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INNOVATION IN AGRICULTURAL VOCATIONAL TRAINING PROGRAMS AND ITS EFFECT ON EMPLOYABILITY IN CENTERS OF EDUCATION AND COMMUNITY ACTION IN CAMEROON

Dissertation Submitted in Partial Fulfillment of the Requirement for the Award of a Master's Degree in Education

Specialization: Conception and Evaluation of Projects

Presented by

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DECLARATION

I, **NDIP-AGBOR PRECIOUS SHEILLA ENOW**, do hereby declare that this thesis is my original work and that it has not been submitted and will not be submitted for any academic award in any other University for a similar or any other degree award.

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CERTIFICATION

We the under signed, hereby certify that the thesis entitled "**Innovation in Agricultural Vocational Training Programs and its Effect on Employability in Centers of Education and Community Action in Cameroon**" submitted to the department of Curriculum and Evaluation, Faculty of Education in the University of Yaoundé 1 was carried out by NDIP-AGBOR PRECIOUS SHEILLA ENOW, Matricule (21V3171), was carried out under our supervision. The work has been properly referenced and acknowledged.

The Dean of the Faculty **Head of Department**

Supervisor

Dr Abdoulai Shaibou Haji

DEDICATION

To my beloved mother Egbe Enow Diana of blessed memory for being an inspiration for me to chase my dreams.

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List of abreviations

AU	:	African Union
A:	:	Agree
ABD	:	ASIAN DEVELOPMENT BANK
ACET	:	Agricultural Centers for Education and Training
AET	:	Agricultural Education and Training
AGRA	:	Alliance for a Green Revolution In Africa
AIS:	:	Agricultural innovation Systems
ANOVA	:	Analysis Of Variance
ATVET	:	Agricultural Technical and Vocational Education and Training
AVT	:	Agricultural Vocational Training
CARPA	:	Partnerships Support Council
CsECA	:	Centers of Education and Community Action
CGEM	:	Computable General Equilibrium Model
CTA	:	Technology Center for Agriculture and Rural Cooperation
DESA	:	Department of Economic and Social Affairs
D	:	Disagree
DV	:	Dependent Variable
EESI	:	Environmental and Study Instititute
ECAM	:	Enquete Camerounaise Aupres des Menages/Cameroon Household Surveys
EFA	:	Education For All
FARA	:	Forum For Agricultural Research In Africa
FBO	:	Farmer Based Organisation
FO	:	Farmers Organisation
IITA	:	International Institute of Tropical Agriculture
GDP	:	Gross Domestic Product
GIZ	:	German Corporation for International Cooperation
GMM	:	Generalized Method of Moments
GMO's	:	Genetically Modified Organism
HCDI	:	Human Capital Development
IEA	:	Integrated Economic Accounts Table
ICLS	:	International Conference for labour statistics
IEI	:	Innovative Enterprise Institutions
IOE	:	International Organisation of Employers
ILO	:	International Labour Organisation International Trade Union Confederation
ITUC	:	Institute of Agricultural Research for Development
IRAD	:	Independent Variable
IV	:	Innovation Support Services
ISS	:	Innovation Support Services Providers
ISP	:	Millenium Development Goals
MDGS	:	Ministry of Agriculture and Rural Development
MINADER	:	Ministry of Vocational Training and Employment
MINEFOP:	:	Ministry of Secondary Education
MINESEC	:	Ministry of Higher Education
MINESUP	:	Ministry of National Education

MNE	:	National Development Strategy30
NDS30	:	National Framework of Qualifications and Certifications
NFQC	:	National Institute of Statistics
NIS	:	Non- Governmental Organisation
ODA	:	Organisation for Economic Cooperation and Development
OECD	:	Organisation for Economic Cooperation and Development

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ABSTRACT

The study “Innovation in agricultural vocational training programs and its effect on Employability in centres of Education and community action in Cameroon” seeks to assess the effect of innovation in agricultural vocational training programs on employability in centres of Education and community action in Cameroon. The problem under this study stems from the skills mismatch that exists in the agricultural training program in centres of education and community action in Cameroon. From the aim of our study, we developed the research question which states that; to what extent does innovation in agricultural vocational training programs affect employability? The study used a survey research design which entailed the use of a structured questionnaire to collect data. The area of study was the centres of education and community action of the councils of Yaoundé 2,3 and 6 with a sample size of 69 participants. The data collected were analyzed using the SPSS version 25 using a descriptive analysis for demographic elements and inferential statistics for correlation and regression tests in order to test the hypothesis. From our results, we had a mean of 3.05 which is in accordance with the statement; to evaluate the influence of management skills on employability.Findings revealed from the regression analysis were as follows ;the regression model for management skills predicted 4.1% of the variance in employability($1,68=3.870, p>0.05$) management skills have no statistically significant influence on employability. The regression model for soft skills predicted 24.4% of the changes in employability($1,68=22.954, p<0.000$).Therefore soft skills have a statistically significant effect on employability.The regression model for technical skils predicted 71.8% of the changes in employability($173.994, p<0.000$).Therefore technical skills have a statisticaly significant imoact on employability. This shows that two out of three hypotheses used in this study are statistically significant, hence the conclusion that innovation in agricultural vocational training programs has a statistically significant effect on employability.

Keywords: innovation in agricultural vocational training programs, employability.

RESUME

L'étude « L'innovation dans les programmes de formation professionnelle agricole et son effet sur l'employabilité dans les centres d'éducation et d'action communautaire au Cameroun » vise à évaluer l'effet de l'innovation dans les programmes de formation professionnelle agricole sur l'employabilité dans les centres d'éducation et d'action communautaire au Cameroun. Le problème de cette étude découle de l'inadéquation des compétences qui existe dans le programme de formation agricole dans les centres d'éducation et d'action communautaire au Cameroun. A partir du but de notre étude, nous avons développé la question de recherche qui stipule que; Dans quelle mesure l'innovation dans les programmes de formation professionnelle agricole affecte-t-elle l'employabilité ? L'étude a utilisé une conception de recherche par sondage qui impliquait l'utilisation d'un questionnaire structuré pour recueillir des données. La zone d'étude était les centres d'éducation et d'action communautaire des communes de Yaoundé 2,3 et 6 avec un échantillon de 69 participants. Les données recueillies ont été analysées à l'aide du SPSS version 25 en utilisant une analyse descriptive des éléments démographiques et des statistiques inférentielles pour les tests de corrélation et de régression afin de tester l'hypothèse. D'après nos résultats, nous avions une moyenne de 3,05, ce qui est conforme à l'énoncé ; pour évaluer l'influence des compétences en gestion sur l'employabilité. Les résultats révélés par l'analyse de régression sont les suivants ; le modèle de régression pour les compétences en gestion a prédit 4,1 % de la variance de l'employabilité (1,68 = 3,870, p> 0,05). Les compétences en gestion n'ont pas d'influence statistiquement significative sur l'employabilité. Le modèle de régression pour les compétences non techniques a prédit 24,4 % des changements dans l'employabilité (1,68=22,954, p<0,000). Par conséquent, les compétences non techniques ont un effet statistiquement significatif sur l'employabilité. Le modèle de régression pour les compétences techniques a prédit 71,8 % des changements dans l'employabilité (173,994, p <0,000). Par conséquent, les compétences techniques ont un effet statistiquement significatif sur l'employabilité. Cela montre que deux des trois hypothèses utilisées dans cette étude sont statistiquement significatives, d'où la conclusion que l'innovation dans les programmes de formation professionnelle agricole a un effet statistiquement significatif sur l'employabilité.

Mots clés : innovation dans les programmes de formation professionnelle agricole, employabilité.

CHAPTER ONE

INTRODUCTION

Agricultural transformation is crucial for economic transformation, but for it to happen upgraded skill sets across the whole agricultural value chain are needed (Eugenie & Harouna, 2017). In terms of the sector size, agriculture and its related activities are the backbone of Cameroon's economy but employment within this sector is mostly unskilled resulting in a drop in its contribution to the GDP from 2018 up to date (NIS report, 2019). The purpose of creating agricultural training and high schools is to provide students with the skills they need to practice agriculture as a profession (Chewachong & Haywat, 2021). The rapid growth of most of Africa's impoverished youths with no employable skills coupled with limited jobs is a serious threat to economic growth in Africa and Cameroon in particular (African Union,2012). There is, therefore, need for most African countries to develop technical and vocational education and training(TVET) as a sustainable alternative to raising the skills levels of youths in order to obtain a productive workforce((Pavlova, 2014). The quality of teaching and learning TVET courses like agriculture has a direct impact on youth productivity, employment and poverty reduction. It is therefore important to develop the TVET system in Cameroon to be able to provide youths with employable skills and competencies needed for sustainable development (Amedome & Fiagbe, 2013). The head of state in his message to the youth marking the 54th edition of the National Day on the 10th of February, 2020 also emphasized that; the government's main goal is to achieve emergence by the year 2035. According to him young people with sound training and education are likely to emerge more soundly and find employment or become employers themselves. He emphasized that the government and the various ministries in charge of education and training have been

carrying out several efforts to provide a solution to the problem of youth unemployment. “To achieve emergence we will have to modernize our agriculture to stimulate our growth which can only be achieved through adequate education and training to reduce our imports and increase our exports.”

The Background of the Study

Historical Background

As far back as 1924, post-secondary agricultural education and training existed in Africa. which was mostly designed for the children of the middle class to prepare them for civil service. However post-primary agricultural education was reserved for the sons of traditional farmers. Following this period, the World Bank invested heavily in agricultural education projects. so much so that between 1964 and 1990, the bank financed 41 projects supporting over 60 institutions in 25 countries worldwide. Although some form of community agricultural education was in practice in Africa before the advent of European colonization, African governments had not given adequate attention to any form of community agricultural education in national development programmes (Anyanwu, 2002; Ojong, 2008). One of the effects of colonization was the adoption of formal education, which led to a gradual decline of African forms of community education with a consequence of increasing unemployment, underemployment, poverty, deviance and criminality in the society (Association for the Development of Education in Africa, 1989; UNESCO,2008). This situation revealed the shortcomings of formal education in meeting the development needs of African countries in general and Cameroon in particular.

During the colonial period, administrations aimed towards more productive-oriented economic strategies which were meant to train local populations in modern agricultural production practices. As a response to increased demand for higher skill levels, secondary-level agricultural education in Africa was established with one of the first schools to develop certificate courses in agricultural education being the Makere College Uganda. Similarly, non-formal education in agriculture in Cameroon during this period was mostly carried out at the secondary level and was reserved for rural youth who had been excluded from the formal education system (Eugenie & Harounan, 2017).

This led to the reorganization of the Ministry of Agriculture in 1976 when community and local development services were extended to the whole national territory to enhance

agricultural training. In the same year, seventeen (17) Community training Centres were transferred from the Ministry of Youth and Sports to the Ministry of Agriculture and placed under the Department of Local and Community Development (Amungwa, 1984). These centres were formerly known as Community and Cultural Action Zones (abbreviated as ZACCs in French), launched in 1970 as a non-formal educational system aimed primarily at dealing with the problem of rural out-migration of the youths who constitute a modernizing force in the rural areas. Several pilot zones were thus created where farmers could acquire innovative techniques and return to improve farming in their villages. However, the ZACCs were not very successful as experiments in the teaching of modern agricultural techniques. The technology employed had little relevance to the situation of village farmers. The ZACC plantations did not often exceed 2 to 3 hectares and their production remained low. Due to the lack of well-trained instructors, and regular funding, the centres went into a prolonged state of neglect and the goal of motivating trainees to live and work in rural areas was not attained.

In an attempt to remedy the situation, the national plan for community Development formulated in 1981 recommended the establishment of operational CsECA within the 5th Five-Year Development Plan (Amungwa, 1984). In 1982, the Community training centres were integrated into the Plan as CsECA with the specific objective of involving the rural population in the identification, planning and implementation of development actions primarily in the field of agriculture. In the same vein, the National Forum on Education organized in 1995 placed a strong emphasis on relating education to the development needs of Cameroon (Ministry of National Education, 1995). Despite the predominance of agricultural education during this period, the initial institution-building achievements of the 1970s and 1980s only gave way to neglect in agriculture training at the advent of the 1990s. This led to donor assistance to African agriculture and support for agricultural education and training in Africa to largely disappear to only about 0.7%. This withdrawal in donor assistance was mostly to; distance African professionals from knowledge networks, and global information resources and to limit their access to technological transfer. This has largely led to a severely depleted pool of human resources in African agriculture. (Jee, 2016). Such assistance is seen to have continued to dwindle since 1996 up till date most probably because of the low returns on investment in agricultural education (World Bank report, 2016). This goes ahead to mention that to enable African agriculture to grow, African countries should be able to grow their skills in agricultural education and training.

Contextual Background

The global context for this study is situated within the 2030 Agenda for Sustainable Development Goals whose fourth goal is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Its sub-articles peculiar to vocational training will be explained as follows; In Sustainable Development Goals Number 4, in its article 4.4 states that; governments should by 2030 substantially increase the number of youth and adults who have relevant skills including technical and vocational skills, for employment, decent jobs and entrepreneurship. SDG goal 2, article 2.4 states that by 2030 countries should ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production that will progressively strengthen agricultural capacity and adaptation to climate change. In article 2.5a, this goal aims to increase investment, including through enhanced international cooperation in; rural infrastructure, agricultural research and extension services, and technological development to increase agricultural productive capacity in developing countries in particular least developed countries.

The World Trade Organization (2015) defines that given the availability of arable land and labour coupled with high unemployment, especially of the youth, there is room for the private sector to step in to capture market share in the trade of agricultural products and potentially reverse the current trend in the agricultural products trade deficit. Therefore, by developing the skills of the youth to become effective farmers, they can be employed in productive jobs and be lifted out of poverty. For instance, the Youth in Agribusiness Program initiative presented at the African Agricultural Transformation Conference in October 2015 in Dakar intends to support entrepreneurship among the youth and women and is supported by institutions such as the International Institute of Tropical Agriculture (IITA), The Alliance for a Green Revolution in Africa (AGRA), The Forum for Agricultural Research in Africa (FARA), The Technology Center for Agriculture and Rural Cooperation (CTA), Techno serve and others. Sanginga (2015) states that "This program is designed to reinforce the roles of disenfranchised young African adults through a comprehensive outreach effort by providing information, life skills education, financial services, proven technologies and a menu of agribusiness information and opportunities to at least 800,000 young people in 20 Regional Member countries largely through awareness campaigns and social media".

In addition, the program intends to provide at least 35,000 internships, 18,400 agribusiness startups and 154,000 new decent jobs and contract farmer marketing opportunities. A total of US$ 700 million is expected to be invested across the 20 RMCs over five years. And each

country is expected to train about 1,536 unemployed university and polytechnic graduates in an 18-month long period (Mutemi and Mohamed, 2007). Beintema and Stads (2014) argue that the desperately low and declining investment levels and human resource capacity in agricultural training hinder the effectiveness of the smallest countries (most likely francophone ones) and recommend further investment in agricultural vocational and training teaching and learning material. Furthermore, SDG number 8 states that governments should promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. It goes further in its articles 8.2 and 8.3 to emphasize that economic productivity can mostly be achieved through technological innovation and diversification of training and productive activities which is the focus of this study.

The world bank group document titled "Fostering Skills In Cameroon, 2016 presented the improvements made in vocational training by identifying that most vocational training programs are not closely linked to the needs of the job market and often focus on a few sectors such as construction which accounts for about 25% of its enrollment while leaving out other important sectors of the economy such as agriculture which accounts just for about 2% of the enrollment rate. It also identifies the fact that apprenticeships could ensure adequate delivery of training in line with the needs of the private sector. although this may happen informally because there is no legal framework for private companies to partner with training centres. As a result, most youths even in vocational training do not undergo professional training.

In Cameroon, the government has adopted the National Development Strategy 2020-2030 for structural transformation and inclusive development with its main aim to achieve emergence by 2035. Whose orientation is derived from the African Union Agenda for 2063 given its second objective which is to ensure that member states have educated citizens and a skills revolution based on; science, technology and innovation. This innovation in training can be linked to objective number 5 which is to achieve modern agriculture for increased productivity and output. The structural transformation of the national economy requires the availability of competent and competitive human capital. The development of human capital represents an essential factor for the development of dynamic agricultural manpower and relies on the existence of a large workforce that is well-trained and optimally employed. To achieve this government must implement adequate policies in education under a climate of good governance to allow the development of productive human capital. The standard measure for the growth in human capital in most countries is the human capital development

index (HCDI). Cameroon's HCDI is seen to have dropped from 0.41 in 2012 to 0.39 in 2017 because of several problems inherent in the formulation of education policies. Ensuring effectiveness in human capital development requires good knowledge of the evolution and structure of the population and above all priority in sectoral needs to prepare better prospects for development. In its section 4.2 articles 272 a study conducted on education, training and employability during the 2010-2020 period showed that the education and vocational training strategy envisaged a reorganization of the education sector through various strategic thrusts such as; access and equity, quality and relevance etc as profoundly elaborated in the education and training sector strategy paper. It promises in its subsection (iii) that vocational training should be demand based and oriented by the productive sector.

In terms of training, there are 1648 government and private vocational training centres and institutes offering nearly 240 training specialities to more than 45000 learners each year (Resen, 2013). However, the current supply of; educational infrastructure, teaching staff and trainers are unable to meet the demand for education and vocational training in terms of international norms and standards. To address the above-mentioned shortcomings, the government is focused on "promoting an education system at the end of which any young graduate is sociologically integrated, bilingual and competent in a field that is vital for the development of the country and aware of what he must do to contribute to it". The strategic objective here for vocational training aims at directing its activities primarily towards the driving sectors of the economy one of which is agriculture and structuring projects. The components of the government's interventions in the sector of education are well elaborated in the Education and Training Sector Strategic paper. Fundamentally in the field of education at the national level, the Education and Training Sector Strategy paper elaborates on a benchmark of strategic thrusts which are meant to orientate progress in the education sector in Cameroon and precisely on vocational training as follows;

First Strategic Thrusts–Access and Equity

Specific Objectives No 5; the question of access crops up, particularly in vocational training at three levels ;(i) the bulk of offer is private,(ii) the cost is very high, (iii) youth do not enrol immediately after leaving the school system. RESEN, 2013 analysis showed that there is a far higher quantity of vocational training beneficiaries than the quantity that only public or identified private structures can generate. This observation implies that there is a strong informal sector that is yet to be mastered. The strategies of the education and training sector will take into consideration the following; the first step is to conduct Studies which according

to RESEN 2013, the government will draft terms of reference for studies to be conducted with the support of specialists from several disciplines. The findings of this study will allow for mastering the vocational training environment, the labour world and public-private partnerships. Also, vocational training cuts across several fields in the system, the study findings will be used to strengthen labour force employability which matches the needs of the production system in order to fine–tune the Government's flows in the management policy of vocational training. The second step is to organize the Training Offer; the Government's focus in this area is to increase existing offers. In order to achieve this, the public offer for training will experiment through the following; create training centres, promote sector-based vocational training, open centres of excellence, promote intensive vocational training centres and enforce the national training of trainers.

The second Strategic Thrust is on quality and relevance which has a general objective; to improve education quality by adapting its content to the socio-economic environment which is according to segment and type. Its specific objective is to**:** Adapt training to the socio-economic environment. The emphasis here will be on the training of human capital, from the perspective of the country's industrialization. This can be carried out through the following set of strategies; the most pertinent to vocational training will be; strategy number 4 which entails forging partnerships between public authorities and productive private sector actors in vocational training; to achieve relevance as well as quality in vocational training it seeks to forge multiple partnerships between public authorities and actors of the private sector. This remains the central instrument of the government's vocational training policy. The prime minister's office has a partnerships support council (CARPA) whose mission is to support sector ministries to implement public-private partnerships. The government was able to undertake its mission in concert with professional organisations through the drafting of an operational list of trades and professions (ODTP). This work benefitted from the technical support of foreign institutions and is consistent with nomenclatures in the CEMAC zone. This operational list will evolve into a national framework of qualifications and certifications (NFQC) which will become the sole reference of qualification in employment, training and the validation of experience acquired (VEA). Another example of a public-private partnership is the Korean Cooperation grant which was used for the construction of the house to the training and engineering centre in Yaoundé. Its activities consist of taking stock of; existing curricula and developing new ones while referring to the NFQC. The centre will be jointly

managed with equal representation of government departments and bodies representing different professions.

Lastly, Law No 2018/010 of July 2018 governing vocational training in Cameroon in section 1 lays down the general legal framework for vocational training in Cameroon. Section 2(1) states that government shall grant vocational training a national priority status. Section 3: Private partners shall contribute towards providing vocational training. It goes further in section 9 to outline the stakeholders. A community for vocational training shall comprise the following; local and regional authorities, private vocational training promoters of guidance entities, administrative and supervisory staff, trainees and socio-professional partners. Section 25 subsection 2 states that the State may sign agreements with competent professional organisations to promote vocational training. And lastly, in its section 35, states that the government shall lay down vocational training standards.

Cameroon's socioeconomic context for Skills and Competences

Cameroon is a lower-income country aspiring to reach full middle income by 2035 during the first two decades after independence in 1960, growth was resource intensive with productivity and efficiency playing very minor roles. Skills development drives productivity and can boost employment and earnings. But employment depends on job creation. Skills development is essential to improve productivity and attract foreign direct investment (Ansu and Tan 2012). Skills are assessed by disaggregating the concept into developing foundational skills(getting off to the right start through early childhood development); ensuring that all children learn literacy and numeracy; building job-relevant skills; encouraging entrepreneurship, innovation, and management skills; and fostering skills for labour mobility to permit ease of movement from the formal to the informal sector and vice versa since the workforce is often dynamic, especially in an environment such as Cameroon, where job stability is not ensured(Shobhana, 2016).

For several years, the various ministries in charge of TVET in Cameroon have undertaken a vast reform programme on skills development, the impact of which is already reflected in the increased number of TVET students. Indeed, data from MINESEC's statistical annual report show that for the year 2015/2016, 343,597 pupils were enrolled in public technical and vocational secondary education (TVSE) including 117,601 girls (34.2%), against 145,516 pupils in 2011, including 53,450 girls (36%). By contrast, in 2015/2016, there were 1,238,891 students in public general secondary This study is situated within the context of agricultural

vocational training programs offered by the Centres of Education and community action (CsEAC). The approach to education in this centre is an interactive challenging process, not only in terms of its content but also in terms of its methodologies and decision-making processes. It assumes a different character from all forms of formal education, not merely in terms of its content but in terms of the relationships between the participants themselves and their community (Amungwa, 2012).

