employment in agricultural fields has remained foundational to the global population (Jones et al., 2017). Thirty-eight per cent (38%) of the world's economically active population was engaged in agriculture as of 2014. It was projected that by 2020, (36%) of the global workforce will work in agricultural fields while (64%) in low-income countries, giving a solid indication that agriculture is a crucial sector of employability (FAOSTAT, 2015). However, there is a strong disconnect between promoting subsistence agriculture to increase employability and practising mechanised agriculture. The higher the level of mechanisation, the lower the labour force required. Also, fragmented subsistence land will not support industrialisation. However, can subsistence agriculture feed the increasing population in Africa with the deteriorating livelihood situation? Especially with more than 200 million Africans suffering from malnutrition (Rosegrant et al., 2005). Therefore, there is a need for urgent re-strategising and restructuring to meet the demand of the growing populace and ensure employment opportunities in agriculture. Overall, Chakeredza et al. (2008) affirm that central to agricultural transformation in Africa is the need to increase productivity and competitiveness by preparing agricultural professionals capable of leading a change.

Similarly, Rukuni (2002) argues that there must be new, improved technology, trained agricultural personnel, efficient institutions such as marketing, research, credit, extension services, land reforms, and a policy environment for agricultural development to occur. However, these prime movers will not be operational without a well-structured agricultural education (Chakeredza et al., 2008). Moreover, agricultural graduates are pivotal in national development (Maguire, 2002).

2.6 Summary

This chapter has explained the definition of a career and provided the theoretical background and the factors influencing career decisions pertinent to the research topic. In addition, the information has provided a foundation to place the empirical data presented in sections for the data analysis. The next chapter explains in detail the role of education in agricultural development.

Chapter 3. Role of Education and Training in Agricultural Development

Chapter two addressed the concept of careers and how people perceive agricultural careers. This section, therefore, seeks to explain agricultural development, agricultural development in Sub-Saharan Africa (SSA) and the need for agricultural transformation. First, highlight the challenges of agricultural development in SSA. Further presents young people in SSA and explains agricultural education and the challenges. Then, it explained agriculture, the challenges in Nigeria, and agricultural education and training. Lastly, examples of some innovative agriculture and the summary.

3.1 Introduction

Undoubtedly, agricultural development requires proper agrarian education. At the same time, the problems faced by Sub-Saharan Africa (SSA) can be partly resolved with agricultural transformation via effective agricultural education and training. The challenges of SSA's agricultural development and youth participation in SSA both required educational reforms. However, Nigeria owes a big chunk of its economy to agriculture and still faces unlimited challenges. Recently, the Agricultural Transformation Agenda (ATA), like some innovative agriculture programmes, were introduced to inspire youth in mechanised agriculture. However, Chakeredza et al. (2008) explain that there had been limited but growing interest in investment in agricultural education and training to prepare an agrarian workforce that supports economic growth. Employment in agricultural fields has remained foundational to the global population (Jones et al., 2017). Around 38% of the world's economically active population was engaged in agriculture as of 2014, while 64% in low-income countries indicate that agriculture is a crucial employability sector (FAOSTAT, 2015). But, a substantial disconnect exists between agricultural promotion with increased employability and mechanised agriculture. The higher the level of mechanisation, the lower the labour force required. Likewise, fragmented subsistence land will not support automation nor the increasing population in Africa, where more than 200 million Africans suffer from malnutrition (Rosegrant et al., 2005). An urgent re-strategising and restructuring can meet the demand of the growing populace and ensure employment opportunities in agricultural fields if there is an increase in agricultural productivity and competitiveness by preparing agricultural professionals capable of leading a change.

3.2 Agricultural Development

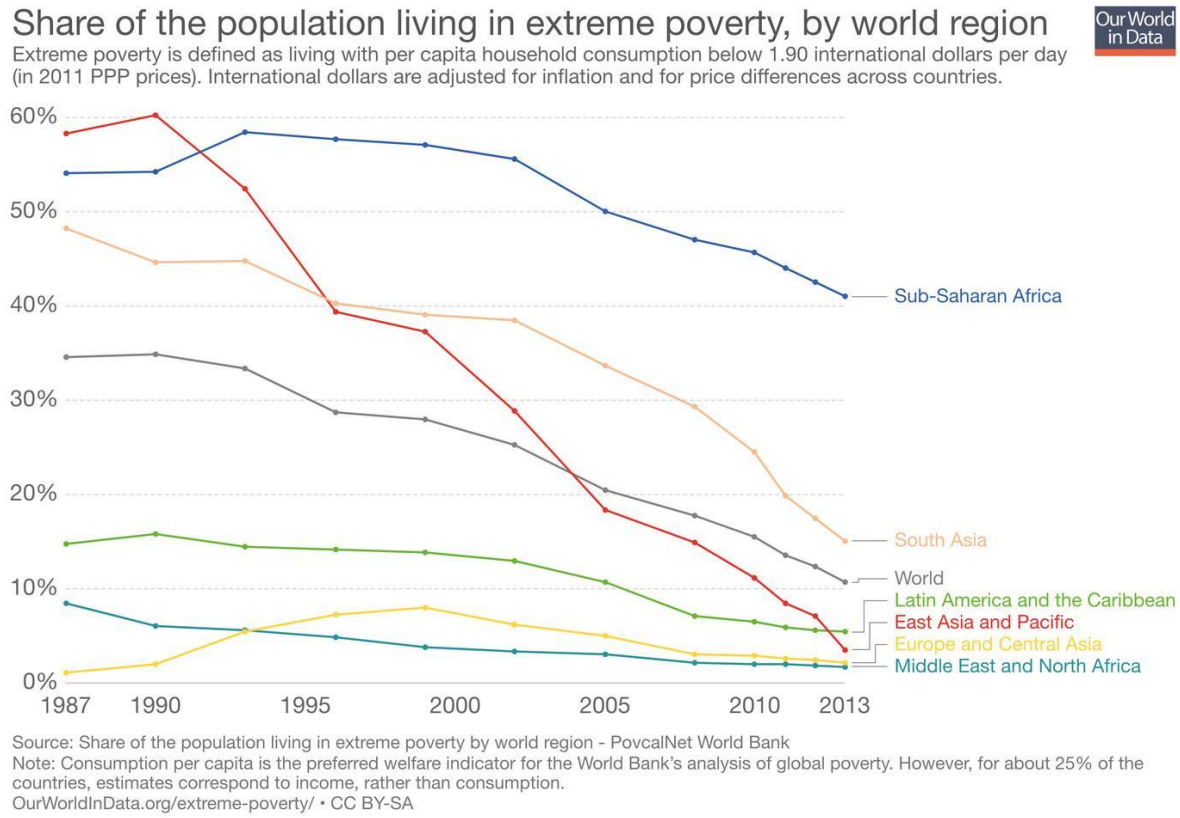
Agricultural development helps to understand the true potential of agriculture, supporting the economy through activities done effectively and can help reduce poverty and attain food security. However, this is impossible without a vibrant agricultural educational system catalysing agricultural transformation, productivity, or sustainability. Therefore, researchers have used agricultural transformation and development interchangeably, describing practices and changes to increase production, employment opportunities, poverty alleviation, economic growth, and rural development (Pinstrup-Andersen and Shimokawa, 2006).

3.2.1 Agriculture in Sub-Saharan Africa and the Need for Agricultural Transformation

Expanded agricultural productivity becomes central as food demands grow among African populations to ensure an adequate and sustainable food supply. The records show that Africa has the second-largest growing population of about 1.37 billion after Asia as of 2021. Sharing 9% of the world population in 1950 to 17.2% in 2021, and projected to be 34.4% by 2100 (UN World Population Prospects, 2021). Simultaneous to a decline in people living in extreme poverty outside Sub-Saharan Africa (SSA). However, SSA experienced an increase from 417 million to 458 million, with a rise in poverty share from 37% in 2010 to 66% in 2021(Walton, 2019). Hence, a strategic effort is needed to meet food demand, curb malnutrition and reduce poverty. Agriculture can be the most effective way of transforming people's lives in developing countries. More than 65% of the labour force is directly or indirectly engaged in agricultural activities, with about two-thirds living in rural areas (ILO, 2014). Therefore, many authors argue that to achieve significant growth and poverty reduction in SSA, it needs a vast sector like agriculture which accommodates more than two-thirds of the workforce with sufficient influence on overall development (Christiaensen *et al.*, 2006; Bresciani and Valdés, 2007; Diao *et al.*, 2010; Christiaensen *et al.*, 2011; Modi, 2019). Although the direct growth of agriculture on poverty reduction is likely to be smaller than that of non-agriculture, agriculture has a significant indirect change and a broader impact, especially in developing countries (Christiaensen *et al.*, 2006). Therefore, efforts should drive towards agricultural enhancement as it is vital in developing an effective strategy for poverty reduction and attaining food security (Modi, 2019).

Achieving agriculture transformation and improving productivity will be a mirage without a targeted attempt to increase knowledge and upskill the agrarian workforce (Yeboah and

Jayne, 2020). Diao *et al*. (2010) examine the role of agriculture in Africa's development and argue that agriculture is the most effective sector for poverty reduction and employment opportunities, thereby corroborating other studies (Adesugba and Mavrotas, 2016). They also emphasise the need to promote staple food that employs more agricultural labour and meets local needs than export crops as a poverty reduction strategy. However, the staple and imported crops have national and international importance regarding food security, job generation, and poverty alleviation in Africa (Yeboah and Jayne, 2020). Whereas it remains an issue of concern in SSA as the share of people living in poverty has always remained and is still the highest when compared to other regions of the world (Figure 3.1), which leads to the need to understand the challenges associated with agricultural development.



Source: World bank 2013

Figure 3.1 Share of the population living in poverty by world regions

3.2.2 Challenges of Agricultural Development in Sub-Saharan Africa

Researchers continue to identify agriculture as the vehicle for economic growth in SSA, while low productivity remains an issue of concern with several known or unknown challenges (Morgan and Solarz, 1994; Bjornlund, Bjornlund *et al*., 2020). Human capital, especially the youth, can be central to solving these challenges as drivers of all other conditions that support agricultural productivity. Amidst the dynamic structure of difficulties of agricultural initiatives in SSA, researchers attempt to understand why agriculture production remains lagging in SSA compared to other regions. Among the problems identified are geographical and environmental factors such as overuse of natural resources resulting from overpopulation leading to low land productivity, making it difficult to develop without suitable innovative technology (Fuglie and Rada, 2013). Overdependence on rainfed agriculture is another challenge because of the lack of an appropriate irrigation system. A practical and efficient irrigation system can be the fastest and easiest way to attain agricultural productivity, increased income, and thus food security (De Fraiture and Giordano, 2014; Namara *et al.,* 2014). However, the failure of an effort to intensify the irrigation system during the green revolution was due to slow and poor infrastructural development, causing the world bank and other donors to be reluctant to invest in SSA's irrigation and other intensive agricultural systems (Otsuka and Muraoka, 2017). Another setback is associated with the poor structure of social and economic institutions. For instance, collective land ownership leads to difficulties accessing land and fragmentation, inhibiting agricultural investment and mechanisation. At the same time, inadequate promotion of commercial agriculture, insufficient rural infrastructure, impaired functional value chain, and damaged rural financial institutions are staggering issues (Austin, 2004).

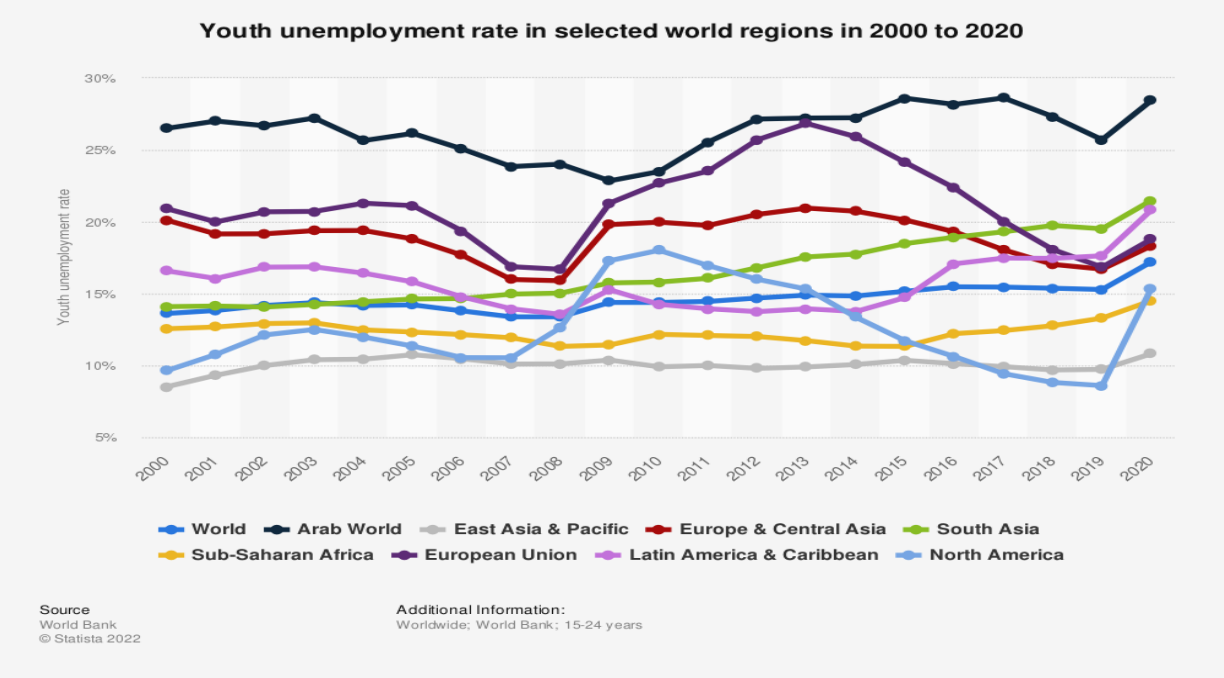
Some trace these issues back to the long history of colonisation and its long-lasting impacts; specifically, the focus on export crops by the colonial master becomes a significant setback for agricultural development in SSA. Meeting the demands of European manufacturers has distorted the agricultural system and impacted food security since then, even after independence. Moreover, the imported agenda of the developed countries, indebtedness to external donors, and paying back loans against investment in human capital and infrastructure have added to SSA's difficulties. Furthermore, dependency on external resources has hindered self-sufficiency and damaged natural abilities (Bjornlund *et al.,* 2020). However, facilitating human and local development, promoting local plans and vision, involving local beneficiaries in technology development, and focusing on research and development can

prove promising. A particular emphasis on developing curriculum content that is adaptable and suitable to the local environment can be advantageous. As African scholars acquire skills adaptable to their home countries, they must develop technologies appropriate to the local climatic requirements. This will increase adoption and local suitability level, but it will also help reduce international debts to the nation. Alliance with the global market is always encouraged; however, internal needs and requirements should always be prioritized to develop people, infrastructure, social amenities, and education (Austin, 2004; Chakeredza *et al.*, 2008).

Sometimes when arguments dwell too heavily on external factors, it sounds like a blame game; therefore, a deeper apprehension is required. Although agriculture challenges in Africa appear complex and deep, agricultural education and training remain central to agriculture and labour productivity. Researchers mention the deficiency of knowledge and skills as inhibitors of agricultural productivity in SSA. Therefore, a comprehensive understanding of the subject matter with particular emphasis on the role of youth is inevitable.

3.2.3 Youth, Agricultural Education and Training in SSA

With the world's largest youth population, Africa had around 70% of the people between 30 years and below in 2021, making it the world's most youthful continent. However, it is crucial to recognise that the increasing number of youths is both a challenge and an opportunity. The region can enjoy these young people's creativity, vibrancy, and innovativeness in economic development. However, rather than acting as a straitjacket, proper action must be implemented to enhance and empower young people to maximise their potential (Kariba, 2020). Globally, unemployment is rising, although considerable regional variation exists, especially among young people(see fig 3.2), with some regions faring poorly (ILO, 2020).



Source: Statista, 2022

Figure 3.2 Youth unemployment rate in selected world regions from 2000 to 2020

Investment in human capital is vital for the developmental process in all sectors of nation-building. At the same time, education is fundamental and pivotal for overall productivity, improving technology, and economic and social efficiency. Thus, calling for a corresponding investment in the education sector by increasing the labour force's efficiency and value (Ozturk, 2001). Yet, the potential of the education system in developing countries is continuously opposed by the prevailing problems of poor quality and deficiency in the finance and governance sectors (Saint *et al.*, 2003). Although many do not view agriculture as a field of study and occupation, developed countries try to change the perception. For example, in the United States, the agricultural subject is incorporated into the early years' curriculum to understand agriculture as an academic field of study (Knobloch, 2008).

Similarly, even though not agriculture-based, forest schools' outdoor learning-based activities in the UK can expose children to the natural environment and develop self-discovery, problem-solving skills, and a connection to nature. Such are examples of a strategic agricultural education system. However, little has been done to emphasise agriculture as a course of study in some low-income countries. Instead, the negative perception of farming persists as schools use it as a form of punishment to discipline students (Chakeredza *et al.*, 2008). This widespread perception is mainly due to past stereotypical experiences, especially from farming backgrounds and the presentation of agriculture in early childhood. It discourages youth from becoming future agricultural developers (Zinnah *et al.*, 2001). For

example, the success of the green revolution in India was because the scientists were mainly sons and daughters of farmers familiar with the rural communities (Singh, 1999). Therefore, it requires an earlier positive predisposition achieved by functional agricultural institutions and practices with significant improvement and investment in education and research (Chakeredza *et al.*, 2008). The role of education in technology and innovation adoption is fundamental in increasing agricultural productivity and competitiveness in Africa (Nwachukwu, 2017). Improved technology has been identified as pivotal to achieving sustainable agriculture. However, this factor cannot become operational without significantly enhancing the education sector to produce efficient human resources central to technology-based agricultural transformation and innovation. Promoting technology and automation in agriculture can be a modern way to allure youth involvement, as traditional orthodox methods may sound unattractive. Suppose the policymakers can still not adopt all the factors mentioned earlier for the betterment and development of the agriculture sector and youth involvement. In that case, it is essential to grasp the challenges still faced by this domain.

3.2.4 Challenges of Agricultural Education in SSA

Education is the driving force for economic and social development, fundamental for constructing all nations' economies and societies. However, the potential of education has not been fully utilised in Africa due to prevailing multifaceted organisational problems in policy, funding, governance, human capacity development, curriculum development, institutional linkages, or infrastructure (Knobloch, 2008). Limitations in the agricultural sector point to the importance of knowledge in economic development, technological changes, globalisation of trade, and increasing labour productivity (Salmi, 2001). Countries with this understanding invest in the right direction and build assets, e.g., research and development, higher education, computer software, or infrastructures (Saint, Hartnett et al., 2003). However, agriculture in many countries is perceived as an activity that requires little or no education or training, thereby creating a poor image of agriculture (Jones et al., 2017). Also, agricultural education curricula appear out of tune with the reality of agriculture and employment because of the economic adaptation and cultural diversification of the post-World War II era. The neglect of peasant agriculture to meet the exigencies of war affects local sector development (Zinnah *et al.*, 2001). Later, the curriculum fell behind, and agricultural education was worthless. Agricultural-related occupations were deemed nominal compared to office-based jobs, discouraging students from opting for agrarian careers (Zinnah et al., 2001). The

curriculum then adopted was either imported from colonised countries or was designed by others without adequate contextualization, thus, failing to match the local environment and available teaching/learning fabrics (Papoutsaki, 2006). For instance, the curriculum teaches capital-intensive, large-scale agricultural procedures in parts where the local environment cannot adopt them because of a lack of modern technologies. Thus, agricultural graduates lack the knowledge and practical skills to initiate and operate agricultural enterprises and look for alternative employment options, while public sector opportunities and white-collar jobs are dwindling (Chakeredza, 2008).

Aside from content issues, the curriculum is usually theory-based and has few practical experiences to enhance effective learning. Studies show a disconnect between theory and practice, which hinders graduates' agricultural enterprise establishment. The reasons are that the skills acquired do not match the demand of the agricultural job market, and students with limited opportunities to contact farming communities do not understand rural development dynamics (Chakeredza et al., 2008; Alam et al., 2009). Formal education may not be a problem, but a balance must be struck between theory and practice and promoting practical instruction to enhance skill acquisition (Bjornlund, 2020). Consequently, an agricultural education policy will be sufficient if materials to implement the curriculum are available. Researchers argue that agriculture education is taken as vocational course content to enhance the development of skills as opposed to structured academic content (Temu *et al.*, 2003; Rivera, 2006). Therefore, agricultural education should expose and prepare youth for various field sections and act as a source for developing practical skills and expertise.

The negative perceptions of agricultural careers are the fundamental problems around recruiting students into agricultural education and hence, the inadequacy of the admission process into tertiary institutions (Chakeredza et al., 2008). Students are admitted into faculties and colleges of agriculture not by choice but as an alternative after failing to enrol for courses like medicine, engineering, etc. Female students are also poorly represented in African agricultural education and form only 12-15% of undergraduate enrolment (BASIC, 2006). Many of them are accidental candidates who fell out of medicine and other courses identified as prestigious (Muir-Leresche *et al.*, 2020). The mode of entrance is likely to negatively influence academic performance, the quality of graduates produced, and retention in the agricultural workforce. Enrolling candidates with reduced scores on agricultural courses also downgrades the course status. Most institutions do this to gain students into the courses as the number of applicants is usually low, thereby compromising quality for quantity, whereas

innovative agriculture requires the best brains. Moreover, it affects the public image of the course, and a negative perception of agricultural occupations persists, thereby tracking outstanding students away (Zinnah et al., 2001). As a result, agricultural education produces graduates who lack competence and cannot meet the demand of agricultural industries or rural communities.

In contrast, the sector needs graduates with a strong entrepreneurial spirit, levelled in scientific and technical principles and practical experiences (Chakeredza, 2008). Many graduates are disconnected from rural communities as they have limited exposure to rural life or field experience outside the classroom to enrich their learning (Bekunda *et al.*, 2007). Practical-oriented agricultural education requires competent teachers with practical backgrounds, whereas the institutions are poorly staffed (Chakeredza, 2008). The immigration of professionals, called the so-called “brain drain”, is also a challenge in developing countries. Therefore, recruitment and retaining competent personnel in universities is crucial at this time. Similarly, teachers' training programmes must keep pace with recent shifts.

Also, there is a disconnect between agricultural institutions, research institutes, the education sector, the private sector, and the agricultural labour force. The linkage of these institutions is essential to facilitate agricultural transformation. Contrary to many developing countries, agricultural education, research organisation, and extension services remain disjointed with limited investment in the tertiary education system (Manuh *et al.*, 2007). Lack of competent agricultural personnel in agricultural parastatals, poor funding, and mismanagement are additional to the appointments in the significantly related ministries, which are usually political and cannot foster viable agricultural programmes (Rivera, 2006; Spielman *et al.*, 2008). Furthermore, the curriculum review process fails to incorporate students and other stakeholders since education is meant to meet societal needs. Innovative agricultural education demands creative achievers, strong leadership skills, team-building skills, strong communication skills, and strong educational and management systems policies. Therefore, efforts should be directed to agricultural faculty committed to both education and sustainable development.

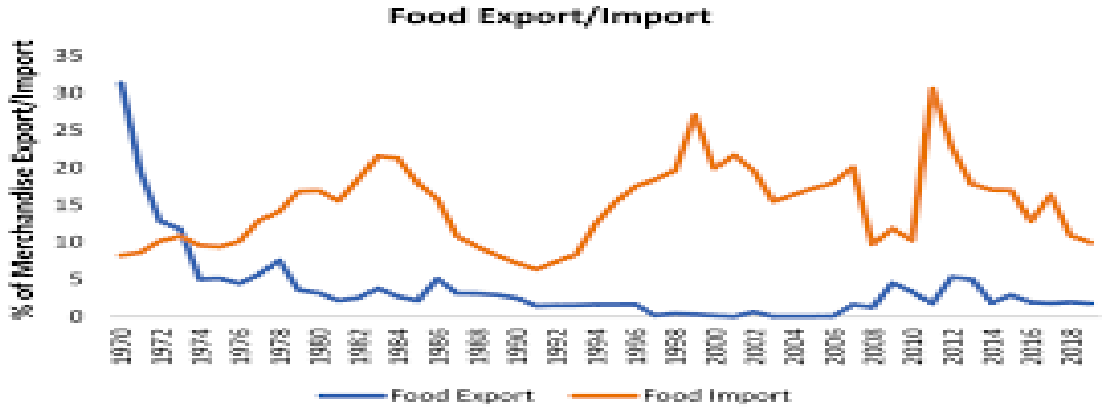
3.3 Nigeria Agriculture

Agriculture is broadly divided into four sectors in Nigeria: crop production, fishing, livestock and forestry. Crop production remains the largest segment, accounting for about 87.6% of the sector's total output (Oyaniran,2020). Agriculture remains the largest sector in Nigeria, contributing an average of 24% to the nation's GDP over the past seven years (2013 – 2019). Nigeria is predominantly an agricultural society, although, at a point, it relies heavily on the oil industry. Nigeria has 70.8 million hectares of agricultural land that support crops like cassava, maize, sorghum, rice, millets, sweet potatoes, beans, plantain, bananas, fruits and vegetables. Approximately 70 per cent of the population engages in agricultural production at a subsistence level. Out of the percentage involved, the majority (83%) grow staple food, 28% vegetables, while 20% embark on animal production (Nations Encyclopedia, 2010).

Similarly, Nigeria's wide range of climate variations allows it to produce various cash crops. The leading cash crops are cocoa, cotton, groundnuts, palm oil, citrus, palm kernel, benniseed, and rubber. These crops are major export in Nigeria in the 60s before the discovery of crude oil. For instance, before Nigeria's independence, cocoa was one of the primary sources of revenue, but it declined over the years. Some reasons for the retardation are decreasing productivity of the existing old cocoa trees, small-scale production, land degradation, inadequate soil fertility improvement and lack of technical know-how of illiterate farmers. Overall agricultural products, a formerly primary source of foreign exchange earnings, are yet to recover their lost glory since the advent of crude oil(Afolayan, 2020).

The distortion, in turn, produced adverse effects on the production levels of both food and cash crops. Although food production increased but could not keep pace with its increasing population, Nigeria began to experience declining food exportation with increased food importation(fig 3.3). For example, in 2019, agriculture accounted for less than 2% of total exports compared to crude oil (76.5%). Agricultural export decreased by about 11% from N302.2 billion in 2018 to N269.8 billion in 2019. Nigeria's agrarian imports hike by 12.7% from N851.6 billion to N959.5 billion during the same period (Oyaniran,2020). However, the government is trying to encourage local production but would it be enough to feed the growing population, especially when food production cannot meet food demand? For example, in 2017, rice production rose from 3.7 million metric tons to 4.0 million in 2018. Despite the increase in rice being the primary staple food in Nigeria, only a 57percent of the

6.7 million metric tons of rice consumed in Nigeria annually is locally produced. Therefore, the deficit of about 3 million metric tons is complemented through importation (FAO, 2021). Overall, Nigeria relies on over $10 billion of imports to meet its food shortage, mainly rice, wheat, poultry, fish and consumer-oriented food. Agricultural imports are from the united states, Europe, Asia and South Africa. Nigeria's agricultural sector has been facing challenges of Boko Haram insurgencies, continuous conflicts between Fulani herdsmen and farmers, kidnapping and a lack of infrastructure for food processing. As a result, food inflation rose to 22.95% in the first quarter of 2021, further worsened by increased fuel prices and naira devaluation (Regional Agricultural Affairs, 2021). The country also lost its status as the largest exporter of cash crops like cocoa. Cocoa is the first largest non-oil foreign exchange, followed by rubber. Still, the sector is also faced with the dominance of smallholders(usually less than 5hectares), urbanization, lack of farm labour and mechanization.



Source: Data Extracted from WDI (2021)

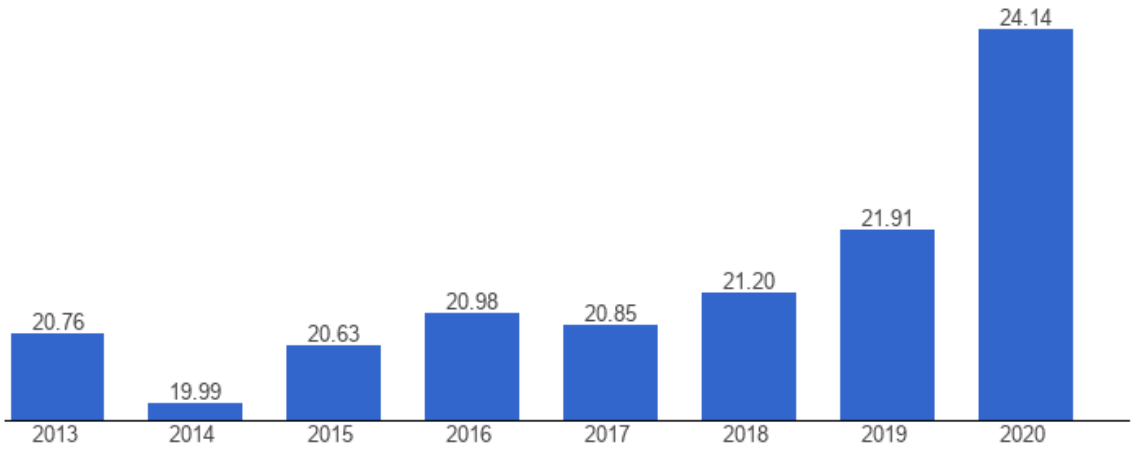
Figure 3.3 Food Export and Import in Nigeria(1970-2018)

Furthermore, animal production has not been fully explored. Common Livestock reared by farm families in Nigeria is the small ruminants like goats, cattle, sheep, and poultry. The weather in the northern part of the country makes it famous for livestock keeping. Also, fishery in Nigeria is among the fastest growing subsectors, with over 14 million hectares of inland waters and a coastline of 853km; fishing is a crucial source of livelihood for many Nigerians and a vital protein source for most families. Nonetheless, the domestic demand

outweighs production. The total fish production per year is close to 1 million metric tons (313,231 metric tonnes from aquaculture and 759,828 metric tonnes from fisheries), yet import about 2.4 million metric tonnes (FAO, 2021). Like other sectors, Nigeria's forest ecosystems are not without its challenge. Among such activities threatening this sector include: deforestation, agricultural expansion, urbanization, heavy reliance on firewood for energy, bush burning, poor infrastructural development, and rapid population growth

With the rising population expected to reach 400 million by 2050, there is a need to enhance agriculture productivity with innovations and technologies to ensure food security. Effective collaboration between all stakeholders is essential for achieving the agricultural transformation agenda. The present agricultural goal is to collaborate with all the critical stakeholders of AKIS to develop an agri-business economy capable of delivering sustained economic development that will meet food security goals, generate exports, and support income sustainability and job creation. The plan specifically focuses on integrating the commodity value chain, growing an integrated agricultural sector, promoting the use of natural resources, and creating a vibrant agricultural sector capable of wealth. The present Agriculture Policy is founded on the following guiding principle: agriculture as a business, agriculture as key to long-term economic development and security, value chain approach, food as a human right, nutrition-sensitive agriculture, market orientation, prioritizing crops, factoring climate change and environmental sustainability, participation and inclusiveness, policy integrity, agriculture's linkages with other sectors (FAO, 2016)

Agriculture is a critical sector in the economy after oil, contributing about 24% of the Gross Domestic Product (GDP) in 2020(fig 3.4). Moreover, it is the source of livelihood for 70% of the labour force(World Bank, 2022). Yet, despite the enormous potential, the challenges restraining agricultural productivity are vast. Thus, there was a rise in the import of staple food to about 3.3 trillion between 2016 and 2019, nearly four times higher than export in this period (FAO, 2022).



Source: World bank 2022

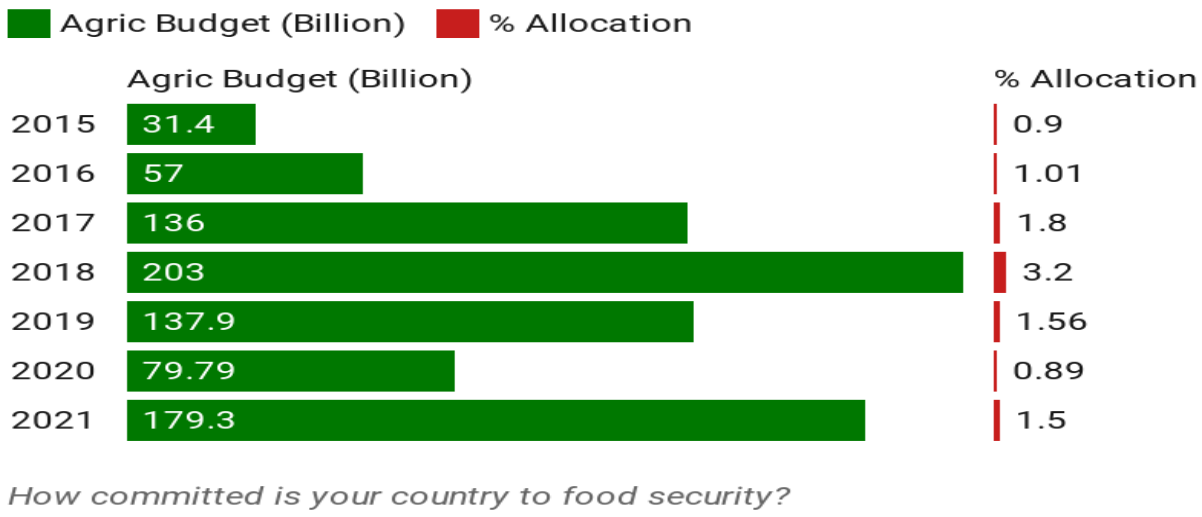
Figure 3.4 GDP share of Agriculture in Nigeria from 2013 to 2020

Although the sector employed a more significant portion of the labour force, its contribution to GDP was 24.14% in 2020, while almost half of the people still live below the poverty line(World Bank, 2021). The report shows that 4 in 10 Nigerians live below the national poverty line. However, statistics show that a more significant percentage of the workforce is engaged in agricultural activities. Yet it does not translate to exit from poverty as most workers are engaged in small-scale household farms and non-farm enterprises. As a result, only 17 per cent of the workforce are employed best to escape poverty(World Bank, 2022b).

Furthermore, climate change, political instability, and conflicts compounded by COVID-19 have heightened the poverty level. While government support to cushion this impact is scanty, households adopt various coping strategies, including increasing dropouts from school and malnutrition, which has long-run implications on human capital. Undoubtfully, much effort must be put in place to lift millions of Nigerians out of poverty, improve health, and access better education: job creation and enhanced social protection(World Bank, 2022). Unfortunately, agriculture is yet to achieve its potential for poverty reduction, food security, and economic development. Some other challenges include land issues, environmental degradation, inadequate technology, inadequate finances, and a poor market system (FAO, 2021).

Nigeria's funding for agricultural development programmes and research remains low compared to the Comprehensive Africa Agricultural Development Programme (CAADP) recommendation. The agreement in the CAADP explained that the budget for the agriculture sector should be 10% of the overall allocation. Yet, the Nigeria budget for agriculture shows non-compliance to the agreement of the CAADP. As seen in fig 3.5, the agriculture funding between 2015 -2021 stood below 2% over the years. This is far below the 10% of total budget recommendations for the agriculture sector set in the CAADP (Hawkins and Sobukola, 2020; Ayandele, 2022). Hence, this leads to poor implementation and quality of many laudable agricultural projects.

Corroborating this is the past findings evaluating agricultural programmes identifying the problem of inadequate funding, mismanagement of funds, incorrect data for proper planning and policymaking and lack of continuity as significant drawbacks (Daneji, 2011; Ayandele, 2022). However, the rapidly growing population is estimated to reach 400 million by 2050, and the present food shortage is causing a rise in food imports (FAO, 2022). Therefore, action calls for more investment in agricultural technology, promoting innovations without compromising agricultural sustainability, and enforcing sustainable development and productivity through education and training.

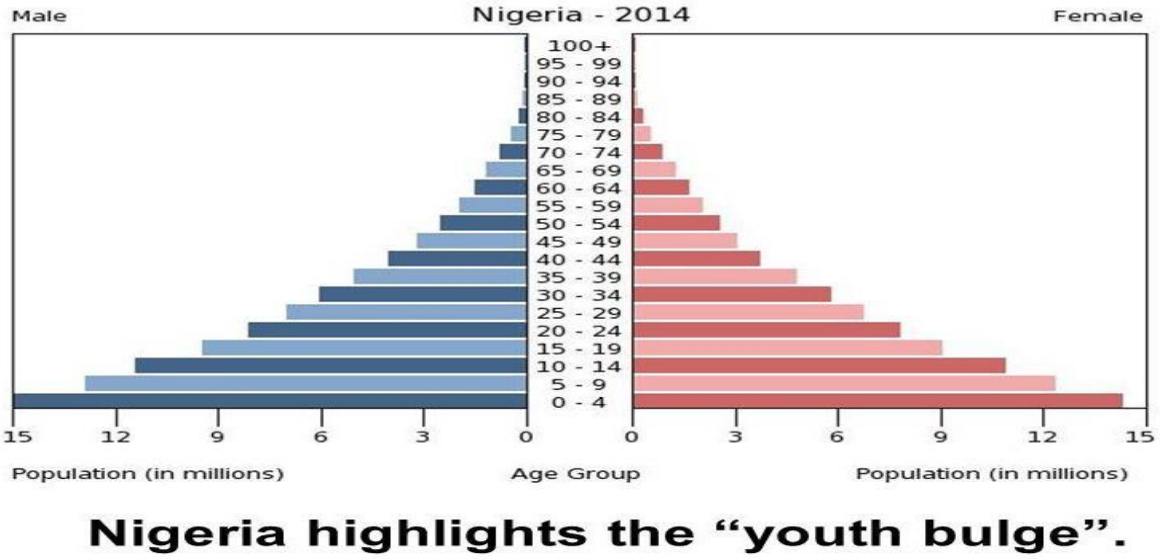


Source: Federal Ministry of Budget and National Planning

Figure 3.5 Nigeria Budgetary Allocation to Agriculture 2015-2021

3.3.1 Youth and Nigeria Agriculture

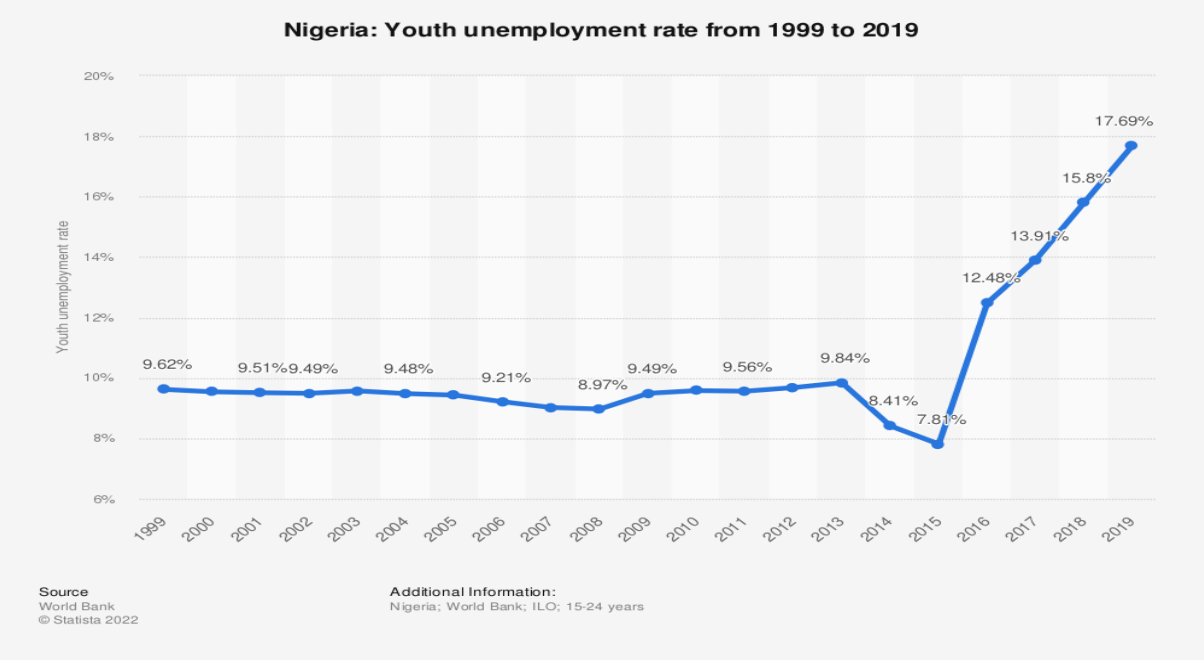
Nigeria has one of the youngest populations globally. Although more than half of the population is under the age of 19 and is in their productive age, they can contribute effectively to national growth as an asset to the Nigerian economy, while 60 years and above represents a small percentage(see fig 3.6).



Source: Knowledge Resources 2017

Figure 3.6 Nigeria Population distribution by Age

However, amidst the opportunity of an agile workforce, unemployment among young people remained high at almost 18% in 2019 (Figure 3.7). Yearly, around 11 million youth enter the labour market in Nigeria (World Bank, 2014).



Source: World Bank 2022

Figure 3.7 Nigeria Youth Unemployment Rate from 1999 to 2019

Agriculture remains central to solving the unemployment problem among young people and continues to be the largest producer of job opportunities, but it requires a transformation that is attractive to young people (Ameyaw, 2015; Adesugba and Mavrotas, 2016). Youth in this digital world is innovation prone. Hence, they are likely attracted to modernised agriculture, fulfilling their career aspirations, job satisfaction, and income expectations. They cannot be the drivers of agricultural productivity without adequate skills and training. The setback in Nigeria's agriculture resulted from the discovery of natural resources, neglect of agriculture, and industry divergence (Hanson and Leautier, 2013; Adesugba and Mavrotas, 2016). Youth dividend benefit in the agricultural sector depends on government policies supporting innovation and enhancing agricultural productivity (Adesugba and Mavrotas, 2016). Small-scale holders, the agricultural food sector, and the value chains are expected to meet youth anticipations crucial for job creation, food security, and poverty alleviation (Proctor and Lucchesi, 2012). Expanding the agricultural value chain will create more job opportunities; however, it requires better infrastructure, knowledge, and skills acquisition (Gyimah-Brempong and Etumnu, 2014). Another challenge may be that a massive part of the agricultural population of Nigeria is older people as youth migrate to the cities to pursue a better life leaving behind an ageing population to operate (Ameyaw, 2015). However, this may not represent reality as paper analyses make it worse than on substantial empirical

grounds. Although the adult-to-young people ratio in farming in the Netherlands is 8 to 1, in the UK, it is 13 to 1, and in Greece, it is 7 to 1 (BBC, 2019), this may not be the case in some African countries. In SSA, 70% of the population is under 30 years. It may be impossible to have the mean age of the farming population to be around 60 years when over 70% are young people (Yeboah, 2020). Debunking the myth of the ageing agrarian population in Africa, Yeboah (2020) argues that many young people are in agriculture. Although on a part-time basis or as an extra source of income. They are more involved in off-farm activities; the reason may be the possibility of quick money in some off-farm activities and lack of access to land. However, an average youth with no other means to make ends meet will not venture into areas requiring longer return time, capital and land intensity.

Additionally, young people are likely to pick an interest in a less stressful aspect of the agricultural value chain. Also, the cultural barrier around land ownership and lack of money for investment could be responsible for fewer young people in certain aspects of agriculture. However, it is implausible to disregard the assertion of young people's negative perception of agriculture as a course of study.

Agriculture offers job opportunities to unemployed youths, while young people are unwilling to seek jobs in agriculture due to a lack of capital, inadequate skills, and negative societal perceptions (Hagar *et al.*, 2020). Nonetheless, youth perception is changing due to limited white-collar jobs in other sectors. However, to harness this opportunity, the need is to create an enabling environment for funding, land access, infrastructure, modern equipment, and adequate training opportunities (Olanrewaju, 2014). Furthermore, the government should increase more effort in attracting youth through innovative agriculture, the establishment of modern agricultural villages for teaching, and agricultural education reform (Olanrewaju, 2014).

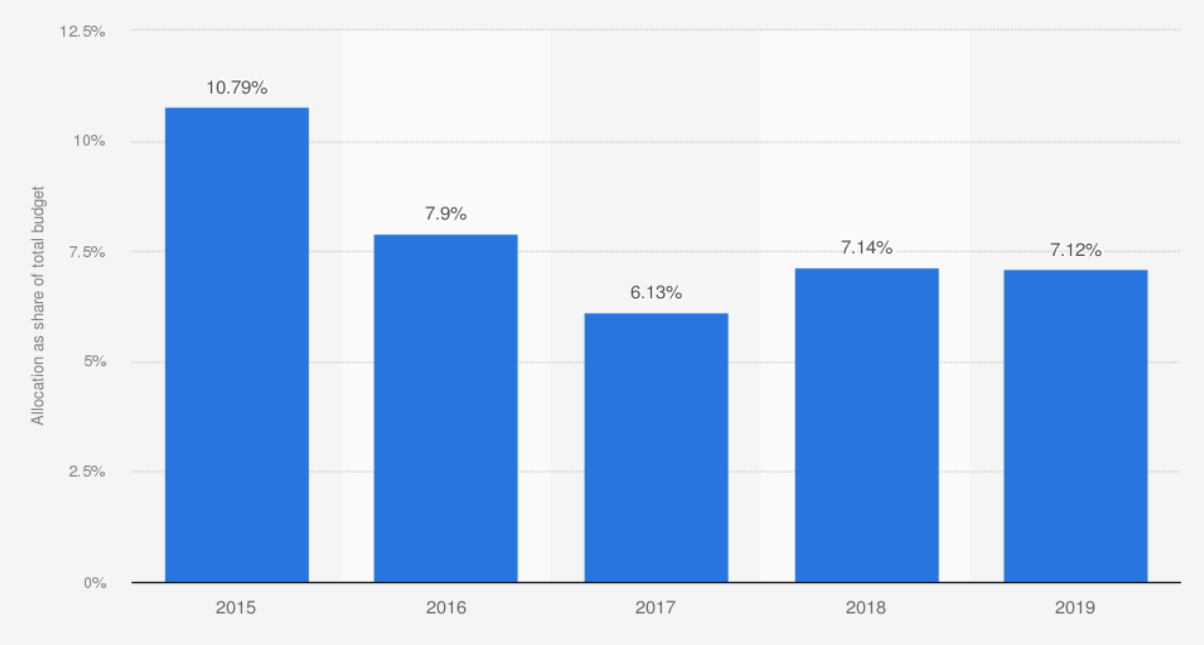
3.3.2 Challenges of Agriculture in Nigeria

Research suggests that the agricultural food system is a subset of economic growth and national development depending on appropriate policies. Evidence of changes in economic development due to vibrant agricultural development is reflected in the countries' GDP (Allen, 2009; Daneji, 2011; Iwuchukwu and Igbokwe, 2012; Collier and Dercon, 2014). Transformations should also bring positive change in the quality of life with appropriate plans to channel the course of action. Agricultural programmes with more comprehensive

plans can be broken down into objectives, required resources, time scales, etc., to achieve the desired outcome with clearly stated goals (Asiabaka, 2002). Ideally, agricultural objectives are to develop a sustainable set of principles, guide effective practices, promote technology use, modern agriculture, food security, employment opportunities, reduce poverty, and provide raw materials for agro-based industries and foreign exchange earnings (FMA, 2002). Overall, effective agricultural policies will generally achieve goals if they have clear objectives. Unfortunately, in Nigeria, agricultural programmes are usually single-handedly initiated by the federal government or collaborated with the state or local government, private sectors, and other foreign agencies without straightforward objectives (Daneji, 2011; Agber *et al.*, 2013).

Researchers argue that Nigeria's current state of agriculture is due to weak and inappropriate policies apart from the neglect of agriculture after the oil boom. The result is dwindling agricultural development despite several policies and programmes. The sequence of agricultural systems and projects emerges from a political power change, with the failure of most agricultural programmes due to a lack of continuity. The objectives were never food security, rural development, an improved method of agricultural production, the creation of employment opportunities, or environmental preservation but rather personal or political gain (Iwuchukwu and Igbokwe, 2012). As a result, Nigeria remains food insecure, rural development is low, an undeveloped food system, and unemployment is rising. Limitations of these policies include poor management, implementation, corruption, political interferences, weak institutional linkages, and inadequate funding (Sanni and T, 2009; Adeoye *et al.*, 2011).

Furthermore, innovative programmes fail due to poor funding, as demonstrated in the education sector with the lowest budgetary allocation (Figure 3.8), poor coordination, inadequate monitoring and incorrect evaluation (Hawkins and Sobukola, 2020). Finally, there must be an appropriate institutional linkage to ensure programmes are planned with people rather than simply for them. Unfortunately, most past agricultural policies lack this essential ingredient for sustainability (Daneji, 2011; Akinbamowo, 2013). In addition, agricultural development programmes pay little attention to the potential agrarian workforce in higher education, thus lacking consistent policies, continuity, and sustainability.



Source: Federal Ministry of education Nigeria 2015-2019

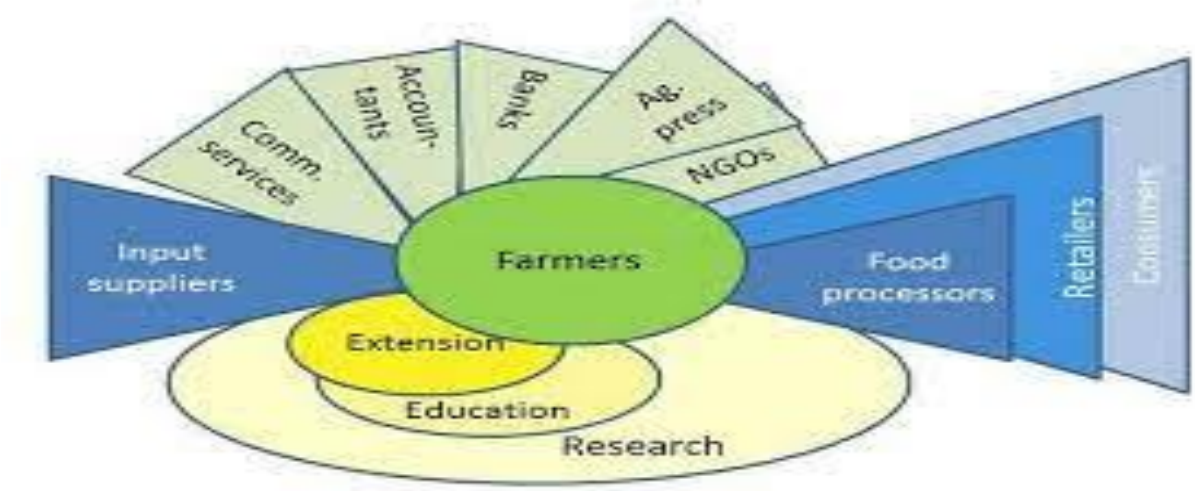
Figure 3.8 Education sector share of the total federal budget Nigeria 2015-2019

3.3.3 Agricultural Education and Training in Nigeria

Nigerian agricultural education, training, and research are the Agricultural Knowledge and Innovation System's bedrock (AKIS). The AKIS describe the exchange of knowledge and support services in agriculture (fig 3.9), as mentioned previously. Although a lot is changing rapidly, more effort is required to meet the food demand of a rapidly growing population. Countries that understand the importance of education, research and training systems in the AKIS are likely to thrive in the sector as it is the key to every other component in the system. Proffering solutions to problems of agriculture demands reforms. For instance, the ministry of foreign affairs in the Netherlands attempts to gain insight into Nigerian education to identify potential areas of support to provide a foundation for agricultural transformation. Nigeria's knowledge system comprises education, research, and training institutes, and research institutes are coordinated by the Agricultural Research Council of Nigeria (ARCN). In addition, there are federal, state and colleges offering agricultural programmes. Also, there are innovation enterprise institutes and vocational enterprise institutes. Some of these institutes are vocational and innovation enterprises created to pursue the agenda of a national skill qualification framework channelled towards developing competence-based agricultural education and training (Hawkins and Sobukola, 2020). How, then, is competency-based skills

acquisition implemented in the agricultural education sector, and what efforts are made to ensure effective linkages among the actors in AKIS.?

There are about 69 research institutes in Nigeria to carry out agricultural-related research to improve and increase the knowledge in agriculture and broaden the possibilities of utilising that knowledge to the best advantage. While the National Agricultural Extension, Research, and Liaison Services (NAERLS) promote connections between the research institutes, higher education, and other stakeholders. is usually done by establishing a regular meeting comprising the Research-Extension and Farmer Linkage System (REFILLS). The education policy emphasises offering primary, secondary, and tertiary agriculture. The policy also states the need to integrate the technical knowledge and skills necessary for agricultural, economic, and industrial development (The Federal Republic of Nigeria, 2013).



Source: European Commission Brussel 2013

Figure 3.9 Agricultural Knowledge Innovation System

3.3.4 Structure of Agricultural Education and Training in Nigeria

As stated in the National Policy on Education (NPE), last revised in 2013, there are ten years of free and compulsory basic education for Nigerians (Federal Republic of Nigeria, 2013). Basic education covers one year of pre-primary education through junior secondary school(3 years), where students obtain the Basic Education Certificate (BEC). Students then proceed to the senior secondary level (three years) and are assigned to science, commercial or art classes based on their performance at the junior examinations. Junior to senior secondary school agriculture is offered as prevocational elective courses. At this level, the curriculum is

structured to cover the three areas of production, farm management, and forestry using a guided discovery to facilitate learning by doing(Federal Republic of Nigeria 2013)

After the BEC, there are three years of senior secondary education, either in general or secondary vocational education. After completion of this stage, students are awarded either the West African Examinations Council (WAEC), West African Senior School Certificate (WASSC) or the Senior School Certificate (SSC) by the National Examinations Council (NECO). Students proceeding to higher education will then take the UTME (Unified Tertiary Matriculation Examination), which qualifies for university, polytechnic or college education based on performance(Hawkins and Sobukola, 2020).

The National University Commission coordinates the universities, a parastatal under the federal ministry of education. They are responsible for approving the establishment of higher education offering degree programmes, approval of academic programmes and quality control of educational programmes. In addition, the individual university sets the entry requirement for each course. There are 43 federal universities in Nigeria, with 30 offering agricultural programmes. Students highly seek federal universities because they offer lower fees as it is generally subsidised by the federal government and is considered more prestigious (Hawkins and Sobukola, 2020). They also have a higher diversity of ethnic groups, cultures, religions and backgrounds. Similar to other countries in the SSA, challenges of agricultural education include poor facilities for the acquisition of vocational skills (Ekezie and Owo, 2019), inadequate personnel, insufficient funding, and inadequate infrastructure (Egun, 2010, Amadi and Lazarus, 2017)

Agricultural training, usually informal and out of school through public extension services, is coordinated by the state Agricultural Development Programmes (ADPs) and some private extension services. The ADP was initiated in each state in 1975 and reformed in 1980 with an agenda for agricultural productivity (fig 3.10) by increasing crop production, supply of inputs to farmers, provision of basic infrastructure, and improved technology and training (Ammani, Auta et al., 2010). However, researchers identify the weakness of the ADP as poor funding, inadequate extension officers (Auta and Dafwang, 2010), lack of community-driven development approach, and lack of professionalism due to the political undertone in the recruitment of extension staff (Chukwuemeka and Nzewi, 2011). Alongside the ADPs, some agriculture faculties in Nigeria offer extension services, especially in the community where they are situated. In addition, non-governmental organisations (NGOs) also provide extension services as part of their community activities, particularly to the less privileged(Adegbola,

Bamishaiye et al., 2013). Personal processing and marketing companies are also a critical part of the extension outlet in Nigeria (Alam, Aboki et al., 2013).

However, aside from the weakness, ADPs remain the most viable route for agricultural extension services in Nigeria and are still very relevant in the government's Agricultural Transformation Agenda (Naswem and Ejembi, 2017). The ATA focuses on mechanised agriculture and increasing young agricultural people, which requires training. The ADP will be more effective in this ATA if it moves from a supply-driven to a user-led approach.

Component of the Agricultural Development Programme (ADP)

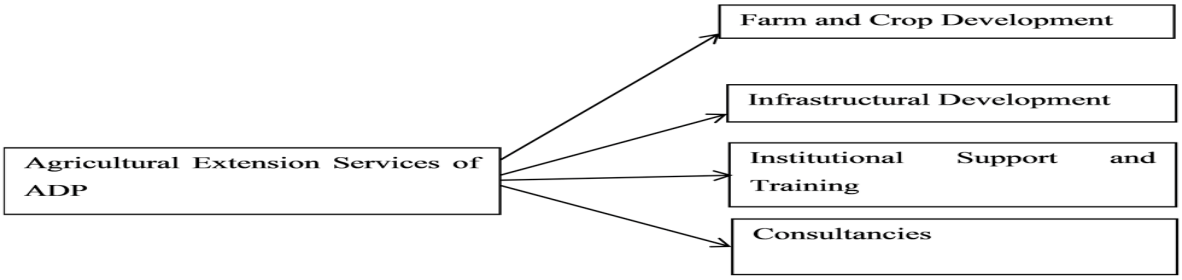


Figure 3.10 Component of ADPs in Nigeria

3.3.5 Nigeria Agricultural Transformation Agenda (ATA)

Agricultural transformation is imperative in Nigeria for enhancing labour productivity, increased production, and national income. The process requires developing appropriate policies, practical implementation, and evaluation in a sustainable way involving stakeholders, including the end-users of the intervention. As discussed in chapter one, the ATA was launched in 2013 to diversify the economy from agriculture to reliance on oil, for food security and job creation, especially among youth and women. The idea is to promote agricultural business, attract private sector investment in agriculture, reduce post-harvest losses, enhance the value chain, provide rural infrastructure, facilitate access to loans and markets, and create 3.5 million job opportunities, especially for the youth (Alhassan and Musa, 2019). ATA promotes collaboration with the private sector, particularly banks, to invest in infrastructure and equipment to establish a modern agricultural business. The programme focuses on curbing unemployment among young people by establishing a modern agribusiness and developing the value chain (Adesugba and Mavrotas, 2016). An example of a youth agricultural intervention programme is the emergence of the Youth and Women Agribusiness Investment Programme (YWAIP) in 2013. In pursuit of the ATA agenda and job creation, targeting youth and women, the YWAIP programme was established by the

ministry of agriculture and rural development in collaboration with colleges of agriculture, agricultural research institutes, non-governmental organisations, and community-based organisations.

The programme was carried out by establishing training centres for skill acquisition. The participants can choose an area of interest and be trained within 2-6 weeks. The scheme offers financial aid and assigns mentors to participants to either establish a new agribusiness or expand an existing one. In December 2014, the government launched the Youth Employment in Agriculture Programme (YEAP). The YEAP collaborated with the Food and Agricultural Organisation (FAO). The programme is a similar plan for food security, promoting the agricultural value chain, creating employment for youth, promoting commercial agriculture, and increasing productivity. The programme entails providing training and financial assistance by linking the beneficiaries with commercial banks

The National Young Farmers Scheme (NYFS), flagged off on 10th November 2020, is another laudable youth-centred programme designed by the National Agriculture Land Development Authority (NALDA). The focus is to engage 1000 youth in agriculture in the 774 local council areas. The idea is to revolutionise agriculture with the active involvement of young people using modern technology.

The scheme is expected to admit graduates and non-graduates by engaging in crop farming and livestock rearing. The programmes reflect the government's awareness of modern step-up technology in agriculture as the traditional method is not attractive to young people. Some of the programmes also indicate the promotion of the agricultural value chain to create more jobs and meet the demands of young people for a quick investment return, rather than the production aspect, which requires a long process. The programmes also consider building capacity and closing the knowledge gap through training and support throughout the project process. Overall youth-led programmes are targeted toward job creation, self-employment, and agribusiness. However, some shortcomings of these programmes include limited youth engagement from the planning stage (Amahah, 2020). Also, many programmes with similar objectives handled concurrently may make monitoring and evaluation cumbersome. In addition, there may be some challenges to continuity, primarily due to political instability.

Much effort has been put into increasing youth participation in agriculture to address the unemployment problem. However, most of the actions may appear curative rather than preventive. A proactive approach suggests solving the problem by promoting interest in agriculture from the early years and addressing curricula problems, thereby creating a positive perception of agriculture. However, intervention to encourage young people in

modern agriculture will not be sufficient without a reformation in agricultural education. Agricultural transformation structures only for out-of-school training without corresponding intervention in the formal setting may disregard the importance of agricultural education. Perhaps the significant neglect of the agricultural education system also points to why young people prefer to seek vocational training in agriculture rather than enrol in agricultural courses of lengthy duration, which offer no practical experience. Effective agricultural education in a rising demand for agricultural modernisation and commercialisation will aim to meet the needs of learners as agribusiness is the main attraction to many young people of today.