Ijan, 2022 explains that; the tutors, the learning process, outcomes and the modes of assessment in centres of education and community action are opposed to a syllabus or institution-driven agenda and geared rather towards the articulation of community needs and problems. Its primary focus is the adult as a learner and the community as context. Anyanwu (2002) submits that in developed countries, this form of education may be understood in terms of expanding existing services and resources for wider use by the local community. In developing countries, it may be concerned with growth in political awareness that will encourage people to press for social change. Others define community education as a process aimed at raising consciousness and providing the necessary skills and material resources. for social, economic, political and cultural development (Ezimah, 2004; Findsen, 2006; Olube & Egbezor, 2012). Community education remains a catalyst for development processes and a channel for enhancing the initiative and creativity of people in solving their problems. This implies that education must go beyond reading, writing and calculating to enable its beneficiaries to build their capacities for involvement in development In community education, power is shared, and both the tutor and the learner engage in the education process to identify what skills are most useful to the local situation and this agenda is pursued in a flexible, developmental manner in the centres. In the context of this work, community education is defined as organized learning activities that groups or individuals undertake for their personal, community, cultural or economic development (Findsen, 2006; Nsamenang, 2005). Such education touches all other areas of learning but its primary focus is the adult as a learner and the community as context. It is the education for people's empowerment, where literacy and other functional skills become integral components of a comprehensive strategy for rural transformation.

Forteh Anatasuis.A (2018) identified that the Centres of Education and community action(CsECA) are grassroots structures of the Ministry of Agriculture and Rural Development which provide short-term training mostly in the field of agriculture and animal rearing. Its resources are provided by the State, municipal councils, and some NGOs. In a

more ideological sense, CsECA provides community vocational education which is viewed as a process of communal education towards empowerment, both at an individual and a collective level. Such an approach to community education sees it as an interactive challenging process, not only in terms of its content but also in terms of its methodologies and decision-making processes. CsECA engulfs both community development and community education which share a common goal of the collective empowerment of community members based on an analysis of the structural barriers to people's life chances (Government of Ireland,2000).

The creation of CsECA nationwide was intended to provide rural people with the opportunity to enhance their capacity for problem-solving and income generation by increasing their skills in particular areas of training. Currently, there are 453 CsECA spread over the ten administrative regions of Cameroon (List of CsECA, Minader; 2022). Each of the CsECA has a Management Committee, which guides in planning education and development activities. The centres organize educative talks on life skills for women and youths, processing of local agricultural products, farming, functional literacy, labour-saving technologies, home economics, craftwork and community mobilization. Short-term training lasting from a few days to several months is offered to meet local people's needs and aspirations. Long-term training in basic crafts or trades such as carpentry, carving, weaving, tailoring, traditional and modern dressmaking, bamboo works, electricity and computer literacy lasts for 3 years. However, most of the centres provide training in agriculture and animal husbandry, enabling participants to establish modern farms on completion. The design of training programs is often preceded by needs assessments to ascertain the priorities of particular rural communities. In the field discussions of this study, the author found that commendable results continue to flow from the youth self-employment opportunity courses, which have enabled the establishment of several youths across the country.

In agricultural training, most of the 71 CsECA in the centre region have established demonstration units and community farms in partnership with the rural communities. Each division within the region is equipped with at least one CsECA. These farms are essentially managed by community members to facilitate learning and transfer of knowledge and skills. On average about 134 youths who completed this training in 2018 were admitted into the government agricultural training schools in the region while others started self-managed businesses in their localities. The Ministerial decision No. 003/MINADER/SG/DDLC/SAAP of 9 January 2008, a new vision has been envisaged for the CsECA which lays more emphasis

on capacity building and rural development planning through sustainable employment. Within the context of decentralization, each municipal council area has since then set up a Local Development Plan and Management Committee chaired by the mayor. This represents a shift away from centralized policy towards a people-centred approach whereby the local people identify their development needs and participate in finding solutions. The management committee of each CsECA adopts an action plan yearly to support council and village development projects. This approach to planning creates synergy and minimizes the waste of resources both human and financial.

Despite the policies put in place, the CsECA have several challenges since its creation which persist till today. In discussions with the directors and staff of the CsECA, the following challenges were identified: I) inadequate funds for capacity-building and organizational development; 2) lack of a core curriculum and appropriate training materials; 3) lack of monitoring, evaluation and research; 4) lack of a coherent policy and legislation; 5)inadequate staff, infrastructure and resources; 6) lack of an appropriate assessment framework for quality assurance and national qualifications; 7) Inadequate attention to special needs groups, and 8) poor coordination of formal and non-formal education activities.

Within the context of this study, only four of these problems have been retained as being more pertinent in affecting the training program offered by CsECA and how it affects the employability of its trainees; firstly, no core curriculum exists for the CsECA, despite the need to diversify the curricular to meet appropriate vocational needs. Besides the CsECA lack adequate pedagogical materials for the type of training they are required to deliver. Appropriate training manuals and pedagogical materials should be acquired for use in these institutions. The contribution of community education was particularly acknowledged in areas such as reaching large numbers of participants, frequently in disadvantaged settings; pioneering new approaches to teaching and learning in non-hierarchical, community-based settings; and taking the lived experience of the participants as a starting point. The second pertinent problem is a general lack of a participatory monitoring and evaluation system evident in the CsECA and there is a weak culture of adult learning and research mostly because the programme is under-funded. Cameroon like most countries has difficulty generating straightforward statistics on the provision, the number and types of programmes; formal and non-formal, and on the number of learners involved, and what their expected learning achievements are (Aitchison & Alidou, 2009).

Without national data showing trends and background information, it is usually impossible to make informed judgments on whether the provision of community education in CsECA has been expanding relative to need and demographic change. The available data on participation (and non-participation) as influenced by age, class, ethnicity, language and educational background is very limited. There is also the paucity of information on facilities for the guidance of learners or on their actual experiences, motivations, expectations and opinions. The lack of substantive support for community education research in higher education tends to undermine the importance of the sector. Development action in dispersed ranks is not an optimal way of using scarce resources. Effective evaluation of the CsECA programmes is stifled because there are often no objectively verifiable indicators. Hence, it becomes difficult to make comparisons at the local, national and international levels or to look at the effectiveness, efficiency, organization and management of the programme. Fourth, a coherent policy and legislation on vocational training in a community context which is needed to guide and regulate the CsECA is lacking and this affects the sector negatively.

Nji (2007) remarks that Cameroon's agricultural and rural development policies, as as well as education policies, are segmented, incongruent and not as effective as expected. Government education policy must address this challenge, and strike a balance between the softer and harder components of community development to avoid placing infrastructure development at its centre, without building the necessary capacity to sustain the programme. Lastly, formal and non-formal education in Cameroon, are poorly coordinated as these fall under different government ministries with highly centralized administrative processes. In this situation, what obtains, in reality, is simply the extension of line management systems downwards rather than the decentralization of decision-making. When responsibility for promoting literacy and adult education is devolved to regional and local levels, but without the requisite funds and resources tends to remain in the urban areas, benefiting only those who live there (Aitchison & Alidou, 2009). This has implications for the establishment of an assessment framework that can lead to similar goals in learning achievement.

The following prospects were identified to counter the challenges faced by CsECA. This is because it has been opined as one of the factors determining growth and development. Past policies to tackle social issues such as illiteracy, employability, unemployment, underemployment, rural poverty and environmental problems failed to fulfil the expectations primarily because they were not grounded on adequate understanding and prospects of training offered in the centres of education and community action. However, if fostered, has

many prospects for social transformation through employment and sustainable rural development in Cameroon. In the first place, community education as provided in CsECA remains a mechanism through which mass involvement in learning activities can progress because it has the potential of improving rural people's ability to think and take action for planned change. Secondly, community education remains an important tool in enhancing community participation in Cameroon.

Conceptual Background

Innovation in Agricultural Vocational Training Programs

Innovation in agricultural vocational training is a blending of institutional capacities, coordination mechanisms, communication networks and policy incentives that lead to gains in agricultural productivity (Jee-Peng, 2017). Innovation in agricultural training, emphasizes the need to understand; key actors and their roles, their behaviours and practices which are key to bringing about changes in governance and management in agricultural training centres. A good innovation system is best to reform agricultural vocational training in Africa. It implies a shift away from the traditional conception of agriculture as a field of only scientific research and extension services to developing skills needed by the whole value chain (Eija, 2018). Following this concept knowledge does not only flow linearly from the classroom to inform basic scientific research but continues outward to strategic, applied and adaptive training in agriculture, followed by technological development.

The ATVET tool kit defines innovation in Agricultural vocational training (ATVET) as a model which has been developed for agricultural education and skills improvement in Africa within the context of the Agenda of 2063 developed by the African Union(Daniel & Gaston, 2018). Following ACET's definition of innovation ATVET can be defined as an agricultural skills acquisition system in order to grow and modernise the sector entailing technology upgrades, productivity increases, and rising export competitiveness, which results in rising farm incomes. An alternative definition is provided by Tsakok (2011), who defines innovation in ATVET as agricultural transformation which aims at simultaneously achieving sustained increases in productivity over two to three decades at least and sustained increases in income for the majority of farm or rural households. Innovation in agricultural training is crucial for economic transformation, but for it to happen, upgraded skill sets across the whole agricultural value chain are needed.

The Organization for Economic Cooperation and Development(OECD,2010) defines skills as follows: "By skill (or competence) we mean the bundle of knowledge, attributes and capacities that enable an individual to successfully and consistently perform an activity or task, whether broadly or narrowly conceived, and can be built upon and extended through learning". Therefore, agricultural skills innovation or skills development can be defined as all activities which are undertaken to acquire knowledge, attributes, and capacities to enable efficient and effective agricultural production or farming. In other words, agricultural skills development aims at equipping individuals with the skill sets to successfully and sustainably perform activities or tasks in crop production. The aim therefore is for agricultural vocational training which is a subset of TVET to render graduates more employable as they have received broad-based education and training, basic and portable high-level skills, including teamwork, problem-solving, information communication technology, and communication and language skills. It follows that a combination of such skills enables such trainees to adapt to the changes in the new knowledge-based economy (Ngu & Teneng, 2020).

Employability

Employability is defined as the ability of those who are willing to find paid jobs to acquire adequate skills in order to meet the needs of the job market (International labour organisation, 2018). Therefore Improving the quality and relevance of vocational training will equip labour in the agricultural field with employable skills which will make them more productive (Amedome & Fiagbe, 2013). Employability can be measured using indicators of the number of jobs and the amount of revenue that will be created as a result of a change in a particular sector (National Employment Policies, 2015).

At the international conference for labour statistics (ICLS, 2021) employability is defined as having the right skills to perform work for pay or profit, which reflects the fact that activities geared towards employability intend to receive remuneration of some form. Statistics from the Bank of financial data in Cameroon (NIS, 2017) present the following information on the rate of employment in the various activities that comprise the agricultural sector; which shows that only 371people were employed as top managers,381 superior technicians,2365 qualified field technicians and 25457 unskilled workers. Giving a total of 29047 people employed in this sector of the economy. These statistics reveal that about 87% of those employed here are highly unproductive and living in poverty probably because they lack the right skills to be sustainably employed (Orodho, 2017).

In addition, in 2016, only 23.9% of secondary school graduates were enrolled in vocational education. Besides, almost 1 in 4 people has previously received vocational training in Cameroon, with this figure rising to 4 in 10 in urban areas against only 2 in 10 in rural areas (EESI, 2010). The participation rate of persons aged 15 to 64, as defined by the ILO, dropped from 76.2% in 2010 and 81.9% in 2007 to 72.1% in 2014 (ECAM, 2014). In 2014, the informal sector was the main source of employment for almost 9 out of 10 workers (89.5%), i.e. 86% of males and 93.2% of females. These informal jobs were distributed between the agricultural (48.6%) and non-agricultural (40.9%) sectors, whereas only 13.4% of the working population, i.e. 16.5% of males and 10.3% of females, were employed in industry.

In the tertiary sector, employment increased by over 6 points over the 2007-2014 period to reach 36.2% in 2014, against 30% in 2007, with a very similar distribution of men (38.1% in 2014) to women (34.1%). Besides, most jobs are vulnerable: 30.1% of workers are farmers in the informal agricultural sector, 27.2% are own-account workers in the informal non-agricultural sector, renowned account workers in the informal non-agricultural sector, 14.6% are employees in the informal non-agricultural-sector-and-13.7 % rely on the informal agricultural sector (ECAM, 2014).

In the field of education, Vision 2035 focuses on the following needs: To provide universal access to education, apprenticeships and vocational training; In the field of employment, national policies are making youth employment a central focus of development policy through employability which is viewed not only as the result of economic growth but also and above all as a factor for driving and accelerating poverty reduction. In the SFGE, the issue of employment relies on three fundamental approaches: increasing the supply of decent jobs; (ii) matching job demands with skills development offered; and (iii) improving the efficiency of the labour market. Accordingly, the SFGE highlights the need to promote a comprehensive framework conducive to the development of small and medium-sized enterprises as a source of new decent jobs.

Vocational training courses are monitored by MINEFOP. TVET includes formal training, nonformal or informal training, including apprenticeships and accelerated training in preparation for labour market entry. Formal TVET programmes are delivered by institutions (public and private) reporting to MINESEC and MINESUP on the one hand, and by vocational training centres (VTCs) under MINEFOP and on the other hand in the field of agricultural training, MINADER.TVET programmes are delivered in English and French and

structured according to the training subsystem (UNESCO, 2015): Besides, apprenticeships have long remained informal in Cameroon, mainly because of the lack of a strong legal framework to define the partnerships between businesses and training centres. However, the government has made progress by recognizing apprenticeships as a form of vocational training in Law No. 2018/010 of 18 July 2018, although the organizing guidelines have yet to be defined. Traditionally, apprenticeships in Cameroon have consisted of on-the-job training carried out by the informal sector. The existing literature shows that most workers in the informal sector (66.9%) learn or have learned a trade on their own or through hands-on practice; a similarly large proportion (24.4%) has been trained in small businesses, and only 5.3% of the employed workers have learned a trade in a TVET establishment (Ngathe, 2015).On the other hand, non-formal training is provided by various ministerial departments such as the Ministry of Agriculture and Rural Development (MINADER) which organizes apprenticeships in agricultural trades. However, access to formal TVET is still limited for most vulnerable people, including people with disabilities, migrants, rural workers, etc. Several factors can explain this situation: The relatively limited number of vocational training providers and their geographical concentration in urban areas.

Theoretical Background

This study derives its focus from two main theories;

The Human Capital Theory by Gary Becker and Mincer

According to the human capital concept; knowledge and skills which are the main components of employability are the most important force to drive modern economies (Becker,1994). Though the assertion that memorizing knowledge only can educate a person, it is not sufficient for him to perform tasks adequately(Wenji, 2010). Therefore the conviction that properly organized agricultural training and an economy actively invested in TVET will enable a country to educate its citizens with high performance and high productivity. This means that agricultural training should provide a link between the skills needed and with job requirements of the labour market. Also, this theory supports the fact that young individuals with adequate skills are able to experience an increase in their incomes and job opportunities (ABD, 2014).

Innovation and Entrepreneurship Theory by Schumpeter

This theory by Schumpeter explains the role that innovation plays in making the entrepreneur in this case the farmer more dynamic. Innovation in agricultural training programs will provide the farmer with adequate skills for self-employment(John & Hagedoorn, 2000).

Through innovation, training can move towards the introduction of new products and processes. Schumpeter definition of innovation is broad and involves a combination of; technical, marketing and organizational aspects (stopper, 2000). Which are the indicators used in this research.

Statement of the Problem

Within the global context of the Sustainable Development Goals,2020-2030 vocational training should provide relevant skills for; employment, decent jobs and entrepreneurship which can mostly be achieved through technological innovation and diversification of training and productive activities in several fields including agriculture(SDGs,goal number 8 2030). To achieve this; technical and vocational education and training must be made available to all in order to improve productivity and make certain sectors more attractive.Also, the government of Cameroon through its ministerial department MINADER aims to dynamise the jobs in the agricultural sector by renewing the workforce in the agricultural sector. Therefore priority is put on innovating the vocational training of youths in agriculture so as to build a dynamic workforce which has more skills to be productive(Minader Infos, 2023).

However, agricultural training programs that incorporate skills training often do not pay attention to remedying deficits in the foundational skills of farmers, even though these skills are at least as important as technical skills for the adoption of new technologies and more productive agricultural practices(Omar, 2020). Furthermore, there are still far too few training opportunities for young people within the continent such that the available training in agriculture does not match the needs of the private sector. This also coupled with the low social status of agricultural training poses a problem. The agricultural sector is also characterized by a lack of modern production methods and low productivity, making it an unattractive sector to work in or develop a career in(Kis, 2016). This problem is further compounded by an ageing workforce in the agricultural sector in Cameroon which has little or no access to any form of agricultural training(Clarisse Taiga, 2023). Also as stated by the World Bank Group in 2016, which investigated the fostering of skills in Cameroon; It presented that improvements or innovations in vocational training programs are insufficient to meet the needs of the job market in vulnerable sectors of the economy like agriculture which accounts only for about 2% of the vocational training enrollment rate. This problem matters because as elaborated in the NSDG 2030 for Cameroon to attain emergence by 2035, it needs to carry out a structural transformation of the economy. Given that one of the main axes is the transformation of the Agro-industry which though accounting for about 60% of overall

employment nationally accounts only for less than 15.4% of GDP as of 2018 (graph 2 on the distribution of GDP per sector of activity, NIS page 26 of NSDG).

In other sub-Saharan countries like Ghana, it has been noticed that trainees from agricultural training schools lack the necessary; communication, management and technical skills needed by employers in different agricultural fields (Mahaba, 2014). Also, such innovations are lacking in the centres of education and community action which lacks a diversified program to meet the needs of its trainees. The challenges faced in this program such as; the lack of a participatory monitoring and evaluation system, the non-existence of a core curriculum for the centres, the inexistence of coherent policy and legislation to guide the functioning of CsECA and the non-coordination of formal and informal education in Cameroon as they fall under different ministries have further impeded its ability to equip youths with innovative skills in agriculture(Fonteh, 2018). And this problem exists despite the relative importance of innovative agricultural training to achieve educational transformation in order to solve the problem of unemployment and underemployment(Richard, 2021). This study is going to prove that this gap exists by evaluating the innovations carried out in agricultural vocational training to provide well-trained human capital which can increase the sector's productivity and hence ensure sustainable employment through the acquisition of employable skills as stipulated in the document NSDG 2030 in Cameroon.

Given this existing problem, there is a need to expand technical and vocational training opportunities to revamp the training institutions in Africa. Education has been found to be a key determinant for the adoption of new technologies in agriculture. Farmers with more training are found to be more adept at learning about new technologies and adopting them (Foster & Rosenzweig, 2005). Innovation in agricultural vocational training is very important as this will increase the productivity of the agricultural sector and positively impact the industrial sector. This will not only contribute to generating additional income but also increase jobs in the economy (pilar 3.2 of NSDG on the development of agricultural production and productivity). The transformation of the agricultural sector may only be achieved by modernizing agriculture and its related activities. Education and training need to meet the requirements of labour markets including those for agricultural jobs (ATVET report, 2019).

Skills and training initiatives need to be supplemented with effective skills forecasting models that are responsive to different sector plans. As proposed by the Innovation for agricultural

training and Education (Innovate project, 2019) agricultural training should promote sustainable employment and eventually reduce poverty. it states that, if properly carried out agricultural training will permit trainees to be able to adapt to new technologies and interact with commercial markets. Therefore, for agricultural training to be able to produce employable graduates; curricular and pedagogic updates are necessary (ACET report, 2017). With adequate reforms in agricultural education and training its graduates will have the appropriate; knowledge, skills and attitudes that enable sustainable employment (Boateng & Ofori, 2018). The toolkit for agricultural training in Africa (ATVET toolkit, 2019) suggests that agricultural training should be shifted away from formal institutions to non-formal or informal approaches to meet the skills needed by unemployed youths. Therefore, the ultimate objective in agricultural vocational training (AVT) is to be able to build an entirely new skill set which will help young people in agriculture to innovate and create their enterprises and also to identify and pursue opportunities.

Purpose of the Study

The purpose of this study is to assess the effect of innovation in agricultural vocational training programs on employability. Specifically;

- To assess the influence of management skills in agricultural vocational training programs on employability.
- To examine the effect of soft skills in agricultural vocational training programs on employability.
- To evaluate the impact of technical skills in agricultural vocational training programs on employability.

Research Questions;

- To what extent does innovation in agricultural vocational training programs affect employability?
- To what extent does management skills in agricultural vocational training programs influence employability?
- To what extent does soft skills in agricultural vocational training programs affect employability?
- To what extent does technical skills in agricultural vocational training programs impact employability?

Hypotheses

The hypotheses of this study are as follows;

- Ho: There is no statically significant effect of innovation in agricultural vocational training programs on employability.
- H1: There is a statistically significant effect of innovation in agricultural vocational training programs on employability.
- Ho: There is no statistically significant influence of management skills in agricultural vocational training programs on employability.
- H1: There is a statistically significant influence of management skills in agricultural vocational training programs on employability.
- Ho: there is no statistically significant effect of soft skills in agricultural vocational training programs on employability.
- H1: there is a statistically significant effect of soft skills in agricultural vocational training programs on employability.
- Ho: there is no statistically significant impact of technical skills in agricultural vocational training programs on employability.
- H1: there is a statistically significant impact of technical skills in agricultural vocational training programs on employability.

Scope and Delimitation of Study

This study will be limited to innovations carried out in agricultural vocational training programs and how the former can have an effect on employability which is a problem plaguing countries in sub-Saharan Africa like Cameroon. We shall study the progressive innovations in agricultural vocational training programs which is the independent variable based on the changes in; management skills, soft skills and technical skills, and if these innovations have been able to solve the problem of skills acquisition and employability in Cameroon based on evidence from other countries.

As indicated earlier, the study is going to be limited geographically to centres of education and community action in Yaounde precisely those of; Yaounde 2,3 and 6. In order to evaluate if the innovations carried out in such centres are able to counter the disadvantages of traditional agricultural training programs and hence lead to employability.

The study has two variables which are: innovations in agricultural vocational training programs which is the independent variable which has been broken down into; management skills, soft skills and technical skills, while the dependent variable is employability.

Significance of the Study

This research is going to help members of the public to know about the activities of the centres of education and community action and how they are providing necessary skills through their training programs to different communities in all the regions of Cameroon, especially in the area of agricultural training. The research is going to also help the decentralized services of MINADER specifically the division of local and community development to know areas which have to be ameliorated in the educational services provided by these centres. This study is also going to enable non-governmental organisations to know areas in which they can partner with CsECA to promote skills acquisition and sustainable growth.