3.4 Examples of Innovative Agricultural Education

The research paper by Chakeredza (2008) presents two case studies of agricultural institutions that have demonstrated a notable ability for agricultural education transformation. The Earth University of Costa Rica runs a four-year integrated learning programme using the university campus farm, providing students with opportunities for practice and experimentation. The scheme promotes teamwork, intercultural exchange, leadership, and values. How does it work in the Earth University model? Their admission process seeks to identify candidates from rural areas who possess agricultural vocational skills, social and environmental awareness, and concern. These students must be committed to returning to their region of origin (Chakeredza, 2008). The study focuses on entrepreneurial skills development, which begins as early as year one. The students study business skills to develop entrepreneurial skills by forming small business groups among five peers. The group members collectively decide the type of agribusiness of interest. They create a business plan, and if accepted, they are given a loan to develop their enterprise. The students are responsible for implementing their projects; they pay their loans after marketing. The profit is divided into three parts, one for revolving loans, and the remaining is shared among the group. Earth also established a funding scheme to provide start-up capital for graduates because many aspire to set up agricultural enterprises after graduation. Still, they could not reasonably do so because they are from low-income families and lack the collateral to secure a loan from the bank.

Earth University has recorded remarkable success; since its inception in 1990, the school has recorded high student retention in the agricultural enterprise (88%) and reduced student unemployment. The target of the Earth programme is farm families' reason for isolating and

establishing the university in rural areas. Jones *et al.* (2017) also opine that agricultural scientists from rural areas are best positioned to develop connections between scientific research, agricultural professions, and rural development because they have experience. Similarly, the success of the Green Revolution in India was because most of the scientists working in the universities were the sons and daughters of farmers. Therefore, they understood how to communicate with them. However, belonging to a farm family may not mean interest in agriculture, especially in Nigeria, where rural-urban migration is high among young people due to a lack of social amenities. Therefore, the model can be opened to students seeking agriculture careers. Interest, motivation, and passion are critical in making career choices.

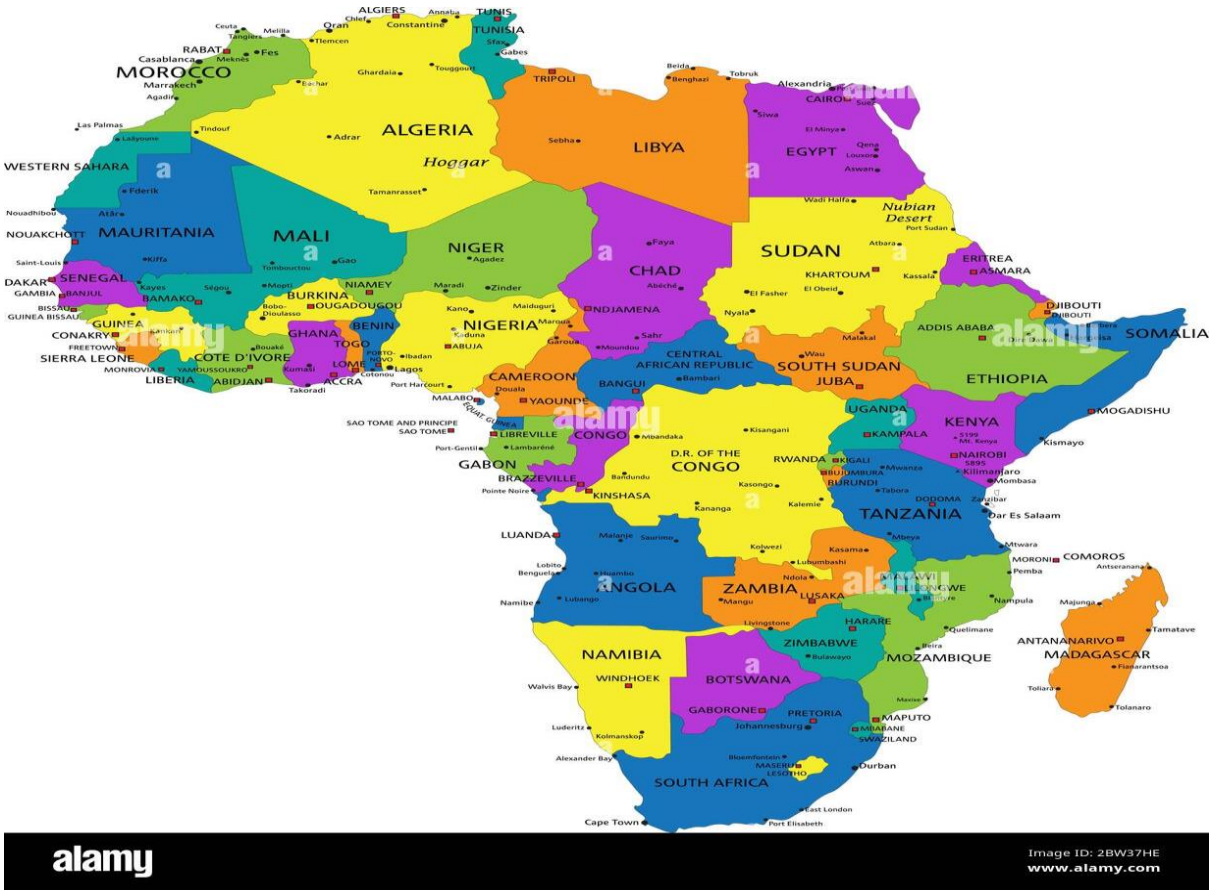
The Botswana College of Agriculture Supervised Enterprise Project (SEP) is similar to innovative agricultural training offered at "The Earth University". Over ten months, the programme enables students to embark on a small-scale agricultural enterprise. Therefore, it allows students to gain financial business management skills and practical experiences relating to credit, loan repayment, and record-keeping(Munthali and Mulinge, 2004). Interested students must develop proposals and budgets for a chosen agricultural enterprise. The project is funded after the submission is reviewed, the loans are charged at economic interest rates, and the loan is refunded as sales are made. The students also pay for facilities and services offered by the college, while the student can have the remaining profit. Therefore, this programme enables students to accumulate a capital from the profits made, which can be collateral after completing the programme(Munthali and Mulinge, 2004)

In conclusion, agricultural development sustainably requires technological development to promote food security in Africa, while education plays a pivotal role. A viable agricultural education will attract young people and is essential for agricultural transformation and economic development. Also, the agricultural transformation plan should include reforming the agricultural education system. Therefore, increasing youth participation demands a holistic approach, and addressing the problem from an educational perspective is more preventive than curative

Chapter 4. Background to case study sites

4.1 Introduction to Nigeria and the research sites

Nigeria is the most populous country in Western Africa, situated between the Sahel to the north and the Gulf of Guinea in the Atlantic Ocean to the south. It covers an area of 923,769 square kilometres (356,669 sq mi) with a population of about 211 million. It is bounded in the north by Niger, northeast by Chad, east by Cameroon, and west by Benin (Figure 4.1).

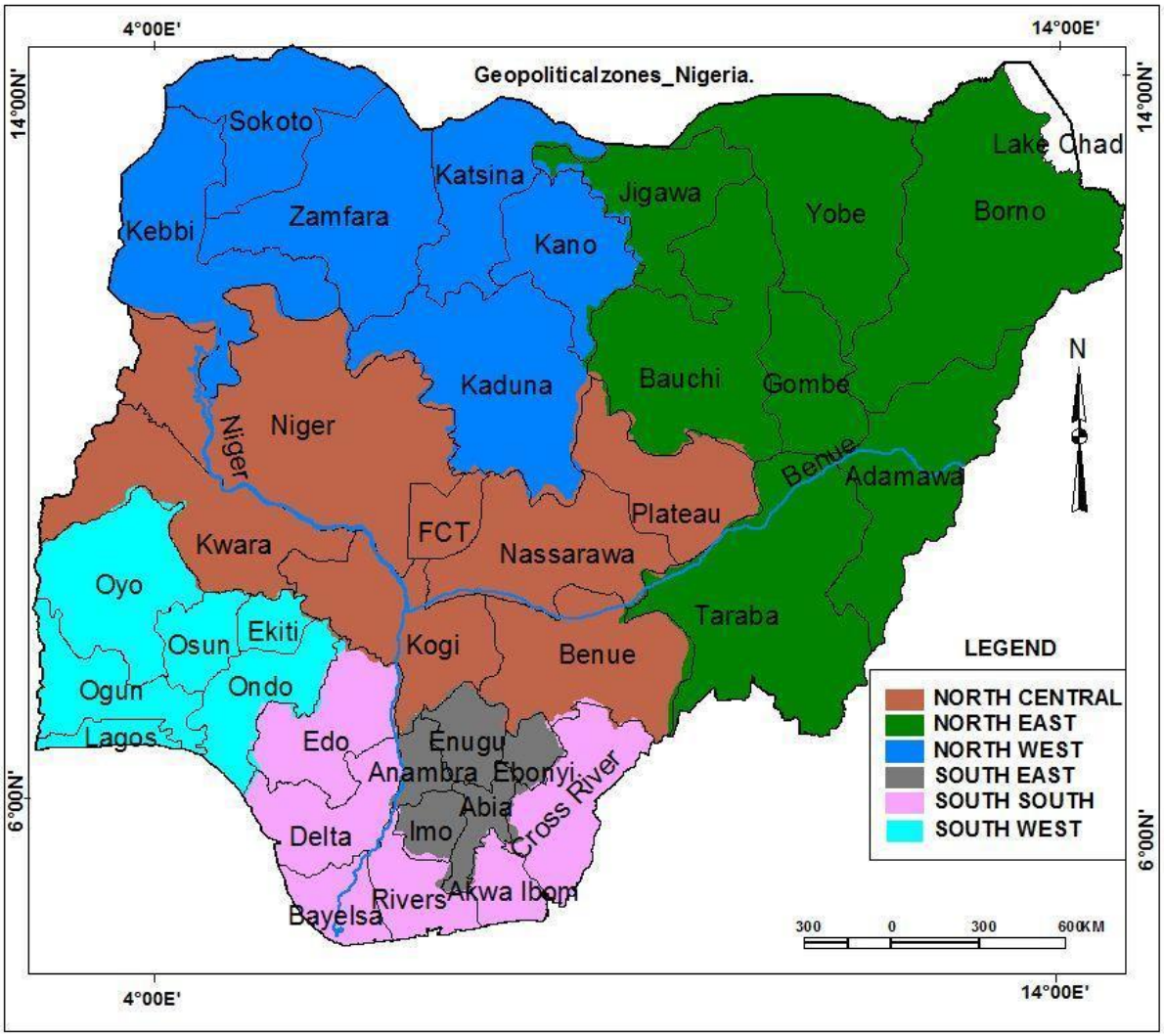


Source: Alamy, 2022

Figure 4.1 Map of Africa

The country is a federal republic comprising 36 states and Federal Capital Territory (FCT) Abuja, where the capital is located. Nigeria is further divided into six geopolitical zones viz; South-West, South-East, South-South, North Central, Northeast, and Northwest (Figure 4.2). The largest ethnic groups in the country include – the Hausa/Fulani, Yoruba, and Igbo in the

Northern, Western, and Eastern Regions, respectively (Falola and Heaton, 2008).



Source: Cartography Unit, COLERM, FUNAAB

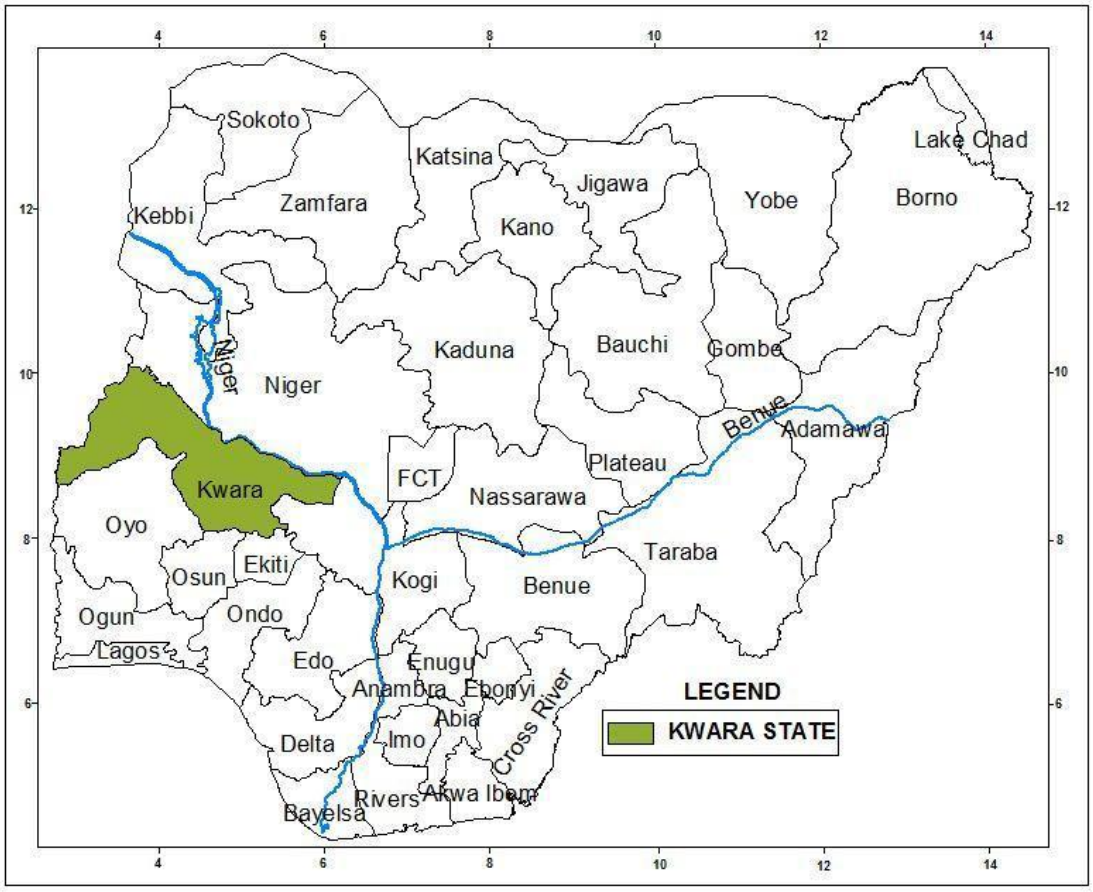
Figure 4.2: Map of Nigeria showing the six geographical zones**.**

The country is endowed with natural resources such as petroleum and coal and substantial agricultural resources such as cocoa and coffee.

4.2 Case study site

This research was conducted in Kwara State in the North Central geopolitical zone. The state was created on 27 May 1967; Kwara State has an estimated population of 2,365,353 (2006 census). It has a landmass of 36,825km^2 (14,218 square miles), resulting in 89 persons per square kilometre. It is bounded by Benin to the west and Niger state to the north, Kogi State to the east, and Ekiti, Osun, and Oyo to the south. The state is located within latitude 8^{0}30`N

and longitude $5^{0}00`E$. It has a tropical pattern of rainfall characterised by two rainy seasons and a tropical wet and dry climate. Both seasons last for about six months. It has an annual rainfall range of 1000mm to 1500mm. The temperature is around $29^{0}C$ during the day, and at night declines to about $22^{0}C$.



Source: Cartography Unit, COLERM, FUNAAB

Figure 4.3: Map of Nigeria showing the study location (Kwara State)

Kwara State capital is at Ilorin and has 16 Local Government Areas (LGAs), as shown in Figure 4.4. The LGAs comprise Asa, Baruten, Edu, Ekiti, Ifelodun, Ilorin East, Ilorin South, Ilorin West, Irepodun, Isin, Kaiama, Moro, Offa, Oke Ero, Oyun, and Pategi. The primary ethnic group is Yoruba, with significant numbers of Nupe, Bariba, and Fulani as minorities. The state has numerous mineral resources such as petroleum, gold, limestone, marble, feldspar, clay, kaolin, quartz, and granite. The state also has agriculture as a source of economy inhabitants are involved in farming activities such as planting crops such as yams, maize, sorghum, millet, onions, and beans. The soil type supports the growth of cereals and

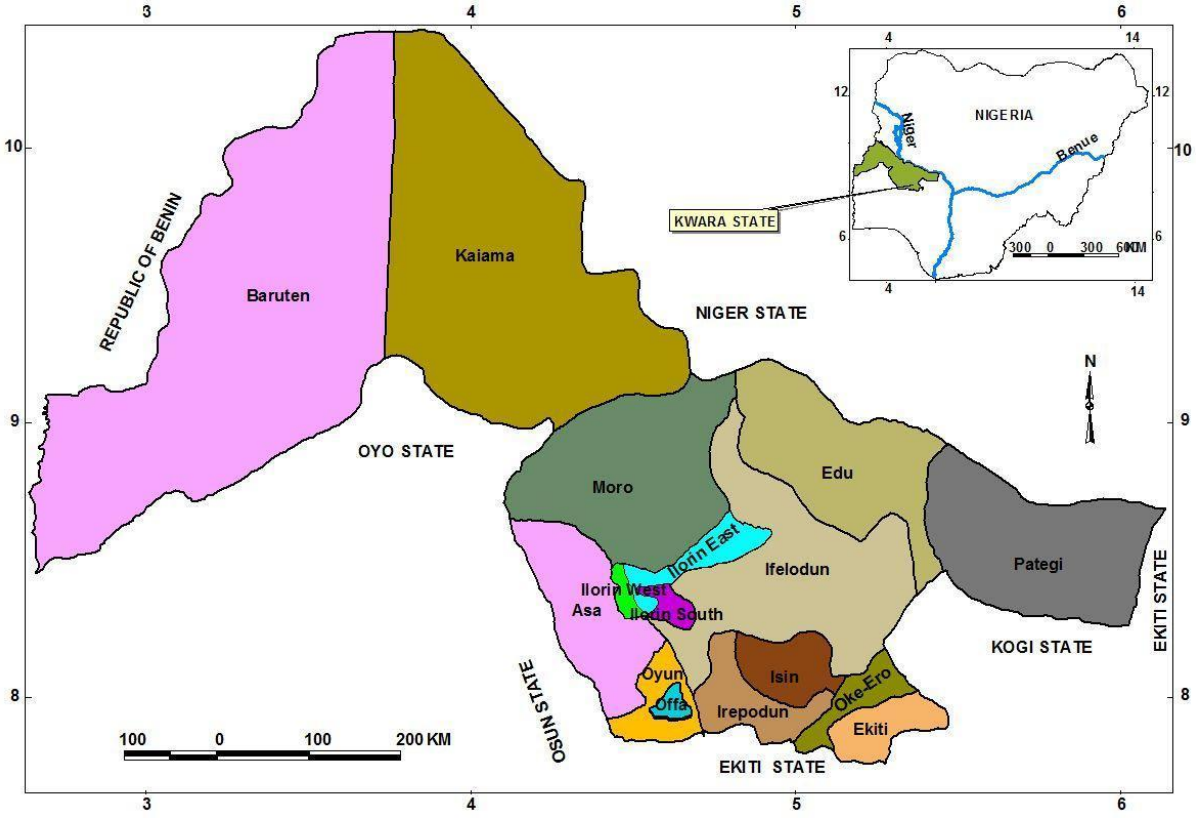
vegetables. In addition, cash crops like cocoa, cotton, coffee, kola nut, tobacco, beniseed, and palm are significantly produced. However, most farmers produce mainly for domestic consumption(Ajadi and Adeniyi, 2017). These agricultural activities are carried out and supervised by extension personnel in four agricultural zones(classification of the Agricultural Development Programme for training and visits to farmers). The category is based on location for easy access to farmers during training and visits

- Zone A: Baruteen and Kaima
- Zone B: Edu and Patigi
- Zone C: Asa, Ilorin East, Ilorin South, Ilorin West, Moro
- Zone D: Ekiti Ekiti, Ifelodun.

Kwara State has institutions of higher learning (Universities, Polytechnics, and Colleges of Education) owned by governments (federal and state) and private bodies. There are six universities in the state; the federal government owns the University of Ilorin; the State government owns Kwara State University, and individual bodies privately own the rest. In the same vein, the polytechnics include Kwara State Polytechnic, Federal Polytechnic, Offa, Graceland Polytechnic, The Polytechnic, and Lens Polytechnic. Moreover, there are 15 Colleges of Education owned by the federal government, state government, and private individuals. Some schools were established by missionaries but later handed to the government. The schools were thriving well but declined under the management of the government. The situation paved the way for the emergence of many private schools.

The private schools are in different categories regarding standards based on the financial strength of the private owners. Privates schools are generally expensive compared to public schools. It is a significant challenge for Nigerian education, as private schools have autonomy and are relatively free in their administration. The population and attendance in private schools are increasing over time as the public schools lack facilities, teaching materials, poor staffing, and frequent strike actions(Adeniyi, 2021). Nevertheless, public schools are still vastly more populated than private as many parents cannot afford tuition fees in private schools. Government-owned schools comprise a broad category of students from different backgrounds and ethnic groups more likely to facilitate socialisation, perhaps one reason why some wealthy parents still prefer them.

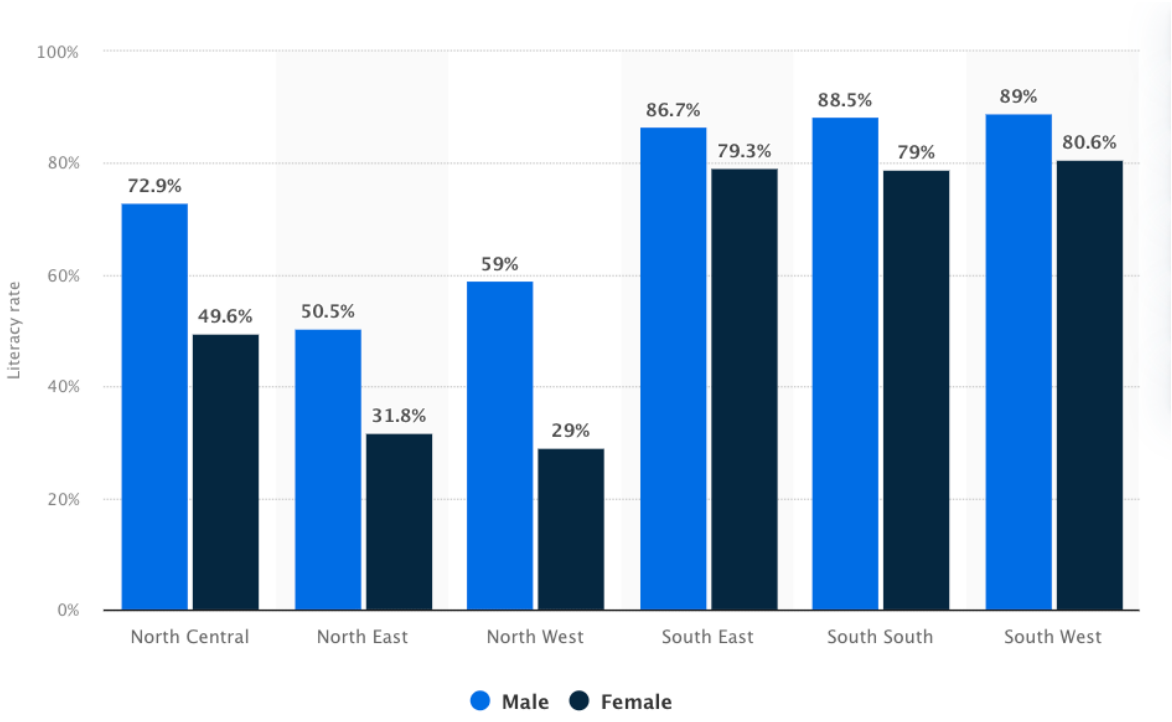
Therefore the federal government school was purposively chosen for this research as it has provided the advantage for a broader category of students. Also, being a familiar terrain provide easy access to participants.



Source: Cartography Unit, COLERM, FUNAAB

Figure 4.4: Map of Kwara State showing all the 16 LGAs

Kwara State Ministry of Education controls the primary and secondary schools to offer quality education across the state. According to UNICEF, the literacy rate in Nigeria for young women is 63%, for young men is 70.9%, while for Kwara is 65% for young women (age 15-25) and 79% for young men. According to the world bank and Nigerian national reports, the literacy level has increased in the last few years (National literacy main report, 2018).



Source: https://www.statista.com/

Figure 4.5: Literacy rate Nigeria 2018, by state and gender

According to the Annual Education Sector Performance Report (2010), the body aims at:

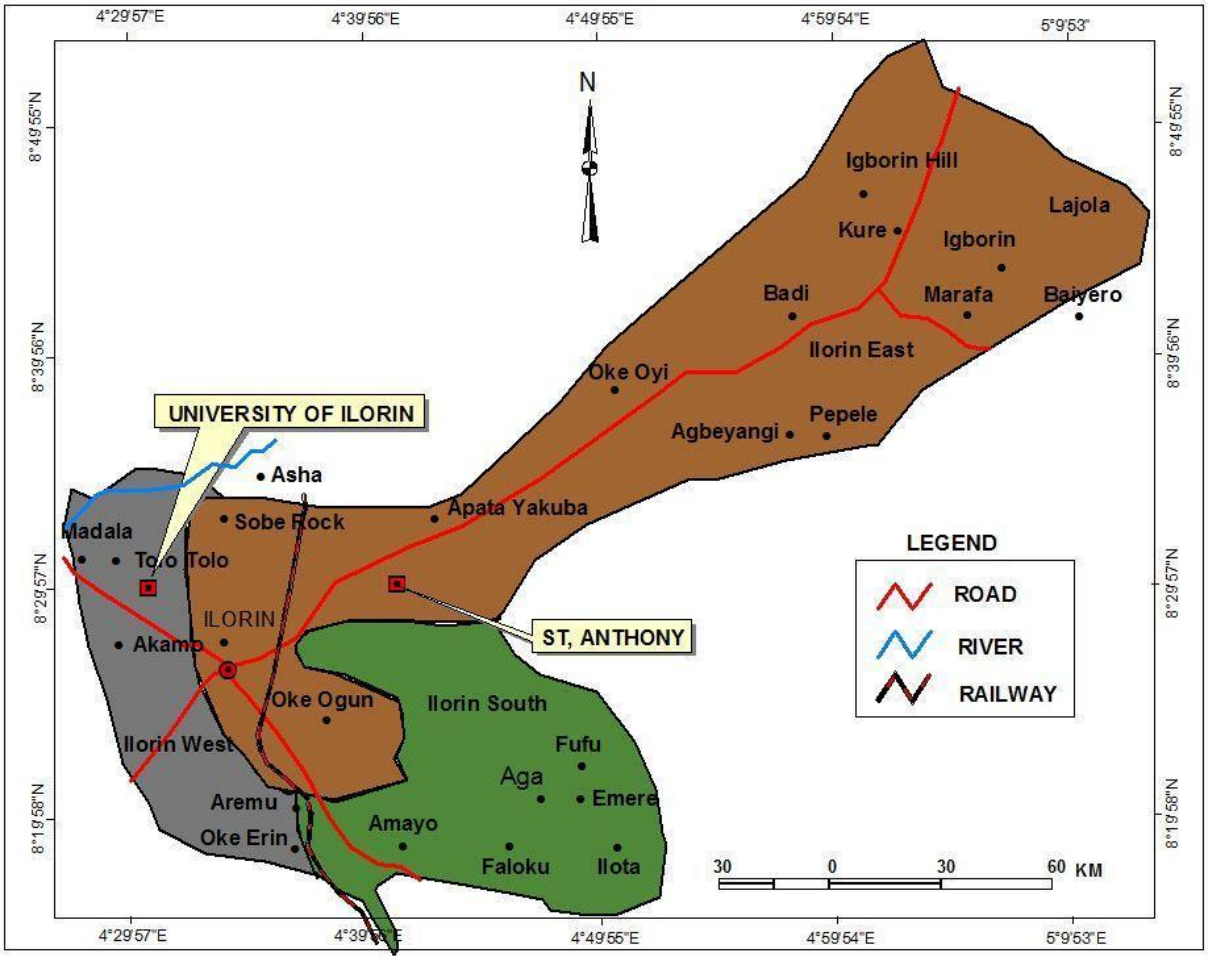
- Improving expert teaching through regular, structured assessment and professional development and training of teachers.
- Maintaining the standard of education through a clear set of quality assurance control programmes and monitoring for every school
- Ensuring schools are well managed through high-quality teaching with modern and efficient administration systems

Other bodies responsible for the effective management of the educational system in the state comprise the State Universal Basic Education Board (SUBEB) and Teaching Service Commission (TESCOM) Annual Education Sector Performance Report (AESPR) (2010). Furthermore, the government and private individuals own numerous agricultural enterprises in the state. Examples of government agricultural enterprises include the Agricultural and Rural Management Training Institute (ARMTI), National Centre for Agricultural Mechanisation (NCAM), Kwara ADPs, Kwara Food and Agriculture Business Growth Enhancement Programme, and the Nigerian Store Product Research Institute (NSPRI). The Agricultural and Rural Management Training Institute (ARMTI) is an agricultural

organisation that provides management training, consultancy, and advisory services. In addition, they conduct applied management research and special and diagnostic studies, disseminating agricultural and rural information and contributing to policy development that would enhance better management of Nigeria's agricultural and rural sectors. Furthermore, the institute offers training and practical services on poultry farming, food farming, horticulture, etc.

The National Centre for Agricultural Mechanisation (NCAM) is a parastatal under the Federal Ministry of Agriculture and Rural Development (FMARD). Its mandate is to facilitate mechanisation in agriculture by developing simple needs-based technology that reduces drudgery, increases farm productivity and improves the efficiency of farmers. It offers tractor hiring, agricultural machinery testing, and tractor certification services. Kwara ADPs is an agricultural consulting firm that provides agro-allied services that help raise the standard of living of rural communities through increased income from agricultural productivity. The Kwara Food and Agriculture Business Growth Enhancement Programme centres on agricultural development services. The Nigerian Store Product Research Institute research improves primary food and industrial crops and studies stored product pests and diseases, pesticide formulation, and residue analysis.

The University of Ilorin, also known as Unilorin, is situated at Ilorin West LGA, the federal tertiary institution in the state (Figure: 4.6). It was established in 1975 and started with three academic faculties of Arts, Science and Education. These have increased to 15 faculties viz: Faculties of Agriculture, Physical Sciences, Life Sciences, Environmental Sciences, Law, Veterinary Medicines, Clinical Sciences, Engineering, Social Sciences, Management Sciences, Basic Medical Science, Arts, Communication and Information Science, Pharmaceutical Science and Education. The institution also has over 60 academic departments in which students offer courses related to agriculture, education, and other courses.



Source: Cartography Unit, COLERM, FUNAAB

Figure 4.6: A Map showing the study locations (University of Ilorin – Ilorin West and St. Anthony Secondary School – Ilorin South.

Chapter 5. Research Method and Approach

5.1 Introduction

This chapter discusses the underlying philosophy and the methodology employed for the investigation to address the research gaps identified in the above discussion. The chapter explains the rationale for research design and methodology, triangulation, data collection, and data analysis.

5.2 Research Philosophical Stance

Social research always has philosophical implications which dictate the methods employed for the investigation (Holden and Lynch, 2004). Since the technique used in research depends on the resources available and the phenomenon to study, the philosophical stance of the researcher also comes into play. Social researchers engage a particular methodology depending on how they view social groups or communities of people as things in themselves with properties that can be analysed or as a collection of individuals. They are usually concerned with the quality or quantity of a phenomenon reflected in different methodologies. Whether human behaviour can be successfully quantified is a philosophical argument (May and Williams, 2002). The positivist believes there is no difference between social and physical research; hence the scientific method is applicable. However, applications of scientific principles may be a way to achieve explanation, prediction, and control (Lee, 1991). However, the constructionist sees differences between the physical and social world, dictating the study method. The interpretivist argues the inadequacy of natural science's procedure in studying human behaviour. They assert that positivists claim reliability, replicability, and validity. While it lacks the reflection of human perception and beliefs. Meanwhile, some researchers believe that approaches are complementary and should not be treated as mutually exclusive (Neuman, 2015)

This study does not seek to argue for or against either of the two paradigms. Still, the focus is to explore the view of individuals and groups of people to reveal different perspectives that cannot be captured in quantitative studies alone. Some studies have been carried out on what influences young people's career choices in agriculture in Nigeria using the positivist approach. Applying a socially interactive approach will further capture the social phenomena that cannot be meaningfully understood using numbers. Many social realities cannot be adequately construed without reference to society. Therefore, to have an in-depth study of the

subject matter, asking a group of people will yield more insightful information than pre-designed surveys (Dudwick *et al.*, 2006). It will explore the depths of the why and how rather than only "what". Employing social constructionism enables the researcher to see the world through the eyes of the research participants as a means of generating knowledge. People construct knowledge through daily social interactions (Burr V., 2003). The interpretive/constructivist tends to rely upon the participants' views of the subject under study (Creswell 2003). This approach is most appropriate to elicit information on career choices in agriculture from different educational stakeholders.

Constructivists do not start with theory. Instead, theory emanates from research (Creswell, 2003; Mackenzie and Knipe, 2006). To generate knowledge for this study, one must acknowledge no single reality. The educational stakeholders' multiple realities (subjectivism) can only develop in an open-ended approach due to the belief that knowledge emanates from multiple interactions (Bryman, 2015). The method also allows close participation between the researcher and participants, enabling them to tell their stories (Crabtree and Miller, 1999). Finally, findings from this type of research are channelled back into the stock of theories relating to the study (Bryman, 2015).

Having laid the philosophical foundation of this research that will facilitate the research objectives, it is also crucial to engage a research design, methodology, and data collection method consistent with the social constructionist philosophy as presented below.

5.3 Rationale for Research Design

A case study research design was used in this study. Rowley (2002) ascertains that this design is suitable for new research areas or research where existing theories are insufficient. It is also applicable in the early study stage for new knowledge built using another scientific approach. In Nigeria, a lot of research has been carried out on factors influencing career choices in agriculture quantitatively, but the why and how these factors come to play have been left unanswered (Apantaku, 2004; Onuekwusi and Okorie, 2008; Adekunle, Adefalu et al., 2009; Mohammed 2010; Ojebiyi, Ashimolowo et al., 2015). Besides, there is little on how the education factors influence career choices in agriculture; therefore, there are insufficient findings on improving the intake and quality of agricultural education. Therefore, this study sought a qualitative approach to have a more in-depth understanding of these factors from the educational perspective in a descriptive, exploratory, and explanatory manner.

Bryman (2015) explains that attaching a case study to qualitative research is possible, while the case study can use a qualitative or quantitative research methodology. This study required only qualitative methods to explore the study, which was mostly absent in the previous research. The focus is to have a deeper explanation and answers to the research questions set for the study. Therefore, the study relies heavily on a qualitative research strategy using unstructured and semi-structured interviews and focus group discussions to generate an intensive and detailed investigation of the cases.

Kwara state was purposively selected for this research. The state is a gateway between the north and the south. It is located in the north-central zone, representing a wide variety of ethnic groups in Nigeria. Although the percentage of indigene in Kwara State is high, Kwara State is a catchment area by location for the university. The research took place mainly in Ilorin, the headquarters of Kwara state, as it accommodates most of the agricultural parastatals and the federal university (University of Ilorin) selected for this research. Therefore, it served as a background for collecting data because it is a more developed area of the state where most government parastatals and federal institutions are located. Similarly, Byman (2015) identifies that the site's significance shows at one point or the other while, in some cases, the location is primarily the unit of analysis

It was also part of risk management to restrict the study to a known location being an election period and the high rate of insecurity in the country. Furthermore, I was able to gain contact with the alumni group WhatsApp chat as a graduate of the University of Ilorin. Also, the research's inspiration significantly connects to my life experience as an agriculture graduate. Furthermore, having grown up in Ilorin, where my parents reside to date, gave me an opportunity of preexisting networks that enabled access to key stakeholders and gatekeepers. It also saved me some cost in the research using the family house through out my stay. Networking in research is essential as it can assist or jeopardize all efforts in research. For example, access to secondary school, tertiary, graduates and agricultural enterprises were easy through my social network in different categories. However, I could not get an interviewee at the ministry of education because there was no internal person to link me up with people to interview.

There are different categories of participants used for this research. These include secondary school final-year students, undergraduates of a tertiary institution in the last years, agriculture graduates, lecturers, teachers, officials of agricultural enterprises and curriculum developers.

5.4 Triangulation

Quantitative researchers are concerned with the reliability and validity of research, while qualitative researchers use the words credibility and trustworthiness. Data were collected using multiple sources to check the credibility and integrity of the study. These include in-depth interviews, focus group discussions, telephone calls and micro-ethnography. Using different categories of cases for the analysis is also a form of triangulation employed in this study. Patton (1999) defines triangulation as using more than one method or data source in qualitative research to generate a more comprehensive knowledge of an event. Triangulation could be in different forms, methods, investigators, data sources and theories (Carter, Bryant-Lukosius et al., 2014). However, method triangulation is less critical in this study. As earlier revealed, there are gaps in the literature regarding educational factors, which this study seeks to probe further; hence the idea is to gain a deeper understanding of the phenomena.

5.5 Methodology

The methodology is the collection of rules that guide the conduct of research. The guiding principles and theories underpin a particular approach to research (Somekh and Lewin, 2005; Mackenzie and Knipe, 2006). Walter (2006) argues that methodology is the foundation of reference for the study, which is determined by the philosophical stance used to develop the theoretical framework. These definitions connote that methodology is the overall approach to research linked to the paradigm or theoretical framework, or world view of the researcher (Creswell, 2013), while the method refers to systematic processes, procedures or tools used for the collection and analysis of data '(O'leary 2004; Mackenzie and Knipe, 2006). The study undertakes a qualitative methodology in line with interpretivism/constructionism in this background.

5.6 Data Collection

An essential aspect of research methodology is research methods. It is the techniques used to gather or analyse data related to some research question or hypothesis" Data collection instruments must be consistent with the research approach and the philosophy underpinning the research. The data collection techniques prevalent among the interpretivist/constructionists are interviews, focus group discussions, participant observation, ethnography and document review. (Patton, 1990; Yin, 2003; Onwuegbuzie et al., 2010;

Bryman, 2015). This research employed interviews, focus groups, observations and document reviews as data collection tools to generate rich data to address the research objectives.

The data collection took place in January-March 2019 during the election period in Nigeria. At first, I contemplated waiting to collect the data after the election, but this will alter the research plan. Therefore, I commenced collecting data with the secondary and tertiary students before the election. I envisaged these groups that would not be available during or after the election. Historically, Nigeria's elections are usually characterized by some level of violence among the youth; therefore, schools are closed so that students can be adequately monitored by their parents. As a result, mitigating against such delay was conducting the focus group discussions among the secondary and tertiary students category within three weeks before the election started on February 23rd. However, it accounts for the reason I could not access science students not offering agriculture during the limited time. In addition, the students were preparing for their final year examinations; therefore, time was a significant constraint. Fortunately, I gained the consent of keepers through friends who liaised with the school and secured stipulated dates for the focus group discussions before I arrived in Nigeria. Also, access to agricultural parastatals was easy through my contacts and social network.

5.6.1 Interviews

Research interviews are fundamentally referred to under three categories: structured, semi-structured and unstructured (Gill, Stewart et al., 2008). Structured interviews involve administering questionnaires to ask predetermined questions; participants do not have the opportunity to elaborate their responses further (Gill, Stewart et al., 2008). An interview is an exchange of views between people involved in a conversation that requires the researcher to understand the world from the participant's point of view to reveal the meaning of peoples' experiences. Therefore, qualitative unstructured interviews do not reflect preconceived theories or ideas; they involve asking open-ended questions, while other questions may emerge upon initial responses (Gill, Stewart *et al.*, 2008). Easterby-Smith *et al.* (2012) opine that the unstructured interview generates in-depth qualitative data, corroborating Gill et al. (2008) findings. In their assertions, an unstructured interview is applicable where virtually nothing is known about the subject under consideration or when a different perspective of a known subject area is required. They further explain that this method is also applicable for

exploring sensitive topics or where participants may not want to discuss such issues in a group.

Identifying an appropriate form of interview is essential to attain specific research objectives. The research objectives of this study necessitate the use of semi-structured interviews to gain a deep understanding of the study. Gall and Borg (2003) describe three qualitative research interview formats: an informal interview, a general interview guide approach, and a standardised open-ended interview. Further explained that an informal discussion relies entirely on the spontaneous generation of questions in natural conversation (Gall and Borg, 2003). Turner (2010) asserts that questions emanate from experiences to understand or clarify what one is witnessing at that particular time. The interviewer does not have an established list of questions; instead, they emanate in interaction with the participant during the interview process (McNamara, 2008).

On the other hand, semi-structured interviews provide researchers and participants with guidance on what to talk about, which is very helpful. (Edward and Holland, 2013). The flexibility of the semi-structured approach, particularly compared to structured interviews, also allows for discovering or explaining the information that is important to participants but may not have previously been thought of by the researcher. The level of flexibility that the research requires will determine semi-structured or structured interviews (Edwards and Holland, 2013). The general interview approach is more formal than the informal, conversational interview, but both are flexible (Gall and Borg, 2003). The former is described as semi-structured because of its similar attribute (Edward and Holland, 2013; Bryman, 2015). According to Bryman (2015), the semi-structured interview refers to a situation whereby the interviewer has a series of questions called an “interview guide”. However, they can vary the sequence of the items. It allows the interviewer to ask further questions based on the interviewee's response when there is a need for clarification or new emerging ideas. Since the respondents are not homogenous for this research, a different semi-structured interview was developed for each group (see appendices C1-C6).

Questions were developed from literature, personal observations and consultations with agricultural lecturers to validate the questions. Some questions are peculiar to each group, so an interview guide was designed to suit each group. For example, (are you retained in agricultural careers? Which sector are you working with? Tell me, what encouraged or discouraged you from continuing an agricultural career? Are the skills acquired in school

sufficient for a career in agriculture? All these are questions asked among the graduates' categories, to mention a few (see appendix C3) which do not apply to undergraduate categories.

5.6.2 Focus Group Discussions

Powell and Single (1996) defined a focus group as a group of individuals selected by researchers to discuss and comment on the research topic from personal experience (Powell and Single 1996). Focus group is a new development from the traditional individual interview whereby social scientists came up with alternative interviewing methods that will be less directive and dominating (Krueger and Casey, 2000). Group discussion provides an ideal setting that enables participants to be actively involved in answering questions making it more in-depth and enjoyable. It also allows for exploring group norms and values, which is a vital instrument for cultural and cross-cultural study (Colucci, 2007). Focus groups have the exploratory potential for generating an understanding of group reactions to a particular subject of discussion, ensuring the generation of collected opinions rather than individuals through dialogue and debate with others. A focus group brings more richness to a topic of conversation than a one-to-one interview. It can further raise specific issues not anticipated (Skop, 2006).

Researchers should note its limitations as much as there are numerous advantages of using focus group discussion for a qualitative approach. The process may be time-consuming, and the interviewer may not cover the interview guides if they are not well managed. Therefore, it depends on the researcher's ability to continually avoid irrelevant discussions by having the interview guide in mind. Furthermore, it may be difficult for one person to facilitate the process successfully; therefore, it requires someone to take notes and record the event. The researcher must take note of individual differences to reduce bias so that outspoken people will not dominate the discussions. The idea of having a homogenous group based on sex is also advised. Another identified pitfall is that focus group discussion may not apply to sensitive issues. For example, discussing religion or politics among people with different idealogy may lead to conflicts and confrontations. Also, some personal experiences that people cannot share in a group, but they will in a one-to-one interview.

Nevertheless, this method is most appropriate for engaging young people in research. They will be more comfortable discussing with their peers than in one-on-one interviews with adults. The current study employs focus group discussions among students in their final

year in secondary school and higher institutions; in a pre-existing group, information and meaning on collective views about the subject of a debate can be generated. It is also helpful in creating a rich understanding of participants' experiences and beliefs (Gill, Stewart et al., 2008). Group interaction is significant in carrying out a successful focus group, and this can sometimes imply that pre-existing groups interact best for research purposes (Powell and Single, 1996; Gill, Stewart et al., 2008). Therefore, engaging students of the same level in focus group discussions allow ease of recruitment and enables groups with shared experiences.

Additionally, they will enjoy a comfortable and familiar environment that will enhance discussion or facilitate challenging each other comfortably (Gill, Stewart et al., 2008). However, the pre-existing group is not without a limitation. One identified in this study during the focus group discussions organised among the secondary school participants is the repetition of ideas among the groups. It was noticeable at the beginning of the discussion but later reduced along the process as they became more settled and gained more confidence. Maybe they were interacting with an unfamiliar person, and recording took place. Therefore, reiterating the research objectives and engaging them in activities during the discussion helps gain students' confidence. As observed, the discussion became more friendly and engaging after some time.

5.6.3 How to effectively engage young people in focus group discussions

Morgan and Krueger (1998) opine that" activities-oriented questions" provide a different way of getting information and promoting dialogue in a focus group; these activities include listing, ranking, sorting etc. Bloor *et al.* (2001) refer to this kind of event as "focusing activities", where participants are engaged in activities that enable the group to focus on the subject of discussion. This approach is helpful for young people who can quickly get bored in a lengthy conversation. Therefore, engaging them in activities that sustain their attention on a debate topic will help them think out their ideas more effectively (Colucci, 2007). In this research, students completed the task by answering a list of questions. The activities were done before the discussion, in the middle and end of the conversation (See Appendix). The sections commenced with demographic information, and the questions included issues relating to their childhood career aspirations and experiences. For example, in one of the sections, students were asked questions on educational factors influencing their career choices in agriculture. Unfortunately, some of their responses included poor qualifications of

teachers and other educational-related aspects that the students could not discuss in their teachers' presence. As soon as I noticed this interference, I engaged them in activities which allowed them to write their thoughts rather than discussion.

It agrees with Bloor et al. (2001) that activity-oriented questions can also be appropriate for talking about sensitive topics not to raise any undue alarm and make it enjoyable in a practical task. They further explain that exercises could be preparatory when introducing a new area for discussion or summary at the end of the section. In addition, these activities facilitate generating, sharing, analysing ideas and reaching a logical conclusion.

5.6.4 Micro Ethnography Study

Ethnography studies people in natural or real settings (Brewer, 2000). According to Hammersley (2006), ethnography involves collecting and analysing empirical data drawn from actual situations instead of the one produced under experiments and controlled conditions created by the researcher. In this process, observation and informal conversation with participants in a particular site of the subject under consideration are vital tools. It could involve a wide range of methods like participant observation, field notes, visual materials, documentary materials, informal conversation, and conducting semi-structured interviews or focus groups (Watson and Till, 2010). Lebaron (2008) describes micro ethnography as a video-based ethnography, which involves recording events in a natural setting. Data from the recorded video, interviews, and observations are then analysed. Part of the plan was to conduct a micro ethnography. Still, due to time and limited access to the students, the researcher only observes students on the field during one of their practical sections to understand their educational setting outside their classroom. For example, the researcher observed the cassava processing practical activities on the school farm took videos photographs (fig5.1). The process occurred only at the tertiary level because outside classroom learning at the secondary is not functional.

5.7 Sample Size in Qualitative Study

Sampling is the researcher's primary interest for the success of the research (Tuckett, 2004). In qualitative research, selecting respondents differs from the quantitative sampling method because the purpose is not the number of opinions or people but a deeper understanding of the opinions and issues (Gaskell and Bauer, 2000). Therefore, qualitative research sampling is concerned with the deepness and richness of data (Kuzel, 1992). The number of participants required is determined by the topic and the resources available to execute the research (Gaskell, 2000). This means consideration in sampling selection for qualitative research is adequacy and appropriateness. Therefore, attention is not on sample size but sample adequacy (Bowen, 2008). Bowen argues that the concerns of the qualitative researcher are to obtain more profound and broader views on the subject of discussion. As much as it is challenging to know the sample size required in a qualitative study before investigation (Mason, 2010; Bryman, 2015), there are criteria for sample size selection. These include theoretical saturation, a minimum requirement for adequate samples, the research's style or theoretical background, and heterogeneity of the population from which the sample is drawn (Bryman, 2015). Warren (2002) asserts that the broader the scope of a study, the more comparison required among the groups, and the more interviews, stating the minimum level of acceptance at 20-30.

On the other hand, Gerson and Horowitz (2002) argue that interviews that can support a convincing conclusion cannot be fewer than 60, and discussions over 150 will produce too much data to analyse. However, the sample size in a qualitative study should not be too small to achieve data saturation or too large and cumbersome for data analysis (Collins, Onwuegbuzie et al., 2007). In this research, the total number of participants is 58. The number includes all focus group discussions and in-depth interviews conducted face-to-face and telephone interviews, as shown in summary below:

S/N	Participants	Focus group	Number of participants
1	Secondary students	2	12
2	Secondary school teachers		2
3	Undergraduates	4	24
4	Lecturers		3
5	Agricultural graduates		12
6	Agricultural enterprises		4
7	Officials in the Ministry of Education		1
Total		6	58

Table 5.1 Categories of Participants

5.7.1 Secondary School Participants

The methodology developed considers the ethical aspect of research on young people regarding the researcher's power over the study (Leyshon, 2011) and also by paying attention to previous research, sociological approaches, and methodologies used to engage young (Leyshon, 2002; Holt, 2004; Leyshon, 2011; Ponto, 2017). In addition, young people were involved in research in the presence of adults or gatekeepers, so the questions asked were open-ended and emergent.

In the work of Leyson (2011), young people were contacted through the youth agencies and not the school or colleges to create a warm and welcoming environment. This method could also have been employed in this study as students may be more explicit in the absence of their teachers, especially in discussing issues relating to their education. “Safety and confidentiality” are sometimes incompatible, as Leyson (2002) opined. However, this study cannot be held exclusively outside the school environment or without schoolteachers included in the research. Therefore, the educational setting is the appropriate site for participant observation for this research.

Additionally, the limited time will not allow for one-to-one discussion and a home visit. For this research, students were approached by school management and teachers. The approval of

the school management is paramount in this research; the interest of the students and their career choice in agriculture were asked by exploring their subjectivities in ways that will be deliberate, open-ended and emergent. The focus group discussions were engaging, in a non-exploitative framework and at the pace of the students (Leyson, 2011). As much as the literature suggests the presence of teachers or gatekeepers in research involving young people, teachers in this kind of research hindered the students' response as teachers are inclusive in the institutional factors.

The first stage was to obtain consent from the principal of the school. A letter was sent through someone back in Nigeria, as I could not gain access to them through emails. I was fortunate to get approval from the school, facilitating ethical support for the research. Senior Secondary School (SSS3) final-year students preparing to enter higher institutions are suitable for this research. Participants at this level comprise students being offered agriculture as an elective subject. Some other students not offering agriculture as an elective were also interviewed. However, their responses were not included in the analysis as they did not give anything meaningful in answering research questions.

Figure 5.1 Focus group discussion among the female group in secondary school(2019)

The agricultural students were grouped into a homogenous group based on gender to ensure that each member was actively involved in the discussion. Morgan and Krueger (1993) agree that groups should be homogeneous and that failure to do so may result in the loss of relevant information, corroborating the thought of Kitzinger (1994) that status differences between participants can hinder discussion. A total number of two focus groups were formed, two (1) for males and two (1) for females. Each of these categories includes students offering agriculture as an elective. Each group comprises six students, as shown below, making 12.

School	St. Antony Secondary School			
Students	Male	Female	Total of Focus Group	Total number of students
Students offering agricultural subject	1	1	2	12
Total	1	1	2	12

Table 5.2 Secondary School Participants

Two agricultural teachers were interviewed at the end of the focus group discussions.

5.7.2 Tertiary Students

The University of Ilorin was purposively selected as a federal government school representing students from different parts of Nigeria. Therefore, it comprises students from various dialects and ethnic groups. The focus groups consist of agricultural students in their final year to ensure a sample of people who have adequate experience on the subject of discussion and make a meaningful contribution that the new intake may not have. These were also students preparing to enter the labour market; therefore, this topic is highly relevant to them.

At the University of Ilorin, there are seven departments: Agricultural Extension and Rural Development, Crop Protection, Agronomy, Agricultural Economics and Farm Management, Animal Production, Home Economics and Food Science and Forest Resources Management. It was impossible to cover all the departments within the duration of time for this research. Therefore, I grouped the department into two categories: production and administration. Production includes agronomy, crop production and animal production. The departments under administration are Agricultural Extension and Rural Development, Agricultural Economics and Farm Management, Home Economics and Food Science and Forest Resources Management. Two focus groups were formed to have a homogenous group based on gender and representation across all the abovementioned categories. One comprises female students and the other male students for each group's administration and production

divisions. Each focus group consists of six students, making up 24 students. Consent was sought from individual students since this group comprises older participants who can make informed decisions. The focus group discussions took place in the absence of lecturers, as they contained more mature students; therefore, the forum did not require the presence of gatekeepers, which made the discussion engaging. The first section required the students to answer questions about their demographic information. Each section of the group discussion lasted for one hour, after which there was light refreshment.

I held an in-depth interview with three lecturers in the faculty of agriculture.

Grouping	**Department**	**Female FG**	**Male FG**	**Total of FG**	**Total of students**
Managerial	Agricultural Economics	1	1	2	12
	Agricultural Extension				
	Forest Resource & Management				
	Home Economics and Food Science				
Production	Agronomy	1	1	2	12
	Crop Protection				
	Animal Production				
	Total	2	2	4	24

Table 5.3 Undergraduate Participants at the Tertiary Institution

5.7.3 Outside Classroom Observation in Tertiary Institution

On this occasion, I visited the site where practical farm training usually takes place. I was fortunate to meet students taking part in cassava processing activities. The students had an introductory lecture from the farm attendant before the commencement of the day's operations. After that, I spent time observing the whole process. I took videos, pictures of the activities, field notes, and recorded the interviews. The equipment on the university farm site is not sophisticated compared to the curriculum content.

Source: Pictures taken at the cassava processing unit of the university during outside classroom field observation in 2019

Figure 5.2 Students Processing cassava to make cassava granules(Garri)

Source: The university poultry unit. Pictures were taken during field observation in 2019

Figure 5.3 University Poultry Unit

5.7.4 Agricultural graduates

I obtained the contacts of agricultural graduates through the Alumni group chats. I had access to this group as a member of the alumni. An equal number of six males and six females were interviewed via the telephone, totalling 12.

Source: Students at the tertiary institution 2019

Figure: 5.4 Male Focus Group Discussion at the Tertiary Institution

5.7.5 Agricultural enterprises

In-depth interviews were conducted with four agrarian enterprise personnel managers in the Ilorin environment. Below is the breakdown.

Agricultural Enterprise	Production	Managerial	Total
Government Parastatals	1	1	2
Private	1	1	2
Total	2	2	4

Table 5.4 Agricultural Workforce

5.7.6 Curriculum Developers

The Federal Ministry of Education is responsible for and administers Nigeria's primary and secondary education sectors. Obtaining consent from this sector is somewhat complicated and cumbersome; notwithstanding, I was able to interview one of their subject specialists who was a graduate of agriculture and gave consent to be interviewed

5.8 Data Analysis in Qualitative Research

The data collection method in qualitative research differs from the quantitative study and analysis process. In qualitative research, data sources are from transcripts of the interview conducted in an open-ended and exploratory manner; hence data are usually large and cumbersome to report (Thorne, 2000, Bryman, 2015). Recently there has been a more innovative use of different sources of the qualitative database. These include recorded observations (both video and participatory), focus groups, texts and documents, multi-media or public domain sources, policy manuals and photographs (Thorne, 2000). Thorne asserts

that much qualitative research includes a semi-structured interview with open-ended questions; therefore, the difference between qualitative and quantitative study is not limited to the data collection method but the philosophical stance on truth and reality. Quantitative data rely on the scientific method to develop an understanding of reality while most qualitative research is focused on how people think and feel in a certain situation without making the judgment of the validity of their perceptions. Therefore, the qualitative study relies on the inductive reasoning process of using data to generate ideas and formulate a hypothesis instead of the deductive reasoning approach in quantitative research. The latter involves starting with ideas; data collected confirms or negates the idea(Thorne, 2000). With this background, analysis in qualitative research is a process of transforming raw data into a new precise picture of the phenomena under study. This process is an intellectual activity done by the researcher. Although there are many computer programmes for analysing qualitative data, this only aid in sorting and organising data, rather than transforming data into meaningful findings.

Bryman (2015) opines that although qualitative research has a high degree of structured analytical procedures, four frequently cited strategies for data analysis are used. These are analytic induction, thematic, narrative and grounded theory. The analytic induction differentiates between the methods, while grounded theory and thematic emphasis coding narrative do not. However, grounded theory and analytical induction begin analysis after collecting some data, informing the next step in the data collection procedure.

In this study, the thematic approach was used to analyse data by identifying, analysing and reporting patterns across the data collected from different sources rather than within the data to answer the research questions. In all the data analysis methods in qualitative research, coding and sorting data into themes is fundamental for analysing qualitative data (Braun and Clarke 2006). It minimises the data set and organises it in a form for easy description and analysis. The analysis process involves selecting patterns and themes, identifying themes of interest, and reporting them. For a beginner in qualitative research, thematic investigation is desirable to enhance the clarity of findings and results for easy reporting and dissemination of ideas(Boyatzis, 1998; Braun and Clarke, 2006).

What, then, counts as a theme? According to Braun (2006), a theme captures an essential idea about the research question and represents, to some extent, a patterned response within the data. Overall, themes do not emerge based on the degree of occurrence in the data set but

on their relevance to addressing the research questions. However, there is a debate on whether prevalence should be a criterion for emerging a theme (Braun and Clarke, 2012). I think this will shift the emphasis on quantity rather than quality which is one of the core philosophical stances of qualitative research. An idea may not be prevalent, but it may be critical in addressing the research question.

A theme could emerge inductively or deductively. The former is described as a bottom-up approach whereby themes emanate from data in grounded theory (Patton, 1990; Frith and Gleeson, 2004). Inductive analysis is defined as coding the data without matching it with an existing coding frame or the researcher's preconceived ideas (Braun and Clarke, 2006). Themes could also emerge deductively referred to as top-bottom or theory-driven.

Themes emerged inductively without paying attention to previous research to gain a more in-depth understanding of factors influencing the career choice in agriculture, which pre-informed the study. Another decision is the level at which themes are construed, semantic or latent. Boyatzis (1998) explains that semantic or explicit approaches identify themes on the surface meaning of data, not beyond what participants said or wrote. Emphasis is on patterns shown in the data and the sense of trends and implications. On the other hand, themes formed at a latent level focus on more than the semantic content of data by beginning to evaluate the underlying assumptions and ideas of the data. For example, this research reveals hidden factors influencing young people's career choices in agriculture beyond what is superficially captured. Therefore, in latent thematic analysis, themes are developed interpretably, and the report generated is theorised and not descriptive, which is consistent with the psychoanalytic modes of interpretation (Hollway and Jefferson, 2000)

This study combined the two levels to construct meaning across the whole data set and an in-depth understanding of concepts within the different categories.

Braun (2006) identifies the phases of thematic analysis as follows:

S/N	Phase	Description of Process
1	Familiarising with data:	Transcribing data (if necessary), reading and re-reading the data, and noting initial ideas.
2	Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set,

		collating data relevant to each code
3	Searching for themes:	Collating codes into potential themes, gathering all data relevant to each likely theme.
4	Reviewing themes:	Reviewing themes:
5	Defining and labelling the themes:	Ongoing analysis to refine the specifics of each theme and the story the study tells, generating clear definitions and names for each article.
6	Producing the report	The final analysis. Selection of vivid, compelling extract examples, the final analysis of selected extracts, relating of the study to the research objectives and literature, producing a scholarly report of the analysis

Source: Braun (2006)

Table 5.5 Phases in Thematic Analysis

5.8.1 Data Reduction, Display and Conclusion

Miles and Huberman (1994) describe the qualitative analysis process as "data reduction, data display and conclusion/drawing verification."

Data reductions occur throughout a qualitative study; for example, the researcher decides the conceptual framework, research questions, cases and data collection approach that applies to the research. As data collection occurs, further data reduction proceeds in summaries, coding, themes, categories, clusters, and memos. This process continues after fieldwork until the completion of final reports. Therefore, data reduction is part of data analysis involving sorting, coding, discarding, and organising qualitative data until conclusions and verifications are made (Miles and Huberman,1994).