Operational Definition of Terms

Agricultural Vocational Training

Agricultural vocational training most commonly known as Agricultural Technical Vocational Education and Training (ATVET) in other countries is defined as the educational process involving the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in agriculture, in addition to general education (Jones, 2013). ATVET is a subset of Technical Vocational Education and Training (TVET). TVET can be categorized as formal, non-formal and informal. The definitions of formal, non-formal and informal TVET vary across countries and institutions. The German development agency defines the various types of TVET as follows:

Formal TVET: is provided by the state education system and leads to a recognized qualification. The learning processes are intentional and systematic.

Non-formal TVET: delivered by education and training providers, companies, social partnership organizations and public-benefit bodies outside of the state-initiated education and training system. The learning processes are intentional and systematic and may lead to a recognized qualification.

Informal learning: non-structured, non-intentional learning processes that take place at work or through other everyday activities. It does not typically lead to certification and recognition

(GIZ, 2015). Actors involved in the VET system include the state, students (apprentices), teachers or trainers (farmers, specialists), sponsors and agri-sector companies. TVET in Africa is delivered by both government and private providers, which include for-profit and non-profit institutions, non-governmental organizations (NGOs) and church-based institutions.

Our study will be focused on non-formal TVET which is carried out within a period of 9 months to 3 years in centres of education and community action in Cameroon. While most AVET systems focus primarily on the farm level and basic processing, this study proposes that a much broader set of skills is required to transform the agriculture sector in Africa and in Cameroon in particular. ATVET is essential for the development of human capital in all sectors including agriculture. Non-formal training as is the case of CsECA does not require such defined learning sites, curricula and even teachers or trainers, unlike formal education. And as is the case of Cameroon is under the supervision of decentralized services such as the division of local and community development found within municipal councils. These services also work with community-based organisations in the course of their programming or advocacy work. Non-formal training delivery as provided by CsECA has become an important component in the TVET mechanism and most particularly ATVET because of the large rural-based economies in Africa and Cameroon which are critical in agriculture. This is .because of the large informal and rural-based economies in Africa. Such developments in human capital enable people to make effective use of other types of capital. For example, farmers' education and knowledge influence their ability to make decisions, adopt new technologies, assess risks and manage agricultural resources (Johanson & Brooks, 2013).

Agricultural Vocational education and training (AVET) as used in our study, which changed over time to Technical Vocational Skills Development (TVSD), is often used to describe flexible skills, learning to learn, going beyond literacy and numeracy skills including more than literacy skills (Hatl, 2009). It is a form of education that seeks to prepare persons for employment in recognized occupations.

Agricultural vocational training also known as agricultural technical vocational education and training (ATVET) is an education process that involves, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge about related occupations in agriculture(Jones, 2014).

Employability

Employability is fundamental to the idea of orienting educational opportunities around labour market demands and hence on the skills necessary to meet them (ILO,2010). The 'client approach' is intended to address the demands of both employers and future employees by providing pathways for individuals to gain skills which there is demand in current agricultural systems(USAID, 2013). Current assessments of agricultural workforce development require dynamic approaches as stipulated in goal 8 of the SDG which makes it clear that there is a direct link among such areas as economic vitality, entrepreneurship, job market skills, and levels of education. This definition is consistent with the one used by the International Labour Organization and relevant others (ILO/UNEP/IOE/ITUC, 2008) which has produced a significant body of evidence that shows that employability is the roadmap to decent work and can facilitate the shift toward sustainable and inclusive growth(ILO, 2012).

Many researchers of agricultural development over the past decade have noticed a wide range of occupations and related skills needed in the sector ranging from pure technical skills to management and 'soft' skills like communication, leadership and entrepreneurial skills (UNESCO, 2012). Other authors have further argued that agriculture is moving away from a non-skilled field to a knowledge-based field where future farmers may need several years of education to run computer-operated machinery and perform a whole lot of technical tasks (Johanson & Saint, 2010). With this, there is the growing place of the small entrepreneurial farmer and the need to provide agricultural training that emphasizes business and management skills (Rivera and Davis, 2010). Now more than ever before skills in ATVET should be able to match labour market needs (World Bank, 2010). Economies need skills to serve knowledge-based industries, provide high-level skills to support technology absorption and further innovation and broaden opportunities for skills development in new and emerging technology areas. Enhancing opportunities for skills training, particularly for poor and middle-income groups, women, and disadvantaged students, in line with the needs of fast growing industries, will bring employment benefits and higher incomes, and will act as an important contributor to inclusive growth. Youth unemployment, underemployment, and provision of training in out-of-date, irrelevant skills are urgent issues to be addressed. Maintaining economic growth sustainably is a policy challenge that Africa has begun to address(ILO, 2015).

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Chapter two introduces the conceptual, theoretical, review by objectives and empirical review related to; innovation in agricultural vocational training and employability in Cameroon, innovation, agricultural innovation, management skills, soft skills and technical skills. With an emphasis on agricultural training in centres of education and community action in Cameroon. The chapter also presents the conceptual framework following the objectives and the research gaps identified in the study.

Conceptual Framework

Innovation

The classical Schumpeterian interpretation of innovation is a technical change in the method of producing things and creative disruption (Schumpeter, 1934). In line with the Schumpeterian concept, innovation is related to changes(large-scale, radical) or small-scale (incremental).

Innovation is a word which is derived from the Latin word innovare which means 'into new'. The simplest definition of innovation is doing something differently (Costello & Prohaska, 2013). Innovation can also be defined as a new idea, product device or novelty (Kuczmarksi, 2003) (Baregheh & Rowley, 2009) brought the suggestion of a complete and multi-stage process definition of innovation as the multi-stage process whereby organisations transform ideas into new or improved products, services or processes to advance, compete and differentiate themselves successfully in the market place. Innovation can also be defined as a process of getting new tools into a given social environment or a new tool itself. Innovations initiate new processes or events to bring about a change in behaviour (Reiman & Dotger, 2013). There have been studies that found a positive relationship between creative climate and innovation. If your workplace encourages a creative climate it can moderate effects between leadership, individual problem-solving, group relations and innovation. The association between creativity and new ideas is close (Gisbert-Lope & Gomez-Gras, 2014).

The basic definition and types of innovation sometimes referred to as typology of innovation given by the Organization for Economic Cooperation and Development(OECD, 2005) defines innovation as all those scientific, technical, commercial and financial steps necessary for the successful development and marketing of new or improved manufactured products the

commercial use of new or improved processes or equipment or the introduction of a new approach to social service through research and development. Godlin(2008) defines 12 concepts of innovation which can be described as follows; Innovation as a process of doing something new: which includes concepts like; innovation as imagination, innovation as invention and innovation as discovery. The second main type is innovation as the human ability to creative activity which includes concepts such as; innovation as imagination, innovation as ingenuity, and innovation as creativity. The third main type is change in all spheres of life including the concepts of; innovation as cultural change, innovation as organizational change, innovation as political change and innovation as technological change. The last main type of innovation is innovation as commercialization of a new product. Rum Cui & Wu, 2010 distinguish the following five aspects of innovation; innovation as something new, innovation as something new, innovation as a conduit of change, innovation as a process, innovation as a value driver and innovation as an invention.

Different innovation definitions reflect the broad spectrum of aspects of innovation;

Innovation as something new is a specific tool of entrepreneurs that is the means by which they exploit change as an opportunity for a different business or a different service. The application of practical tools and technics that make changes; large and small to products, processes and services result in the introduction of the introduction of something new for the organization that adds value to customers and contributes to the knowledge store of the organization(O'Sullivan & Dooley, 2009). Innovation as a process is thoroughly defined by Aiken & Hage(2007) who see innovation as; the generation, acceptance and implementation of new ideas, processes and services for the first time within an organization setting.Rasul(2003) defines innovation as the process whereby ideas for new or improved products, processes or services are developed and commercialized in the marketplace. Wang and Kafouros (2009) recognize innovation as a value driver. innovation provides impetus to emerging economies by opening up new markets for the infusion of new products or services.

Agriculture

Agriculture is the most comprehensive word used to denote the many ways in which crop plants and domestic animals sustain the global human population by providing food and other products. The English word agriculture derives from the Latin ager (field) and colo (cultivate) signifying, when combined, the Latin agricultural: field or land tillage. But the word has come to subsume a very wide spectrum of activities that are integral to agriculture and have their

own descriptive terms, such as cultivation, domestication, horticulture, arboriculture, and vegeculture, as well as forms of livestock management such as mixed crop-livestock farming, pastoralism, and transhumance. Also, agriculture is frequently qualified by words such as incipient, proto, shifting, extensive, and intensive, the precise meaning of which is not self-evident. Many different attributes are used too to define particular forms of agriculture, such as soil type (David & Dorian, 2020). Agriculture is generally known as Farming; it is an art and science that prudent endeavours to reshape a part of Earth's crust through the cultivation of plants and other crops as well as raising livestock for sustenance or other necessities for human beings and economic gain (Muhamt.I, 2022).

Aspects of Agriculture

Cultivation is an activity through which humans become directly involved in the management of the lives and life cycles of certain plants. In abstract terms, this can be considered a change from a largely extractive approach to subsistence (collecting) towards a highly regulative one (Ellen, 1994).

Domestication is most clearly defined as a biological phenomenon, that is, by traits in crops that result from adaptation to cultivation and by which they differ from close wild relatives. Several recurrent “domestication syndromes” can be recognized as sets of characters that define domesticated crops and characterize domestication as a form of convergent evolution under cultivation (Fuller, 2007). The domestication syndrome differs for different kinds of crop plants, according primarily to how they are reproduced, by seed or by cuttings, and what plant organ is the target of selection (grain, fruit, tuber). The best-defined domestication syndrome is that for grain crops, including cereals, pulses, and oilseeds.

Cash crop farming includes the cultivation of crops for sale or exports; the main agricultural cash crops in Cameroon are; Coffee (Arabica & Robusta), cocoa, cotton in all its forms (fibre and unpinned), rubber, sugar cane, tobacco and sweet banana (Achancho, 2015)

Food-producing agriculture continues to be the main source of food and survival for people, while generally remaining at the level of subsistence farming. The products are very varied from cereals (maize, millet and sorghum, paddy, etc.), roots and tubers (cassava, cocoyam, taro, potato, yam, etc.), oilseeds such as groundnut, cottonseed, etc., fruits and vegetables, including citrus, pineapple, tropical fruits, legumes and pulses, spices and condiments, leafy vegetables and mushrooms, plants and ornamental flowers, etc(Pinaud, 2016).

Innovation in Agriculture

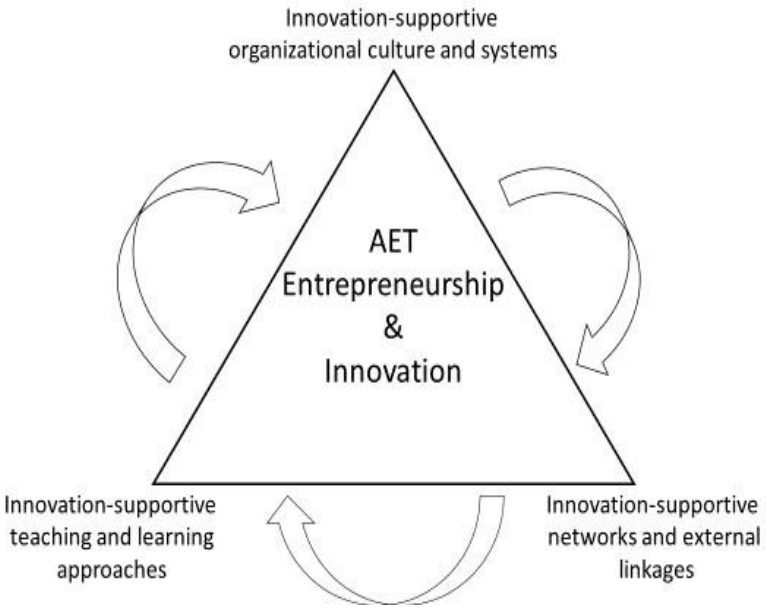
Agricultural innovations in Cameroon have traditionally followed a “diffusionist” scheme in which innovations mostly technical such as new varieties, cultural practices and technical itineraries originate from national public research organizations and are then disseminated to farmers by agricultural extension services through producer organizations (IRAD, 2013). The disengagement of the state from its public functions between 1980 and 2000 has however stimulated the emergence of a myriad of new actors (private organizations, international and national NGOs, NGO networks, interprofessional organizations, farmer organizations (FO) and their grouping). Through specific Development projects and programs, these providers are engaged in a wide range of activities such as the distribution of seeds and improved seedlings to farmers, agricultural marketing, rural animation, organization of farmers involved in agricultural chains, technical experimentation, supply of other agricultural inputs, technical advice, agricultural financing, etc. (Temple, 2019). These activities can be defined as innovation support services (ISSs). An innovation support service is intangible and involves one or more suppliers and one or more beneficiaries in activities in which they interact to address a more or less explicit request arising from a problematic situation and formulated by the beneficiaries and to co-produce the services aimed at solving the problem.

Interactions aim to achieve one or more beneficiary objectives based on the desire to strengthen an innovation process, i.e. to promote technical and social design, enable ownership and use of innovations, facilitate access to resources, help transform the environment and build capacity for innovation" (Mathé, 2016). The consolidation of farmer organizations has received particular attention from the State that wishes to precisely invest in projects/programs aiming at consolidating farmer organizations and improving food security (Ntsama, 2009). However, despite the implementation of these strategies and the emergence of projects/programs to increase the quantities produced of certain food crops (cassava, maize and plantain), it must be noted that the volume of the main food crops has remained almost stagnant (Achancho, 2015) or that at least production per agricultural input has slightly increased. This raises questions about the effectiveness of projects/programs as a means of intervention in support of agricultural and agri-food innovations. Project and program-based development interventions can allow a diversity of actors to join forces and thereby contribute to building farmers’ individual and collective problem-solving and innovation capacities (Nagel, 1997).

Agricultural innovation systems (AIS) are "a network of organizations, enterprises, and individuals focused on bringing new products, new processes, and new forms of organization into economic use, together with the institutions and policies that affect their behaviour and performance. It extends beyond the creation of knowledge to encompass the factors affecting demand for and use of knowledge in novel and useful ways" (World Bank, 2006). Jordaan and Taylor (2014) encourage academic institutions to apply a systems approach at both the organizational and operational levels and provided recommendations for adapting curriculum, instruction, and assessment to foster innovation and entrepreneurship in AET. At the operational level, the authors suggest the adoption of pedagogies that cultivate an innovative and entrepreneurial mentality in students such as;(a)participatory and experiential learning methods,(b) debate, discussion and critical thinking,(c)interdisciplinary teamwork and problem-solving and (d) opportunity recognition and treatment of ambiguity or uncertainty.

This can be illustrated in the figure below

Figure 1: Framework for developing entrepreneurship and innovation in AET



Source: Jordaan & Taylor (2014).

Forms of Agricultural Training

Agricultural Education and Training

The emerging paradigm of AET within the innovation perspective requires AET to produce graduates with the ability to facilitate market-oriented production and technological

innovation in addition to traditional services of technology transfer for crop production. Thus, the challenge to AET systems is to prepare students with the appropriate mix of technical skills and functional competencies to adapt and innovate within their professional track (Jordaan & Taylor, 2014). Indeed, most AET curricula lack a breadth of interdisciplinary coursework that provide students with well-rounded and in-demand skills (Vandenbosch, 2006). Throughout the literature, employers call for graduates with competence in "soft skills" like leadership, communication and problem solving, and ICTs (Rivera & Alex, 2008; World Bank, 2007). Respectively, many programs were also deficient in technical depth, especially in areas such as agribusiness and marketing; agro-processing/post-harvest technologies.

Agricultural Technical Vocational Education and Training (ATVET)

Agricultural Technical and Vocational Education and Training (ATVET) delivery is unlike agricultural training programs in universities because they are autonomous and design their own training delivery models, ATVET centres directly translate the policies and strategies of governments into teaching methods based to a large extent on a specific national agenda. In Agricultural Technical Vocational Education and Training (ATVET), this role becomes even more critical, especially given the new focus and paradigm shift on training towards 'agriprenuership'. This involves teaching people how to become entrepreneurs with the necessary skills and competencies to be employable and employers. Agricultural training centres (ATCs), therefore, act as important agents in transforming the traditional knowledge and practices of young people, women, existing farmers, and others, into skills that can be used in commercial agriculture and profitable enterprises that will help create jobs, generate income and food security within the Comprehensive Africa Agriculture Development (CAADP) framework to meet the goals set out in the Malabo Declaration.

Agriculture education and training at the TVET level are conducted with the support of agricultural colleges, farmer training centres, extension departments of the ministries of agriculture, smallholder and commercial farms, value chain actors, processors, traders, financial service providers, farmer associations, and related government structures. There are also many private training institutes and trainers, local and international development agencies and NGOs involved in providing training. Target groups include school leavers seeking training for employment, farmers, farm workers, and self-employed workers within agricultural value chains.

In only a few African countries agriculture forms parts of the National Technical Vocational Education and Training (TVET) system, due mainly to the fragmented responsibilities and sometimes overlapping training and TVET mandates of the ministries of agriculture and those in charge of TVET/ education. This has become a critical challenge for ATVET affecting infrastructure development, investment, and training delivery. Instead of building harmonized systems built on shared principles and values, countries are deploying different, independent systems making it almost impossible to manage with regards to providing comparable levels of education. Most frequently, formal ATVET training takes place in public and private training institutions. However, to reach the majority of unemployable youth, and address post-training support and mentorship challenges, ATVET in Africa should emphasize other learning routes, especially non-formal and informal systems. But the further development of non-formal training delivery is hampered due to the fact most countries deployed more formal systems. But the further development of non-formal training delivery is hampered due to the fact most countries deployed more formal systems mechanisms that systematically do not incorporate the non-formal or informal approaches.

Existing formal training systems are not modularised, which makes it difficult for non-formal systems to merge or interact with them, especially when it comes to recognition of prior learning. The general institutional framework in which non-formal and informal training takes place outside the borders of the state-regulated or private education and training system makes it difficult for most ATCs to combine them with their formal training delivery orientation. Improving ATVET delivery in Africa also requires the modernization of training providers, especially ATCs, to respond to the changing and dynamic needs of training, governance, and proving performance and attractiveness to agriculture training in achieving better value for money in investment. ATCs need to be catalysts for ATVET responsiveness to changing labour market demands, improving the match between training demand and supply, especially in the private sector. In almost all African countries, formal vocational education and training systems are geared towards starter education and training for young people, whether at secondary, post-secondary or tertiary levels. The vast majority of these systems comprise full-time, classroom-based learning. A small number of countries, such as South Africa, also offer partially state-regulated apprenticeship schemes that confer state-recognized qualifications.

A self-assessment completed in some countries namely; Ghana, Kenya, Cameroon, Rwanda, Uganda and South-Africa which was carried out to; understand the current status of ATC

development at the country level, identify key gaps and weaknesses in ATC delivery mechanisms, establish key areas for targeted interventions for ATC's to establish quality training and sustainability, enable ATC's to establish and undertake peer review mechanisms and set benchmarks amongst themselves and enable ATC's to know where they can source expertise and partnerships among themselves as well as ATVET delivery of demand-driven training. The capacity of ATCs to design training along business models and cases (with the support of industry), work experience or industry internship, mentorship and incubation, and encouraging students to develop projects whilst in school to meet the practical approaches of trainees should be enhanced. In the short to medium term, capacity development and the outcome expected from ATVET institutions should be focused on: organizational development processes applied in ATCs.

Challenges of Agriculture Training

Past agricultural training interventions have failed at sustainably alleviating poverty and improving household insecure employment in African countries (Mango et. al, 2015). The lack of a value chain approach is put forward as a reason for this failure. Indeed, Benita and Stads (2011) blame agricultural sector fragmentation for the failure of the interventions even though the common goal is agricultural sector development, sub-sectors work in silos.; Another problem with the interventions is that they have embraced a linear approach of technology transfer, that did not allow the skills acquired through new technology to produce the expected results on employability among smallholder farmers

Vocational training programs

Vocational education and training is the building of; knowledge, skills and professional attitudes of individuals in various fields to make them self–reliant, self-sufficient and independent(Vysotsky, 2015). Most times vocational education is further understood to be; an integral part of general education, a means of preparing for occupational fields and effective participation in the world of work, an aspect of lifelong learning and preparation for responsible citizenship, an instrument of promoting environmentally sound and sustainable development.

In countries like Nigeria, vocational education is to train low-level workforce such as; operatives, artisans, craftsmen and master craftsmen for; commerce, industry, agriculture and ancillary services(Akinde, 2020). Vocational courses and programs are shorter, more focused and prepare trainees for immediate employment. They often result in a certificate of training. Vocational training programs focus on a hands-on approach as well as teaching the learners

general employment skills. In Nigeria, the duration of training can range from 1 to 3years (Olakunri, 2006)

In Cameroon vocational training is teaching meant to give the initial levels of qualifications necessary for the practice of trades or a group of trades. It allows for developing the necessary skills for a trade or a group of trades through theoretical technical studies on such a trade group of trades. Vocational training culminates in a certificate. Vocational training is a subset of informal education in Cameroon (DDSEF, 2013). Vocational training guarantees the professional integration of graduates from the education system and thereby contributes to streamlining their flow. It comprises SAR/SMs and intensive vocational training centres. The duration of training varies from 6 to 24 months depending on the background of certificates. Vocational training in Cameroon intervenes at different levels from; the primary, and secondary to the higher education levels (structure of the Cameroon education systems. 2013)

Classification of Vocational Training

In general, vocational training or education has three different sub-sectors as follows;

Formal Vocational Education and Training

Formal vocational education and training and vocational enterprise institutions (VEIs) formal vocational training is handled by institutions including; technical colleges, mono and polytechnics which also includes vocational enterprise institutions and innovative enterprise institutions(IEIs). Formal vocational training is often technical, and post-secondary, includes the award of a higher national diploma, has a duration of more than 1 year and may permit entry into higher levels of education (UNESCO,2012). Formal training is characterized by the fact that it is provided by the state education system and leads to a recognized qualification. Training is delivered through formal and rigorously structured processes. The course work is developed by competent ministries and at the end of the course learners are expected to go for internship or work experience schemes. Furthermore, practical skills are expected to be acquired through student projects and mentors. These projects are also defended by the learners at the end of the training course as a condition for the award of certificates.