In this study, the data collected were transferred from the recorder into my laptop and saved for transcription. The transcription process involves listening and writing out the discussions, which could be done manually or using NVivo. I could use NVivo to transcribe by uploading the recorded interviews on NVivo and transcribing immediately. However, being a beginner, I was more comfortable with manual transcription. Therefore, the transcription was transcribed verbatim and edited before it was transferred to NVivo for analysis. Codes

identified from the data later emerged as sub-codes, categories and themes. Finally, themes were displayed in an organised, compressed form where conclusions and verification were drawn, as seen below:

S/N	Themes	Categories	Sub-categories	Codes
1	Perception of agricultural careers	Negative perception	Societal status of agrarian jobs	-Agricultural careers are not prestigious -Agricultural careers are not professional -Agricultural careers are vocational, not a course of study. -Agricultural careers are dirty jobs -Agricultural careers are for low educational achievers
			Lack of profitability	-Agricultural careers are not lucrative -It is not a quick means of livelihood -It has a low return on investment
			Method of operation	-Use of crude implement -Stressful -Drudgery
			Childhood agricultural experiences	-Child labour -Forceful farm work by caregivers -Agriculture as a means of punishment in schools -Agricultural teachers are cruel
		Positive perception	The importance of agriculture	
			Entrepreneurship	-Means for self-employment
				Employment opportunities
2	Factors influencing the choice of career in agriculture	Social system	Circle of influence	-Family -Peer pressure -Mentors
			Education	-Lack of exposure to career opportunities in schools -Unattractive representation of agriculture (hoes and cutlasses) -Policy -Funding -Poor physical infrastructure -Poor school facilities -Inadequate teaching materials -Inappropriate practical experiences -Inadequate skill in practice -Admission policies/challenges -The lengthy duration of the study -Discrimination/agriculture for leftovers -Human capacity development -Teacher/lecturer personalities -Quality of teachers/lecturers -Poor teaching method (GIGO)

				-Inadequate extracurricular activities -lack of professionalism
			Religion affiliation	
			Media	
			Government	
3	Constraints in agricultural career choices	Lack of career guidance		
		Government factors		-Government instability -Poor policy implementation
		Financial constraint		
		Disconnected institutional linkages		
		High risk		-Nature's dependence on agriculture -Poor insurance scheme
4	Motivations for agricultural careers			
5	Innovative agriculture			

Table 5.6 Themes Generated from Data

Big data from the interview and focus group discussions are compressed into themes from which meanings of concepts inductively emerge, and irregularities and patterns are identified. Finally, thoughts flow is explained, and propositions are made (Miles and Huberman, 1994).

5.9 Ethical Considerations.

Ethics in research are the guidelines and principles that must be observed in the study. Gajjar (2013) defines ethics as rules and processes that guide research. Part of the ethical considerations is to promote the achievement of set research objectives, avoid error, and ensure accountability. For instance, there are guidelines for authorship, data sharing and confidentiality. Other ethical principles promote researchers' responsibility to the public. Ethical consideration, therefore, encourages funding of research work and public participation. Failure to follow research procedures can harm humans, animals, students, subjects or the general public (Gajjar, 2013). For example, researchers must follow the rules of informed consent. People should participate in research with adequate knowledge of the risks and benefits of the study. They must be informed that they can leave at any research

stage if they feel uncomfortable. Participants should be permitted to include gatekeepers or carers if the person cannot make an informed decision, like children or due to cognitive disabilities. Participants should be assured of confidentiality and data protection while researchers ensure the coding of peoples' identities. Furthermore, the code of conduct in research do not encourage financial incentive to coerce participation (Kvale, 2006). I explored a more practical way by giving light refreshments after the discussions.

Ethical consideration for this research was deemed strict because of the young people involved; it took a while before I could obtain ethical approval. Nevertheless, the involvement of children and young people in research has increased in recent years, especially in areas like education, health, child protection and public health (Stafford, Laybourn et al., 2003). Although there are ethical concerns involving children in research, young people are social actors who view their world. Therefore, their voices and making sense of social phenomena are essential in research. However, the approach has to be child-centred and consider issues from their participatory perspective.

Furthermore, the researcher must maintain their integrity by not falsifying data (Pings, 2000). Also, young people can only be involved in research with gatekeepers (Harden, Scott et al., 2000). The parents or carers serve as first-level gatekeepers, while school headteachers are second-level gatekeepers (Leyshon, 2002). This study observed this procedure by involving principals (headteachers) in secondary schools as gatekeepers. Consent was obtained to ensure voluntary participation and the right to leave at any point in the activity. Participants were informed of what they would do during the exercise and information on the outcomes. Participants were also assured of the anonymity and confidentiality of the discussions.

5.10 Limitations of the Study

This research took place during a period of change of government, and, by history, it is usually a sensitive time in Nigeria. In addition, it may sometimes involve some violence; students are often on holiday. Therefore, students form a more substantial part of the participants for this study which was to take place in the school environment. Therefore, part of the contingency plan was to travel a few weeks before the election and work within a limited time frame. The fieldwork started with secondary school students since the focus was on the final-year students preparing for the West African Examination. I arranged the focus group discussions with the assistance of the agricultural teachers during break time, each lasting for at least one hour. The female group took a little more time as they were more expressive.

The two focus groups at the secondary school comprised six students each. Each group included six females and six males, respectively. According to the plan, two groups should consist of science students who do not take agriculture as an elective course. Unfortunately, I could not access this set of students as they were unavailable within the stipulated time for this study due to exam preparation.

The alternative arrangement given to me involved final-year non-science classes. However, I discovered that they did not relate well to the research questions, as sections in the interview guide did not apply. In addition, although some of them have agricultural experiences from their parents since pursuing a career in agriculture requires a scientific background, these groups were not relevant to this study. Therefore, their responses were not included in the research.

Also, participants were sensitive about what they said concerning the educational system. It was more pronounced among students in a secondary school and their teachers. However, they were assured of the confidentiality and anonymity of their responses before the interview. As the conversation proceeded, substantial effort was made to reassure them that responses were for research purposes. The use of semi-structured interviews was also a contingency plan as it enabled the researcher to probe further for an in-depth study.

The students were expressive during the discussion, although they were withdrawn whenever their teachers came around. To minimise this, I stopped the conversation and focused on activities that required students to write their thoughts on the issue under consideration.

Focus group discussion with the tertiary students was more interactive, involving more mature students in their final year. They were more expressive and coordinated. The group did not require the presence of a gatekeeper which encouraged deeper discussions.

However, the officials at the ministry of education were unresponsive, and only one person gave consent; ultimately, the interview was shallow. Therefore, the responses were not included in the analysis.

5.11 Summary

This chapter presented the underlying philosophical stance of the research. It also outlined the rationale for the research design and explained the reasons for multiple cases of triangulation. It then summarised the appropriate methodology based on the paradigm of the research. Subsequent sections further outlined a step-by-step method of data collection and the research participants. After the relevant data collection, the discussion is consistent with the qualitative

methodology. The concluding section presented issues on ethical considerations and the study's limitations. The next chapter is the first of the three chapters that comprise the data interpretation and discussion section.

Chapter 6. Perception of Agricultural Careers

This chapter is one of the two chapters on the analysis of findings in line with the research questions for the study. The chapter contains demographic questions, including respondents' childhood agricultural experiences and career aspirations. Respondents' responses were analysed using descriptive statistics (bar charts, pie charts and tables). The section laid a foundation for other areas and further discussed the participants' perception of agricultural careers and how their background information influences their perception negatively and positively. The discussion and interpretation of data comprise three groups secondary students, tertiary students and people already in the world of work. (agricultural graduates, enterprises, lecturers, teachers and curriculum developers). Finally, the section presents a summary of the chapter.

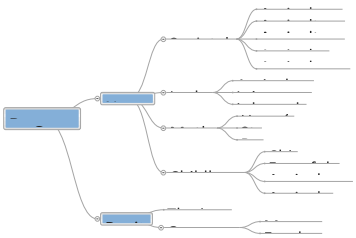
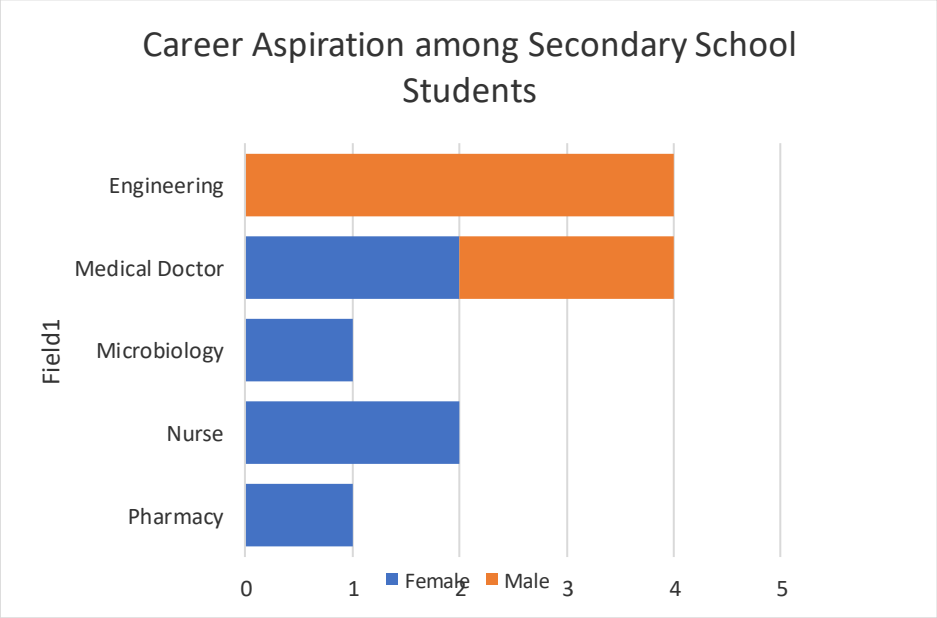


Figure 6.1 Map mind showing Emerging themes on Participants' Perception of Agricultural Career

6.1 Background Information of Participants



N=12

Figure 6. 2 Career Aspiration Secondary School Students

Figure 6.2 shows the responses of secondary school participants about their career aspirations. Across the board, most participants chose medical-related courses, with medicine being the topmost in their choice. There is no gender disparity in the selection of medical careers as it is a choice course among female and male participants. However, the participants acknowledged that the medical profession is what every science student craves, reflecting the effects of peer influence, lack of understanding of career choices and societal views of jobs. It does not show explicit knowledge of what matches their abilities, strengths, and skills.

I have in mind to become a medical doctor. However, I noticed that people don't take care of themselves. People eat whatever they like. I want to be a medical doctor to advise people on healthy living (Deborah-SSS female focus group).

Most of the participants' responses connote a limited understanding of professions. For example, Deborah's(names mentioned are either first names or pseudonyms assumed by individual participants) passion is to advise people on diet needs and live healthily. However, she does not have to be a medical doctor to become a nutritionist. It indicates the need for career guidance, especially at secondary schools where career decisions are made. Generally,

a guidance and counselling career is not relevant in Nigeria compared to the developed world (Omoniyi, 2016). Although the federal ministry of education has a blueprint for guidance and counselling (G&C) in schools, as stated in the National Policy of Education (NPE), the present state shows that G & C has not been given its place at various levels of the education system (Omoniyi, 2016). In most schools, G &C is non-existence or non-functional as schools face inadequate funding to run guidance and counselling sections and a lack of accommodation to set up G&C (Haruna, 2015). Also, due to insufficient teaching staff, trained counsellors take up teaching roles as the school places less emphasis on the counselling profession (Omoniyi, 2016). Teachers with no training in counselling are often responsible for advising their students when the need arises alongside their teaching role. As a result, teachers do not have enough time to support their students other than teaching activities due to workload. Also, due to a lack of professionalism and training, the teachers may leave the students worse-off as they lack work ethics (Nkechi, Ewomaoghene et al., 2016). For instance, teachers may discuss students' issues with their colleagues; hence, students prefer keeping secrets rather than becoming objects of discussion among teachers. Consequently, one of the reasons students are left with no option is to rely on the family circle for decision-making, including career.

Only a few indicate career choices that align with their skills and strengths.

"When I was younger, I wanted to be a medical doctor, but while growing up, I noticed that I did not like the sight of blood, so I dropped it. I decided to choose microbiology instead because I love research, or things that deal with research" (Priscilia- SSS female focus group)

Most students with clear career aspirations are from enlightened families or are exposed to career education through their various affiliations. Nevertheless, having self-awareness is vital in making career choices. Still, career decisions become complicated when an individual lacks an understanding of matching a career with an area of interest and skills. People obtain career inspiration from media sources, e.g., books, films, and characters on social media. Yet, the decision depends upon individual self-knowledge, knowledge of the world of work and the ability to match the two. In other words, one may be aware of likely professions but lack self-awareness or the ability to match suitable jobs to their interest and skills. However, understanding the three is paramount to finding the right career.

Additionally, some career aspirations may not emerge without having prior information or exposure to specific work opportunities. Individuals may not know what they can do without trying it, hence buttressing the role of environmental and social factors (Ingold, 2000)

Those who choose medicine-related courses do so, considering that medical careers demand extra effort, while they prefer a more straightforward alternative but still in the medical line.

"I finally decided to study pharmacy; I thought about it very well because I was contemplating becoming a medical doctor, but I was considering the difficulty of medicine (SSS Tosin- female focus group).

The principal driver for the choice and craving for a medical or medical career are societal views (prestigious courses), for example, the title of a doctor and the influence of role models, parents, peer pressure, and significant others). Also, for children with career aspirations in conspicuous professions (medicine is apparent and desirable among science courses), it takes digging deeper and lots of exposure to discover other courses like agriculture that are already termed "undesirable". It is impossible to develop aspirations in a profession without awareness.

At the same time, individuals may obtain career information from the formal or informal setting. The implication is that one may have a vague understanding of a profession from an informal rather than a formal setting. For example, career information from the school or workshops, conferences, online articles, and TV career presentations will be more expository and facilitate making career decisions in the right direction.

Also, the role of significant others (circle of influence) influences career decisions. The impact may depend on how cordial the relationship is with family or friends. It sometimes may be an outsider who one holds in high esteem or someone in place of authority.

"….I want to become a nurse; it has been my dream since childhood. We have a family member who is a nurse. She is my big mum; she is like my role model. The way she takes care of people had created a passion in me; it is like she has embedded that character of taking care of people in me….." (SSS Majemu-female focus group)

"I have a role model who is a member of my church, and he is a doctor. I admire him so much; he counsels and advises on health and nutrition. I got motivated by him and his wife, a pharmacist" (SSS Deborah-female focus group).

However, while the preference for careers in medicine does not discriminate among gender, it does for engineering courses. Male participants indicate engineering as their career goal, implying that mathematics skills courses are usually gender-related and common among boys (Gottfredson, 2002). One of the reasons identified is a lack of self-confidence due to

stereotypes that some subjects are male-related. The absence of female representations in such courses discourages other female students who lack motivation. Generally, most girls would have ruled out some occupations like engineering, building contractor, hardware sales, military etc., regarding these occupations as too masculine. At the same time, boys would have ruled out professions like receptionist, nursing, and librarian as not manly enough. These are factors restricting young people to limited career opportunities.

However, many pieces of research on the factors influencing career choices in agriculture do not reveal gender-related aspects (Torres and Wildman, 2001; Esters and Bowen, 2004, Esters and Bowen, 2005; Adebo and Sekunmade; 2013, Fizer, 2013). Although, White (2012) revealed that gender was significant in students' career choices in agriculture. However, the findings of this study did not indicate agriculture as a dominant male occupation or vice versa, as the results did not show gender disparity. However, at the secondary level, neither sex sought further academic pursuit or a career. The negative perception is stronger among secondary school students than other older participants, primarily maybe, due to a lack of exposure to different areas of agriculture. Many still view agriculture as farming and a profession for the poor. Both male and female participants indicate the possibility of establishing an agricultural business in later life as an extra source of income but not as a career or course of study. However, findings show that most females prefer poultry-keeping at a subsistence level that can be operated around the house as they perceive it as less stressful.

An attempt to know why participants chose agricultural subjects among the electives in secondary school shows that they consider it less demanding than other options (further mathematics, food and nutrition, geography), not because they intend to seek further study in agriculture.

"Personally, for me, I would have chosen geography, but I chose agriculture because I felt it is simpler" (SSS Jayjay-male focus group)

Meanwhile, some felt agricultural knowledge might be helpful in the future but not as a course of study. The study also shows that both genders prefer animal production to crop production as an additional source of income in the future. The reasons given are that crop production requires enormous capital and is more stressful than animal production, as one of the participants pointed out.

Some said there is stress in agriculture; I don't think so except for crop farming but no other sectors like poultry-keeping. Crop farming also requires enormous capital(SSS Parish-male focus group).

Nonetheless, the participant did not view agriculture as a course of study but as an alternative income source in later life.

"I chose agriculture to gain more knowledge on farming activities maybe incase in the future; I may want to start a business of my own as an alternative source of income" (SSS Victor-male focus group)

Overall, the lack of interest in agriculture, as identified in this study, is primarily due to the societal status of the course and the belief that some professions, especially medicine, are more lucrative and attractive for high achievers. Ideally, everyone will aim for the best and opting for agriculture seems degrading. Although some admit their interest in agricultural activities, they opined that because of the significant capital it requires, they would pursue a career in other lucrative courses and engage in agricultural activities in later life when they have enough money for the start-up. Data suggest little or no preference for agricultural education and training

"In the future, if I become an engineer and have saved some money though I will be working, I can also engage in agriculture if I already have the capital to start. So, my challenge is capital because starting up agricultural activities requires enormous amounts of money, so I can't go into it right now (SSS Parish-Male Focus Group).

Most of the participants continued to refer to agriculture as "farming" Similarly, many have childhood agricultural experiences in farming. Although their parents are engaged in more than one aspect of farming, most have agricultural experiences in crop farming, as shown in fig 6.3

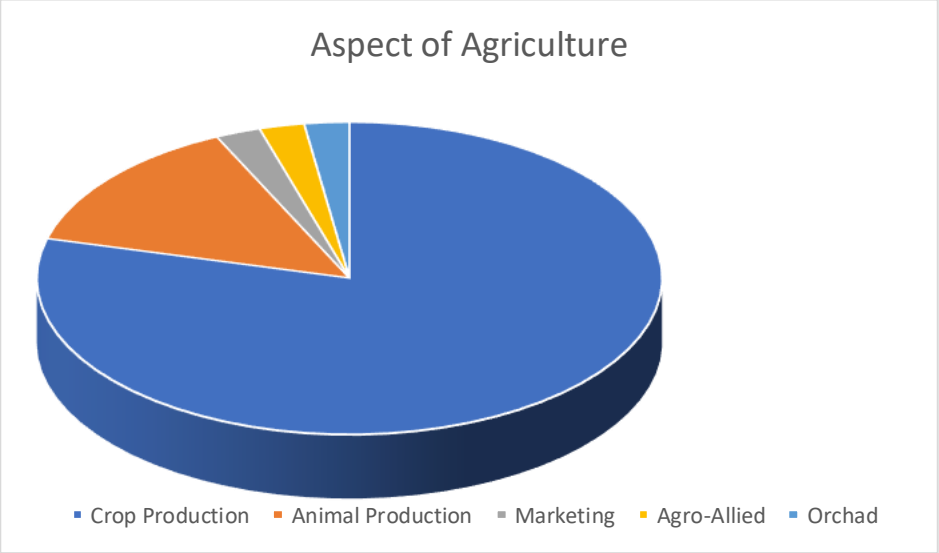


Figure 6.3 Childhood agricultural experiences of secondary school students

Childhood career aspiration in medicine also ranks high among tertiary students, while many show interest in agricultural jobs. However, participants acknowledge the influence of parents and friends on choosing a career in medicine. Participants ascertain pressure from parents to choose medicine against their personal choice of agriculture, giving the impression that agriculture is for low achievers. It takes a self-determined person to stand by a decision, especially when parents are involved, and it is culturally unacceptable to challenge parents' authority. However, individuals should be allowed to take the lead in life choices. Participants' choice of agriculture career is the product of their interest, the realisation of abilities, numerous opportunities in agriculture and motivations from significant others. Such participants are likely to excel in their careers as decisions were made voluntarily rather than by coercion. Also, the individual drive is sustainable.

"I chose agriculture as a career but against mum's wish. Like every child in this country, most people want to be in the medical profession, especially because of parents and peer pressure. When I was younger, I always called myself a doctor and wanted to be a doctor, but I later found out that I always do better in agricultural courses. Now I am in agriculture, not because I am poor academically. Though the pressure was there from my mum, I was left to decide what I wanted. I had the opportunity to study anatomy, physiology, or pharmacy with my jamb cut-off and post–jamb, but I chose Agriculture. My dad supported that agriculture is a good course though my mum was unhappy." (Undergraduate Adebayo-Male Focus Group)

Note: (JAMB) Joint Admission Matriculation Board and Post JAMB examinations are examinations for entrance to Higher Education.

"I have been into agriculture since my childhood. My father is a farmer, and we all go to the farm with him, so I am used to cultivating farmland, it is already part of me, and I will like to continue the career" (Undergraduate Yaya-Male Focus Group).

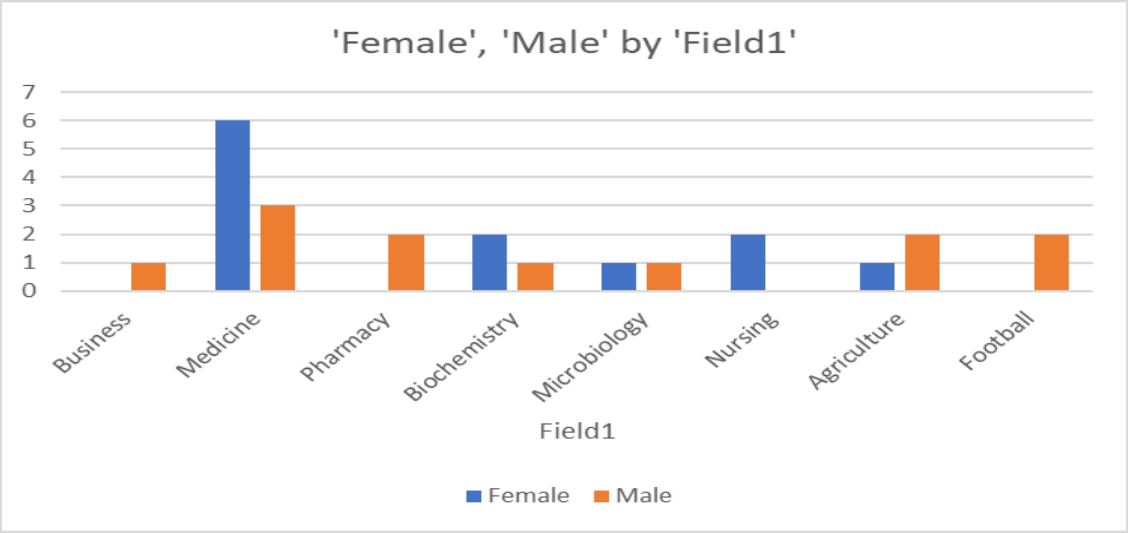
"I chose agriculture right from the initial stage; I got my motivation through my sister. I used to help her on her poultry and banana farm" (Undergraduate Sonia-Female Focus Group)

"I intend to be a practising agriculturist because there are many opportunities in agriculture. , it is only visible to people that can recognise it."
(Undergraduate Adebayo-Male Focus Group).

The older participants have more cognitive development because of age, more awareness of interest, skills, passion and less parental control. Although many aspire to medicine from childhood, they later realise it is not in line with their abilities and strengths, acknowledging that lack of exposure, their peers and parents influence their career aspiration in medical-related courses.

"I had always wanted to be an entrepreneur when I was young. I got motivated by my mum, who is a trader. But because my friends aspired to study medicine, I decided to study anatomy. I got admission to study anatomy, but I was offered agriculture in my second year when I could not meet the requirement. That was when I realised that I should have pursued my passion. There is no point in forcing yourself into the medical line or doing what you don't like. I wish we understand our abilities while growing up" (*Undergraduate Alabi-Male Focus Group)*

"Another issue is parental influence on career choices; even though our parent wants the best for us, they allow us to choose our career. When growing up, nobody enlightened us about the profession. I would have made the right decisions if I had been given adequate exposure to career opportunities. We do not have the chance to discover our passion and what we like doing. Society did not make agriculture attractive either. Every parent wants prestigious jobs for their children". (Undergraduate Male FG-Akanbi)



N=18 Figure 6.4 childhood career aspirations among agricultural undergraduates.

Moreover, due to their inability to secure admission into medicine, the participants studying agriculture handle the situation differently. Some purposed to seize the opportunity, while others were uncertain whether to change their careers afterwards. However, few participants feel they have wasted time and cannot make anything out of the agricultural profession.

"I chose medicine, but I am now studying agriculture; though I tried to switch to medicine, it did not work out. It is not about what I study, but I am ready to make the best out of it." (Undergraduate Abel-Male Focus Group)

Considering this mode of entrance into agricultural careers could hinder the retention of agricultural graduates and possibly affect the quality of graduates' turnout. However, undergraduates indicate their readiness to continue their careers in agriculture after school due to the numerous opportunities they discovered in agriculture (see fig 6.5). A critical motivation factor is the opportunity for self-employment and creating an agribusiness, considering the country's unemployment rate. However, there are identifiable constraints to careers in agriculture.

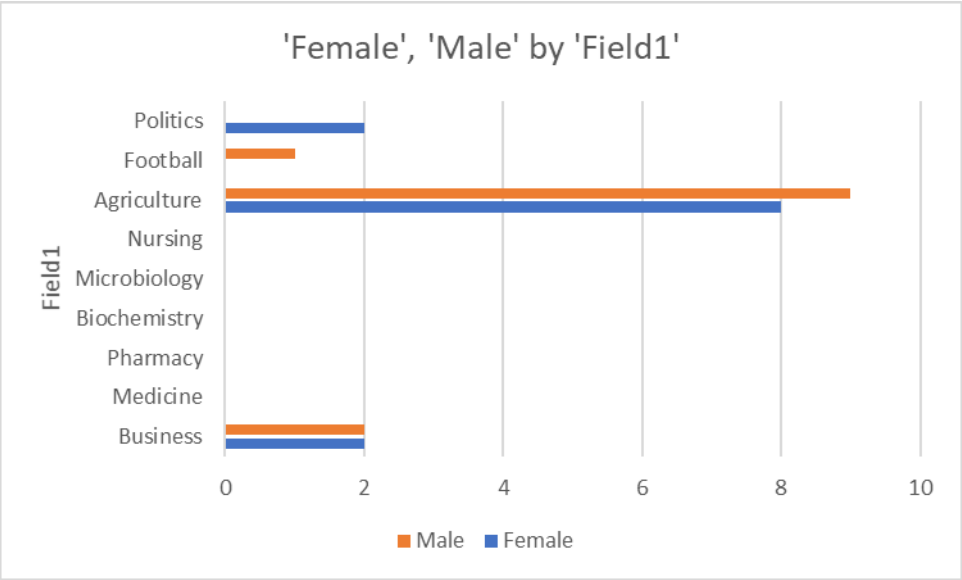
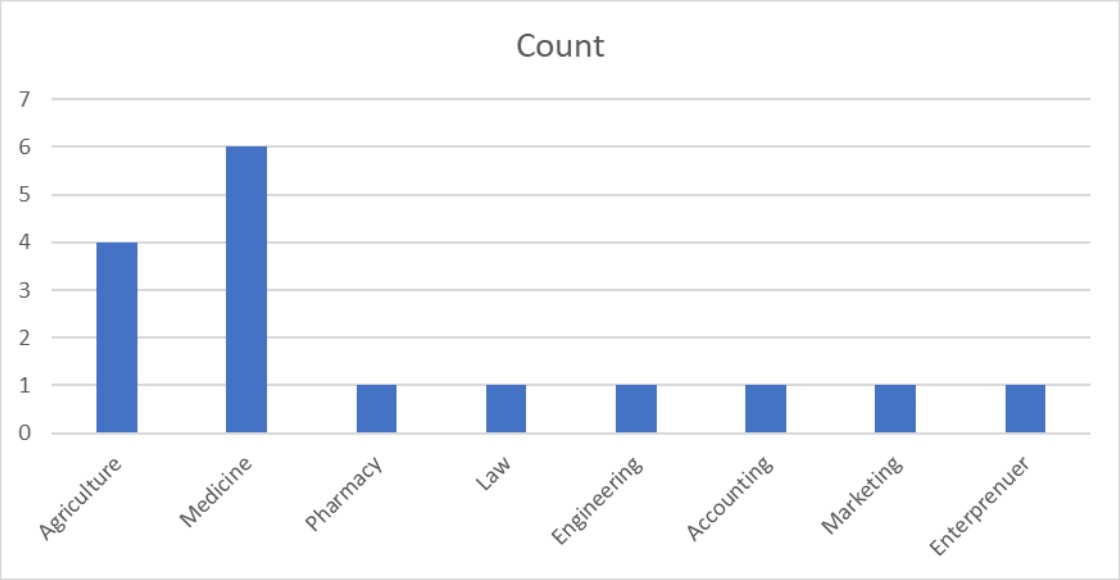


Figure 6.5 Agriculture Undergraduate Career Aspiration After Graduation



n=16

Figure 6.6 Childhood Career Aspirations of Agricultural Graduates and Agricultural Workforce

Childhood career choices of agricultural workforces and graduates are not different from the students in secondary and tertiary institutions. Also, medicine peaked high in childhood career aspirations. However, this category has a broader selection of careers (Fig 6.6). Although not explicit in the data, one could infer that these groups may have more career information access than the previous groups (secondary and tertiary students). Also, a considerable number aspire to the agricultural profession compared to secondary school students. In addition, some agricultural workforces were formerly not agriculture students but now work in agricultural parastatals. Some participants preferred a non-science career in secondary school but were influenced to choose the science route. An indication of strong influence from social actors implies the need for public awareness in making career decisions

Comparing all participants' career aspirations, the groups' craving for medicine and medical-related courses is similar. However, data show that limited awareness and lack of exposure to career opportunities significantly influenced their career decisions.

"It is the major trend among young people, provided you are in a science class. There are just a few career aspirations, we are aware of either medicine or engineering, and the majority go for medicine. That was what formed my aspiration. (Undergraduate Male Focus Group Abel).

The data indicates a lack of career guidance. While some courses are overcrowded with applicants, others receive little or no applications. Although many secondary school students

feel strong desires for medical courses, their desires are challenged in the face of a competitive admission process. At the same time, many end up in other courses based on the available spaces (common ways of recruitment into agricultural careers). As a result, most are studying courses that are not on their career choices as they are forced to face reality. Many take available courses as alternatives and, as a result, struggle through the programme. In both theories, a central factor is an intention to perform a given behaviour, which is assumed to be a motivational factor influencing behaviour. This implies that there may not be enough drive to do something out of compulsion, coercion, or decisions that come arbitrarily due to the only available options. Although some actions are habitual, that is, informed by doing things over time, they may be triggered automatically by situational hints (Bargh, 2006; Wood Neal, 2007). Nevertheless, forming intentions can be crucial for securing long-term goals and aspirations (Baumeister & Bargh, 2014; Kuhl & Quirin, 2011).

"We are studying agriculture because we could not secure admission to medicine. We result in fate to avoid wasting time at home" (Shayo-Undergraduate female focus group).