Non-formal vocational training or Tvet programs

These programs target; adults, adolescents and early school leavers and generally do not have any specific requirement for entry. The programs often offered here are in; arts and crafts, fabrication and welding, agriculture and livestock management. Certificates of completion are awarded at the end of the program, the basis of non-formal training in the different programs

is the ‘recognition of prior learning’(RPL). Participants acquire skills which enable them to forge ahead in life while continuing with lifelong learning(Federal Ministry of Education, 2017). Most of the training providers that use this approach also encourage a strong involvement of the communities where the training centres are found. This is to ensure the sustainability of the training and its multiplication in the community. Training also focuses on the building of entrepreneurial skills of participants and regular practice on the farm the acquisition of practical skills accounts for about 70%, while theoretical issues take only 30% of the training This training is essentially subject-specific (production, storage, transformation and marketing) or commodity-specific of agricultural products like; cassava, rice, oil palm, vegetables etc. Courses usually have a duration of 9 to 12 months, and at the end of the training certificates of participation are awarded to the participants

Informal Vocational Training

Informal vocational training incorporates apprenticeships which remain the most important form of skills development. Apprenticeship is a contractual agreement undertaken by a master craftsman (the trainer) and the apprentice (the learner) through which the apprentice is trained for a given duration on a prescribed work process through practical experience. It is a form of workplace learning which enables the apprentice to have on-the-job training. It usually takes place within a setup of a training workshop. The master usually has full training of the training generally without any input from the government. Apprenticeships as a self-financed system, generally display high flexibility, combine work with learning and are accessible to youths with little or no prior training and are connected to the labour market in ways that formal training systems find difficult to manage. Apprenticeships lack a standardized certification, when the master craftsperson considers the apprentice qualified, he or she is released with a certificate of qualification which does not comply with any official standards(Okoro, 2000).

Informal training differs from formal learning in that it takes place outside of the institutional education and training system. It does not require structures such as defined learning sites, curricula, teachers and trainers. Informal training often includes training undertaken by civil society or community-based organizations in the course of their programming or advocacy work. Informal training delivery has become an important component in the TVET mechanism and is even more critical in agriculture TVET because of the large informal and rural-based economies in Africa. Rural youth and women often are unable to obtain formal qualifications that can lead to employment and cannot start their own businesses or achieve

better incomes and working conditions. It is often a vicious circle. ATVET training and learning mechanisms therefore should recognize that the skills requirements for those employed in the informal economy are as complex and wide-ranging as the activities and forms of employment found within it (Hassan & Salau, 2016).

Informal training is important to address the challenges faced by most youth and especially women in rural areas which may include: their inability generally to spend long periods away from work (most rural farmers) because of their precarious income or family situations; rarely have formal vocational qualifications, They generally have a lower level of school education which makes them unable to meet the entry requirement of the formal courses, they might have little access to vocational schools or to structured forms of continuing what training they may have, which further prevents the acquisition of recognized (vocational) qualifications (Akinde, 2020).

Agricultural Training Centers

For ATVET to provide relevant skill needs agricultural training centres (ATCs) should recognize the specific needs of vocational education and training by designing appropriate methods and learning systems and running non-formal training programmes targeting these disadvantaged groups. Centres should be oriented around the following types of activities; identifying the needs of the community and non-formal learners, identifying and providing relevant information to particular target groups (for example youth and women), and working together with actors, at different levels, to ensure participation by the target groups, tailoring vocational education to suit the training needs of youths and rural population (ATVET toolkit,2018)

Employability

Employability is having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful(Oliver, 2019). Employability is adopted as the possession of relevant knowledge, skills and other attributes by individuals that have facilitated the gaining and maintaining of worthwhile employment. Human resource deficit or shortage in qualitative terms implies knowledge and skills deficiencies. This is obvious in many of the developing countries' workforce composition and by implication, questions the vibrancy of educational institutions that produced the graduates. (Akinbode & Opeyemi, 2020).

There is no certainty that the possession of a range of desirable characteristics will convert employability into employment; first, there are too many extraneous socioeconomic variables for that (national, regional and/or local economic health, and the demand/supply ratio for the characteristics in question). Second, „Skills" and „knowledge should not be construed in narrow terms. The richness of these concepts is elaborated below, and in the companion guide, Embedding employability into the curriculum, the gaining of a graduate job, and success in it, should not be conflated. Higher education awards describe the graduate's past performance but some achievements vital for workplace success might not be covered, not least because of the difficulty of placing a grade on aspects such as drive, cooperative working and leadership. (Fatima & Ludenyo, 2016)

The issue of graduate unemployment has become a national concern as unemployed youths tend to be more anxious, depressed and unhappy with their attendant sleeplessness than those with jobs. This situation has not only posed a great challenge to the economy but also retarded the economic growth of the country. Graduate unemployment is attributable to the fact that employees' education and skills acquired are inadequate to meet the demands of modern-day jobs. These inadequate technical knowledge, deficient English proficiency and lack of critical thinking on the part of graduate employees coupled with the high technological drive of most organizations in response to tougher competition in the competitive markets are the factors responsible for graduate unemployment. (Akinyemi & Ikuenomore, 2012)

In the context of education, employability is considered more than merely 'getting a job, as it implies a set of achievement skills, understandings and personal attributes that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy, employability includes a competence-based dimension. In other words, the focus is based on the identification and development of knowledge, competencies, and attributes that foster students' development of effective performance in the labour market. This perspective also reinforces the responsibility of educational institutions for the quality of the routes followed by their students. Employability could be further enhanced by incorporating work experience in the curriculum, building an institutional culture that promotes employability and inviting employers as guest lecturers. (Marta, Sandr, Diana, Filipa & Ana, 2020)

Most existing conceptions of employability view it as a set of skills, both generic (e.g., teamwork, organizational, communication) and discipline-specific (e.g., the skills and

knowledge relevant to engineering, law or social work), as well as personal attributes (e.g., self-confidence, resilience, discipline) which are relevant to employment and desired by industry. For example, Oliver (2015), proposed that employability is the ability to "discern, acquire, adapt, and continually enhance the skills, understandings and personal attributes that make graduates more likely to find and create meaningful paid and unpaid work that benefits themselves, the workforce, the community, and the economy". Others have similarly identified sets of employability 'skills'. For example, Smith, Ferns, and Russell(2014) identified six dimensions of employability (termed work-readiness): professional practice and standards; integration of theory and practice; lifelong learning; collaboration; informed decision-making; and commencement-readiness (confidence to start a job in the discipline Recent calls for more critical approaches to understanding employability (Burke, 2016), including broader conceptions of the term (Clarke & Holmes, 2017), have led to views moving beyond the skills-based approach to a wider conceptualization that better captures "the complexity of graduate work-readiness" (Jackson, 2015).

Skills

The economic concept of skill is broadly related to that of human capital, which encompasses all individual attributes that have a market value (Green, 2013). Skills are needed in order for a person to be employable. In economics, skills are used to explain or account for a variety of phenomena such as wage inequality, economic growth or organizational performance (Hanushek, 2015). Recent applied economic research has shown that besides 'cognitive skills', the so-called 'non-cognitive skills and personality traits' also play an important economic role (Heckman, 2012).In economics, the term skill is also used as a defining element of occupations, which are in turn typically related to the concepts of division of labour. For example, the International Standard Classification of Occupations by the International Labour Organisation defines skill as "the ability to carry out the tasks and duties of a given job", and distinguishes between skill level and skill specialization to classify different occupations (ILO, 2012). From a sociological perspective, skills concerning occupations are one of the determinants of the position that individuals occupy in the social structure or social class (Vallas & Warhurst, 2017). In educational research, skills are a component of competencies. Although knowledge and attitudes are also attributes of individuals with clear economic value, they are fundamentally different from skills in the way they are acquired and applied to tasks in labour markets.

Skill can be generally defined as the ability to perform a task well. Although a skill is an attribute of individuals, it necessarily refers to a specific activity (or as we are saying, acts of transformation). In our context, the specific act of transformation that the concept of skill refers to is a discrete task within a particular work process. Therefore, each task has an associated skill and its completion is skill-dependent. For our current purposes, skills have two crucial features: A skill can be graded depending on how well the task is performed. In other words, skill is a relative concept, as one can be very skilled or not very skilled in doing something. This gradation is specific to each type of task. A skill is something that is acquired and that can be improved by different means, mostly by learning and practising. Skills are directly related to tasks, we can classify them in a way analogous to three categories: Physical skills: the ability to do well physical tasks, involving strength or dexterity; Intellectual (or cognitive) skills: the ability to do well intellectual tasks, involving information processing or problem-solving; Social skills: the ability to do well social tasks, involving attending, teaching, influence others.

Theoretical Framework

Human Capital Theory (Becker and Mincer)

The classical authors of this theory include; Gary Becker who is the founding father of the Human Development Index which was developed in the 1950s by trying to determine the difference in income among college graduates in the United States. He proposed that; schooling, training courses, medical care and even lectures on personal improvements are capital that can increase earnings. Another founding father of the theory is Schultz 1961 who defines human capital as the knowledge and skills that people acquire through education and training which is an investment that yields returns. His main proposition is that investment in people should produce returns. Education and training are viewed as the most important investments in human capital. This is because education provides benefits to the economy which include; the cultivation and discovery of talent, the increased capability of people to adjust to changes, the preparation of teachers and the provision of manpower to achieve sustainable growth (Schultz, 1963). Another classical author is Mincer (1962) who proposed that the theory of human capital is education and schooling to prepare the workforce.

The Basic Concepts or Principles of the Theory are as follows;

The fundamental principle is that people's learning capacities are of comparable value to other resources involved in the production of goods and services(Lucas,1988). Therefore, to reduce

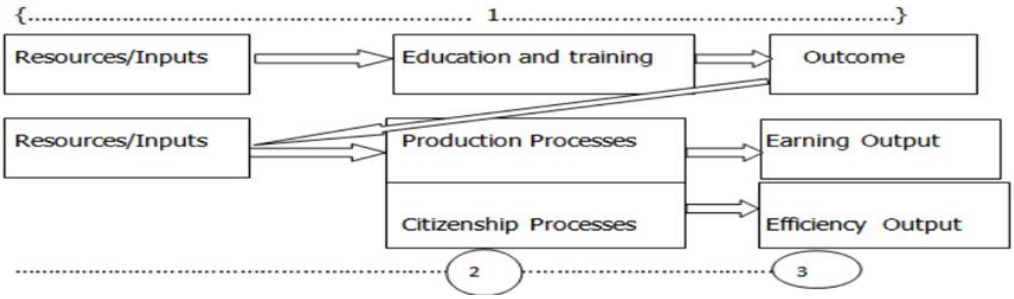
income inequalities, one needs to reduce inequality in investments people make in human capital (education, health and on-the-job training other vocational training and so forth). These investments in education and training will lead to private and social returns in the form of greater productivity. In fact, this led to the 'knowledge economy' where individuals invest in education up to the point where the returns in extra income are equal to the cost of participating in education (Becker,1964).

The second principle proposed indicates that human capital includes investment in both informal education and training to enhance individual productivity (Psacharopolous & Woodhall, 1985). This can be accomplished through the provision of knowledge, skills and attitudes and motivation necessary for economic and social development. This principle was further extended by Romer, 1987 who views human capital as a continuation of the new growth theory where increasing returns to organisations are due to investments in human capital through specialization

As a result of variations in human capital investments, could lead to variations in labour productivity and income in a free market which is mostly due to differences in labour quality (Cohn & Geske, 1990)

Therefore the framework of this study is better explained using the Human Capital theory. This theory according to Schultz (1963) emphasizes the role of investment in education to boost economic and social achievement. Human capital theory equally suggests that education or training raised the productivity of workers by imparting useful life skills to the individuals. In line with the above, Becker (1962; 1964) believed that the height of workforce production has a positive relationship with the educational and training form in which, the higher the educational and training form a person gets, the higher the productivity/achievement of an individual. According to Lange and Topel (2004), a person with great skills will be able to increase employers or workplace productivity. It is believed that by virtue of this theoretical framework, trainees need to possess new and employable skills that will enable them to function effectively and efficiently in the world of work. The theory can be summarized in the following model;

Figure 2: Model of Human Capital Theory (Swanson, 2001)



Source: Swanson,2001 p.104

The diagrammatic representation of the human capital theory above presents the key relations in human capital theory. The first relationship 1 represents the concept of production as applied in education and training. This relationship means that investment in education and training results in increased learning (Imeokparia & Ediagbonya, 2012). Relationship 2 presents the relationship between learning and increased productivity. This means that increased learning can result in increased productivity. This relationship emphasizes the human capital relationship that exists between increased productivity and increased wages and business learning. This relationship 3 pointed out that increased productivity does result in increased wages for individuals. The human capital theory is a replicate of the human resource development theory which emphasizes the investment in the training and development of human resources, therefore according to human capital theory, it can be concluded that when adequate resources are committed to the development of human capital which is the stock of competencies, knowledge, habit, social and personality attributes of the society, the nation will grow and develop.

More contemporary authors like Pritchet,2001 further notes that the rate of growing demand for educated labour which could be due to changes in; policies, sectoral shift or technological progress will greatly vary across countries. so much so that countries with the same initial individual returns and subsequent expansions in the supply of educated labour have instead seen the marginal returns to education drop drastically. Therefore Pritchett (2001) concluded that education has a huge number of direct beneficial effects which go far beyond raising economic output. Some of which are; lower child mortality, lower violence etc. This implies that although education can increase cognitive skills it can only achieve increased output if combined with favourable reforms in policy to generate a profitable payoff.

Human capital can be increased through investment, for example in education, training or health. Agricultural training is one of the most straightforward ways of investing in human capital because it generates productive skills which are traded in labour markets. Consequently, Agricultural training affects an individual by increasing their potential income.

A well-developed curriculum for Agricultural training based on the current needs of the agri-food sector can provide a further boost to the whole economy. Additionally, this boost to the rural economy and subsequent employment opportunities for rural youth may lead to lower rural-urban migration, an issue that has been linked to socio-demographic and environmental problems (Qin & Liao 2016). Increased income and, consequently, increased demand by the rural populations, along with a more productive workforce would positively contribute to economic growth (Besley & Cord 2006; Ravallion, 2004). By building environmental awareness and the capacity to apply new technologies, ATVET can substantially contribute to sustainable growth. Agricultural training is an investment in human capital, costs and returns to this investment should be considered. Similarly to the distribution of benefits of TVET, costs can also be borne by different actors: individuals, NGOs, companies or states.Costs can include trainees' and instructors' time or equipment and opportunity costs-that is the value of the inputs in their best alternative use. Designing a cost-benefit analysis framework which considers all the complexity of the system is a difficult task which has widely been studied for TVET in general Several publications evaluate rates of return (ROR) to TVET, but unfortunately ATVET has not received the same kind of attention in the literature. A review of studies evaluating ROR to TVET on a global scale was conducted by Bennel (1996) with particular emphasis on comparing ROR to general education with that to TVET. His finding is contrary to the then orthodoxy, largely sustained by the World Bank, that general education has higher returns than TVET (Psacharopoulos 1987; Barthelemy & Bourguignon 1995). Studies indicate that most of the developing countries showed higher rates of return to TVET than to general secondary education. An important outlier was in Sub-Saharan Africa, where school-based vocational education was found to be inefficient and ineffective. Psacharopoulos, although critical of traditional TVET, proposes some approaches to make it an effective training tool (1987). The author insists that TVET must be de-linked from the formal schooling system, the latter of which should be limited to general skills; TVET should be offered by specialized vocational institutions or in the form of on-the-job training. He emphasizes the need to link TVET to employers and quotes the German dual system as a successful example. Additionally, he calls for an increase in private financing and ongoing

evaluations of the training.The African Development Bank opines that TVET can play a significant role in realizing the youth dividend, addressing youth unemployment, and, in concert with other macroeconomic factors, boosting national economic productivity (ADB, 2015). The African Development Bank has been at the forefront of promoting TVET in recent years in Sub-Saharan Africa. Similarly (Oketch 2015) analyses the role of TVET in youth skills development and employment in Africa using key economic and education highlights in Kenya, Ghana and Botswana. They also examine the policies and practices that characterize the TVET landscape across these Sub-Saharan African countries from a political economy approach. His findings suggest that TVET has played a marginal role in most Sub-Saharan African countries despite numerous policy actions to address youth unemployment and promote economic growth through an expansion of TVET provisions. They further show that enrolment in vocational education as a share of all enrolled in secondary education continues to be below 10% in most Sub-Saharan African countries.Spielman et al. argue that the agricultural education and training role is not limited to building human and scientific capital, but is also important in building the capacity of organizations and individuals to transmit and adapt new applications of existing information, new products and processes, and new organizational cultures and behaviours (2008). Consequently, it is important to emphasize that general education and ATVET are complements rather than close substitutes (McMahon et al. 1992). Nevertheless, the discussion about which type of education is better for development is still ongoing (Oketch, 2015). Recently, there has been a major shift in the mainstream perception of the role of ATVET in development. While the Millennium Development Goals limited their targeted educational levels to primary education (MDG goal 2), the Sustainable Development Goals explicitly mention in goal 4 “equal access to all women and men to affordable and quality technical, vocational and tertiary education including university”. Furthermore, the role of vocational education in the job market has changed (Oketch, 2015). Initially, it was to provide job-specific skills specific for entry into a career. Now, it is perceived more as a way to facilitate the acquisition of vocational-specific skills over a lifetime.

Innovation theory (J.A Schumpeter)

The founding father of the theory of Innovation and Entrepreneurship is Joseph Alois Schumpeter who stated that ‘we are living in a complex and dynamic world in which innovation and entrepreneurship are occupying a decisive role for economic

development…carrying out innovation is the only function which is fundamental in history. It entails replacing today's Pareto optimum with tomorrow's different new thing ….'

The term innovation originated in the late 1980s and was considered then as something unusual but none of these classical authors was able to give a true meaning to the concept like Schumpeter. In his book titled the theory of Economic Development. Schumpeter described innovation as the driver of structural changes and sustainability which could bring about development.

The basic Concepts or Major Principles of the theory are as follows;

According to this theory, the effective function of an entrepreneur is to start innovation in the venture (introduction of new goods, new methods of production, the opening of a new market, discovering a new source of raw materials, carrying out a new source of an organization). to him, the entrepreneur has a creative nature, with the following characteristics; an institutional capacity to see things in a way which afterwards proves to be true, the energy of will and mind to overcome static habits, desires and emotions, and the capacity to withstand social opposition.

Schumpeter regards the entrepreneur as a catalyst who checks the static conditions of the economy, thereby initiating and thrusting a process of economic development, taking it to a new level. Also, an inventor discovers new methods and new materials while an innovator applies inventions and discoveries to make new combinations to produce newer and better goods which yield satisfaction as well as profits. An entrepreneur doesn't have a single person but equals an organization with witnesses.

In summary, Schumpeter makes a clear distinction between invention and innovation that is between discovery and execution. While the invention is a pure idea it is not adequate by itself to lead to implementation, it must be taken up by a strong influence. It is therefore not the power of ideas but the power that gets things done (innovation) which he terms 'creative destruction. Which can increase output and move an economy forward? The entrepreneur hence performs the function of the change creator. Unlike an economy which is stationary because its activities are; reactive, repetitive and routine. The authors of a new idea or creation are those who carry it forward. He went ahead to propose that the macroeconomic effects of any basic innovation are hardly noticeable in the first few years. What matters in terms of economic growth in investment and employment is not the discovery of basic

innovation but rather the diffusion of basic innovation. This is a period during which imitators start to realize the profitable potential of the new product or process and begin to invest heavily in it.

In conclusion, the increasing complications of modern economies cause the necessity for a higher rate of economic interaction. More so today knowledge-based economies are far more dependent on dynamic technological progress. We live in a generation of innovation which does not only depends on individual personalities but involves the cooperation of different actors. This theory has evolved into the neo- Schumpeterian economics.

Review by Objectives

The Influence of Management Skills on Employability

The training of trainees in agricultural vocational centres and entrepreneurs in agribusiness should be carried out to upgrade their skills (Mayaki, 2013). This should be accompanied by training methods. Here are agricultural innovation Centres (ICs) which hold training of trainers on best practices in delivering services for different target groups, such as farmers, workers in agribusiness, processors, agri-preneurs and start-ups. The training will be more practical and use modern teaching methods and online courses such as Massive Open Online Courses (MOOCs). Combining managerial and entrepreneurship training through incorporating business knowledge and skills in vocational secondary and tertiary education or through developing innovative community-based training programmes (Pieters, 2013). Opportunities exist for ATVET to systematically support management and entrepreneurial activity among small-scale producers themselves, by providing basic business and management training not traditionally incorporated into ATVET programmes (Vandenbosch, 2006). The most effective entrepreneurship training combines "core" business administration skills such as accounting, with softer entrepreneurship skills, such as problem-solving. Training also needs support services such as coaching, mentoring and financing. Also needed are networks linking with higher levels of value chains (Pieters, 2015).

Development of Entrepreneurship Skills

Entrepreneurship and innovation are increasingly being recognized as drivers of economic growth, productivity and employability which are key elements of economic dynamism. The ultimate objective of entrepreneurship training or education should be to facilitate the development of an entrepreneurial culture which will in turn help young people in agriculture to be innovative and create their own enterprises. And also to be able to identify and pursue

new opportunities. Agricultural training should ensure that entrepreneurship is embedded in informal education through partnerships with the private sector, apprenticeship training programs and local communities (ATVET toolkit,2019). In order to achieve this agricultural training centres should have the capacity to design and implement practical training that will empower the youth to develop an entrepreneurial spirit(Kreucheuf, 2017).

Development of Business Management Skills

Business management skills complement technical know-how and are foundational to self-employment and local agribusiness creation (Rivera & Alex, 2008). Agricultural experts propose that the curriculum training should not be centred only on science but on the full range of activities that span the agricultural value chain. Business management includes services in four main areas: business development services for farmers, micro-, small-, and medium-sized enterprises (MSME); value chain advisory services; consultancy on ATVET training in farm businesses, processing industry, the public sector and other ATVET institutions; and research on process development in specific areas and action research (tracer studies, OS and others), feasibility studies, and the like. Thus on completion of training, trainees should be qualified as farm workers (employees), and farmers(employers) and should have the skills needed by the job market.

leadership and training skills

By implementing best practices as part of their agricultural activities, the young people integrated into the centres successfully carry out tasks seen as complex by farmers (setting up an incubator for poultry, a nursery for cocoa plants, etc.).This enables them to carry out demonstrations and train other farmers in the area, which affords them recognition and social status through access to responsibilities within the community. The young people trained under the programme are seen as "resource persons" who are consulted by close relatives and other farmers in their areas of professional expertise, as well as on social issues. They have increasingly respected in their communities: "The neighbours are interested in my techniques and my field, and when they see the crops, they adopt them, they are good cheaters [they copy]," emphasises a young trainee integrated into the sector (Ayite & Leppens, 2016). This leads to the development of self-confidence which the training seeks to develop in young people a sense of leadership, mastery of plant production techniques, farm management skills, marketing techniques and sustainable management of soil fertility as well as a desire to take their training further.