"In my case, I was given agriculture, not that I applied for it. Since not many people applied for the course and need people there, they will offer you agriculture just for you to not sit at home. The morale of many of the students in agriculture is already killed in that process." (Agricultural Graduate –AG5 male)

This recruitment method into agricultural careers usually succeeds in harvesting emotionally battered students. It also creates an impression that agriculture is for low achievers, leaving agricultural students with feelings of inferiority complex. Participants ascertain it informs their negative perception of agricultural careers

"People believe that low achievers who could not meet the admission cut-off for the medical course are in the faculty of agriculture. They should also set a standard for agriculture, like any other course. If the condition why the university pushes people into agriculture is because there are too many applications, they should devise other better alternatives; the action is demeaning" (Undergraduates male focus group-Adebayo)

"I used to feel inferior in my 100level when my roommates studying geology tell me agriculture is all farming with hoes and cutlasses" (Shayo-Undergraduate female focus group).

Many students in agriculture are emotionally battered; this implication may have a long-term effect on the quality of agricultural graduate turnout and retention in agricultural careers. Therefore, a more sustainable option is making agriculture more attractive from the early years to increase the number of people entering agricultural education voluntarily and not out of coercion or compulsion.

"No profession is better than the other; every career has its contribution to society. Many agricultural graduates are choosing another career after school" (female lecturer 1).

Although agriculture was not their initial plan for many students, admission into the course was an eye-opener to the opportunities in agriculture. Also, being self-employed is a motivation considering the country's high unemployment rate.

"Over time, I have discovered many opportunities in agriculture, primarily orchards. It is becoming more attractive now in my state. I see farmers becoming rich, buying cars and living a good life. I have plans to go into that as soon as I secure land for it" (Abel-Undergraduate male focus group)

6.2 Participants' Childhood Agricultural Experiences

More than 80% of the respondents confirmed that they had childhood agricultural experiences in different aspects of agriculture, mainly crop production. The data suggests that it is one of the reasons why respondents continually referred to agriculture as farming, as they lack exposure to other aspects. Since most experiences are peasant farming, participants described it as complicated and tedious—additionally, it is not an enjoyable activity as parents and carers forcefully coerce their children to farm. The idea of children as farm labour persists, discouraging young people from agriculture.

*"Going to the farm was not voluntary. Sometimes we cry when coming from the farm because the place is very far away and we trek long-distance "(Agricultural graduate –Mal*e AG 6)

"Partly, there are some activities that I enjoyed like planting, but I dislike harvesting time where you have to carry the load" (Agricultural graduate female AG7)

"My dad had a piggery farm managed by my siblings and me. We only work while my dad collects the money. Then the experience was not palatable. There was no proper communication seeking our consent; we were literarily forced to do it. We had no choice, so the interest in agriculture was not there." (Agricultural Enterprise male -AE 5)

"When I was younger, my parents took me to the farm, but I did not like it. It is very tedious, especially when my parent instructs me to weed the cassava plot. In the process, I sustained spots because of my fair complexion. So I do hate going to the farm" (SS female teacher-PTO)

However, some participants admitted that their childhood agricultural experiences made them interested in agriculture, as the parent made it fun and did not engage them in the tedious aspects of farm activities. Others acknowledged that their motivation was due to the success of their parents in the farming business.

"I choose a crop production and processing career because I have been into that since childhood. My father is a farmer, and we all go to the farm with him, so I am used to cultivating farmland, it is already part of me, and I would like to continue in the career" (male undergraduate- Yaya)

"Sincerely, I was born and bred in a rural area. I was 12 years old before I left the village. I did not see any farm work as a big deal; when I came to the city, I discovered the modern world. I thought that the village is the best place to be" (male agricultural graduate AG4-Male)

"In the 50s and 60s, I was very close to my grandfather, a major supplier of oranges in Lagos state. I visited the village every weekend on my grandfather's farm, which influenced me greatly; my grandfather encouraged me to pick agriculture as a career because he was successful in his agricultural business. He had four wives and many children. I am just one of his grandchildren" (male lecturer –L3).

However, one significant dissatisfaction expressed by participants is the exertion and stress in agricultural activities due to crude implements. Also, parents and caretakers engaged in agriculture for family consumption and as an alternative source of income with no business orientation, formal education or informal training. Therefore, the children of such people might not be encouraged to pursue a career in agriculture if their parents recorded little or no success.

"That time, it was not interesting to me for two reasons, they were farming at a subsistence level, and the output was not encouraging. If my father had bought a jeep from engaging in farming, or maybe they had built a big house possibly, I would have developed an interest. It is easy to develop an interest in what brings money. Though the fun part of it is we play with other children on the farm and also maybe because my parents are educated, they do not push us to do the tedious part" (male agricultural enterprise- AE 1-)

"Somehow, we have been into agriculture, though mainly for family consumption and some extra income, but not as a real business. They did not have a global view or a business plan. We even had a garri processing unit, but my father's workers were myself and my siblings. He never thought of employing people that could work for him. He did not see it as a business, and there was no proper accounting for labour cost and family consumption" (male agricultural enterprise -AE 5).

Note: *Garri (Cassava granules)*

6.3 Negative Perception of Agricultural Careers

Data suggested some underlying themes of why participants are negatively disposed to agricultural professions:

6.3.1 Societal Status of Agrarian jobs

Young people form career aspirations by observing people and the profession they do, using tangible and visible evidence. It accounts for why young people prefer prestigious jobs like doctors and lawyers because of the feasible attributes and the prestige attached to such a profession. Career aspiration follows a similar pattern among all participants. Ideally, young people are expected to consciously search their "social space" for a personally fulfilling occupation. Over time, continuous cognitive growth makes them better understand their uniqueness. For example, their interest, abilities, and values connect their personality and suitable jobs (Gotfredson, 2005). Adequate exposure and guidance are essential in the process. However, to a large extent, most participants' career decisions were driven by society's view of some professions. Participants perceived agricultural courses as low status compared to other prestigious jobs. These are discussed under the following sub-themes

6.3.2 Agriculture courses are for low achievers

Participants opined that medicine is for high achievers and only people with low-grade study agriculture, comparing the cut-off requirement for admission into medical and agriculture courses. In addition, dropping off students who could not meet the required scores in their first year in medicine and moving to agriculture also create a negative perception of agricultural careers.

"The school should increase the entry scores to agriculture. It will boost the image of the course so that it can compete favourably with a course like medicine. The university should stop admitting students who do not choose agriculture to take the course seriously. We need to erase the impression that agriculture is for low achievers" (Undergraduate Male- FGD-Silver)

" I am dissatisfied with the admission process. Agriculture should no longer be a dumping ground. The country indeed wants more people in agriculture, but that they want to achieve their goal by dumping people in agriculture is wrong. This method of admission is not encouraging, to me, I feel this method debase agricultural students and graduates" (Undergraduate Male-FGD-Adebayo)

"*The system discriminates against other courses. I had a terrible experience during the national youth service corps (NYSC), a one-year programme for graduates. They gave doctors and nurses special treatment and relegated other professions. Does it mean I wasted five years studying agriculture? We do not place value on some professions. As a parent seeing how some professions are disdained, I will never allow my child to do such a profession. People believe that people in agriculture are poor academically and will become a farmer. We should place value on every discipline. The students all crave courses like medicine and engineering because society values such courses. We should change that*

orientation; all courses are important; not everybody can be a doctor or engineer." (male agricultural graduate AG5).

Also, people believed that students with high grades should automatically apply for medical courses without considering their interests, abilities and passion. However, not all students with high academic performance have abilities for medical careers. There should be value in all professions; students should not feel inferior because they study some courses. Participants ascertain that the selection process creates a feeling of inferiority among agricultural students. Moreover, innovative agriculture requires high achievers and an emotionally stable agrarian workforce to take agriculture to the next level.

6.3.3 Presentation of Agricultural Careers

Students dress up representing the different professions during presentations and career talks in school. For example, a career in medical-related courses and engineering is described as white-collar, while students representing agriculture wear casual dress, holding hoes and cutlasses.

"My passion for medicine grew when we had a career talk on medicine in my school. They displayed a lot of things about medical careers, and I fell in love with the profession." (Susan-SSS Female focus group)

I was invited to a career presentation on agriculture at a primary school. The students dressed up in different professions. Unfortunately, the students who represented agriculture appeared like farmers carrying hoes and cutlasses. I told someone sitting close to me that the way agriculture was presented made us think negatively about it. If agriculture is about hoes and cutlasses, the perception is that agriculture is all farming. It discouraged students in their early years. They presented it as a dirty job; there is a need for a reorientation because I think the schools are not communicating careers in agriculture well. (Male agricultural enterprise-AE5)

Furthermore, the idea of punishing students by taking them to work on school farms also created a significant negative impression of agricultural jobs.

"Whenever students err, they take them to weed on the farm to punish them; this action discouraged students from studying agriculture. Students see agriculture as farming characterised by hard labour. (male agricultural enterprise-AE5)

Even in this century, the media presentation of agricultural jobs has not changed. In some books, pictorial representation of agriculture careers remains hoes and cutlasses.

6.3.4 Professionalism

The medical profession receives a doctoral (Dr) title after certification. A certified engineer carries the title of "Engr". It is not so for agricultural students who spend five years in tertiary

institutions. Additionally, nobody can take up the role of a doctor without certification; however, people practice agricultural activities without formal training or education—reasons for low career aspirations in agriculture among young people. Therefore, professional certification will boost the image and societal view of agriculture careers

"I think it has so much to do with the government and the education policy. Engineers spend five years in school at the end, getting titles (Engr), like lawyers and doctors. It is not so for agricultural students who spend five years in school without identification". (male agricultural graduate -AG1)

"We also need to professionalise agriculture; we should eliminate quacks in agriculture to give it a better image. Nobody becomes a medical doctor without formal education; we should value every discipline. The students are craving courses like medicine and engineering because of society's value on such professions". (agricultural graduate AG5).

"For example, when a graduate of medicine could not secure a job with government parastatals, they don't look for a career in the bank or elsewhere. Instead, they will set up their clinic, work in private hospitals, or pull resources together with other doctors to set up healthcare services. The same professionalism should apply to agricultural graduates" (male agricultural enterprise AE1)

6.3.5 Lack of Profitability

People believe that agriculture is farming, and farmers are generally poor. Many view farmers as people with a low standard of living, as seen in how they dress, which may not be a true reflection of their socio-economic standard. Some agricultural jobs may not require a corporate appearance. The nature of most agricultural activities may result in work clothes getting dirty; this makes people classify agriculture as messy. Therefore, people perceive agriculture as unprofitable compared to doctors, who are always dressed corporately.

"We see farmers wearing rags is not encouraging and the hard labour involved. People will not venture into any profession that does not have monetary value and societal recognition" (male agricultural enterprises AE3).

"Majorly, people think agriculture is all about farming, and nobody wants to be a farmer anymore because of the experience of our rural farmers. People don't also want to do dirty jobs" (male agricultural graduates AG6).

"Agriculture is a dirty job. I smelled when I was operating a piggery farm. People look at you as if you are local. Though it allows self-employment" (male agricultural graduate AG2).

"None of my children is studying agriculture; it was never their choice though they are in science. I have been trying to make at least one of them develop an interest in agriculture, but I still have not succeeded. They see it as a dirty job, especially in the production aspect of agriculture" (female Lecturer L1)

Apart from people's perception of agriculture as a poor man's job, data revealed other reasons for the unprofitability of agricultural activities: lack of a business plan, lack of proper recording, lack of specialisation, and lack of training and education. Many embark on agricultural activities without a plan, no consideration for accounting principles and procedures of the law of demand and supply, no proper recording and lack of adequate business appraisals. It further reveals the lack of agricultural training and education, which explains why people engage in different agricultural activities and make no meaningful profit from them. They do not see it as a business as they make no family consumption and labour record. Therefore, they hardly know the actual income and expenditure; as a result, agriculture is unattractive to young people because they desire a better life and something more productive and lucrative. Many will not mind the societal view that agriculture is productive.

"One of the reasons is that farmers do not run agriculture as a business. They may end up selling below the cost of production because they do not include their cost of labour" (male agricultural enterprise AE2)

"As I said earlier, any lucrative profession will attract young people. For example, more people are now in fish farming when they realise it is lucrative. Like I started a fish farm estate, now people are adopting the idea. People don't want to be scapegoats not until they see that the concept is workable and profitable" (male agriculture enterprises AE4)

Low productivity is a drawback in agriculture for many young people. Hence, agricultural mechanisation and modern and innovative agriculture will attract more young people. Young people who are innovation prone are more likely to be attracted to technology-inclined agriculture. Increasing productivity in agriculture requires improved technology and upskilling an agricultural workforce. It is not necessarily the quantity but the quality of the workforce. Furthermore, backyard farms downplay the need for training and education

"I commented during an interview that young people are more likely to be attracted to something lucrative. Nobody will force or beg them to do agriculture if it is profitable. More people will go into it, which will attract young people. Let us move away from this subsistence agriculture and small-scale farming. I am against small-scale farming and nearly caused controversy at a conference I attended. The small-scale farming we are talking about is no longer relevant. Small-scale farming cannot feed us again; no country has escaped poverty using small-scale farming. We need a skilled agriculture workforce" (male Lecturer-L2)

Most people embark on agriculture enterprises with little or no training. Hence, they cannot develop innovative ideas for doing things better. Moreover, because of the crude method of

operation, agricultural activities are characterised by a lot of exertion and stress resulting in low output compared to improved technology. Using crude implements in teaching agriculture in higher institutions, a centre for innovative and technology-led agriculture, is also discouraging. The curriculum, in theory, entails technology-driven agriculture but does not apply in practice.

"The education system is discouraging to young people. They believe that agriculture is stressful, entails using crude tools, and is less attractive. Many believe it is a dirty job that you may have little or nothing to gain. If they can make it more appealing, lively and mechanised, it will attract more people to agriculture. The technological aspect of agriculture in schools is inadequate. For example, the practical farm year was done manually with no mechanised knowledge gained" (Silver-female undergraduate focus group).

"Most of them think they will be like their forefathers using hoes and cutlasses; these primitive tools are characterised by exertions and hard labour, which can only be operated at a subsistence level. This method can only be enough for the family and has little to sell. Primarily young people's negative perception about agriculture is because of the use of crude implement" (male agricultural enterprise AE3)

"Agriculture is stressful, and in Nigeria, as of now, agriculture is not something that you will go into; in Nigeria, there is no machinery, no improved seedlings etc." (Pricilla SSS female focus group).

"Agriculture is too stressful; let's forget that there are other attractive courses like medicine, pharmacy etc. Those courses take students' time intellectually and require brilliant people, but agriculture demand more manual labour. There are bright students, too, in agriculture, but it is more stressful. Apart from the fact that commercialisation is coming in to make everything more straightforward, it still demands a certain amount of your energy" (Abel-male undergraduate focus group)

"Like in my area, a farmer uses crude implements at the back of my house. He did not have agricultural facilities; the government didn't recognise them, so I wanted to improve. But, of course, nobody will wish to become someone like that" (Ini-male SSS focus group).

Participants emphasise that agriculture is a practical course that cannot be approached theoretically. However, the curriculum content should match with practice.

"The students are not taught real-life situations, they are being introduced to agricultural models working in developed countries, yet it is not replicable here. It makes it abstract. Teaching should centre on models that can work in the locality" (male agricultural enterprise- AE1).

"The presentation of agriculture to students is not fascinating, even in higher institutions. The lecturers present it as a course you read, memorise and recall when needed. There are limited practical experiences that are not adequate. I don't particularly appreciate remembering my days in the university because it appears I am only passing the time" (male agricultural enterprise AE5).

6.4 Positive Perception of Agricultural Careers

Amidst the negative perception, data shows that participants will not mind the stress and societal view that agricultural careers are profitable, less stressful and attractive. They believed agricultural jobs provide many opportunities and are indispensable for human survival. Therefore, many perceived it as an alternative source of income to their regular jobs and supporting family food intake to ensure a healthy diet. Agriculture is recognised as an indispensable sector; with a recent emphasis on self-employment, agriculture is a viable sector to alleviate the problem of unemployment among young people. Opportunity for self-employment via agriculture motivates people who voluntarily. “

“The major problem is land and capital; an agricultural graduate should not be jobless. There are many opportunities in agriculture” (Agricultural graduate AG6).

“I did not feel good initially because my experience with my father on his farm was tedious, so agriculture was not interesting. As a result, I did not plan to take a profession in agriculture. Still, over time someone convinced me that agriculture is lucrative and that I can be self-employed without waiting for any white-collar job” (Latifat- female undergraduate female focus group).

“I choose agriculture because I believe the knowledge will help my future ambition, and besides, no experience is a waste. Knowing about it is not bad; at least in the future, I can be self-employed and work to make money by engaging in farm business” (Victor-male undergraduate focus group)

“When I got the admission, I was seriously crying that this was not what I wanted. However, when I spoke with someone who graduated in 2015, he advised me that there are a lot of opportunities in agriculture, that it can make me self-employed, not having to work for anyone” (Shayo- female undergraduate focus group).

"Many are looking for a white-collar job; only agriculture can engage many people. We should promote the farm settlement scheme, which involves settling people in the rural areas where there is vast land for agricultural activities" (male agricultural enterprise-AE4)

6.5 Summary

The chapter has examined the perception of respondents on agricultural careers as negative and positive. A negative perception of agricultural careers revolves around the societal view of agriculture careers as not professional, courses for low achievers, and unprofitable ventures. It is seen as a job that requires no formal education and training or as an alternative source of income that one can pick up at any point in time. Some of the negative perceptions were formed from childhood due to unpalatable experiences in agricultural activities. Other factors mentioned in this chapter are institutional; these include the different agents of

socialisation in the social system and how they influence career choices in agriculture. These factors will be explained in detail in the next chapter.

However, amidst the numerous negative perceptions, several participants are naturally disposed to agricultural careers, for instance, those with agricultural experiences and successful mentors. At the same time, circumstantial agriculture candidates are ready to settle in the profession, discovering the vast opportunities in agriculture and the possibility of self-employment. Unfortunately, participants opined that the school failed to prepare them for agribusiness, which was the motivating factor in their careers.

Chapter 7. Institutional Factors Influencing Choice of Career in Agriculture

The previous chapter focused on how people perceived agricultural careers and mentioned factors influencing young people's perceptions. These include the family, role model, peer pressure, educational elements, and religious background. This chapter, therefore, explains these institutional factors and their influence on career decisions in agriculture. The concluding section presents a summary of the chapter.

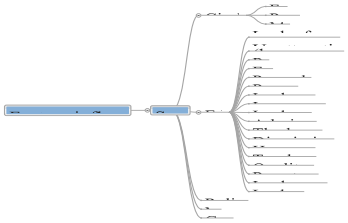


Figure 7.1 Emerging Themes on Factors Influencing the Choice of Career in Agriculture

7. 1 The Family

The choice of career has a long-lasting effect on an individual. It determines the income, type of job, social circle and most importantly, the sense of fulfilment, job satisfaction and self-actualisation in life. It is, therefore, a significant aspect of life decisions that require adequate information. Wrong career choices may result in an individual being unable to achieve their

life goals, experiencing a lack of productivity, and feelings of unfulfillment and regret (Kazi and Akhlaq, 2017). Many factors influence career decisions, among which the family plays a vital role (Shumba and Naong, 2012). The family constitutes a primary socialisation agent; being the first contact, it plays a significant role in educating and teaching different life concepts (Whiston and Keller, 2004). Traditionally in Africa, the male voice as the head of the family is prominent in deciding except among more educated or enlightened family settings where women are also involved in decision-making.

In contrast, it may be argued that in terms of career decisions, women who are more involved in children's education are likely to influence their career decision (Mickelson and Velasco, 1998; Muthukrishna and Sokoya, 2008). Overall, the more active or the closer the relationship of any family member, the more likelihood there is a significant influence. Family members can discover and give appropriate career guidance that matches individual abilities, interests and strengths due to their close and cordial relationship. However, family members can provide suitable career advice if they are enlightened on what to consider in making career decisions since they can only advise based on their understanding. Evidence suggests that career enlightenment should involve the young and all stakeholders, including parents, who strongly influence individual decision-making (Alemu, 2013). Career awareness will help shift people's attention to individual unique strengths and abilities for suitable jobs. It will also help expose people to different prospective careers outside of stereotyped career choices.

"We should tackle the issue of career guidance right from home; parents should be educated so that they are adequately informed about a career decision so that they can guide their children appropriately.". (female lecturer-L1)

The family role in decision-making, including careers, is more pronounced in countries with strong family ties, dependency, and respect for the elderly. Some are forced to make choices against their will because the culture of respecting elderly opinions demands them to obey. It is ideal for children to be obedient to their parents, but not at the expense of taking away their right to a decision that affects their lives. For example, some have chosen a career based on their parents' desires, which do not align with their interests, skills, or abilities. Such decisions have an undertone of parents' interests and concerns associated with financial gain and social status. Parents' pride is to have their children in prestigious careers (Shahzad, Zahra et al., 2014). Data in this study also buttress this point,

"As a boy, I wanted to be an accountant; that was my aspiration, I had it in mind to work in the bank, but parental influence moved me to science class. I would have to be in a commercial class in secondary school to pursue my passion, but my parents pushed me to science class. They wanted me to study engineering, which required me to be in science class" (male agricultural enterprises-AE5)

While some parents desire their children to continue the family business, it indicates why they seek skills in related areas.

"My father wanted medicine, but I love pharmacy. My dad was a businessman, and he owns a massive hospital, so he wanted one of his daughters to be a medical doctor who can manage his hospital for him" (female lecturer-L1)

Kerka (2003) opines that there are implications in how people view professions in a different culture on individual career choices, as people view the world differently across cultural groups. As discussed earlier, the study revealed that the concept of "prestigious occupation" revolved around income earned, social status, lucrative jobs, profitability, and job opportunities. For example, the prefix doctor (Dr) and engineer (Engr) names are not available in courses like agriculture, except when they have undertaken an academic doctorate. Nevertheless, participants assert that titles attract more people to some courses. Often, parents succeed in securing admission to prestigious courses for their children. Still, they may end up in another career when they cannot cope as it does not match their abilities or lack interest. When parents have less control in adulthood, an individual has more flexibility for a career switch.

Consequently, passion and skills are essential in making career decisions. Otherwise, it may result in low self-esteem, dissatisfaction, lack of motivation, poor academic achievement, and occupational mismatch (Suutari, 2003; Kazi and Akhlaq, 2017). Shahzad *et al.* (2014) classify ways of making career choices into two scales, by will or force, identifying that people make career choices due to a certain level of restraint from parents. Therefore, it collaborates with the participants' opinions that parents sometimes persist in studying a particular course and withdraw support otherwise. In addition, parents use their authority and financial power to dictate their children's careers.

The parents sometimes are not helpful. Once they realise you don't want to pursue a career in medicine, they withdraw their financial support and go out of their way to borrow if their child is studying medicine. Parents encourage their children to study medicine, not courses like agriculture. Children are aware of what their parent desires; this then influences their career choices (male lecturer-L3).

It is a widely spread cultural belief whereby the parent sees their children's education as an investment and financial security for their old age. So compromising this stance is

detrimental to their future, not the children. It is more pronounced in a society that expects children to care for their parents in old age; therefore, parents are keen on careers they deem lucrative and profitable for their children. For example, there is no structured plan for older people in Nigeria. Hence, parents perceive their children's education as an investment.

Consequently, financial gain is likely the top criterion for choosing a career. It is common, especially among average or low-income earners, who struggle to send their children to school, believing they will reap the dividend of their investment later in life. Such parents prefer to invest in a lucrative profession where their children can be gainfully employed. Moreso, they discourage their children from exploring agricultural careers that they believe do not fall into the category of their expectations. While some can borrow extra money to sponsor their children for prestigious courses, many cannot afford this as studying courses such as medicine is not cheap. Financial restrictions may also result in a dichotomy between the poor and the rich, as some children may meet the requirement and cannot proceed with medical careers due to a lack of funding.

People perceive medicine as a more specialised profession with more employment opportunities than other careers. Conversely, as it increases, the rate of application and admission to medical careers may result in more supply than demand for medical practitioners and a shortage of other professions. The implication is that being a medical doctor does not guarantee employment when considering economic principles. The perception of agriculture as farming also informed people about agricultural careers. People perceived the lack of financial capacity to establish agricultural business when not gainfully employed as a barrier since attention is shifting to self-employment.

Family influence on career decisions may come from the immediate or extended family members due to intimacy and quality relationships or someone seen as a mentor. However, amidst young people's challenges in choosing careers, the issue becomes more complicated and confusing when family members present contrasting career opinions.

"Most people aspire to study medical-related courses because of pressure from parents and friends. In childhood, I desired to become a doctor because of these influences. Later, when I discovered my interest and strength in agricultural careers, I changed my mind. I had excellent grades in studying medicine, but I chose agriculture. Though the pressure was there from my mum, and she was not happy, my dad supported my decision. My mum believed that I am intelligent, and she thought medicine was the best for me" (Adebayo- male undergraduate focus group)

“Agriculture was never my choice; my ambition is to become a medical doctor, as it is my mum's desire. At the same time, my uncle wanted me to study architecture when he discovered my drawing skills. My mum filled out medicine in the application form, but eventually, the university gave me anatomy. After my first year, I planned to cross over to medical courses if I performed brilliantly well, but I didn't have a passion for medicine. I did not do well in the first year, so they gave me a form to pick other options. I chose agriculture, but my mum was unhappy, so I told her that you do not want me to do architecture. I do not have a passion for medicine; why not allow me to explore other areas” (Ojo-female undergraduate focus group).

Family members' interest sometimes tends to overshadow the young ones and may jeopardise their career fulfilment and satisfaction later in life. Although many do it ignorantly without meaning any harm, they intend the best for the family. Sometimes, young people are in a fix since societal and cultural expectations demand children's obedience to their parents and the elderly. Therefore, they make a career decision to satisfy their parents and later pursue their life goals in adulthood when they feel relatively free to make their own decisions.

"Some people are just schooling to satisfy the desires of their parents, like a friend of mine, said he is in school because of his parent after completion; he intends to present the certificate to his parent while he pursues his passion in business" (male agricultural enterprise-AE2)

It becomes more complicated when career guidance is more coercion than advice. The impact of such decisions, whether negative or positive, is on the individual, not the people who advise them. However, participants agree that parents can signpost children to appropriate careers if they are observant enough to discover their children's interests, strengths, and passions. Still, the decision should be the individual's responsibility as it gives a sense of satisfaction when they take the lead.

“Parents can discover and guide their children towards appropriate careers if they are observant. For example, some children have a natural gift for engineering-related skills with what they do at home. If parents discover such traits, they can channel the child to the engineering profession” (Integrity-male undergraduate focus group).

Often, families have limited awareness and understanding of different careers; therefore, they can only guide their children to the ones they know. Prestigious and lucrative courses are the topmost priority of family members. They tend to consider family expectations by choosing careers that enhance their social status and bring glory to the family, irrespective of their children's interests (Xing and Rojewski, 2018).

Furthermore, since children learn a lot by imitating their parents or family members, this is also true in career decision-making. Parents or family members serve as role models for the children. In most cases, females may desire to take after the mother's career pathway, while males, on many occasions, are attracted to their father's career. Evidence also suggests that children develop careers aspiration in line with a parent or family member's career, especially when they are successful in their chosen careers. The definition of success is relative; to some, it may mean financial gain, while others may feel self-satisfaction and fulfilment define it. People can also form career interests by inheritance of the family profession. However, this varies with culture. In some places, the firstborn or male child usually inherits the family property and most likely continues with the father or mother's occupation, as the case may be (Kniveton, 2004, Binder, Davis et al., 2016).

"My father is an engineer; anytime I see him repairing things, I usually ask him how it works and its principle, which inspired me to study engineering" (Adebayo male SSS focus group).

"I love caring for people, and my mum was also a nurse, so she is like my role model; she is the one that made me choose the career, not that she forced me. So I love the career because I love caring for people " (Mujibat-female SSS focus group).

There are many benefits to choosing family careers, as it gives them a ready platform regarding infrastructure, human capital, networking, and experience. For example, participants affirm that agricultural students from farm families are versatile and knowledgeable in practical agriculture.

"Those coming from rural areas, we discovered that they are better in agriculture because of their experience" (female lecturer L1)

Participants believe that agriculture faculties should target children from farm families with real-life experience vital for a notable agricultural transformation. It can only be realistic if the educational sector has a platform that promotes indigenous knowledge and children's willingness to pursue careers in agriculture.

In America, most people who invented new things in agriculture are children of farmers. Their experience on-farm combined with education makes them outstanding. Similar to my experience in Russia, most of my colleagues in the agricultural academic then were farmers' children; they are so vast and experienced" (male agricultural enterprise-AE3)

Although some consider financial gain a yardstick for success and are not encouraged to choose their parents' careers if they feel they are not making enough money, career decisions are not fixed; they can change over the years. For example, a participant (L2) disliked her mother's profession because of how much she earned as a teacher, but she later became a lecturer. However, her childhood career interest was to become a pharmacist.

“My mum was a teacher, and they are not well paid, so I never wanted to be a teacher, but my father was very wealthy, he makes a lot of money as a businessman, so I never wanted to be a teacher “(male lecturer –L2)

Other participants whose parents were successful in their agricultural business positively perceived agricultural careers. Still, many did not see it as a course of study; they were interested in the farming industry, especially the production aspect. This barrier is primarily due to the societal perception of an agricultural career as farming only. Most intend to study other perceived lucrative courses and acquire enough capital to diversify or transition into agribusiness later in life. Therefore, they rely on their childhood agricultural experiences or maybe informal training from an experienced person rather than enrolling on agricultural education. The implication is that participants do not perceive the formal school setting as necessary to acquire practical skills. However, education is vital to improve indigenous knowledge and promote agricultural development.

"After I become an engineer, I would like to practice agriculture too because my grandfather was a farmer. My great grandfather was a farmer too, and they were all successful in their farming business" (Parish-male SSS focus group).

Most parents engage in agricultural activities without formal education or training, informing their children of agrarian professions based on how their parents practice them. Moreover, young people will likely consider agricultural careers if their childhood agricultural experiences were fun, less stressful, and lucrative.

7.2 Role Model/Mentor

People's choice of role models may include gender similarity, supportive and quality relationships with role models, positive attributes, and achievement (Perrone *et al.,* 2002). Sometimes, parents or family members, especially in an ideal family setting, become role models in their children's career decisions as they take advantage of practical experiences, resources, and social networking. Research ascertains the gender position in choosing role models; females are more likely to take after female family members' careers. However, there are exceptions; the data revealed that irrespective of role models' gender status, individuals are likely attracted to successful family members' professions. Although success is relative, a more significant percentage of the participants describe success as financial gains

"I have always wanted to be an entrepreneur while growing up. My mum is a successful trader, and she makes a lot of money from it. That forms the basis of my desire for business" (Akanbi-male undergraduate male focus group)

Young people also make career decisions by imitating role models outside the family. They are most likely in a cordial relationship or admire someone from a distance their achievements and successes. Mentors who are more enlightened on career choices do not necessarily point out their careers to individuals. Instead, they may advise them to pick professions suitable for their personality and interest. In contrast, others signpost their mentees to perceived prestigious jobs. Moreover, young people also seek mentors in appealing careers.