Project management skills

ATC's should engage trainees in a project-oriented learning environment to provide them with the opportunity to make combined use of the various competencies acquired throughout the program. Project learning does not only allow trainees to learn the technical and vocational aspects of their speciality but also aspects which are relevant to; social processes and interaction, teamwork and interdisciplinary knowledge. Training at the service of the life projects of young people is a continuum of training and integration. The articulation of training with support for socio-professional integration is what gives this model its strength. In developing their projects, the young people mobilise what they have learned during the period of training: theoretical knowledge, technical processes, and substantial practicality. This knowledge and practicality acquired through theoretical learning and time spent in the field in a socio-professional environment help the trainees establish their independence from suppliers and other farmers, families and so on. Networks are formed, both those from before the training but especially those built up during it, while close links are forged also with the farmer supervisors which is a form of mentorship. Training in a farming profession can therefore only be effective if it is complemented by a process of support for learners in the design and implementation of their socio-professional integration in local communities, which is also referred to as the learners' life projects to permit them to be employable. (AFOP programme, 2021).

Mentoring

Involvement of professionals and families as co-trainers supporting the integration of young people. The support of regional stakeholders in the process of modernising the national

training system has laid the foundations for a strong local anchoring of training structures. The involvement of professionals in the development and implementation of benchmarks, which are primarily based on the professions, allows for the development of contextualised training content focused on skills and not on disciplinary or theoretical knowledge which is sometimes disconnected from the reality of the profession. The involvement of families in

training in a socio-professional environment during the work-study phases allows learners to develop the socio-cultural skills necessary to succeed in their social integration in the communities. Agriculture and fishing are activities influenced by the social and cultural environment, and this is sometimes the root cause of the failure of integration projects in these sectors. As well as becoming functional and competitive professionals, learners under this

approach also develop as citizens aware of cultural wealth, local know-how and social relations.

The Impact of Soft Skills on Employability

In order to equip young Africans with skills to thrive in all forms of agriculture in addition basic skills, training centres must provide their learners with knowledge in the use of digital technology to access and interpret information. Information and Communications Technology (ICT) offers innovative tools for restructuring teaching and learning processes in preparing students for the 21st Century skills. Soft skills are also needed by farmers in order for them to convey their requirements for information and technology to service providers (Stumpf & Niebuhr, 2012). The link between the training system and the labour market needs to be strengthened so as to better equip youth to face the world of work (ILO, 2015). Therefore improved access to vocational training and and on-the-job training programmes with an emphasis on soft skills training, and the combination of in-classroom and workplace training is of prime necessity.

Soft skills in Information technology can support better crop, fertilizer and pesticide selection. It also improves land and water management, provides access to weather information and connects farmers to sources of credit and connects farmers to sources of credit (Fasset, 2010). Agricultural training should include; the development of core skills- including literacy, numeracy, communication skill and learning ability as well as awareness of workers' rights which are not linked to performance in specific occupations but are the building blocks of the life- long learning. In line with good education and training an appropriate Skills Development Act and the levy grand scheme aims to incentivize organisations to expand the competencies of the labour force resulting in improvements in employability and productivity. By participating in the scheme, employers will reap the benefits of a better skilled and more productive workforce (Fasset, 2010).

Social skills

Backed by theoretical contributions, the practical learning with farmer supervisors offered through the work-linked training model is a feature welcomed by most project leaders. The farmer supervisors teach trainees the correct processes, practical tips and know-how. Local connections of mutual support and exchanges of practices, services or products are thus established between farmers. Young people can be the target of jealousy and may have difficulty adapting to local customs. "Sociology impacts the project more than the technical

aspects," notes an integration counsellor from a training centre in Bouam (Berges, 2015). Human factors linked to becoming accepted in a (sometimes new) community and the quality of the social links the young person forges are decisive in the success (or otherwise) of their project. The region and its stakeholders can be welcoming and facilitating through mutual aid, cooperation, innovation, etc., as well as limiting or even off-putting as a result of greed, rivalry, insecurity, etc.

Communication skills

Communication skills are "The ability to convey ideas to others through verbal and written means, using clear and effective language that accounts for the audience" (Farrugia & Sanger, 2017). Another widely accepted definition is the ability to interact with others (Hull, 2012). Communication skills consist of multiple elements; four described in the literature (Bonaccio & Hull, 2016) were interpersonal, verbal, nonverbal, and written communication skills. Communication skills also involve the use of information and Communications Technology (ICT) which offers innovative tools for restructuring teaching and learning processes in preparing students for the 21st Century skills(Shaibou, Gracemary & Inkoo, 2017).

Problem-Solving Skills

Even more than knowledge and skills, the training should enable young people to develop a better opinion of themselves, something they often lack. They are aware of their skills, and many say that they evolved during the period of training: that is forcing them to think out of the box. Trainees are expected to have a different outlook on work and life after training (Berges, 2015). Armed with their knowledge, they can adapt to their context.

The Effect of Technical Skills on Employability

A growing and diversifying agricultural sector will create jobs that demand increasingly advanced technical and professional skills. Better-trained farmers are more likely to develop better farm inputs and technologies to make better use of purchased inputs, and labour and hence choose technologies more effectively to respond rapidly to changes in markets and natural calamities(Schultz, 2000). The majority of farmers who have little more than basic education will require to sharpen their technical knowledge in extension services Agricultural training also requires the development of higher-level skills- professional, technical and human resource skills to capitalize on or create opportunities for high-quality or high wage jobs. The Portability of skills-based first on core technical skills to enable workers to apply knowledge and experience to new occupations or industries and on systems that codify

standardize, assess and certify skills so that levels of competence can be recognized by social partners in different labour sectors across national, regional and international labour markets and hence employability (for wage work or self-employment) which results from all these factors.

Good education and training of good quality and relevance in the labour market empower people to develop their full capacities and seize employment and social opportunities, raise the productivity of workers and enterprises, contribute to boosting future innovation and development; encourage domestic and foreign investment, thus job growth lowering unemployment and underemployment (ILO, 2010). Expanding skills and broadening access to skill formation are quality education as a foundation for future training, a close matching of skills supply to the needs of enterprises and labour markets, enabling workers and enterprises to adjust to changes in technology and markets and anticipating and preparing for skills of the future International Labour Office (ILO, 2010).

Specialized Knowledge

Most times, the young people trained in agriculture stand out from other farmers thanks to their technical knowledge, which is tailored to the methods of production, conservation and marketing of produce. Being more autonomous, they are less dependent on the vagaries of suppliers despite the uncertain financial position of their small agricultural facilities. For the young person, the increasing autonomy of the life project represents freedom from social, moral or intellectual dependence and becoming a stakeholder in their own development. The young men and women supported by the programme who achieve this maturity are generally resourceful and show greater resilience to hazards.

Safety Standards and Protocol

Quality Control

A rigorous quality assurance (QA) mechanism for skills development covers curricula, programs and institutions, trainers and assessors, and assessment and certification. Integrating sustainable skills standards into QA will not only instruct various education and training institutions but will also guide companies and employers. Quality education and training programs allow transferability of competencies across jobs and enterprises, and, again, mobility of workers across jobs and companies. In both QC and QA, collaboration among key partners, i.e., government, industries, workers' representatives, and education and training institutions, is critical in identifying the skills needed for renewable and sustainable

employment and in making sure that there is enough provision for education and training. Another crucial partnership is between private companies and their trade associations. In many countries such as Germany and Denmark, governments are working with employers' and workers' associations to adapt or formulate new curricula in order to match skills with the needs of the job market. (ILO and EU 2011a, b).

Empirical Review By OBJECTIVES

This section of the work consists in reviewing what other authors have written concerning the topic, and how it can serve as a base for our work in the upcoming chapters.

The Influence of Management Skills on Employability

William Mandla Thwala carried out a study on agriculture vocational education programs and the promotion of job creation skills in the Free State Technical Vocational Education and Training College. The aim of the study was to investigate the agriculture educational programme and the promotion of job creation skills in the OFS FET College. The interpretivism paradigm and design approach were adopted with the use of a qualitative research design. The sample consisted of seven participants precisely; three final-year students, three facilitators and one coordinator. The non-probability and purposive sampling techniques were used for the qualitative research. The qualitative data was descriptive and thematically analyzed. The study found that there is a big demand for agricultural professionals in South Africa but very few are choosing this career. The quality of education in the agricultural sector is not where it should be. The demand for skilled people in the sector is growing, while the number of students enrolling in agriculture-related training continues to decrease. Africa's agricultural education is failing to produce a new wave of farmers. The study found that FET colleges did not train and provide enough skills to students to enhance development in agriculture sectors and therefore make students non-productive in the labour market. The study also found that the FET colleges had left a trail of low skills, partially educated and jobless youth behind. The study also found that the curriculum tended to be outmoded, and irrelevant to adequately address the challenges facing modern agriculture. The curriculum still focused on farm production rather than encompassing all segments of skills needed in the agricultural value chains such as; entrepreneurship and agriculture business processing market. Agriculture forms the basis of productivity for food security in every country. It contributes to a large proportion of the gross domestic product in many developing countries and is the source of income and subsistence for many of the poorest and most vulnerable individuals and households.

Ngoura Ndjidda (2022) wrote an article whose purpose was to evaluate the effects of Official Development Assistance (ODA) in agriculture on all sectors of the Cameroonian economy. More specifically, it aims to assess the effects of this funding on agricultural value-added, industrial value-added, food consumption, the well-being of the population and economic growth. To achieve this, the study used the Computable General Equilibrium model developed with the support of AGRODEP, PEP and IFPRI. We have come to the following conclusions: any increase in ODA stocks directed towards the agricultural sector generates growth in agricultural production, an improvement in government revenue, and, by extension, contributes to economic growth. To achieve this, strong actions to improve the business and management skills in agricultural training are emphasized.

The theoretical literature review used in this study according to Clemens, 2012, ODA appears as an aggregation of very heterogeneous components that may or may not have an impact on the employability of agricultural trainees. Investments in schools, agriculture, and infrastructure influence growth and to some extent on poverty reduction in host countries. The theoretical anchoring of the ODA-agricultural growth relationship shows that ODA funding influences agricultural growth. For Ferry (2013), ODA is now considered one of the main solutions for promoting productivity, economic development and reducing poverty. The result of the study similar to that of Loayza and Raddatz (2010) shows that ODA has a greater contribution in unskilled labour-intensive sectors (agriculture, construction, manufacturing). According to Morrissey and al. (2006), the economic debate is about the potential effect of The methodology of data analysis used for the study is the Computable General Equilibrium Model (CGEM) a tool calibrated on a Social Accounting Matrix (SAM). In this research, the SAM is constructed from the 2014 aggregate matrix for Cameroon, developed by the National Institute of Statistics (NIS), which has been modified to address the issue of managing ODA flows in the agricultural sector. The main changes made concern the disaggregation of the agricultural sector, considering the disaggregation of labour and capital factors and the introduction of the land factor.

The effect of agriculture on employability shows that the demand for employment in the informal sector fell by 1.034% and 3.92% respectively, which means that most of the workers in this sector have migrated to the formal sector due to the acquisition of further training, which generates decent employment and improves living standards. This improvement will have an impact on the development of the other sectors, as well as on the increase in state revenues. This result is consistent with the literature that investment in the agricultural sector

creates conditions for growth and poverty reduction. A manufacturing chain can depend on agricultural production. Under these conditions, any sustainable improvement in agricultural productivity has positive employment effects for the workers in the manufacturing firm. In the end, this analysis shows that any upward variation in ODA stocks in the agricultural sector leads to an upward variation in the value added of the agricultural sector improves the standard of living of the population with the increase in disposable incomes, and the repercussions are significant in terms of reducing unemployment, especially in the primary sector, notably agriculture.

Daniela Bruni and Bruno Poitier, 2012 carried out a study for the Food and Agricultural Organization (FAO) in Niger on agricultural education and training on land and plant nutrition between the years 2008 to 2011 on the promotion of the use of agricultural inputs by the association of farm producers by an increase in their training. The study considered the main agricultural activities which are normally divided into two categories according to the seasons; Millet and sorghum which are the main crops in the winter season and they essentially provide for family needs. Only when the production is more than needed, is it possible to sell on the market. Moreover, Niger often has to face food crises owing to poor soil fertility and drought.

The problems that farmers and rural populations in general always have to face are the same: Access to business knowledge, Farmers' training and capacity building were one of the pivotal areas of the project. The enhancement of the quality of learning outcomes and their impact on agricultural development was closely related to the training given to all beneficiaries. In 2009, after years of "traditional agricultural extension activities, the project wanted to go further by introducing the innovative concept of Farmer's Field Schools to reveal and promote farmers' traditional knowledge and experience and to let skills learning objectives; The Inputs Project aimed at strengthening the capacities of farmers' groups to play an important role in inputs supply for farm production as well as to enhance their agricultural and life skills. At the end of the training courses, farmers were more knowledgeable in agriculture, having been exposed to modern technology, more confident in managing micro-dosing fertilizer techniques, better informed on credit access and had a strengthened self-esteem and marketing capacity. Their level of competence in job performance was emphasized and their creativity was fostered through the enhancement of their abilities required for learning in the context of lifelong education and training farmers to become themselves trainers. Training is a key element in ensuring the sustainability of the technology

and dynamics initiated in this project. To define the training topics based on an agreement with the target population made up of 400 farmers, the project staff first undertook some baseline surveys to identify the farmer's learning needs. A multi-disciplinarily team (educationists, technicians in agriculture and in new technologies) was in charge of the training.

At the end of the project; Farmers' skills and knowledge were upgraded and now they are able to run their activities by and for themselves. The income of farmers using micro-doses of fertilizer and the inventory credit system increased from 52 to 134 per cent. Farmers' access to credit and inputs was greatly improved by the warranting system. Moreover, farmers who were involved in warranting activities used the credit to undertake income-generating activities and purchase fertilizers and seeds of improved varieties for the next

The Effect of Soft Skills on Employability

Tiffany.J.Freer (September, 2015) carried out a study on the Innovation for Agricultural Training and Education (InnovATE) Project promotes sustainable employment, poverty reduction, and natural resource conservation in the developing world by assisting in the development of effective and sustainable agricultural education and training (AET) systems to develop soft in order to enable trained farmers to adopt better technologies and move their products to the market. The purpose of AET is threefold as follows (1) develop human resource capabilities; (2) produce and apply research to address the needs of agricultural production, markets, and end users; and (3) transmit research and technology to smallholders and other marginalized groups to improve employment and livelihoods (Rivera, 2006). Agricultural education and training contribute to poverty reduction for rural populations across the globe (Wallace, 2007). The World Bank (2007) determined four effects of AET on agricultural productivity and hence employability: (1) enhanced worker productivity; (2) formal education increases farmer's ability to choose prime combinations of inputs and outputs; (3) additional school influences farmer's capacity to innovate and adapt new technologies, and additional education facilitates interaction with commercial markets. Thus the importance of soft skills in agricultural training.

The World Bank report (2016) was Concerned with the neglect of agricultural education and training in Africa and its potentially damaging consequences for long-term human capital formation in the agricultural sector, it, therefore, initiated a series of studies on agricultural education and training (AET) in 2014. The research comprised six thematic studies, which in

turn drew on analyses of 15 country cases, a survey and a qualitative research design with a purposive sampling technic. The purpose of this report was to synthesize the findings of this research and suggest strategic measures for strengthening the contribution of agricultural training to agricultural productivity and natural resource management in Sub-Saharan Africa. The target audiences are African agricultural practitioners and policymakers. Developing skills in agriculture may help curb the productivity issue, which in turn would make agriculture more profitable if a minimum market infrastructure exists. There are many opportunities to get involved in parts of the agricultural value chain, provided people have the right skills and in some instances the required capital. Indeed, processing of agricultural products, packaging and marketing of those products as well as application development using ICT to improve management of production and marketing of agricultural products are opportunities that await the skilled individual.

Saleem & Mohammad (2021) carried out a study on the factors contributing to Employability in Agriculture Department as Perceived by the Diploma Holders. This study explored some notable factors contributing to the employability of graduates in the agriculture department from the Government University of Punjab as perceived by the Diploma in Agricultural Sciences (DAS) holders who were recruited in the agriculture department in 2017. This study was quantitative and data were collected through a questionnaire from 300 respondents who were recently appointed as Field Assistants (FAs) in the agriculture Department. A total of 237 questionnaires returned by the respondents were found complete, thus, the sample size was reduced to 237. The effective Schools Model presented by Lezotte (2010) was employed as the theoretical framework of this study. Collected data were analyzed through Statistical Package for Social Sciences (SPSS). Results unveiled that the average age of respondents was 25.03 years. Maximum respondents (31.96%) had received DAS from IATI, Sargodha while the least contribution came from the University of Agriculture Faisalabad (2.86%). The family background of 77.45% of respondents was rural and farming was a key source of income for more than half of respondents (56.14%). Satisfaction with classroom facilities (Mean=2.47±0.67), higher grades in examination (Mean=2.39±0.77) and relevance of the coursework (Mean=2.38±0.75) learned at training institutes helped respondents to get through the recruitment process. Educational activities and co-curricular activities were equally important for successful academic performance and leading to employability. The findings of the study show that graduates from the agricultural school need to build soft skills and social skills through extracurricular activities at the institutes level and conducting inter and intra-

institutes competitions to bring positive change in the behaviour of students to pave the way towards employability(Mohammad, 2021).

The Impact of Technical Skills on Employability

Godwill Mih Chewachog and Geoff (2018) carried out a study on teachers and learners in vocational agricultural high schools as an insight into the challenges they face in Cameroon. Challenges in teaching and learning agriculture remain an important and unresolved problem across sub-Saharan Africa. The purpose of this study was to explore the challenges in teaching and learning agriculture in Vocational Agricultural High schools in Cameroon. Using a mixed method that is; descriptive survey research design. In this study; data was collected with separate questionnaires for students and teachers. The sample size was made up of 98 respondents, 18 teachers and 80 students from the 3 existing agricultural high schools which were involved. Therefore the sampling technique which was used was; Purposive, proportional and convenience sampling techniques to select the respondents. Proportional sampling was adopted to select students because the number of students varied between schools The questionnaire was administered and collected by the researcher with a response rate of 100%. Data collected were analysed using descriptive statistical techniques.

The problem of this study is centred around the rapid increase in the world's population which is projected to be 10 billion by 2050 with that of Africa alone expected to increase to about 2.5 billion people, most of which will be young people under the age of 25 (DESA, 2017). Africa thus has one of the fastest growing populations in the world (United Nations, 2010) and this increase is associated with increasing problems of youth unemployment, poverty, food security, school dropout, and crime (ILO, 2012) with renewed consequences on the sustainable development (SD) of already fragile economies. It is estimated that close to 375 million of these youths should be in the workforce by 2030 (DESA, 2017). This rapid growth of mostly impoverished youths with no employable skills, coupled with a limited supply of jobs thus constitutes a serious deterrent to economic growth in Africa. There is, therefore, a growing policy concern about the need for countries to consider Technical and Vocational Education and Training (TVET) as a viable alternative to raising the skills level of these youths to obtain a productive workforce (African Union, 2017). Agricultural vocational training is a subset of TVET which refers to all forms of education and training, which provides learners with skills and knowledge related to the world of work in different sectors of the economy for poverty alleviation and economic development (Pavlova, 2014; Schneider

& Kogan 2015). Several challenges were identified: inadequate teaching and learning resources, frequent use of teacher-centred teaching methods and the need to improve on the training of teachers. Gaining vital insights into the current capacity and capability of the Technical and Vocational Education and Training (TVET) system in Cameroon especially related to the teaching and learning of agriculture and generating evidence needed to inform policy on possible ways of improving TVET delivery in high schools can contribute to the development of a skilled workforce and Cameroons sustainable development. Despite the apparent advantages of TVET, it is said to have been neglected in the education policy of several African countries due to problems of high cost, poor quality of training and an observed mismatch between the training offered and the expectations of the employers (Boutin, 2009). It has been suggested that diversifying the curriculum by integrating prevocational and vocational courses in school programs could: facilitate the transition between the skills that are learned in school and those which are required at work, increase equity to access to education, and increase the career options of the students upon their graduation (Psacharopoulos, 1985; Che, 2007). There is a clear need for policy and practice that supports the provision of quality TVET in Africa.

At the end of the research, the authors recommend putting in place a comprehensive TVET development policy that will make sure the available resources are well coordinated and distributed while those that are completely absent are purchased and all stakeholders participate in defining the training of teachers and students to ensure quality. This, could result in properly trained youths with directly employable skills, reduce unemployment and poverty, and in consequence, foster sustainable development.

To respond to the first research question of this study; the results show that both teachers and students stress the need for more (teaching and learning resource) TLR that can make the teaching of agriculture more practical to be provided. Every good learning process in the TVET system should lead to students gaining what is valued as the attributes of the knowledge worker; skills, expertise and knowledge (Anastasiou, 2011). Without the required resources, it is hard to imagine effective teaching that provides learners with practical competencies. The results of the study further show that teachers mostly use teacher-centred methods than practical methods which fail to equip learners with technical skills. This might result in ineffective learning, thus preventing the students from acquiring the skills they need (Ofoegbu, 2015; Amaechi & Thomas, 2016). Based on the findings of this research, it is concluded that the three existing agricultural high schools as they currently exist might not be

able to effectively inculcate into students, the necessary vocational skills needed to ascertain that high school graduates are competent and directly employable. Hence, the need to build the capacity and capability required to meet policy ambitions. This study recommends that a policy framework should be created to make vocational training in agriculture more practical than theoretical to equip learners with technical skills. This could result in properly trained youths with directly employable skills, reduce unemployment and poverty and in consequence foster sustainable development.

Eugenie (2018) carried out a systematic review of employment outcomes from youth skills training programs in agriculture in low and middle-income countries by using the Human Capital theory to predict a positive correlation between human capital accumulation in agriculture and labour employability. The study was carried out on the basis that skills training can be used to improve agricultural employment outcomes through youth employment programs. Sixteen studies were carried out in different countries. Concerning the study design, 9 countries used the qualitative method of data collection while 4 used quantitative methods of data collection and the remaining 3 used the survey method of data collection. Data were analysed using statistical and econometric methods. A summary of these findings in Zimbabwe and Uganda by Alfonsi(2017) on vocational training and on-the-job training in agriculture for four years used quantitative methods. Data was collected through a survey and the sample size retained for the study was N=1714. The target population was between 18-25years. The key findings of this research showed that youths in agricultural vocational training learn specific skills in technical aspects as well as in transformation. Therefore there is a link between technical skills in vocational training and employability.

Chakravarty,2016 carried out a study in Nepal on vocational training precisely skills training and employment placement services in agriculture. The study proposed one to three months of training plus six months of employment placement. It used a quantitative survey method for a sample of 200 youths aged between 16 to 24years. The results were as follows training intervention in technical aspects improved employment outcomes in farming. Also, e-skills training intervention induces women to undertake more income-generating activities which could lead to job creation in agriculture as well as an increase in profit and income of farmers and agricultural-related activities.

A study carried out by Kristal Jones on innovation on the role of Agricultural Technical and Vocational Education and Training in Developing Countries: A Review of Literature, Issues and Recommendations for Action. A review of the literature on agricultural education in developing countries provides a history and context of current trends in various aspects of agricultural training, with a particular emphasis on more recent shifts toward value chain and workforce development frameworks. Based on both conceptual and case study literature, a strengths-weaknesses-opportunities-threats (SWOT) analysis is then offered to help focus efforts to strengthen and build ATVET systems in developing countries. From the SWOT assessment, best practices in the current field are offered, and two case studies, from Ethiopia and Kyrgyzstan, are used to highlight specific lessons learned. Finally, the paper highlights key areas in which innovation could support agricultural vocational development in countries with an interest in building their agricultural human capacity. The analysis presented here leads to conclusions that ATVET programs must be demand-driven and context-specific, and investments at the institutional level must promote flexibility and innovative programming in order to maximize the impact of agricultural vocational training. Over the past ten years, however, there has been a growing emphasis on agricultural value chains to stimulate economic growth (Maguire, 2011). These modern value chains, in turn, demand skilled workers to fill a variety of roles that relate to agricultural development but that are not directly related to traditional roles of production and small-scale producers (Olenik and Fawcett and Jacobs,2013). The study focuses on the educational level at which vocational and workforce development programs operate, the range of skills and knowledge included in "agricultural" training, and the delineation of agricultural occupations are all open questions in the current discussions around agricultural vocational training programs and agricultural workforce development. Though the implication is that TVET oriented toward workforce development will alleviate poverty by providing individuals with skills that increase their employability and therefore their income. The research design used for this study is a survey using a SWOT matrix analysis. This analysis presented the following opportunities in agricultural vocational training; value chains create new types of jobs, increased integration of educational levels, emphasis on rural livelihoods emphasis on agricultural entrepreneurship(Unesco,2016b).

The study was triggered by the situation at ATVET Colleges which is found to produce mismatched and unproductive students at the labour market; the trail of low skills partially educated and jobless youth; the outdated and irrelevant curriculum that still focuses on farm production rather than encompassing all segments of agricultural value chains and

entrepreneurship and agriculture business processing market. In this study, three final-year students, three facilitators and one programme coordinator will constitute the sample. This will enable the researcher to select participants who bear all the characteristics required in this study, namely agriculture as a vocational education programme. Bias will be avoided through appeal to coordinators to identify experienced facilitators who have the most information on the programs making a sample size of 7 participants.

Muhammad, 2021 carried out a study and the purpose of this study was to discover students' self-perceived employability skills gained from participating in international HIEs such as study abroad. Two research objectives guided data collection. Those objectives were to; Describe students' perspectives of personal and social responsibilities gained from participating in HIEs, and Explain which self-perceived skill gains may be useful when seeking employment. A qualitative research design (Patton, 2002) for this non-experimental study afforded appropriate analysis techniques (i.e., content analysis procedures) to examine former HIE participants' archival data from agriculture study abroad programs in the College of Agriculture and Life Sciences (COALS) at Texas A&M University. The phenomenon under study was identified by the researchers as employability skills derived from study abroad. Identifying a phenomenon is the first step in a qualitative study (Fraenkel et al., 2019). A qualitative research design was appropriate because the research topic included recording participants' qualitative responses (Bogdan and Biklen, 1998). This research was approved by the Institutional Review Board at Texas A&M University. The population of interest was based on COALS' fall 2017 enrollment (N = 7,792). Of this population, ~57% were females (n = 4,407); males totalled 3,385 (~43%). Nine categories described the population's ethnicities (American Indian, Asian, Black, Hispanic, International, Multi-racial excluding black, Native Hawaiian, Unknown/Not Reported, and White). The largest ethnic group was White, totalling ~67% (n = 5,180). The second most represented was The population of interest based on COALS' fall. A purposive sample (n = 105) was used to represent the target population because COALS' HIEs provided the same and equal chance of participation to all students (Fraenkel et al., 2019).

Participants were self-selected into the sample, based on participation in one or more study abroad programs (Costa Rica, Greece, Namibia, and/or Poland). Respondents were predominantly (n = 66; 85%) interested in study abroad programs (from summer 2017 to summer 2018) in Costa Rica (n = 34) and/or Namibia (n = 32); 12 (15%) studied in Greece or Poland. Females comprised nearly 70% (n = 54) of all participants. The results findings show

that participants gained enhanced communication skills through intercultural interactions in their study abroad programs. Participant number 23 noted the study abroad experience taught him/her "how to communicate and work with people from other cutlers. Participant number 17 stated the experience exposed him/her to "various and positive methods of interpersonal communication." These findings support Gaia's (2015) study, which noted short-term study-abroad programs effectively increased communication skills.

Tiffany. J. Freer (September 2015) carried out a study for the InnoVate project to modernize agricultural education and training. The Project promotes sustainable employment, poverty reduction, and natural resource conservation in the developing world by assisting in the development of effective and sustainable agricultural education and training (AET) systems. The purpose of AET is threefold as follows (1) develop human resource capabilities; (2) produce and apply research to address the needs of agricultural production, markets, and end users; and (3) transmit research and technology. The study was carried out using a cross-section research design. Samples were taken from agricultural training schools in; North America, Ghana, Nigeria and Egypt. The purpose of the study was to deduce the problems of agricultural training at the vocational level, programs have been critiqued for an overly narrow and production-oriented focus that is misaligned with the range of current agricultural occupations and overlooks agricultural systems as a part of rural development (Vandenbosch, 2006) while appraisals at the undergraduate level demonstrated heavy theoretical and academic emphasis that are discordant with employer needs and those of smallholder and entrepreneur clientele (Rivera, 2006). Additionally, country-level labour market assessments that are necessary to align content and instruction with employment outcomes are missing or inadequate (Wallace, 2007). Curricula and pedagogical updates are necessary for AET systems to produce graduates with the knowledge, skills, and attitudes that enable sustainable employment, improve livelihoods, and facilitate natural resource conservation. In order to produce graduates that the labour market has the capacity to absorb (World Economic Forum, 2014). Labour market imbalance also reflects a skills mismatch between workforce qualifications and the expertise needed by employers (World Economic Forum, 2014). In Upper Egypt, the results of a skills gap analysis demonstrated that AET graduates did not have the necessary communication, management and technical skills needed by employers in the international dairy, horticulture, and agribusiness sectors (Vreyens & Shaker, 2005). Mabaya, Christy, and Bandama (2014) called for AET systems to expand the scope of curricula to include executive training skills such as supply chain management and finance in

addition to the traditional content to foster agribusiness entrepreneurship and ensure employability of Agricultural Education and Training (AET) graduates (McKinsey Global Institute, 2012).

The recommendations of the study were as follows; employers need personnel with expertise in current agriculture-specific techniques such as production, biotechnology, and agro-processing/post-harvest handling (Oketch, 2007) while entrepreneurial and business management skills complement technical know-how and are foundational to self-employment and local agribusiness creation (Rivera & Alex, 2008). Additionally, graduates need skills to move commodities through commercial supply chains and markets including competence in information communication technologies (ICTs); marketing and certification standards; transport and logistics; and food safety and quality control (Fernandez-stark et al., 2012). Furthermore, "soft skills" such as communication, leadership, and teamwork are necessary across middle and high-level supervisory positions.

Technical Skills and its Impact On Employability

Cheteni, 2018 used a correlational quantitative research design in South Africa in a youth program on agricultural vocational training. The sample size was made up of 140 youths between the ages of 15 to 35years. The results from the regression analysis show that; when youth programs are increased by one unit, youths are 8 times more likely to participate in agricultural training programs. Also, a total of 18% of the respondents stated that they will earn more money by selling agricultural products. Therefore youths are more likely to participate in agricultural activities when there are more training programs available for agriculture**.**

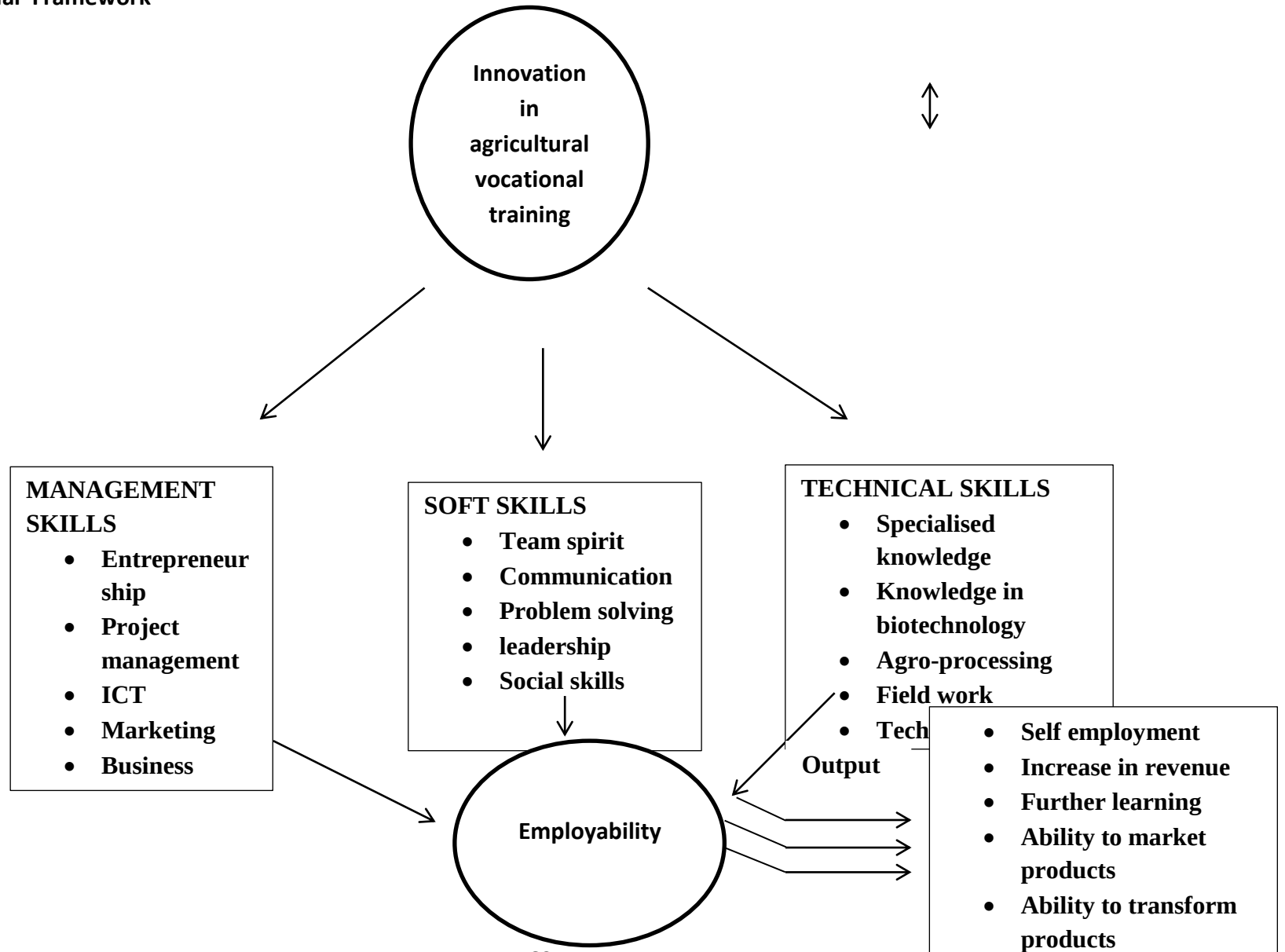
Akinde & Vitung (2020) carried out an analysis of the agricultural technical vocational education and training (ATVET) system in Nigeria,2020. The objectives of the study were to assess Nigeria's public, private and rural agricultural technical and vocational training programs and more specifically to establish a diagnosis of the agriculture and rural tvet systems, actors and initiatives in Nigeria. The methodology used for the study was more of a qualitative approach because it used an exploratory research design to gain a clear understanding of underlying policies, strategies and choices made by the key actors of ATVET both public and private. Primary data was collected from field actors predominantly with the use of semi-structured discussion guides rather than a structured questionnaire. This permitted discussions to be conducted within a fairly open framework. The data generated

were analysed with the use of qualitative exploratory analysis technics. The sampling technic was purposive and was made up of staff from ministerial departments and Nigerian focal points for field study. The sample size was made up of 35 actors. The theory underpinning the renovation of ATVET is the Human Capital theory which treats human knowledge and skills as means of production, an asset that can potentially generate income and can be increased through investment for example in education and training. The findings of the study show that the relevance of ATVET has been able to provide adequate quality initial training for young farmers and entrepreneurs or continuing training to practising farmers due to its inherent weaknesses. One of the recommendations from the study is that ATVET should be able to build linkages in the labour market for agricultural training leavers such that they can be able to pursue careers in agriculture by providing them with adequate business, commercial and technical skills.

Audrey Ball (2016) in the study themed; The Future of Agriculture in Cameroon in the Age of Agricultural Biotechnology. Hence the emphasis on technical skills. His research project investigates the realities of agriculture in Cameroon and the futures that different actors are working towards. The subject is approached via four research questions. The first question asks what the challenges are to Cameroonian agriculture today. The researcher hypothesizes that one important challenge to Cameroonian agriculture is climate change and food shortage, which can be used to justify the introduction of new technology, including GMOs which are components of technological knowledge. The second research question asks what the arguments are for and against GMOs in Cameroon. The researcher hypothesizes that the exploration of GMOs is justified by the need for increased food security and climate change adaptation by the government, while others object to GMOs because they hurt smallholder farmers and threaten food sovereignty. The third research question asks what futures different stakeholders are working to create in the field of agriculture. And was hypothesised that while all parties wish to advance the agricultural sector, universities, research institutions, civil society organizations, and farmers have goals for agriculture that do not necessarily align with the goals of the government. Lastly, the fourth research question evaluates whether all stakeholders are involved and being heard in the conversation around the future of agriculture and, specifically, agricultural biotechnology which was hypothesised that there is dissonance between government plans and the interests of smallholder farmers, their allies, and the general public, and this dissonance arises because certain stakeholders are excluded.

While no two informants spoke of challenges to agriculture in the same way, there was consensus in reporting problems in three main areas. Obstacles perceived by the five main stakeholder groups revolved around financing, factors of production, and the state. The obstacles will be reported and expounded with consideration of the informant's identity to facilitate comparisons and identification of dissonances. In terms of financial and economic aspects of farming, the second most cited difficulty was finding and accessing markets. Farmers report feeling burdened by a lack of sure buyers and markets. In 2014 Monsieur Koumenda of Messassi was contracted by the government to grow 50 hectares of corn but after experiencing crop failure during the growing season, he can no longer produce. Each of the six farmers interviewed was asked what they would like for the future of agriculture. The desire to progress to mechanized agriculture was consistently expressed, while irrigation and the opportunity to farm larger areas were also mentioned. Aside from these key hopes for the future, farmers. The researcher Farmers then see the much more effective results that IRAD technology and processes have and farmers choose to adopt them. The techniques that IRAD has shown small farmers have increased their production by 35%.85 The components of Second Generation Agriculture and bringing techniques directly to the level of the farmer are effective ways that the government, through the instrument of IRAD, accompanies Cameroonian producers. IRAD effectively diagnoses and works to address on-the-ground issues deduce from interviews that MINADER does not focus on mechanizing agriculture, lowering the market prices of inputs through subsidies, establishing agriculture credit institutions, or spending extensive time in the field with farmers, which would best meet the needs of producers and address the obstacles discussed earlier. On the other hand, IRAD seems to understand and strive to meet the needs of farmers. Dr Ngonkeu states that agriculture must progress to Second Generation Agriculture with an emphasis on technical skills, which has six elements: quality seeds, quality chemical inputs, larger areas, mechanization, transformation, and well-managed conversation.

Figure 3: Conceptual Framework



CHAPTER THREE

METHODOLOGY

This chapter shows the research methodology. According to David Wilkinson (2003), research methodology is the specific procedure or technique used to set procedures for a study. This section of the work discusses the research methodologies used for collecting and analysing data. It reveals the processes used to collect data from the field. The section opens with a description of the research design and how the study was carried out. Followed by a discussion of; the study area, the population of the study, the target population and the accessible population from which our sample size was derived. After this, the sample and the sampling techniques were employed. The tools used to gather data and the methods for validating them were discussed. The methods for administering the instruments were also discussed, data analysis techniques elucidated, ethical considerations and reiteration of the hypothesis.

Research Design

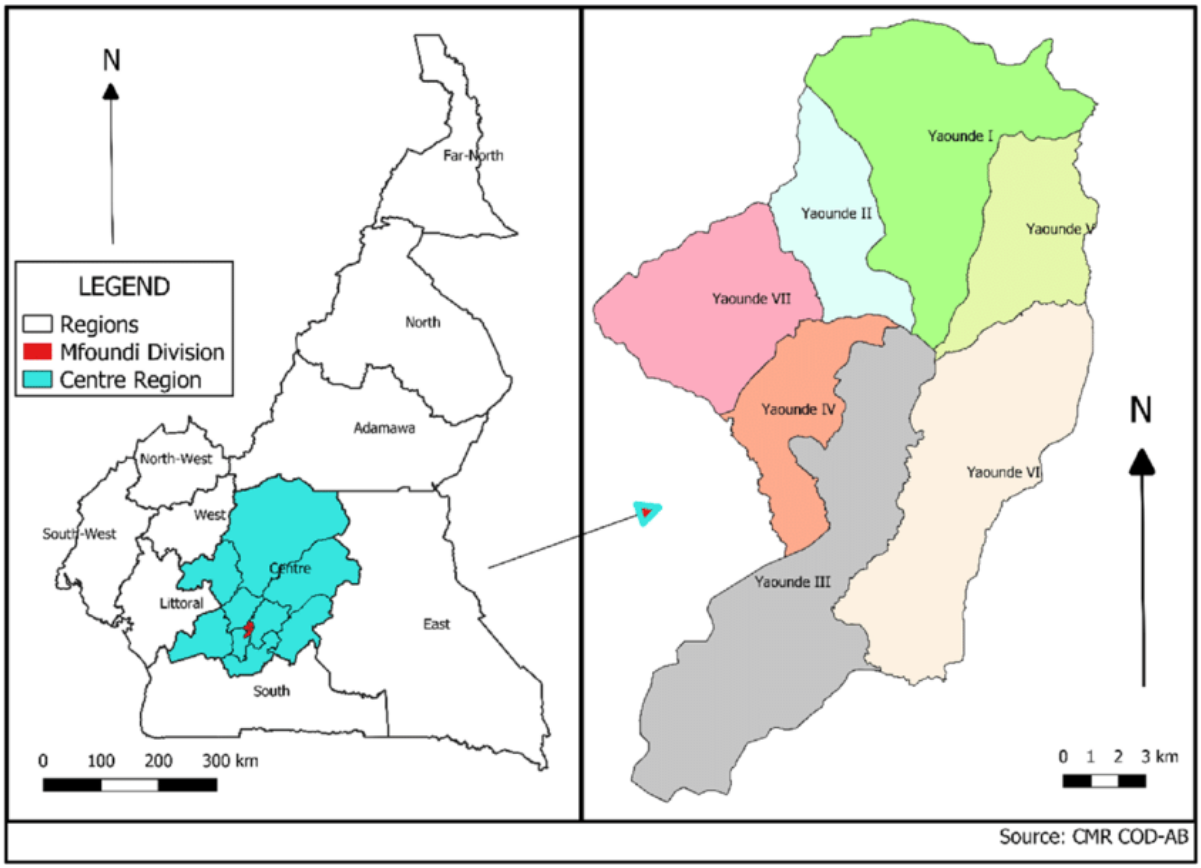
A research design is the blueprint of research methodology or plan of activities to be implemented by the researcher towards completing his or her work (Mbua 2003). Amin (2005) states that a research design is a detailed plan, and method for systematically and scientifically obtaining the data to be analysed. The research design to be used in this study is the correlational research design and a survey with the use of questionnaires was used as a strategy for gathering data (Creswell, 2012). According to Harris (2006), a correlation research design aims to show the cause-and-effect relationship between one independent variable and one dependent variable. It is used to evaluate the effect of an intervention and to verify the magnitude and direction of the relationship that exists between an independent variable and a dependent variable measured on an interval or ratio scale. The quantitative method was also used in the research which helps to predict or explain phenomena that occur in the world. The quantitative method derives its worldview from the post-positivists which hold a deterministic philosophy in which causes (probably) determine effects or outcomes. A correlation study quantifies the degree of the relationship between two variables. Data is gathered using a correlation approach in order to ascertain whether and how strongly the two variables are related (innovation in agricultural training programs and employability).

Correlation coefficients are used to express how closely variables are related. Studies of correlation give an estimation of the degree of relationship between two variables. The forecast based on the link between two variables is more accurate the closer the two variables are related (Amin, 2005). After preparing the research design, quantitative data was; collected, and analysed and the findings were generalised to the entire population of the study.

Area of Study

According to Research Wap (2020), the research area is the geographical environment in which the study area is carried out. A research area is a physical site where a study was conducted or a current research project is being conducted. The study was carried out in the capital city of Yaounde precisely in the council areas of; Yaoundé 2, Yaoundé 3 and Yaoundé 6. The choice of these study areas is largely due to the geographical accessibility and the willingness of the coordinators for local and community development to participate in the study which facilitated the process of data collection.