"I developed an interest in medicine through a couple in the church that I admire a lot. The man is a doctor, and his wife is a pharmacist. Both are my role model; they usually organise seminars and counselling sections on health and nutrition in the church" (Deborah-female SSS focus group)

"My uncle influenced me to choose sciences, although I wanted law. He is my mentor, and I have high regard for him. He guided me with good intentions because the law profession was not lucrative in those days, but there was a high demand for medical doctors. He wanted me to become the first medical doctor in our family" (male lecturer –L2)

Participant (L2) was passionate about studying law until his uncle advised him otherwise because of the high demand for medical professionals. The possibility of being gainfully employed and the societal prestige of medicine account for his motivation for a medical career. The quest to make the family proud by becoming the first doctor is why his uncle pointed him in this direction. The participant obeyed the uncle's advice but could not proceed with the course as he could not meet the medicine requirement. Lack of motivation in medicine made L2 drop out of medicine regardless of academic background. Neither the participants nor the uncle was aware of matching interests with careers. Agriculture was among the options offered to the participants afterwards. However, as a lecturer in agriculture, L2's passion for law persisted over the years.

"I had developed an interest in agriculture over the years because I chose it out of the options available to me when I dropped out of medicine. Yet, the urge to study law came back. In 2002, I inquired about the entry requirement for admission into law school, but my wife discouraged me. Nevertheless, I am still considering returning for a law career" (male lecturer L2).

People tend to trust the judgement of their role model, even against personal interests and abilities. Some may not have interpersonal relationships with their role models, yet they still influence their decision-making. Sometimes it could be because mentees liked mentors' personalities or career achievements. For example, reading or watching people via social media can inspire similar career choices.

"Medical career became inviting among young people through people like Ben Carson, that famous surgeon; reading his book was motivating to desire a medical career" (Akanbi male undergraduate focus group).

7.3 Peer Influence

The study revealed that parental and peer bonds contribute significantly to predicting career choices; however, the parental influence seems more substantial (Nawaz and Gilani, 2011). The factors particularly reinforce young people's desire for medical or medical-related careers. As children play among themselves, discussion on careers comes up in a role-play where they assume a particular profession. At this stage, they can identify appealing occupations based on feasible attributes they demonstrate in role-playing among friends. Children begin to form career aspirations as they identify various disciplines

" My career aspiration was due to peer influence. It was common among young people in science class to desire medicine. There are just a few career aspirations, either medicine or engineering, and the majority go for medicine" (Abel-male undergraduate focus group)

"Like every other child in this country, most people will want to be a medical doctor primarily because of parents and peer pressure. Therefore, when I was younger, I always called myself a doctor and that I wanted to be a doctor (Adebayo-male undergraduate)

Participants confirmed limited awareness of professions and highly regarded jobs in society was a motivating factor in their choices. Since they perceived agriculture as farming, it became the yardstick for grading agricultural careers. The data also show that children's uninteresting and stressful childhood agricultural experiences also influence young people's career choices in agriculture. Peer influence is more pronounced among secondary school participants, as many do not understand options and realities. Many tertiary institutions and graduates agree that they had a limited understanding of career choices in secondary school, indicating the need for career education at this crucial stage. Parents and carers need enlightenment as most young people form stereotyped career aspirations without considering other options suitable to their personalities, interests, and strengths.

7.4 Educational factors

Education is pivotal in any developmental process; the development level in countries reflects the education sector's state and is an essential aspect of any nation (Okoro, 2011). It is identified internationally as a critical indication of development and why countries worldwide are committed to developing their education sector. Nigeria's government had attempted to expand its education sector after independence. Such efforts to transform the educational sector are channelled through different policies and programmes, yet the educational system's development remains low (Odetunde, 2004). Agricultural education is even more complicated due to the long years of neglect of the agricultural sector. Undoubtedly, an efficient agricultural education is vital in the agricultural development of any nation. Several studies have revealed that young people are avoiding careers in agriculture. However, their perception changes as they realise limited white-collar jobs, unemployment, food insecurity, and a rising population. These create awareness of the need for agriculture, especially job creation. Furthermore, understanding the broader agricultural sector, including off-farm and on-farm business, is shifting young people's attention to agriculture. However, with a drive to establish an agricultural industry, the agriculture education system is not meeting learners' expectations in the following ways.

7.4.1Admission Process to Higher Education

A career decision is crucial and complex for students because it determines the kind of job which has implications for attaining their life goals. Students attempt to make career choices at the secondary level, yet they face challenges matching their selection with their abilities. It becomes more complicated when students are not rightly guided and have limited awareness of suitable career options. At this point, primarily due to peer pressure, most cluster on the same course during application to higher education, while other professions receive few or no applicants (Edwards and Quinter, 2011). Furthermore, admissions into higher education become challenging due to tight entrance to the overburdened population growth of school-age (more than half of the population are under age 19, as seen in fig 3.5) and low educational institutions to accommodate the increase (WENR,2017).

Agriculture is one such course with few enrollees; the university then offers it to students. Although many results to fate due to the tight and competitive admission process as they are unsure of securing another admission. At the same time, others with solid determination decline admission. Therefore, agricultural departments usually comprise students in

agriculture by chance, as they had to face realities when they could not access courses of their choice. Agricultural students also include some who could not meet the requirement for admission into medicine or drop off in the second year due to their inability to cope with medical courses. Therefore, these categories that makeup agriculture departments comprise many emotionally battered students. Consequently, this affects their academic performance while others adjust quickly to the change. However, some may opt-out of the career after graduation due to feelings of unfulfillment.

"As a lecturer, I supervised one particular boy who was very unserious. I invited him for a chat to know what had gone wrong. He told me that he did not have an interest in agriculture. I then asked him why he was wasting his time on the course. He admitted that he took up the course due to influence from friends. To my surprise, he graduated with a pass, but this boy is now a chartered accountant. Many of these students are doing courses they do want to do because they could not get their courses of desire, and it is affecting the quality of the turnout of graduates" (male lecturer –L2)

Participants posit that creating a better image for agricultural careers requires upgrading the entry procedures to agrarian courses, as people view it as a dumping ground. It implies that agricultural courses are for low achievers. Agriculture requires the best brain to constitute its workforce for remarkable transformation. However, the government is clamouring for more young people in agriculture education to attain its agricultural development goals. Therefore, it is better to catch them young by stimulating interest from early years and secondary school. Teachers should facilitate interest through different learning experiences, better presentation of agriculture, farm excursions, and agricultural-related organisations where they see things practically. Also, creating awareness of other aspects of agriculture will showcase the numerous opportunities in agricultural careers. Furthermore, raising admission requirements and making it competitive will help correct the idea that agriculture is for low achievers. Innovative agriculture that will meet the world standard needs the best brains and an emotionally stable workforce.

7.4.2 Curriculum-Related Factors

The national education policy offers agriculture as a pre-vocational elective course at the junior and senior secondary levels. The idea is to lay a foundation for vocational agriculture to establish agricultural businesses and curb unemployment (National Policy of Education, 2013). The curriculum is expected to be implemented through a guided discovery where students learn by doing to facilitate practical knowledge. However, implementation is

challenging, as laudable as the policy is on paper. Due to inadequate funding, there are no teaching materials to foster teaching and learning.

Similarly, higher education is underfunded (WENR,2017), resulting in poor infrastructure and inadequate teaching materials to facilitate curriculum implementation. Most university agricultural programmes run for five years against other science courses like biochemistry, geology, industrial chemistry, and physiology (Amadi and Lazarus, 2017). Participants opined that this number of years is sufficient to acquire skills to establish an agric business. However, their expectations are not met as the curriculum implementation is theory-based

"The Curriculum is inadequate because it trains students to pass and obtain a certificate without skill acquisition. Students should be able to manage individual farms and make a profit. It will better communicate the theory taught in class. They train us that agriculture is profitable but have no practical experience to confirm it. "(male agricultural enterprises AE 1)

The curriculum is vital for achieving educational goals and the nation's economic transformation. Therefore, it is an essential document continuously changing to address society's needs. The curriculum is reviewed and updated to solve current social conditions and achieve educational goals. The input of all stakeholders, from design to evaluation, including the students, is equally important. Over the years, there have been many educational transformation programmes, policy reforms, and goals, but they have yet to record significant attainment of those goals. Many scholars attribute this to poor implementation, lack of political stability, lack of political will, insufficient funding, corruption, lack of proper monitoring and evaluation of educational goals, shortcomings of the educational sector as unqualified or inadequate staffing, inadequate infrastructure, socio-cultural issues and lack of continuity of programmes due to political instability(Okoroma, 2006; Odukoya, Bowale et al., 2018). All these affect the educational standard and learning outcome. However, as the problems are multidimensional, the curriculum's design is one of the fundamental setbacks. The curriculum content has failed to match the local environment and available teaching materials (Temu, 2004; Papoutsaki and Rooney, 2006). The curriculum teaches capital-intensive, large-scale agricultural systems in some aspects of agriculture that cannot be adapted to the local environment because of a lack of modern technology in and out of school. The problem is mainly due to underfunding of the education system. Therefore, agricultural graduates lack the knowledge and practical skills to initiate and operate agricultural enterprises, while public sector opportunities and white-collar jobs

are dwindling (Chakeredza, 2008). Aside from content issues, the curriculum is usually theory-based, with few practical experiences to enhance effective learning. The disconnect between theory and practice hinders graduates' from attaining their goals. The curriculum must reflect current issues and the latest development and be environmentally friendly and locally adaptable(Ibrahim and Onuk, 2010).

In the absence of resources to implement the modernised agriculture content of the curriculum, implementation tends to be executed theoretically with little or no practical basis. Lack of practical experience is a consistent theme across all participants in this study. Hence, such a curriculum can only promote learning at the lowest cognition. Therefore, the curriculum content should match the resources available for implementation(See fig 7.2). In addition, modern technology should be provided to enhance the educational goals as stated in the curriculum.

Source: Fieldwork 2019

Figure 7.2 Cassava process activities, students peeling cassava manually as opposed to the use of a peeling machine as taught in the theory

Participations identified that the theoretically based curriculum in a practical course like agriculture is a significant drawback. Furthermore, their perceptions of agriculture as farming also reinforce this. As discussed in the previous chapter, a consistent positive perception of agricultural careers among respondents is the opportunity for self-employment. Due to the high unemployment rate among graduates, people are shifting attention from white-collar jobs to careers that can make them self-employed. However, agriculture courses are not attractive to many young people, as demonstrated by the low level of applicants at the entry point. Still, participants who settled for agricultural careers against their choices confirmed that the establishment of agribusiness was paramount in their decision to take up the course.

Although people are aware of other agriculture parts, their focus is on the entrepreneurial aspect to create jobs. With the limited jobs in the office- related aspect of agriculture, most prefer the production aspect, and they believed they could establish this independently. Participants emphasised that theoretical knowledge can only turn out graduates with bookish knowledge with little practical skills, thereby jeopardising their intention for the career. As participants negatively perceive agricultural jobs, the current high unemployment rate, government agenda encouraging self-employment, and food shortage amidst the increasing population are motivations for agricultural careers. Agriculture is a potential sector for employment if we effectively harness the African dividend of a large population and young people. However, the government-led Agricultural Transformation Agenda (ATA) is to increase more youth in agriculture by upskilling them using mechanised agriculture and providing funding through commercial banks. However, little is being done in agricultural education. This call for urgent attention for reform in this sector consistently promotes self-employment through agriculture.

The curriculum relies heavily on imported content from developed countries, but resources for implementation remain local (Ibrahim and Onuk, 2010). Furthermore, since attention is changing to agricultural mechanisation in the ATA, modern technologies should also be provided in higher education to implement the content of the curriculum(see fig 7.3).

"The curriculum needs to be regularly updated. The world is dynamic, with a lot of discoveries here and there. We can't compare agriculture in Nigeria with places like the Netherlands, where they have introduced curriculum innovations. We are lagging, especially in technology; we should incorporate modern technologies to enrich our curriculum" (Lecturer-L1)

Source: Outside classroom observation 2019

Figure 7.3 Goat rearing site of the university farm practical training

Inconsistency in the theory and practice of agriculture makes mastery of agriculture difficult. Participants, therefore, perceived that their learning experiences were not substantial enough for skill acquisition. It accounts for why people do not perceive agriculture as a course of study, primarily at the tertiary level, because they cannot acquire practical knowledge in the formal school setting. They believed that the layman has field experience and is more knowledgeable than students who spend five years in school. Thereby highlighting that understanding and incorporating the needs of learners in the curriculum is vital for attaining educational goals.

‘‘The curriculum teaches agricultural models working in developed countries yet cannot be replicated due to technology. Lectures are on abstract things that are not locally compliant. Students should be taught with models that can work within their locality which are readily available daily" (male agricultural enterprises- AE1)

Teachers at the secondary school also revealed the inadequate time allotted for teaching agricultural science, which did not give room for practical experiences. In addition, introducing new courses has also reduced time allocation for most subjects.

"The introduction of more compulsory courses like civic, trade, marketing, have reduced the time allocation for existing courses" (female teacher-T1)

"The time allocated for agricultural science is insufficient for us to have practical sections" (female teacher-T2).

However, other participants, especially the undergraduates, opined that five years duration for an agricultural programme is too long compared to the skill acquired. Moreover, compared to four years for other science courses, one year is allocated for teaching general courses. Therefore, participants opined that the extra year is also discouraging.

"I do not think 100level is necessary for teaching general courses. Students should proceed directly to their course of study" (female lecturer –L1)

"I still do not know why agriculture students spend five years in schools like law and engineering, yet they do not earn any title after certification Agriculture should be three or four years" (male agricultural graduate –AG1)

Nevertheless, participants will not mind the longer duration if they gain practical skills. Participants suggest that they were taught too many subjects without mastery due to inadequate practical sessions. Meanwhile, the limited practical experiences rely on crude implements, making it too laborious and stressful.

"The labs are under-equipped, coupled with the stress of crude implements. All these discourage learning. The theory part is enormous and cumbersome. We diversify into too

many courses to the extent that we lost mastery of any of the courses" (Akanbi-male undergraduate focus group).

"I chose biochemistry, but I was offered agriculture. What discouraged me most is that agriculture is a five-year course while biochemistry is four years. The extra one year is discouraging" (Latifat-female undergraduate).

"The number of years is also not encouraging; they should scrape the first year. It is just like a waste of time" (Female group tone).

The perception of lengthy course duration has no gender disparity, but due to lack of interest, the perception that agriculture is a vocation and not a course of study, inadequate skills acquisition and lack of professionalism in agricultural careers. Participants assert that practical experiences start relatively too late, towards the end of their programme. It focuses on indigenous methods, while the theory teaches modern agriculture. Participants acknowledge the need for industrial experiences for exposure to technology-driven agriculture if the universities' resources are unavailable.

"In five years, I could not boost tangible skills acquired. I would have preferred to attach us to agricultural industries even from 200level. We should specialise in our desired department earlier than when we get to 500level when we really can't do much. Agriculture should be practical, but we spend most of our time in the classrooms. An agricultural graduate should create jobs and not join the wagon of jobseekers, but when the skills are not there in school, how do you practice after school? There is a system problem" (male agricultural graduate - A5).

One of the participants opined that polytechnical agricultural education is more practically oriented than university.

"I had practical experience during the national diploma programme(ND); polytechnics do more practical more than the university"(male agricultural graduate-AG2).

Inadequate practical knowledge hence influences retention in agricultural careers after school. Moreover, since establishing an agribusiness motivates studying agriculture, participants seek further training outside school.

"Before I started poultry keeping, I went for training on a poultry farm. I found out that people who did not study agriculture but operate poultry farms have more practical knowledge than the agricultural students because they practice daily "(male agricultural graduate-AG1).

Therefore, the data emphasise problem-solving, practical-oriented agriculture and promoting education that encourages skills acquisition over certification. However, respondents also

identified a disconnect between various agricultural development stakeholders and collaboration between agricultural enterprises, rural life and the education system.

"We need to redraw our agricultural education curriculum to be practically oriented towards solving problems, not just theory-based. Before taking a master's or PhD programme in advanced countries, you must have identified specific issues your research will solve. There is a disconnect between industries, research and academic institutions" (male agricultural enterprises -AE3).

Participants ascertain that after the five-year course in agriculture, they still feel incapable of starting any agricultural venture independently without supervision or further training. Therefore, it confirms their expectation of most agricultural graduates for agricultural entrepreneurship.

"I cannot say I know much about crop protection, but if I have a passion for it, I have to get the required skills, so I think what we are doing at the university is just the theoretical part. The training will start after university" (Kay-male undergraduate focus group).

"We will still have to attend seminars and workshops of a three- or six-months training programme to practice after studying agriculture for five years in school. These could have been enough with adequate individual practicals. Going to learn the same thing that you studied for five years is not a good thing at all" (Shayo-female undergraduate focus group)

Teachers ascertain that some of the challenges to practical experiences are inadequate to support teachers. For example, since the schools are under-equipped with educational resources, they can explore those facilities outside through excursions and field trips to agricultural parastatals. However, this attempt fails because few assistant teachers can help facilitate the process and ensure students' safety, especially with a large class. Moreover, teachers are considering the issue of safeguarding, especially where the teacher to students ratio is inadequate. Therefore they get discouraged and instead will not engage in field trips.

"Nothing like field trips exists again. For instance, we can go to the National Centre for Agricultural Mechanisation(NCAM) to reinforce agricultural mechanisation teaching. The students can see a lot of machinery to facilitate learning; however, one teacher can not coordinate 130 students. The entire arm of science students is 260. It is difficult to manage where there is no support staff" (female teacher-T2)

"We need more teachers to assist, especially for the practical sections" Susan- female SSS focus group)

I don't have the boldness again to embark on field trips. But unfortunately, we had a record of an incident that almost claimed two students' lives on one of our field trips because teachers were not enough to supervise them (female teacher-T1).

Other curriculum-related issues include the incomplete implementation of the curriculum. Although the curriculum has a course of study, other neglected areas, such as co-curricular activities that make learning fun and engaging, have received little or no attention. There will be more motivated to study agriculture if the education system can promote a balanced education across the tiers.

"Engaging the students with co-curricular activities like field trips and school clubs will also be helpful, but none exist" (male agricultural enterprises -AE2)

Also, the data show no adequate financial support from schools to acquire co-curricular activities. However, people blame the government without accounting for the possibility of mismanagement of funds. Parents also are not supportive, especially in the early years and secondary schools, as much attention is to an aspect of the curriculum rather than all child development. Parents tend to focus more on academics by organising extra classes for their children during summer break, whereas they can acquire life skills other than academics. The parents should collaborate with the school to ensure that their children are exposed to different co-curricular activities that can give them a broader horizon of careers. This helps them relate more to real-life experiences and make appropriate career choices.

"Funding of education is still a severe problem in Nigeria, though the government are trying they should do more, we should not also leave it only for the government, everybody should do more" (male lecturer –L2)

7.4.3 Teaching materials/teaching aids

Participants in their final year in the university emphasised the educational factors as they were speaking from recent experience. They assert that **t**eaching and learning become problematic without adequate teaching materials to enhance practical experiences. Furthermore, the lack of a positive attitude toward improvement further deepens this problem as educational personnel prefer to window-dress the situation during accreditation of the educational system.

"Teaching materials are inadequate, but we try to window dress during accreditation. During the accreditation, I remember we brought some chickens to the school farm from lecturers' farms to meet the accreditation requirement." (male agricultural graduate -AG4)

Participants agree that teaching materials/aids enhance learning, while their lack makes learning difficult. While teaching aids are available in some cases, there are no trained personnel to operate them. Participants also identified a lack of maintenance, technical know-how of imported technology and proper planning for the operationality of some of the available equipment renders it redundant and non-functional.

"At the 200 level, I remember one of our lecturers showed us a combined harvester donated to the school by an international organisation, but it is not functional because it can only work on a large expanse of land that is not available now. He also said that the school could not afford the cost of fuelling "(Alabi- male undergraduate focus group)

"There are no teaching materials to motivate students to learn and develop their interest in agriculture. Therefore, agriculture is not appealing in any way." (male agricultural graduate AG 1)

7.4.4 Teacher factors

Teachers are very pertinent to the development and implementation of the curriculum. Therefore, teachers' personalities and attitudes can make or break the learning process. For example, teachers sometimes negatively impact agricultural careers at the secondary level, where they have school farms, using students to work on the farm to punish them. Students perceived agricultural teachers as wicked because they usually constitute part of the school disciplinarian team. Thereby students avoid agricultural options because of the negative impression of agricultural teachers.

Moreover, forcing young people to engage in farm work is not limited to the family setting alone. It also happens in some schools with a school farm, especially in government-owned schools. Participants agreed that this act creates a dislike for agricultural subjects. Furthermore, adequate training, besides the teachers' attitude, is vital for their effectiveness. Evidence shows that some agricultural teachers lack a teaching background. It also applies to lecturers in higher education. Participants explained that lecturers are versatile in their subject areas but lack teaching qualifications to enhance their teaching skills.

Moreover, participants opined many people come into teaching careers because they cannot meet the entry requirement for other courses. Usually, people who do not meet university entry requirement seeks education training. Also, universities withdraw candidates from medicine to education or agriculture. Therefore, people with low grades are admitted into teaching or agricultural careers.

"Lecturers should have teaching skills because they can have first-class, but they may not know how to teach students. Teaching qualifications should be part of the entry requirement for lecturers"s(female lecturer L1)

"Poor agricultural subjects' delivery is sometimes because most teachers and lecturers do not have a teaching background" (male agricultural enterprise AE2)

"Many people became teachers when it was the only career option available. The idea of admitting people with low grades into the teaching profession is also destroying the education system" (male lecturer-L3)

Furthermore, teachers/ lecturers cannot give what they do not have as they also lack practical experience during their training as it was theory-based. Therefore, it trickled down to the education system's fundamental error, emphasising theoretical knowledge.

7.4.5 Attitude of Learners/Students

Interest and motivation drive someone to excellence but affects their academic performance and retention in agricultural careers when students lack interest.

I was shocked when some undergraduates could not identify our feed formulation ingredients. It may be the student's fault due to a lack of interest in the course (male agricultural enterprise AE 5).

"Many students are not interested in agriculture and only want the degree; therefore, they end up with poor grades". (male lecturer- L3).

However, people should make the best of every opportunity. Participants attribute the poor academic performance of students to their attitude to work. They opined that young people in this generation love easy things. The microwave life provided through technological advancement has advantages and disadvantages.

"The younger generation wants the easy and microwave life and pleasure, forgetting that there is time for everything" male lecturer -L3)

"The young people of today do not read again; in the olden days, there was no mobile phone, laptop or internet; everything was textbooks. But today, young people suffer from multiple problems and endless distractions, reducing their concentration. They are busy looking for a faster way of making money" (male lecturer- L2)

7.5 Religious Factors

Religious beliefs are salient factors influencing career choices. In this study, participants affirmed that it is a factor that informed their career decision. Participants also ascertain the role of the spiritual world and revelations through vision, dreams or prophecy, as the case may be. For example, AG 1 claims the career decision was made through a dream.

"I had a dream, which interpreted that I should go for agriculture, so I applied, and fortunately, I was given admission to study agriculture" (male agricultural graduate AG1).

The participant opined career direction could be received through the dream. Although dreams can come from many thoughts, one may not rule out the spiritual world's existence and the possibility of receiving instructions from such. Some participants ascertained that they received career instructions through prophecy, while some had no career plan as they believed in leaving it blank to allow God to direct their path. They think this made them have an open mind and helped them adjust to any career that came their way. Although leaving such critical decisions open makes some live on fate without making adequate plans for their future, they may likely lack drive, motivation, and high expectations. However, such people live a life of contentment and are more flexible about a career switch.

"I had no career aspiration in mind because I believe wherever God leads, I will follow. So, I put in two separate entries choosing medicine and agriculture, respectively. I got admission to both, but because my mum runs a poultry business, she advised me to select agriculture because my knowledge would help the family business. Also, the course duration for medicine is more prolonged than agriculture". (male agricultural graduate- AG3).

At times several factors inform career choices. For example, participant AG3 gave spiritual interpretation to career choices and parental influence. Although this contradicts most parents' desire for medicine, the career guidance offered was for the participant to take advantage of agricultural training and previous experience in poultry farming to further the family business. The decision also considers course duration rather than the particular area of interest or passion.

7.6 Opportunities in Agriculture

Although many have negative perceptions of agriculture for several reasons, opportunities for self-employment inform respondents' motivation for a career in agriculture. Many are beginning to see the numerous options in different aspects of the agricultural value chain. Agricultural students expect to become entrepreneurs, especially in parts that can facilitate self-employment and small-scale production. Some of the courses taken include entrepreneurship and management of the agricultural business. Still, participants opined that learning would be more substantial and long-lasting if they could learn on the job by managing an individual agribusiness during the programme. Participants reiterated that practical experiences are insufficient and inconsistent with the mechanised theory taught in the classroom. Practical involves using primitive tools. Therefore, the constraints identified

by the participants revolve around barriers that hinder the realisation of their expectations. These include the following:

7.7 Socio-Political Environment

7.7.1 Political Instability

Political instability is described as violence, absence of control, non-functional government and irregular structural change. Aisen and Veiga(2013) affirm that Africa is the most politically unstable region globally, which is detrimental to economic growth. Political instability results in the incomplete implementation of policy and performance, among many others. According to Yiu and Mabey (2005), stability is not the absence of change in government change but the degree of managing change. It is about having governance ready to promote continuity by facilitating existing projects to a logical conclusion. Participant AE4 indicates a typical example.

"The government is not encouraging people. For example, we used to have a fish farm estate, where individuals acquired a portion of land, which created room for many people. Still, suddenly a new government cancelled the programme" (male agricultural enterprise- AE4).

The fish estate was an idea of the previous government, promising and viable until the new government stopped the programme. The scheme involved many fish farmers coming together in the exact location, acquiring land, establishing individual fish farms and forming a fish farm estate. The arrangement has many opportunities, including security, bulk purchase of inputs, cooperative and credit access, and knowledge transfer among the owners. The programme is laudable but was discontinued as soon as political power changed. Political instability is a significant reason for the incomplete implementation of policy and developmental programmes. Many viable policies are abandoned due to a lack of political will and the personal interest of leaders. Another problem is a result of poor planning and implementation; however, a more significant percentage is due to political instability(Aisen and Veiga, 2013).

7.7.2 Conflicts

Apart from the benefits of cluster farming, another reason is to ensure farmers' security, especially with the recent insurgence and terrorist attacks. One reoccurring and persistent conflict is between farmers and Fulanis. The Fulani ethnic group is mainly from the northern part of Nigeria, comprising sub-groups from Fulbe Adamawa, Fulbe Gombe, Fulbe Mbororo, Fulbe Sokoto, and Fulbe Borguin. They are primarily nomadic, moving from place to place,

searching for green pastures for their livestock. Fabiyi and Otunuga (2016) opine that their frequent migration to the southern part of Nigeria resulted from climate change, desert encroachment, and terrorist attacks in the northern part of Nigeria. They are seeking safety for themselves and green pasture for their livestock. Although they constitute a significant meat and dairy supplier, primarily cattle, sheep, and goats, their encroachment on farmland is a primary concern.

The conflicts between farmers and Fulani usually erupt from livestock grazing on farmland, destroying crops. Any attempt by farmers to stop them typically results in violence and killings. Several incidences of slayings and sexual harassment pose more threats to female farmers. As a result, many farmers can no longer go to farms without fear of being attacked by criminals (Kimenyi, Adibe et al., 2014). Usually, farmland locations are far away from the residential areas; therefore, people walk miles on lonely roads and bush paths. As a result, it is becoming increasingly dangerous to access farms. As farmers' safety is not guaranteed, more people abandon farming and prefer to engage in something else with fewer risks. The impact has increased bush fallow, high food product prices, decreased farm output, hunger, and malnourishment (Kimenyi, Adibe et al., 2014).

"We planted cowpea, but more than half was wasted due to Fulani herders' encroachment into the farm. Agriculture is risky; imagine having that kind of experience is discouraging" (male undergraduate focus group)

Young people are disposed to agribusiness but fear insecurity rampaging through the country. Since the increased attacks, farmers now prefer to work in groups by forming clusters for security purposes rather than operating scattered farms to protect themselves and their farmland. Therefore, cluster farming is becoming more popular for security reasons, social networking, discount on input, joint ownership of resources, and marketing. The word cluster or cooperative is used interchangeably, but the terms differ. A cluster usually refers to the exact location involving people in similar production lines or related areas. Meanwhile, people from different places can form a cooperative group (Wardhana, Ihle et al., 2017).

"But our major challenge is the herdsmen; that is why a cluster arrangement is being made now" (male agricultural graduate AG7)

Cluster farming is also viable for easy technology transfer and dissemination of information(Aphunu and Agwu, 2014). If well harnessed, it ensures an easy transfer of innovation to the group rather than individual farmers. People can learn new things from one another. This kind of farming is more likely to promote mechanised technology as it involves

farmers in the same production line. It is also easier to access loans as a group than as an individual.

7.7.3 Land acquisition

Another constraint identified by participants is the difficulty in acquiring land for establishing a farm business. Since most people's intention is self-employment, respondents confirmed the bottleneck in land acquisition due to the land tenure system, corroborating Phillip *et al.* (2009). In addition, participants ascertained their increasing interest in agricultural entrepreneurship; however, they highlighted cultural discrimination on land by gender and family position. As a result, many could not secure land for agricultural businesses due to land tenure and the financial implications of acquiring land.

"There are many agriculture opportunities; one major problem is acquiring land to establish a farm" (AG6).

Land acquisition can be costly, especially for people in the cities. Although land acquisition may be cheaper in the villages than in urban areas, many young people may not like to live in the suburbs with limited access to social amenities. The availability of basic amenities could attract more young people to rural life. At the same time, access to land is also tricky due to communal land tenure. This type of land ownership system is prevalent among most ethnic groups in Nigeria, where land is owned by inheritance. Collective land ownership is associated with challenges, including land fragmentation, limited access to land, restricted family land, and difficulty using land as collateral for accessing loans.

On the other hand, land ownership restrictions have helped preserve traditional heritage, enhance bush fallows, and prevent land degradation(Phillip, Nkonya et al., 2009). However, the data show that cultural ownership and financial constraints hinder access to land, and it is a barrier to promoting agricultural entrepreneurship. For example, only male or firstborn sons inherit most families' land.