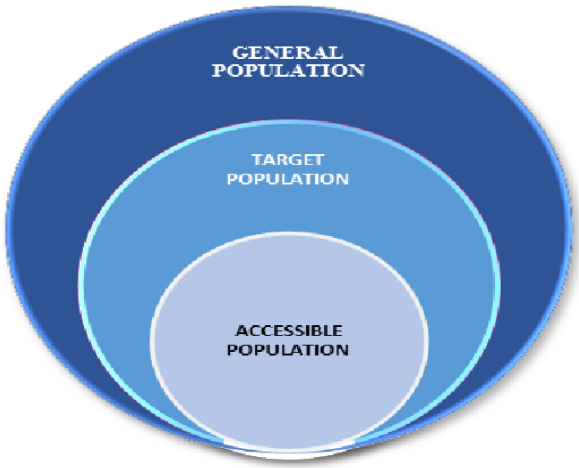
Figure 4:Area of Study



Population of Study

A population, according to Amin (2005), is the totality of all the components that are relevant to certain research. When concluding a sampling study, the researcher is interested in the entirety or aggregate of things or people who have one or more traits in common (p.235). Asiamah et al. believe that population members must share at least one common attribute. This characteristic qualifies participants as population members. Also, Mbagwana (1999) defines the population of the study as the total number of participants from which the sample will be selected by the researcher. To Frankel and Wallen (2006) a population is the largest group to which researchers hope to apply the results obtained from a sample. Satisprakash (2020) defines population as a set or group of all units on which the findings of the research are to be applied. The population of this study are the; focal points, trainers and trainees of the centres of education and community action which are under the supervision of the service in charge of local and community development in the council areas of; Yaoundé 2,3 and 6. The population is structured in three principal levels, which are the target, accessible and sample population as illustrated in the figure below.

Figure 5: Diagrammatical illustration of the target, accessible and sample population figure explaining the three levels of population



Target Population

The researcher intends to generalize the findings of the research to this population. The target population, often known as the parent population, may not always be reachable to the researcher (Amin, 2005). For Asiamah et al. (2017), the set of people or participants with

particular traits of interest and relevance is referred to as the target population, and it is the portion of the general population that remains after it has been refined. The researcher must therefore identify and exclude members of the general population who might not be able to share experiences and ideas in sufficient clarity and depth from the target population. For the purpose of this work, the target population includes all the;focal points, trainers and trainees in the centres of education and community action whose activities are coordinated by the division of local and community development in Cameroon. The trainers are from the ministries of; agriculture, small and medium-sized enterprises and vocational training. The trainees selected for the program are most times farm owners or small business owners involved in the transformation of agricultural products. Who have some degree of experience in agriculture such that the program enhances their performance in their activities ((head of training and internship; department of local and community development, Yaoundé 6 council). Three (3) centres of education and community action (CsEAC) from the three subdivisions of Mfoundi were used for this study. Focal points, trainers and trainees were chosen as participants for the study because they all participate in one way or the other in the conception and delivery of agricultural training activities in the CsECA(list CEAC,minader).

Accessible Population

This is the population from which the sample is actually drawn (Amin,2005).Asiamah et al, (2017) corroborate this by postulating that after eliminating every member of the target population who might or might not engage in the study or who cannot be reached during that time, the accessible population is then reached. The last group of participants is the one from whom data is gathered by polling either the entire group or a sample taken from it. If a sample is to be taken from it, it serves as the sampling frame. People who are eligible to engage in the study but are unable to participate or would not be available at the time of data collection are referred to as the accessible population. The accessible population of this study is drawn from three (03) councils', where focal points, trainers and trainees were targeted. The researcher, therefore, had access to 80 participants drawn from the three (03) council areas.

Sample of the study

The sample of this research work was drawn from the accessible population of 75 trainers and trainees of CsECA from three centres in the municipal areas of Yaoundé 2,3 and 6. Amin (2005) views a sample as a portion of the population whose results can be generalised to the entire population. The author further adds that a sample can also be considered a representative of a population. Majid (2018) corroborates this by asserting that because the

community of interest typically consists of too many people for any research endeavour to involve as participants; sampling is a crucial tool for research investigations. A good sample is one that statistically represents the target population and is sizable enough to provide an answer to the research theme.

The sample size was determined using Krejcie & Morgan table (1970) that constituted 75 participants that is;25 participants for each council area made up of; the focal points of training, trainers and trainees of the CsECA. The sample was drawn in such a way that the average number of people trained in CsECA each year should be represented.

Table 1:The distribution of participants per centre of education and community action

No	Type of participant	Sub-division of yde 2,3 and 6	Accessible population	Sample
1	focal points	CsECA Yaounde 2	6	5
2	Trainers	CsECA Yaounde 3	21	20
3	Trainees	CsECA Yaounde 6	54	50
.	**Total**	**.**	**81**	**75**

Source: Fieldwork 2023

Sampling Techniques

The sampling technique refers to the process of selecting a number of individuals from a population preferably, in such a way that individuals are representative of a larger group from which they are selected. It is the process of selecting from a bigger population. Amin (2005). Convenience sampling is a non-probability sample technique where subjects are selected because of their convenient accessibility and proximity to the researcher (Explorable.com, 2022). While a purposive sampling technic or judgmental sampling is a non-randomization method where the researcher determines the criteria of participants to use for data collection (IIker et all 2015) for the sake of this study, a non-probabilistic sampling method was used. The sampling technique used was purposive and convenience sampling in which eligible candidates were recruited consecutively until the sampling size was met. Preparatory meetings were done in the three council areas of; Yaoundé 2, Yaounde 3 and Yaoundé 6 in order to assemble all participants who fell within our targeted population. Only those who showed up during the training seminars participated in the filling of questionnaires.

Identification of Variables of the Study

This section involves the analysis of the variables of the study. The independent variable and the dependent variable. What are the respective indicators of these variables and how do they affect the notion of employability in centres of education and community action in Cameroon.

The Independent variable

The independent variable of this study is Innovation In Agricultural Vocational Training Programs. This study sought to find out the influence innovation in agricultural training programs has on employability in centres of education and community action.

The Dependent variable

The dependent variable of this study is employability. The dependent variable explains the problem of the study, which is the skills gap currently existing in agricultural vocational training programs and which is expressed by the various skills needed in agricultural training in order to make its trainees employable.

Reminder of Hypothesis

General Hypothesis: The hypothesis of this study is as follows; Innovation in Agricultural Vocational Training Programs has a statistically significant effect on employability in centers of education and community action.

Description of the general Hypothesis

Independent variable (IV): Innovation in Agricultural vocational training programs

The independent variable has been broken down into three modalities. The three modalities are related to the agricultural training offered by the centres of education and community action. These modalities are based on the skills acquisition set offered by this program. From empirical literature; management skills, soft skills and technical skills which are needed for trained farmers to be employable. The three modalities used will be explained as follows

Modalities of IV:

Modality 1; management skills

Indicators: Entrepreneurship, business management, leadership and training, project management and mentoring.

Indices: entrepreneurship courses, leadership skills, project management courses, marketing courses, certification norms.

Modality 2: Soft skills

Indicators: Teamwork, problem-solving, information and communication technology (ITC),

Indices: teamwork spirit, critical thinking, ICT skills, problem-solving, leadership skills, social skills.

Modality 3: Technical Skills

Indicators: specialised knowledge, safety standards and quality control.

Indices: specialisation, knowledge in biotechnology, fieldwork, agro-transformation, technical assistance, harvest handling.

Dependent Variable (VD) : Employability which is assessed by the type of skills acquired during training.

Table 2:Synoptic Table of research

General Hypotheses	Specific Hypotheses	Independent variable	Modalities	Indicators	items	Dependent variable	Modalities	indicators	Research instrument	Data Analysi
There is a statistically significant effect of innovation in agricultural vocational training programs on employability	There is a statistically significant influence of agricultural vocational training managerial skills on employability.	Innovation in Agricultural Vocational training programs	Management skills	Entrepreneurial skills. -business management skills. -project management skills. -leadership skills. -Marketing skills -leadership skills	Entrepreneurship, business management, project management, management of resources, marketing of products, certification norms, mentoring.	Employability	-Ability to be employed. -Increase in revenue. -further schooling. -self Employment in marketing. transformation of their products	Increase in employment, increase in self-employed farmers, increase in revenue, increase in the possibility of further schooling, increasing in marketing farm produce, increase in the transformation of farm produce.	Questionnaire	IBM SPSS Statistic 25

	There is a statistically significant effect of agricultural vocational training soft skills on employability.		Soft skills	-Problem solving skills. -critical thinking skills. -social skills communication skills	Team spirit, use of ICT tools, mentoring, social skills and critical thinking.					
	There is a statistically significant impact of agricultural vocational training technical skills on employability.		Technical skills	-specialised knowledge. -Quality control. -harvest handling	Specialised knowledge in different fields, knowledge in biotechnology, field work, agro-transformation and harvest handling.					

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

This chapter presents the research findings and analysis of this study. The research work investigates the effect of Innovation In Agricultural Vocational Training Programs on Employability in Centers of Education and Community Action within the council areas of: Yaoundé 2, 3 and 6. The data was collected with the use of structured questionnaires using a four-point Likert scale. Findings were presented in order to respond to the purpose and objectives of this study. The study sought to provide answers to the following objectives :(i) To evaluate the influence of management skills on employability. (ii)To access the effect of soft skills on employability. (iii) To examine the impact of technical skills on employability.

Demographic Characteristics of Participants.

Demographic characteristics of participants in this study include; gender, age and level of education.

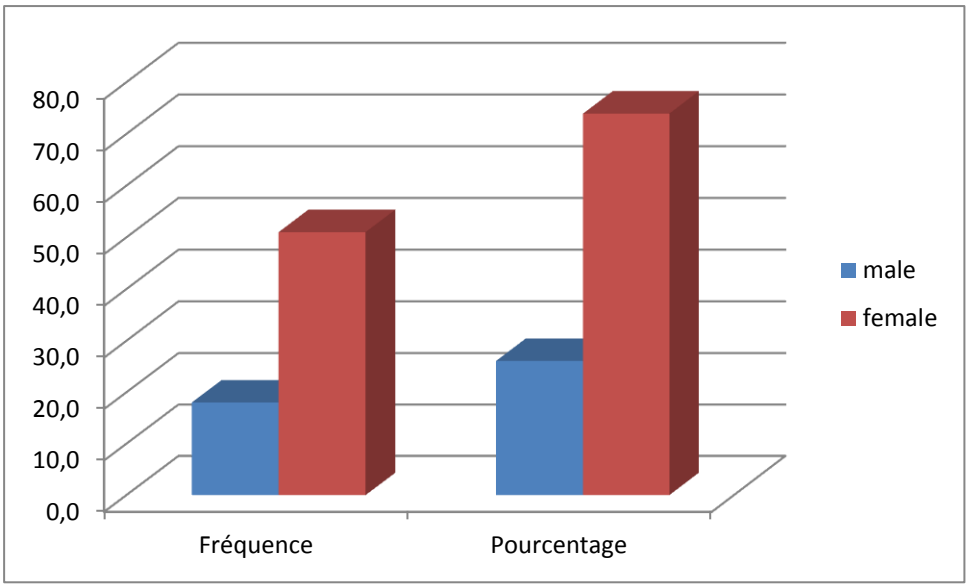
Gender of respondents

The table represents the gender distribution of respondents. In the context of this study, we use a sample population of 69 respondents. According to the table 51 of the respondents are male while 18 of the respondents are female, making a percentage of 73.9 and 26.1 respectively. This variation is due to the fact that there are more females than males in the sample population which was taken from those who took part in the training organised by the centres of education and community action in the municipal councils of Yaoundé 2,3 and 6.

Table 3: Gender of respondents

	Gender	frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Female	51	73.9	73.9	73.9
	Male	18	26.1	26.1	26.1
	Total	**69**	**100,0**	**100,0**	

Figure 6:Gender Distribution of Respondents



Age of respondents

The age distribution for this study included the age range of the trainers and trainees who participated in this study from the centres of education and community action from the municipal councils of Yaoundé 2,3 and 6. The result shows that 7.2% are less than 20 years, 40.6% are between 21 to 30 years, 34.8% have ages between 31 to 40 years and 17.4% are above 40 years.

Table 4: Age distribution

		frequency	Percentage	Valid percentage	Cummulated percentage
Valide	below 20years	5	7,2	7,2	7,2
	between 21-30years	28	40,6	40,6	47,8
	between 31-	24	34,8	34,8	82,6

40years				
above 40years	12	17,4	17,4	100,0
Total	**69**	**100,0**	**100,0**	

Age Distribution of respondents by researcher from field work

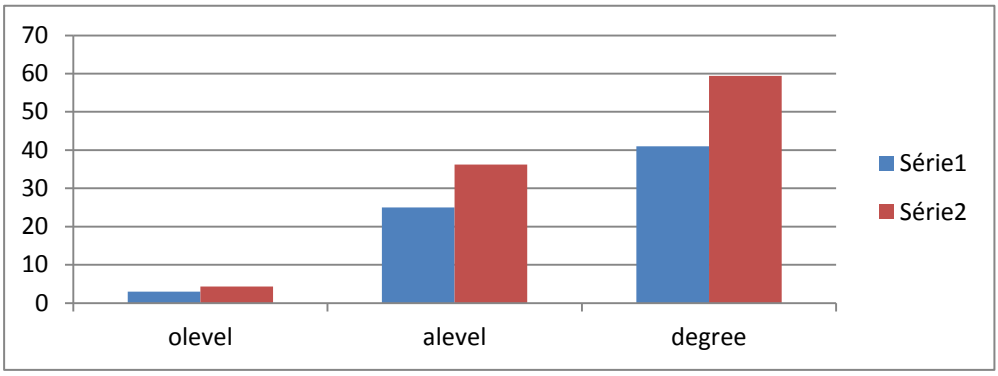
Level of Education of Respondents

The level of education of trainers and trainees who participated in this study from the centers of education and community action from the municipal councils of Yaoundé I, II and III was taken into consideration from a sample population of 69. The levels of education of the participants for this study were taken to range from olevel, alevel to degree. With respect to the level of education, more than half of the respondents (59.4%) have a degree, 36.2% are holders of Advanced level and only 4.3% have olevels.

Table 5:level of education of respondents

		Frequency	Percentage	Valid Percentage	Cummulated Percentage
Valide	olevel	3	4,3	4,3	4,3
	alevel	25	36,2	36,2	40,6
	degree	41	59,4	59,4	100,0
	Total	**69**	**100,0**	**100,0**	

Figure 7:Level of Education of Respondents



Presentation of Findings

The research findings were presented according to the research objectives. Data was analyzed using; frequencies, percentages, weighted mean and standard deviation. The study sought to provide answers to three specific objectives: (i) To evaluate the influence of management skills on employability. (ii)To access the impact of soft skills on employability. (iii) To examine the effect of technical skills on employability.

Objective I

To evaluate the influence of management skills on employability in centers of education and community action.

Table 6:Respondent's view on the Management Skills

No	item	SA		A		D		SD		Mean	Standard deviation
		f	%	f	%	f	%	f	%		
1	There are courses on entrepreneurship through out the program		52.2	24	34.8	9	13.0	00	00	3.3913	0.7116
2	The program favours the acquisition of	31	44.9	15	21.7	19	27.5	4	5.8	3.0580	0.98345

	leadership skills in trainees.										
3	The program provides courses in project management.	33	47.8	21	30.4	5	7.2	10	14.5	3.1159	1.0646
4	The training includes courses on the use of ICT	37	53.6	18	26.1	9	13.0	5	7.2	3.2609	0.94949
5	Trainees have the opportunity to work with experienced marketers.	18	26.1	38	55.1	3	4.3	10	14.5	2.9275	0.94431
6	Business management courses form an intergral part of the training.	17	24.6	32	46.4	20	29.0	00	00	2.9565	0.73634
7	Management skills are intergrated in the training program.	24	34.8	20	29.0	15	21.7	10	14.5	2.8406	1.06101
8	Knowledge on the use of certification standards	23	33.3	20	29.0	16	23.2	10	14.5	2.8116	1.06101
	Total									**3.0452875**	**0.938976**

Source :Researcher from field work, 2023

The participants responses were scaled according to the level of agreement or disagreement presented in a Likert scale 4-1 (Strongly Agree, Agree, Disagree, Strongly Disagree). Data were analysed using frequencies, percentages, weighted mean, and standard deviation Table 6 presents the results below.

Respondants views were graded using a four point Likert scale as shown on table 6 above. Eight items were designed in the questionnaire to respond to the objective of managerial skills as follows; there are courses on entrepreneurship throughout the program 36(52.3%) respondants strongly agree, secondly ;the program favours the acquisition of leadership skills 31(44.9%) strongly agree, third the program provides courses on project management 33(47.8%) strongly agree, fourth; the training includes courses on the use of ICT 37(53.6%) strongly agree, fifth; trainees have the opportunity to work with experienced marketers; 38(55.1%) agree, sixth; business management courses form an intergral part of the training 32(46.4%),seven; management skills intergrated in the training program 24(34.8%) strongly agree and eight ;knowledge on the use of certification standards 23(33.3%) strongly agree.

Our cut off mean for this research is 2.5. The mean of this objective is 3.0452875. This is above the cut off mean implying that a majority of the respondants strongly agree that management skills have a positive influence on employability.

Objective II

To Assess the Impact of Soft Skills on Employability

The research finding according to research objective II was analysed using frequencies, percentages, weighted mean, and standard deviation as show in Table 4. The responses were also scale using Likert scale.

Table 7:Respondent's View on Soft Skills

No	Item	SA		A		D		SD		Mean	Standard deviation
		F	%	f	%	f	%	f	%		
9	Trainees have to work in teams as part of their evaluation.	43	62.3	13	18.8	13	18.8	00	00	3.4348	0.79480
10	Trainers use up to date material to promote communication skills.	28	40.6	27	39.1	14	20.3	00	00	3.2029	0.75886
11	Trainees need to live in small communities to promote critical thinking.	28	40.6	10	14.5	31	44.9	00	00	2.9565	0.93045
12	Trainees are mentored on how to be leaders by helping less skilled workers in thier communities.	37	53.6	17	24.6	10	14.5	5	7.2	3.2464	0.96109
13	Trainees live in training camps to promote their social skills.	14	20.3	19	27.5	22	31.9	14	20.3	2.4783	1.03765

Total		**3.06378**	**0.89657**

Source: Researcher from field work,2023

The following modalities were analysed for this objective :firstly; Trainees have to work in teams as part of their evaluation 43(62.3%) strongly agree, secondly ; Trainers use up to date material to promote communication skills 28(40.6%) strongly agree, thirdly; Trainees need to live in small communities to promote critical thinking 31(44.9%) disagree, fourth; Trainees are mentored on how to be leaders by helping less skilled workers in their communities 37(53.6%) strongly agree and lastly Trainees live in training camps to promote their social skills 22(31.9%) disagree.

The cut off mean here is 2.5 but for this objective. Therefore it can be concluded with a mean of 3.06378 it means that a majority of the respondants strongly agree that soft skills have a positive effect on employability.

Objective III

To Examine The Effect Of Technical Skills on Employability.

The research findings according to research objective on technical skills were analyzed using frequencies, percentages, weighted mean, and standard deviation as show in Table 5. The responses were also scale using Likert scale.

Table 8:Respondent's View on Technical Skills

No	Item	SA		A		D		SD		Mean	Standard deviation
		f	%	f	%	f	%	f	%		
14	Trainees have adequate production skills in their field of speciality.	27	39.1	34	49.3	08	11.6	00	00	3.2754	0.66164
15	Trainees can use their knowledge in biotechnology to	20	29.0	41	59.4	08	11.6	00	00	3.1739	0.61731

	prepare farm inputs.										
16	Trainees carry out practical exercises on agro processing	18	26.1	34	49.3	13	18.8	4	5.8	2.9565	0.83022
17	Technical skills constitute 70% of field work	18	26.1	34	49.3	13	18.8	4	5.8	2.9565	0.83022
18	Trainees benefit from technical assistance	18	26.1	29	42.0	13	18.8	9	13.0	2.8116	0.97431
19	Training includes harvest handling on different types of crops	18	26.1	29	42.0	13	18.8	9	13.0	2.8116	0.97431
	Total									**2.99758**	**0.8146683**

Source: Researcher from field work, 2023

Six items were designed to explain the third objective on technical skills as follows ; 34(49.3%) respondents agree that trainees have adequate production skills in their field of speciality,secondly;41(59%) of respondents agree that trainees use their knowledge in biotechnology to prepare farm inputs, thirdly ; 34(49.3%) agree that trainees carry out practical exercises on agro-processing; fourthly, 34(49.3%) respondents agree that technical skills constitute 70% field work, fifth ; 29(42%) respondents agree that trainees benefit from technical assistance after the training and lastly; 29(42%) agree that training includes harvest handling of different types of crops.

The cut of mean for this objective is 2.5. Therefore it can be concluded with a mean of 2.99758 that a majority of the respondents agree that technical skills have a positive influence on employability.

Dependent Variable: Employability

The research findings in line with the dependent variable; employability were analyzed using; frequencies, percentages, weighted mean, and standard deviation too as shown in Table 4.6.

The responses were also scaled using Likert scale (Strongly Agree, Agree, Disagree and Strongly Disagree).

Table 9:Respondent's View on Employability

No	Item 4 : Employability	SA		A		D		SD		Mean	Standard deviation
		F	%	f	%	f	%	f	%		
20	Skills acquired permit me to be self-employed.	38	55.1	23	33.3	8	11.6	00	00	3.4348	0.69617
21	I have experienced an increase my income as a result of additional skills.	18	26.1	43	62.3	4	5.8	4	5.8	3.0870	0.74240
22	Farmers can further their education in other areas.	38	55.1	23	33.3	8	11.6	00	00	3.4348	0.69617
23	Skills acquired in the program permit me market my products.	42	60.9	9	13.0	18	26.1	00	00	3.34778	0.87155
24	Skills acquired in the program permit me to transform.	33	47.8	28	40.6	4	5.8	4	5.8	3.3043	0.82790
	Total									**3.321736**	**0.766806**

Source: Researcher from field work ;2023

The dependent variable was analysed using 5 modalities ; from the table it can be seen that 38(55.1%) respondents strongly agree that competences acquired from CEAC permit trainees to be self-employed, secondly 43(62.3%) respondents agree that trainees have experienced an increase in revenue after training, thirdly, 38(55.1%) strongly agree that trainees who have completed the program can further their studies in other areas, also 42(60.9%) strongly agree that competences acquired permit trainees to market their products and lastly 33(47.8%)

strongly agree that competences acquired permit trainees to be able to transform their products .

Therefore, given our cut off mean of 2.5 and the calculated mean of the dependent variable is 3.32174. Which shows that a majority of the respondents strongly agree that employability was greatly influenced by; management skills, soft skills and technical skills.

Correlation analysis

To test the previously established hypotheses we used the simple linear regression model in order to test the linearity of the relationship between the independent variables and the dependent variable Therefore, in first instance the researcher has produced Pearson correlation of the relationships between the different IVs, namely; management skills, Soft skills and technical skills towards Employability as the DV.