"My grandfather has a lot of lands. My dad inherited the land since he was the firstborn son of his father. In my case, I am not that fortunate because I am the fifth born, and I have brothers, so nothing will pass on to me except if the first set of siblings is female" (Abel-male undergraduate focus group).

Abel was keen on establishing a cashew and oil palm plantation as he was motivated by successful plantation farmers in his place of origin.

"Over the years, I have discovered opportunities in agricultural plantations, especially in cashew plantations and oil palm. I see poor farmers becoming rich from the proceeds of the export of cashew plantations. They can now afford to buy cars and live a good life. I have plans to go into plantation farming. We have a large expanse of land for oil that belong to my father(Abel- male undergraduate focus group)

However, he envisages the challenge of access to family land because of his position in the family. Although the family setting is monogamous and the parents are educated, cultural ideologies persist. Establishing a plantation requires a vast land area readily available, but he cannot access the family land because he is not the firstborn son. The land belongs solely to the firstborn son, who may not use the land.

Although there is a high rate of women's involvement in farming, land acquisition is a problem as it is easier for a male member of the family to access land than a female. The gender implication may explain why more females are in selected farming aspects, including farm labour than owning a farm (Ugwu, 2019). The barrier women face in accessing the land account for why they are more involved in certain activities like planting, fertiliser application, weeding, harvesting, and post-harvest activities like processing, storage, and marketing. Land preparation activities involving digging or making ridges require a lot of energy assertion. (SOFA Team and Cheryl Doss, 2011). It indicates discrimination whereby people are treated differently due to their natural attributes and characteristics.

7.7.4 Financial Constraints

Agricultural business requires enormous capital to start. As discussed in the previous chapter, participants indicated their passion for agricultural entrepreneurship but lacked capital. Many had an intention for agriculture later in life when they made money in another lucrative career. They believe they can raise money in a lucrative profession and later diversify into the agricultural business. However, participants identified inadequate financial support from the government as a significant barrier and a short time repayment plan of loan considering farm business rate of return

"I attended training on a youth empowerment programme, after which they gave us a loan of N250,000 and a full refund within two years. However, the repayment starts after six months, which is relatively too short considering the agricultural business's nature" (female (agricultural graduate- AG7).

Participant A7 opined that short-term repayment is strenuous. Most agricultural investment does not start yielding immediately. For example, investing in crop production requires a period between planting, harvesting, and marketing, usually longer than six months. Most

processes require manual handling, which takes longer than mechanised farming. The implication is that farmers start returning the borrowed loan even before generating any income, which is difficult for people with no other source of income. Farmers face a lot of barriers to accessing loans in the first place because they lack collateral

The high risk in farming practices, especially nature's dependence on agriculture in Nigeria, makes it worse. For example, due to the lack of irrigation facilities, farmers still depend on rainfed agriculture, primarily because they cannot afford irrigation systems due to the financial implication. The risk increases with uncertainty, especially with the effect of climate change. Also, the stress associated with farming activities is due to inadequate funding to purchase improved technology. However, the data ascertain farmers' reluctance to an insurance scheme to cushion the effect when a loss occurs. People form a negative perception of insurance companies due to past experiences. As compensation does not match the financial investments during adverse occurrences, farmers' involvement in insurance schemes is low.

"My people are outstanding farmers in my area, but we have financial constraints and many unforeseen circumstances. For example, last year, a flood from Cameroun washed away our crops. The government's only compensation is a mattress after people have spent so much on farming; this is discouraging" (Yaya- male undergraduate focus group)

Yaya is from a farm household, an ethnic group noted for farming involvement, especially crop production. The participants point out their discouragement due to inadequate assistance from the government during losses from unforeseen circumstances. The situation is complicated due to non-involvement in an insurance scheme. Farmers lack business orientation to farming, as they hardly keep farm records and accurate income and expenditure. They also lack planning for unforeseen circumstances and lack understanding of risk assessment and mitigations.

7.8 **Summary**

This chapter has outlined the underlying institutional constraints that form how people perceive agricultural careers. It explored the role of agents of socialisation, socio-cultural, environmental and political implications on career choices in agriculture. The chapter further explained that career decisions are not fixed by the in-depth exploration of the educational barriers emphasising learners' needs in the curriculum design and consistency in the education system's theory and practice. Opportunities for self-employment are changing

young people's perception of agriculture. However, the agriculture education system is not designed to meet learners' needs to become agricultural entrepreneurs.

Chapter 8: Conclusion and Recommendations

The final chapter of this thesis summarises the findings and identifies the insights into the research. It also outlines recommendations for policy change and presents areas for further study. Lastly, limitations and personal reflections are discussed.

8.1 Insights from the study

Participants have a similar pattern of career aspiration, although it changes slightly through different age groups. While the younger group have fixed career aspirations around prestigious jobs identical to the older group's childhood career aspiration, the latter is more flexible to career changes due to exposure and more awareness of the opportunities in agriculture. A homogenous pattern of career aspiration among participants indicates peer influence, lack of self-awareness, exposure, and social view of specific courses. Also, there is no gender disparity in the choice of agricultural courses except that females are more disposed to poultry-keeping activities, which is the reason for the less drudgery aspect of agriculture. Meanwhile, subjects that require mathematical skills, such as engineering, are male-dominated. The findings further show the significance of socialisation agents in making career decisions. These include family, friends, role models, educational institutions and religious affiliation. It is worth noting that the significant influencers have different reasons for saying things, some of which may be personal or what they deem reasonable for the individual.

Nonetheless, career choices become more complicated in cases of conflicting ideas from different influencers. Hence, a lack of advice consistency makes career decisions even more difficult. The implication is that there is a need for a holistic approach to career enlightenment for learners and all actors in the socialisation process. Career choices can become more complicated if people in their circle of influence lack an understanding of giving career advice considering individual interests and personality rather than external reasons. Most importantly, parents and caregivers should be incorporated into the enlightenment programmes as they have a significant impact on career decision

Similarly, children form career aspirations in feasible professions, and it takes exposure to delve deeper into different options. However, it is impossible to choose a career one is unaware of; it requires more exposure to extra-curricular activities. According to Gottfredson's theory, the findings show the significance of cognitive development in career

decisions. Therefore, children may have a different understanding of their careers at a particular stage. Ideally, career aspiration becomes more apparent with cognitive development and exposure. However, career decisions are not fixed; they can change (Lent, 2002). Therefore, the possibility of a career switch. However, most participants negatively perceived agricultural careers due to complex and tedious childhood agricultural experiences, societal views, and institutional factors. Yet, the numerous opportunities in agriculture, the importance of agriculture, and the means for job creation are motivating factors. Therefore, there is an urgent need to provide sufficient skills for establishing an agricultural business, creating interest in agriculture from the early years and reducing drudgery.

Young people are aware that the government transformation plan focuses on developing the agricultural sector in the nation, hence their readiness to establish agribusiness. However, educational institutions are not meeting learners' desires for skills acquisition needed for agricultural ventures. Other drawbacks include the admission process, long course duration without professionalism, poor curriculum design, disconnection in curriculum theory and practice, teachers' factor, inadequate teaching materials, inadequate practical experience and late specialisation. Participants felt they were left in the middle of nowhere as they lacked modern and traditional agriculture competence. The education system only succeeds in raising their hope without providing adequate opportunities for practical experience. They believe five years is sufficient for them to acquire tangible skills to establish an agribusiness successfully. However, many still enrol for short training courses after graduation to operate an agribusiness. Similarly, constraints are identified in line with their need. These include political instability, insecurity, conflicts, land tenure problem, and financial constraints.

8. 2 Recommendations

In line with the study's objectives and findings, the following recommendations are made to address the issues around young people's perception of agricultural careers, mass career enlightenment incorporating various agents of socialization and the need to sort out institutional difficulties facing young people in agriculture.

Career Empowerment/ Person-Centred Career Decision Making.

There has been much advocacy for people's voices in decisions that affect their lives. A career decision is no exception. Children need to be empowered to take the lead in their career pathways. This can be possible by tailoring career guidance to understand the child's

area of interest and strength rather than imposing a profession on them due to family pride, personal gain or societal status of jobs.

Career Enlightenment at the Secondary level

It would be incredibly beneficial if the schools could facilitate career awareness in agriculture, especially in secondary, where career decisions are made. Creating awareness in schools by inviting successful agricultural entrepreneurs and celebrating agriculture day are motivational strategies. In addition, there is a need to direct effort to support and expose the children to different aspects of agriculture to change their perception of agriculture as farming. This will further widen their career horizons to see the vast opportunities in agricultural careers and facilitate self-discovery.

Parents and Caregivers' active involvement in the all-round development of their children

It is crucial that parents and caregivers get actively involved in their children's overall development and not leave it to the school alone. Parents need to ensure that their children are engaged in extracurricular activities for their development. Also, it calls for a re-orientation around jobs and careers and appreciating individual uniqueness, job uniqueness, and every profession's usefulness in nation-building. For example, suppose everyone becomes a doctor who will provide food for the nation. Exposure to a broader learning experience promotes self and career awareness.

Creating mass career awareness through various social affiliations and media.`

The influence of religious beliefs in decision-making, including careers, can not be underestimated. Nigeria is a spiritual environment with individuals and families having strong faith connections in a deity in different religious afflictions. Therefore, career campaigns are more likely to reach a wider audience through this media**.** As career awareness is for young people and people who can influence their decision, different channels should be used for publicity. For example, campaigns targeting the youth are likely to reach a wider audience through WhatsApp, Facebook etc., while TV, radio and newspapers are likely to gain older groups' participation.

Curriculum Review

A reformed agricultural education is vital to Nigeria's economy at this crucial time. The findings suggest policy changes in agricultural education, especially in higher education. The

needs of learners and society are essential in curriculum development; therefore, the curriculum should be redesigned to facilitate skills acquisition for agribusiness. The theoretical content of the curriculum should match how it is delivered. The curriculum is expected to be implemented through a guided discovery where students learn by doing to facilitate practical knowledge. However, implementation is challenging, as laudable as the policy is on paper. Due to inadequate funding, there are no teaching materials to foster teaching and learning. Inconsistency in the theory and practice of agriculture makes mastery of agriculture difficult due to the absence of resources to implement the modernized agriculture highlighted in the content of the curriculum. Hence, the need to provide all the necessary equipment to deliver the curriculum content.

Promoting Extra Curricula Activities

The curriculum contains not only the course of study but extracurricular activities for comprehensive education and all-around learning, which is generally underway in many Nigerian schools. Improving extra-curricular activities in agriculture will subsequently motivate more young people in agriculture. Therefore, a strategic agricultural education should facilitate agricultural tours and visits to farm villages, bringing children closer to nature and promoting learning, especially in the early years. During tours, students can see things taught in the classroom in real-life situations, hence facilitating long-lasting learning than abstract presentation.

Admission Policy Review

An innovative agricultural education requires recruiting the best brain into the sector, which may demand a change in the admission policies. The admission requirement to agriculture needs to be raised to meet other prestigious courses. So, agriculture courses become more competitive, eradicating the opinion that agriculture is for low achievers. Furthermore, pursuing the ATA of modern agriculture requires intelligent students; hence, the focus needs to be on interested candidates with high academic standards.

Strategic recruitment into an agricultural career by using incentives than coercion

Interest is vital in sustaining a career. Therefore attracting candidates into agriculture needs not to be by coercion but through motivations like scholarships and sponsoring promotional programmes via various social media, conferences and exhibitions will motivate more young people into agricultural careers. Also, promoting innovative agriculture using improved

technology to meet the world standard demands the best brains, which lowering admission requirements for agriculture cannot achieve. Similarly, the provision of modern equipment for implementing the curriculum is more attractive to young people than the traditional method, which involves a lot of stress and exertion.

Early specialisation:

It will be beneficial at the tertiary level if students are given their specialities from the beginning of the programme. They may be taking some general courses, but they need placement in their area of interest from the commencement of their programme to facilitate skill acquisition. The perception of lengthy course duration of agriculture has no gender disparity but is due to lack of interest, inadequate skills acquisition and lack of professionalism in agricultural careers. Early specialization in chosen area will help students gain enough skills to establish agribusiness in their chosen field after school.

Provision of practical training for establishing an agricultural business.

A consistent positive perception of agricultural careers among respondents is the opportunity for self-employment. Due to the high unemployment rate among graduates, young people are shifting attention from white-collar jobs to careers that can make them self-employed. Hence, students will prefer to gain skills that enable them to become agricultural entrepreneurs. Furthermore, students will benefit from early practical training from the beginning of the course and not at the later end. Therefore, agricultural education needs to be more problem-solving and practical-oriented.

Provision of a loan scheme for students to establish agribusiness.

Funding should be provided as repayable loans to establish agribusiness within five years of their study. With this, students can gain managerial and other skills for operating an agricultural venture. In addition, they need to be adequately funded to start an agribusiness after school, encouraging their retention in an agricultural career.

Provision of adequate teaching materials for curriculum implementation

Teaching and learning become challenging without sufficient and appropriate teaching materials to enhance practical experience. Provision of adequate teaching materials that can facilitate learning the theoretical contents taught in class.

Campaign against the use of farm work as punitive measures /child labour

There is a need for public enlightenment against using farm work as a punitive measure in schools or coercing a child to farm by parents or caregivers. Most people develop a negative perception of agriculture from childhood through their experience in school or at home. Moreover, forcing young people to engage in farm work creates a dislike for agricultural subjects.

Recruitment of teachers and lecturers with teaching qualifications

Lecturers and teachers need teaching qualifications because they can have first-class but lack teaching skills. Teaching qualifications must be part of the entry requirement for lecturers and teachers. Also, the best brains must be admitted into the teaching profession and not a dumping ground for people unable to secure jobs in other sectors. Staff needs training and retraining to update their skills.

Effective collaboration between agricultural stakeholders.

There is a need for knowledge transfer and collaboration between various agricultural stakeholders. In addition, it is essential to promote students' exposure to rural life and agricultural enterprise through visits and tours.

Establishment of a farm village for agricultural graduate

Efforts must be made to promote the establishment of agricultural villages at various levels to accommodate agricultural graduates and ensure continuity and retention in agricultural careers. Students who are taught modern agriculture can practice after school if facilities are available, which requires enormous capital that individuals may not be able to afford. However, young people are more likely to discontinue agricultural careers if these resources are unavailable. Therefore, to ensure continuity, the study suggests establishing a farm village for graduates, which will not only solve the problem of access to land but also address security issues. The conflicts between farmers and Fulanis have made many abandoned farming as most farms are located in remote areas. One of the solutions to insecurity is farmers forming clusters against operating traditional scattered small farms. Establishing a farm village for graduates will serve as a security measure. At the same time, it is a viable approach for easy technology transfer and dissemination of information. If well harnessed, it ensures an easy transfer of innovation to the group rather than individual farmers. As a result, people can learn new things from one another.

Continuity of agricultural programmes.

Government need to facilitate the continuity of developmental programmes. Laudable programmes do not need to stop because of changes in political power. Political instability is a significant reason for the incomplete implementation of policy and developmental programmes. Therefore, many viable policies are abandoned due to a lack of political will and the personal interest of leaders. Another problem is a result of poor planning and implementation; however, a more significant percentage is due to political instability

Provision of a reliable insurance scheme and awareness.

There is a need to establish reliable insurance schemes for young people keen on becoming agricultural entrepreneurs. This is because agricultural business can be very unpredictable and highly risky, especially with nature-dependent agriculture practised in Nigeria. Therefore, more young people are likely to be retained if insurance schemes can cover them during unpredictable circumstances. However, people negatively perceive insurance companies due to past experiences of people as compensation does not match the financial investments during adverse occurrences. Therefore, a more reliable insurance scheme will attract more young people to agriculture.

8.3. Constraints the implementation of these recommendations.

It is worthy of note that the implementation of these recommendations may be at different levels, including individuals, families, institutions, the education sector, and local, state or federal government. While some require funding, others involve a change in attitude, policy and practice at different levels. However, effort depends on political will and having the right people in places where decisions are made. Overall it requires proactive people who can see the need for a change and implement it. However, some of these changes can be made in the family setting, secondary school or higher education level, and society without the requirement for funding. For example, changing the admission policy, recruitment of interested candidates, motivational strategy to agricultural careers, and early specializations and engaging in extra curricular activities like farm visits are small changes that can make significant differences at the school level. Furthermore, parental involvement in the children's comprehensive education are changes that can be made locally. At the same time, mass career campaigns, provision of teaching facilities, training and retraining of teachers, and provision of loans require funding that may demand a collaborative intervention of all levels of government and private investors.

8. 4 Suggested Areas of Further Research

- The influence of Parental styles on young people's career decisions in agriculture
- How does the mode of entry affect academic performance?
- How method of entry influences retention in agriculture careers after school.
- Comparing the educational factors to making a career choice in agriculture across states, federal, private universities and colleges of agriculture
- Comparing the educational factors across selected states in Nigeria.
- What motivating factors can increase the retention of agricultural graduates in the agricultural sector?

8.5 Limitations of the Research

Nigeria is a vast and diverse country; however, this study only covers Kwara State, specifically, the headquarters (Ilorin). Unfortunately, the study could not go beyond this scope due to funding and time. Also, part of the plan was to conduct focus group discussions with students who are in science classes but not offering agriculture. However, this was not possible due to the limited time. Therefore, I ended up interviewing non-science students. Ultimately, I realized that their responses did not answer the research question; consequently, they were not included in the analysis.

I obtained limited information from the ministry of education personnel representing the curriculum developers group. Unfortunately, they were unresponsive and cautious about releasing any information as they considered it implicative and detrimental to their employment. As a result, the responses were not included in the analysis.

Also, the students were conscious of voicing anything against the education system or their teachers. Fortunately, there were sections where they were asked to answer a short question regarding the educational factors on a sheet of paper. It was an individual activity that allowed the students to express themselves and write what they could not say in their teachers' presence, which proved to be more engaging and relaxing.

8. 6 Personal Reflection

PhD journey started in 2015, I applied and got admission to Newcastle, but I deferred the admission twice due to my inability to meet the financial obligation. Fortunately, I started my PhD in 2017. Since I started, I have had several ups and downs from the first day. It began with my family being denied a visa. Seeing my two years old daughter only via Whatsapp

was devastating, and I could not imagine leaving her back in Nigeria for a four-year programme. I overcame that, and the next was the financial challenge that almost ended this programme as I was told I would have no option but to return to Africa if my tuition fees were not paid. It became overwhelming, but I persevered thanks to my support system.

I proceeded with the fieldwork against all odds at a critical time in the Nigeria election. As elections usually involve violence, I worked judiciously within the shortest time. First, I prioritised the focus group discussions with students. After that, I proceeded with agricultural enterprises and personnel at the ministry of education. Lastly, telephone interviews with the agricultural graduates.

I learned a new challenge of conducting qualitative research, resilience, and hard work during the process. In addition, I found qualitative research enjoyable as listening to people's experiences is more genuine and engaging.

Although the write-up seemed like an endless journey when the pressure of different challenges was too much, including COVID and having to homeschool two children was overwhelming. I told my supervisor I would like to stop the programme, but her support and encouragement kept me going.

My youngest child would say, “why are you always writing so much, and when will you finish your story" Everything that has a beginning, indeed, has an end.

Appendix A1

Educational Perspective of Factors Influencing Young People's Career Choice in Agriculture: A Case Study of Kwara State, Nigeria

PARTICIPANT INFORMATION SHEET

You are invited to participate in a study to understand the educational perspective of factors influencing young people's career choices in agriculture: A case study of Kwara State. This research is part of a postgraduate study and will involve students, graduates, teachers, lecturers, agricultural enterprise personnel and curriculum developers. This research is supervised by Dr Elizabeth Oughton and Professor Sally Shortall from Newcastle University.

What is the purpose of the study?

This research will explore the influence of Nigeria's educational system on young people's career choices and recommend how youth may be encouraged to seek careers in agriculture.

Why have I been chosen?

You are considered to be in the category of respondents needed for this study

Do I have to take part?

Participation in the study is voluntary. You have the right to reject the invitation or withdraw from the study at any time without providing any explanation or incurring any penalty.

What will happen to me if I take part?

If interested, you will be part of a group of approximately 4-6. You will be asked to discuss issues related to young people in agriculture(This is not a test; therefore, there are no wrong or correct answers). We are simply interested in your opinion on the topic being discussed. The discussion will take place on the school/workplace premises. With your permission, the group discussion will be audio recorded. The group discussion will last approximately one hour. The audio recording will be transcribed, copied verbatim and analysed. The results will be anonymous and will be used only for the research.

Is there any risk that could be incurred by participating in this study?

The researcher has undergone training in the management of focus group discussions. Therefore, I am well informed on managing individual differences in a group. Though no specific risks have been identified, there is always the possibility of people getting on one another nerves. In such a case, I will take appropriate measures by retiring an upset individual from the group, ensuring proper care.

Are there any potential benefits of taking part in the study?

This study will significantly benefit, though not immediately, as the study will make recommendations on the educational curriculum and agricultural policies.

Confidentiality

All information supplied will be confidential. Names will not be attached to audio recordings or questionnaires; respondents will be identified by coded number. Anonymised interview transcripts and interview guide will be stored in a locked password-protected computer

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Appendix A2

Personal Consent Form

I ---------- confirmed that (Please tick appropriately

1	I have read and understood the information about this research as provided in the information sheet	
2	I have been allowed to ask questions about this research, and also my participation	
3	I voluntarily agree to participate in this research	
4	I understand that my participation is voluntary, and I can as well withdraw at any point without being penalised or questioned	
5	I understand that this research will be confidential and anonymous	
6	I understand that the research will entail the use of an audio recorder, the information will be transcribed, and all personal data will be removed	
7	I understand that the data collected is only for this research and will be saved on the Newcastle University Computer.	
8	I understand that other researchers will have access to this data if the data is confidential and if they agree to the terms I have specified in this form	
9	I understand my name will not be used on any document or research presentation.	
10	I, along with the researcher, agree to sign this informed consent form	

---------- ---------- ----------

Name of participant Signature Date

Researcher:

---------- ---------- ----------

Name of researcher Signature Date

Appendix A3

Participant debriefing information

Thank you for participating in this study. This research relies on your voluntary participation, and your contribution is highly appreciated.

This research is part of a postgraduate study involving agricultural students, alumni, teachers, lecturers, agricultural personnel and curriculum developer. It aims to explore the educational perspective of factors that influence young people to choose agriculture as a career to recommend how more youth may be encouraged to seek careers in agriculture.

I am simply interested in your opinion on the topic being discussed. The discussion will take place on the school/work premises. With your permission, the group discussion will be audio recorded. The group discussion will last approximately one hour. The audio recording will be transcribed, copied verbatim and analysed. The results will be anonymous and will be used only for the research. The transcripts and audio recordings will be kept electronically and accessed through a password-protected computer.

The outcome of this study may be published in academic journals, and it could be used for further research.

If you have any further queries about the research, please get in touch with Funmilola Omolara Olaitan Dr Elizabeth Oughton. and Dr. Menelaos Gkartzios

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Appendix B1

Research objectives and questions

S/N	Research Objectives	Research Questions
1	Background Information	Participants' previous experience in agriculture, aspect, career aspirations and reason for their choice?
2	To examine the participants' perception of agricultural careers	Why did you choose agriculture as a course? Do you intend to continue in an agricultural career after graduation? Which aspect?
3	To determine factors influencing participants' choice of careers in agriculture	What factors influences career choice? What is the educational factor influencing choice?
4	To identify barriers in agricultural careers.	What encourages or discourages you from seeking a career in agriculture?
5	To identify the strengths and weaknesses of agricultural education	What educational factors discourage or encourage a career in agriculture

Table 1. interview questions for tertiary students

S/N	Research Objectives	Research Questions
1	Background Information	Participants' previous experience in agriculture, which aspect, and childhood career aspiration

		reason for choice?
2	To examine the participants' perception of agricultural careers	Why did you choose agriculture as a course? Are you retaining a career in agriculture? Which aspect?
3	To determine factors influencing participants' choice of careers in agriculture	What factors influences your career choice? What can you say about your educational experience?
4	To identify barriers in agricultural careers.	What encourages or discourages you from seeking a career in agriculture?
5	To identify the strengths and weaknesses of agricultural education	What are educational factors discouraging or encouraging a career in agriculture

Table 2. Interview questions for agricultural graduates

	Research Objectives	Research questions
1	Background Information	Participants' previous experience in agriculture, which aspect, childhood career aspiration and reasons for choice?
2	To examine the participants' perception of agricultural careers	Why did you choose agriculture as a course? What motivated you to continue in agricultural careers
3	To determine factors influencing participants' choice of careers in agriculture	What factors influences your career choice? What can you say about your educational experience?
4	To identify barriers in agricultural careers.	What encourages or discourages you from seeking a career in agriculture?
5	To identify the strengths and weaknesses of agricultural education	What educational factors discourage or encourage a career in agriculture

Table 3. Research questions for agricultural personnel

	Research Objectives	Research questions

1	Background Information	Participants' previous experience in agriculture, which aspect, childhood career aspiration and reasons for choice?
2	To examine the participants' perception of agricultural careers	Why did you choose agriculture as a course? Which aspect?
3	To determine factors influencing participants' choice of careers in agriculture	What factors influences your career choice? What can you say about your educational experience?
4	To identify barriers in agricultural careers.	What encourages or discourages you from seeking a career in agriculture?
5	To identify the strengths and weaknesses of agricultural education	What educational factors discourage or encourage a career in agriculture

Table 4 Research questions for participants at the ministry of education

Appendix C1

The secondary students' interview guide

Focus Group Discussion Guide, specific questions for this group

Question 1 Background information

Activity one

Do you have any previous experience in agriculture?.....

Which aspect?.....

What are your career aspirations (what would you like to become)? …….

What informed your decision to choose a career in that profession?.....

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a subject?

What informs your decision to choose or not choose agriculture as a subject?

Do you intend to pursue a career in agriculture after secondary school?

What about agriculture as a profession after graduation?

How can you explain agriculture?

What does it entail?

-Are you aware of various aspects of agriculture

Which part do you prefer

Questions 3 What are the factors that support or constraints the decisions of students to choose an agricultural profession

Can you tell me those things that can encourage or discourage you from seeking a career in agriculture?

Question 4 What are the educational factors influencing student's choice of agriculture as a career

Activity 2: What can you say about agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				
Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden, processing etc Specify any practical experience you had				
Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your perception of agriculture?

What can you say about the skills you have acquired so far?

Appendix C2

The tertiary students' interview guide

Focus Group Discussion Guide, specific questions for this group

Question 1 Background information

Do you have any previous experience in agriculture?.....

Which aspect?.....

What are your childhood career aspirations……..

What informed your decision to choose a career in that profession?.....

What is your career aspiration now?.....

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a course?

What informs your decision?

What about agriculture as a career after graduation?

How can you explain agriculture?

What does it entail?

-Are you aware of various aspects of agriculture

Questions 3 What are the factors that support or constraints the decisions of students to work in the agricultural profession

Can you tell me those things that can encourage or discourage you from seeking a career in agriculture?

Question 4 What are the educational factors influencing student's choice of agriculture as a career

Activity 2: What can you say about the following agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				
Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden, processing etc Specify any practical experience you had				
Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your perception of agriculture?

What can you say about the skills you have acquired so far?

Are they enough for you to pursue a career in agriculture?

Appendix C3

Agricultural Graduate interview guide

Question 1 Background information

Do you have any previous experience in agriculture?.....

Which aspect?.....

What were your childhood career aspirations? ……..

What informed your decision to choose a career in that profession?.....

Are you retained in agricultural careers?

Which Aspects?

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a course?

What informed your decision to choose agriculture?

Questions 3 What are the factors that support or constraints the decisions of students to work in the agricultural profession

Can you tell me those things that can encourage or discourage students from seeking a career in agriculture?

Question 4 What are the educational factors influencing student's choice of agriculture as a career

What can you say about the following agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				

Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden, processing etc Specify any practical experience you had				
Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your retention in agriculture careers?

What can you say about the skills acquired while in school?

Are they enough for you to pursue a career in agriculture?

Appendix C4

Agricultural teachers and lecturer interview guide

Question 1 Background information

Do you have any previous childhood experience in agriculture?.....

Which aspect?.....

What were your childhood career aspirations? ……..

What informed your decision to choose that career ?.....

What motivates your retention in agriculture?

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a course?

What informed your decision to choose agriculture?

Questions 3 What are the factors that support or constraints the decisions of students to work in the agricultural profession

Can you tell me those things that can encourage or discourage students from seeking a career in agriculture?

Question 4 What educational factors influence students' choice of agriculture that you can identify?

What can you say about the following agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				
Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden, processing etc Specify any practical experience you had				

Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your retention in agriculture careers?

What can you say about the skills acquired while in school?

Are they enough to retain you in an agricultural career?

Did you feel fulfilled in your agricultural career?

Appendix C5

The agricultural personnel interview guide

Question 1 Background information

Do you have any previous childhood experience in agriculture?.....

Which aspect?.....

What were your childhood career aspirations? ……..

What informed your decision to choose that career ?.....

Why are you retained in agriculture

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a course?

What informed your decision to choose agriculture?

Questions 3 What are the factors that support or constraints the decisions of students to work in the agricultural profession

Can you tell me those things that can encourage or discourage students from seeking a career in agriculture?

Question 4 What educational factors influence students' choice of agriculture that you can identify?

What can you say about the following agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				
Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden, processing etc Specify any practical				

experience you had				
Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your retention in agriculture careers?

What can you say about the skills acquired while in school?

Are they enough to retain you in an agricultural career?

Did you feel fulfilled in your agricultural career?

Appendix C6

Agricultural curriculum developer interview guide

Question 1 What are the personal characteristics of respondents

Do you have any previous childhood experience in agriculture?.....

Which aspect?.....

What were your childhood career aspirations? ……..

What informed your decision to choose that career ?.....

Why are you retained in agriculture

Question 2 What is students' perception of choosing agriculture as a career?

Why did you choose agriculture as a course?

What informed your decision to choose agriculture?

Questions 3 What are the factors that support or constraints the decisions of students to work in the agricultural profession

Can you tell me those things that can encourage or discourage students from seeking a career in agriculture?

Question 4 What educational factors influence students' choice of agriculture that you can identify?

What can you say about the following agricultural education?

Learning experiences	Adequate	Inadequate	Non	Comments: explain
Content: Agricultural subjects				
Delivery: Teaching methods				
Teaching aids				
Practical experiences, E.g. class garden,				

processing etc Specify any practical experience you had				
Co-Curricular activities, e.g. Field trips, Young farmers club Specify----------				
What can you say about your learning environment				

Did your learning experiences in school inform your retention in agriculture careers?

What can you say about the skills acquired while in school?

Are they enough to retain you in an agricultural career?

Did you feel fulfilled in your agricultural career?

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