Table 10:Correlations among variables

	Management Skills	Soft Skills	Technical Skills	Employability
Management Skills				
Soft Skills	.552**			
Technical Skills	.187	.511**		
Employability	.234	.505**	.850**	
Mean	**3.0452875**	**3.06378**	**2.99758**	**3.321736**
Standard Deviation	**.93897625**	**.89657**	**.8146683**	**.766806**
N	**69**	**69**	**69**	**69**

**. Correlation is significant at the 0.01 level (2-tailed).

The table above shows the correlation between variables. It is important to note that the correlation test is used to show if there is a relationship between variables and the strength of the relationship. The correlation coefficient normally ranges from -1 to 1(Ask. Brunel, 2018). When a variable is correlated against itself it gives us a value of 1. Statistically significant correlation coefficients can be observed between independent variables as follows; between management skills and soft skills there is a positive correlation of 0.552 with a significance level of 0.000. (pearson,r=0.552,p=0.000). Also the correlation coefficient between soft skills and technical skills is 0.511 and the level of significance is

0.000. This means that there is a positive significant relationship between soft skills and technical skills (pearson,r=0.511,p=0.000).The correlation coefficient between management skills and employability is 0.234 which means that there is a positive relationship between management skills and employability. The correlation is significant at 0.01 two-tailed level. Therefore given a significance level of 0.053, it shows that though there is a positive relationship between management skills and employability but it is not statistically significant(pearson,r = 0.234,p=0.53). The second level of correlation is between soft skills and employability. It can be seen from the table that the correlation coefficient is 0.505 with a significance level of 0.000(pearson,r=0.505,p=0.000). Therefore there is a statistically significant positive relationship between soft skills and employability. The third level shows the relationship between technical skills and employability. The correlation coefficient between these two variables is 0.850 and the level of significance is 0.000(pearson,r=0.850,p=0.000). This means that there is a strong positive relation between technical skills and employability which is statistically significant. Hence, from the correlation analysis, it can be concluded that all three measured IVs are positively correlated. But only the relationship between soft skills and technical skills are statistically significant. Moreover, due to the confirmed linearity of relationships between the separate IVs and the DV, the precondition to run regression analyses to actually test the previously developed hypotheses is met (Saunders et al, 2016).

Regression Analysis

Test of Hypothesis

Ho1: Management skills have no statistically significant influence on employability

Regression was carried out to ascertain the extent to which management skills influence employability.

Table 11: Model Summary of the influence of management skills on Employability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.234[a]	0.055	0.41	0.61971

a.Prédicteurs : (Constante), management skills

The scatterplot showed that there was a weak positive linear relationship between management skills and employability, which was confirmed with a Pearson's correlation coefficient of $r = 0.23$. The regression model predicted 4.1 % of the variance. The model was not a good fit for the data (F (1, 68 = 3.870, p >0.05).

Figure 8: Scattered plot showing the relationship between managerial skills (IV1) and employability (DV)

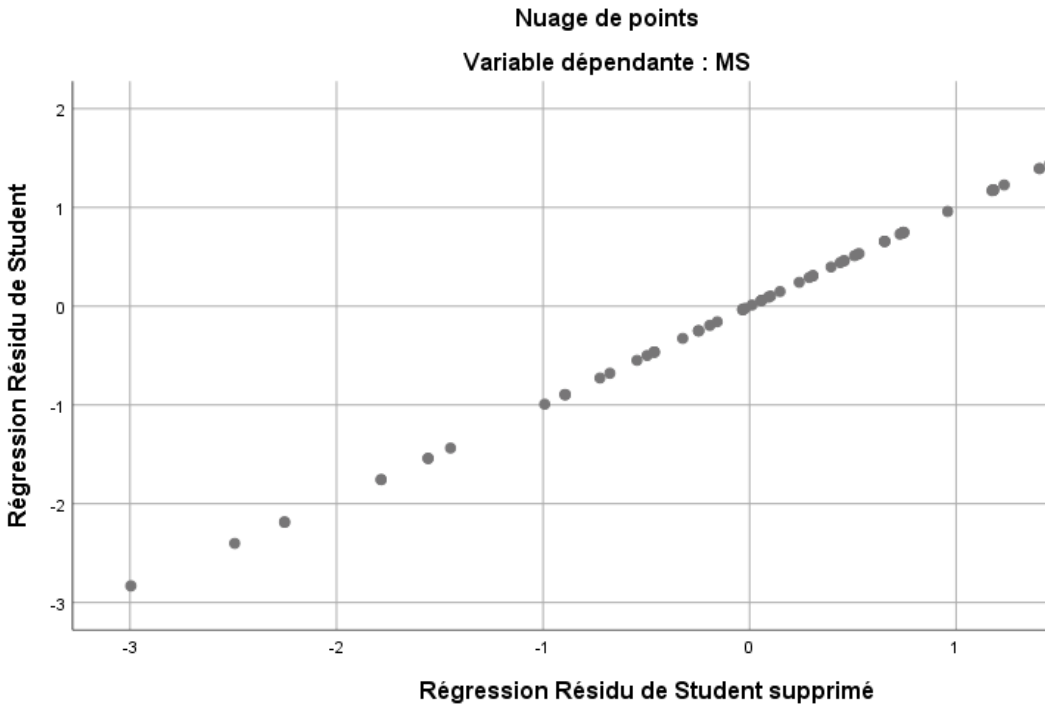


Table 12**: ANOVA of the effects of management skills on employability**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.486	1	1.486	3.870	0.053[l]
	Residual	25.731	67	0.384		
	Total	27.217	68			

a. Variable dépendante : employability

a. Prédicteurs : (Constante), management skills

This table is on the F test. The linear regression F test states the null hypothesis that management skills does not have a statistically significant influence on employability at p=0.05. In other words, R^2= 0, with F (1.67) = 3.870, p= .053, the test is insignificant. Thus we can assume that there is a no statistically significant influence of managerial skills on employability.

Table 13: Coefficients of the influence of management skills on employability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.603	.373		6.976	.000
	Management skills	.236	.120	.234	1.967	.053

a. Variable dépendante : employability

The regression results showed that there is no statistically significant influence of management skills on employability. (t = 6.976, p > 0.05). The slope coefficient for management skills is 0.234, therefore employability increases by a gradient of 0.234.

H_{O2}: Soft Skills have no statistically significant impact on Employability.

In order to verify this hypothesis; regression was also carried out to ascertain the extent to which soft skills can predict employability.

Table 14: Model Summary of the effect of soft skills on employability.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.505[a]	0.255	0.244	0.55006

a. Prédicteurs : (Constante), soft skills

The scatterplot showed that there was a positive linear relationship between soft skills and employability with a Pearson's correlation coefficient of *r* =.505. The regression model predicted 24.4 % of employability variance. Therefore the goodness of fit for the data (*F* (1, 69) = 22.954, *p* < .0000.

Figure 9: Scatterplot of the effect of soft skills on employability

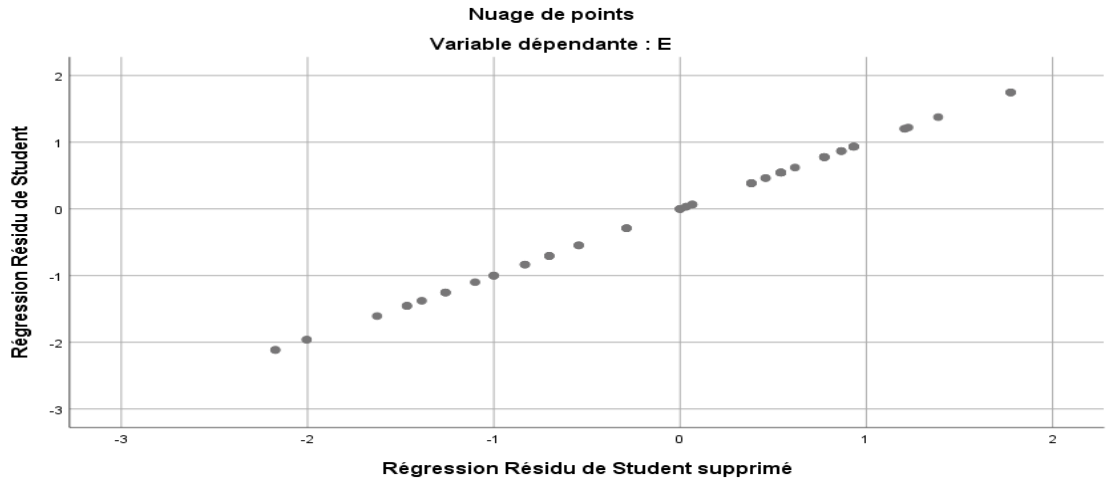


Table 15: ANOVAa of the influence of soft skills on employability

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.945	1	6.945	22.954	0.00[b]
	Residual	20.272	67	0.303		
	Total	27.217	68			

a. Variable dépendante : employability

b. Prédicteurs : (Constante), soft skills

This table shows the F test. The linear regression F test has the null hypothesis that soft skills have no statistical effect on employability p=.01, R^2= 0, with F (1, 68) = 22.954, p= .000, the test is highly significant. Thus we can assume that there is a statistically significant effect of soft skills on employability.

Table 16: Coefficientsa of the effect of soft skills on employability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.647	0.356		4.629	.000
	Soft skills	.547	0.114	.505	4.791	.053

a. Variable dépendante : employability

The regression results showed a significant relationship between soft skills and employability (t =4,629, p < 0.000). The slope coefficient for soft skills was 0.505, so employability increases by 1 unit when soft skills increases by 0.505.

H_{O3}: Technical skills do not have a statistically significant impact on employability.

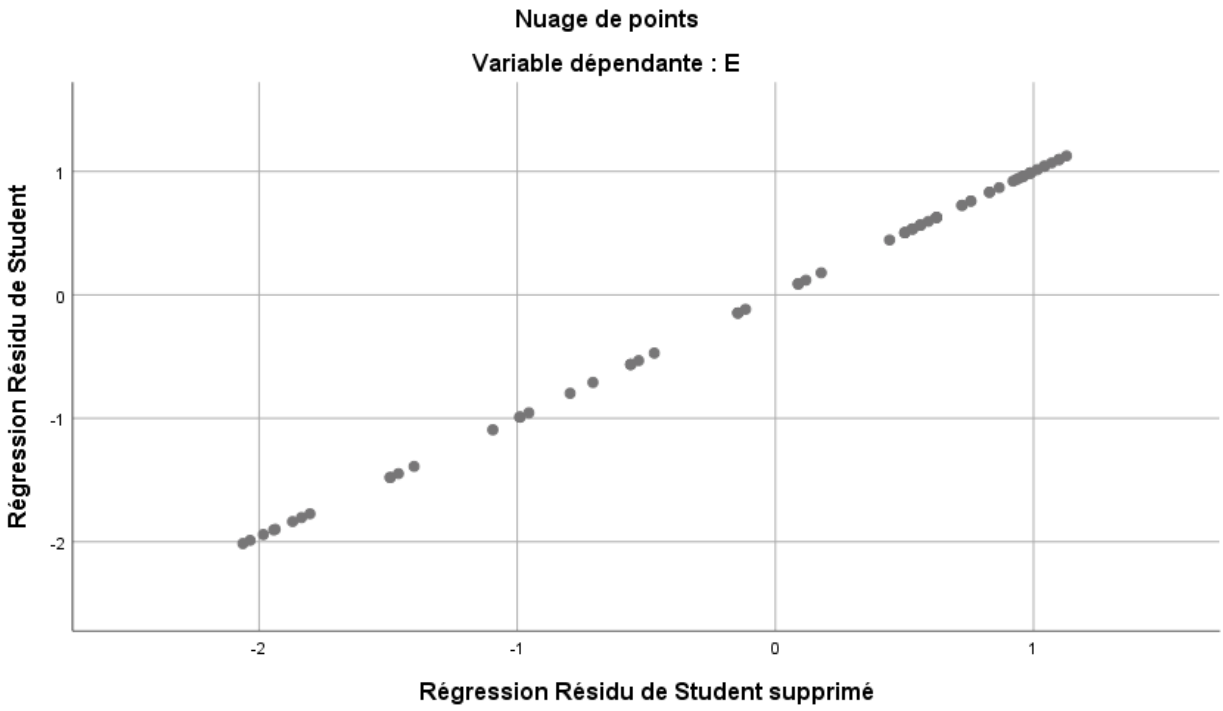
Simple linear regression was equally conducted in order to ascertain the extent to which technical skills can have an effect on employability.

Table 17: Model Summary of the impact of technical skills on employability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.85[a]	0.722	0.718	0.33606

a. Prédicteurs : (Constante), technical skills

Figure 10:Scattered plot of the impact of technical skills on employability.



The scatterplot showed a positive linear relationship between technical skills and employability which was confirmed with a Pearson's correlation coefficient of r = .850. The regression model predicted 71.8 % of the variance in employability. The model was a good fit for the data set (F (1, 68) = 173.994, p < .000).

: ANOVA[a] of the impact of technical skills on employability

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.651	1	19.651	173.994	0.00[b]
	Residual	7.567	67	0.113		
	Total	27.217	68			

a. Variable dépendante : employability

ANOVA results show that the linear regression F test has the null hypothesis that technical skills does not have a statistically significant effect on employability. Given that, R^2= 0, with F (1, 68) = 173.994, p= .000, the test is highly significant. Therefore, we can conclude that technical skills have a statistically significant impact on employability at p=.00 in our model.

Table 18: Coefficients of the impact of technical skills on employability

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.974	0.183		5.334	.000
	technical skills	0.783	0.059	.850	13.191	.000

a. Variable dépendante : employability

The regression equation showed a statically significant relationship between technical skills and employability (t=5.334, p < 0.000). The gradient coefficient for technical skills was 0.850,so employability increased by 1unit when technical skills increases by a factor of 0,850.

Summary

The analysis of the collected data revealed that only two out of three hypotheses used in this study are statistically significant, hence:

H_{a1}: Management skills do not have a statistically significant influence on employability.

H_{a2}: Soft skills have a statistically significant effect on employability.

H_{a3}: Technical skills have a statistically significant impact on employability

CHAPTER FIVE

DISCUSSION OF FINDINGS AND RECOMMENDATIONS

The objective of this work has been to find out how innovation in agricultural vocational training programs has an effect on employability in centres of education and community action in the council areas of Yaoundé 2,3 and 6. The research instrument used for the study was the questionnaire. This study posed a set of questions while proposing the hypothesis and their relationships within the study variables. It also arrived at several results that confirmed the problem and hypothesis posed in the chapter1. Data collected were analyzed using SPSS 25 version. In this chapter, we shall analyze the findings in relation to the hypothesis, objectives and views of other authors. We shall also give the limitations; propose recommendations and possible suggestions for further study on the research topic. Also, this topic arrived at several results that might add to improving innovation in agricultural vocational training in centres of education and community action in Cameroon.

Summary of findings

The obtained results can be summed up as follows based on the data that was evaluated and the study hypothesis that was examined in Chapter 4; The mean of all variables ranges from 3.04 for management skills,3,06 for soft skills, 2.99 for technical skills and 3.32 for employability; with technical skills having the lowest mean of 2.99 and employability having the highest mean of 3.32. This indicates that the respondents all agreed that these different aspects put together will improve employability in Cameroon. The results above agree with the results of (Kristal Jones,2017) in a cross-sectional study on human capital development in agriculture.

Concerning the strength of the relationship, the IVs of the management skills and employability (Pearson's r (68) = 0.234, p >0.01), soft skills and employability, (Pearson's r (68) = .505, p < .01), technical skills (Pearson's r (68) = .850, p < .01), management skills and soft skills (Pearson's r (68) = 0.552, p < .01), technical skills and soft skills (Pearson's r (68) = 0.511, p < .01). Hence, from the correlation analysis, it can be concluded that all three measured IVs are correlated with the dependent variable; employability. But only soft skills and technical skills have a statistically significant influence on employability. Moreover, due to the confirmed linearity of relationships between the separate IVs and the DV, the precondition to run regression analyses to actually test the previously developed hypotheses is met.

With respect to the independent variable (innovation in agricultural vocational training programs) and dependent variable (employability), the results obtained were as follows; **Research question 1**: To what extent does management skills in agricultural vocational training programs influence employability?

Research Hypothesis 1

H_{a1}: Management skills in agricultural vocational training programs have a statistically significant influence on employability.

The regression results showed a positive influence of management skills in agricultural vocational training programs on employability ($t = 6.976$, $p > 0.000$). The slope coefficient for management skills was 0.234, so employability increases by a factor of 0.234. This permits us to confirm H_o that though there is linearity between management skills in agricultural training programs and employability it is not statistically significant therefore rejecting $H_{a1.}$

Due to the fact that there was a positive correlation between the variables in hypothesis 1, it was clearly based on the responses on the questionnaires which portrays the fact that trainees from the centres of education and community action have some courses in management which permit them to be able to start a business in agriculture and to be able to manage their farms more that those who have no training in agriculture. Daniella et al (2012) proposed that agricultural training made farmers more knowledgeable to become better farm managers. This is because they have enough skills to make better use of farm inputs and therefore become more employable. However, management skills may have a positive correlation with the ability of the CsEAC trainees to be more employable. It is also clear from the research findings that it is not statistically significant.

This finding agrees with the study carried out by Tiffany et al (2018) which used a survey and qualitative research design which showed that trainees in agricultural training suffered from a skills mismatch in management skills which was needed in the agricultural value chain, a cross-section of graduates who underwent agricultural training in most sub-Saharan countries were mostly interested in integrating civil service as agricultural technicians. Therefore little or no training was received in management skills which made the trainees to be greatly unfit for the labour market or to be able to create their own business in other agricultural value chains in transformation and marketing of their products training. The confirmation of this hypothesis also goes in line with the study carried out by William Mandla Thwala (2017) on the agricultural vocational training education program at the Free state technical vocational education and training college(FET), the study was triggered by the situation at FET Colleges

which is found to produce mismatch and unproductive students at labour market; the trail of low skills partially educated and jobless youth; the outdated and irrelevant curriculum that still focus on farm production rather than encompassing all segments of agricultural value chains and entrepreneurship and agriculture business processing market. The study used a purposive sampling technic similar to the one used in this study. The research findings show that business agriculture which is a component of management skills is possible in order to promote competition and job creation skills. This goes further to confirm the hypothesis of this study that though business and management skills are necessary to make agricultural trainees employable it is most times neglected in their training programs.

In this study, we adopted the human capital theory by Smith (1776), Mincer (1974) and Becker's (1962). This theory is very important in explaining the concept of innovation in agricultural vocational training programs. This theory emphasized the fact that the acquisition of education and training though incurred at a cost will permit the trained individual to be more productive and useful to himself and the community as a whole. This is in line with the study carried out by Eugenie and Maiga in 2018 in which the research findings show that there is a positive correlation between management skills and employability. The study also used statistical methods to analyse the data though the sample size included agricultural training schools from 16 countries. It is the human capital theory that serves as bases for this study such that it can be deduced that properly trained agricultural vocational students will become more productive and witness an increase in their income therefore become more employable. Therefore, innovation in agricultural training management skills is considered an investment (Kristal Jones,2017).

$\underline{H_{a2:}}$ Soft skills in agricultural vocational training programs have a statistically significant effect on employability.

Research Question 2: To what extent does soft skills agricultural vocational training affect employability?

Hypothesis2:there is a statistically significant effect of soft skills on employability

$\underline{H_{a2}}$ was accepted and $\underline{H_{02}}$ was rejected. This indicates that specific research question 2 was answered in confirmation of the hypothesis results. The regression results showed a statistically significant relationship between soft skills in agricultural vocational training programs and employability ($t = 4.315$, $p= 0.000$). The slope coefficient for soft skills was 0.505, employability increase by a factor of 0.505.

This result ties with that of the World Bank report on the fostering of skills in sub-Saharan Africa (2016) which was carried out in 15 member countries. The target audiences were

African agricultural practitioners and policy makers. The results of the study showed that soft skills in information and communication technology(ICT) were necessary for agricultural practitioners to be able to market their products thereby making them more employable. Which is in line with the results of our study which showed that majority of the respondents strongly agree that soft skills in ICT are premodial to make trainees from CsECA employable. Also the results are in line with the study carried out by Chakravarty,2016 who carried out a study Nepal and proposed that learners in agricultural vocational training should have atleast 3 to 6months of training plus employment placement. Similar to our study, the researcher used a quantitative method but with a larger sample size of 200 youths from which he was able to deduce that e-skills also known as soft skills could encourage trainees of agricultural vocational training programs who are predominantly made up of women to undertake more income generating activities which could lead to job creation in agriculture as well as increase income and profit for farmers. The results are also in line with that of Kristal Jones (2018) who used a quantitative research design and SPSS for data analysis. The study came to the conclusion that adequate innovation in agricultural vocational training programs made it possible for its participants to gain communication skills and interpersonal communication skills also known as social skills which will permit them to know how to create businesses and to be able to effectively market their products. Therefore, making them more employable. This is similar to a study carried out by Gaia's'(2015).

To complement this result, the ATVET toolkit through a cross-sectional study carried out in 16 African countries indicated that most agricultural training programs were too specific on the acquisition of specific technical skills and their curriculum almost did not include subjects on skills needed throughout the agricultural value chain like; communication and social skills as well as team spirit. Such that upon completing training most of the graduates lacked the skills to eventually move their products from their farms to markets. This further led most of them to choose careers in central administration as extension technicians than pursuing a career in agriculture. This is similar to the results of our study which shows that innovation in agricultural vocational training programs such as the inclusion of soft skills in the program of training can statistically affect the ability of the trainees from CsEAC to be employable.This result points to the fact that soft skills in agricultural vocational training has a significant effect on employability with a correlation coefficient of 0.505, with about 60% of respondents

Research question 3: To what extent do technical skills in agricultural vocational training programs have an impact on employability?

Research Hypothesis3

H_{a3}: Technical skills in agricultural vocational training programs have a statistically significant impact on employability.

According to this result, H_{a3} was confirmed while H_{03} was rejected. The positive confirmation of specific hypothesis 3 in this research is indicative of the fact that H_{a3} has a statistically significant influence on employability. The regression equation showed a statistically significant relationship between Technical skills in agricultural vocational training programs as a predictor of employability scores ($t = 5.334$, $p < 0.000$). The slope coefficient for technical skills was 850, so employability increases by a factor of .850. This finding agrees with Daniela et al (2012) which was carried out in Niger, the study proposed that agricultural training made farmers more knowledgeable to use farm inputs properly. This has permitted farmers to be able to open shops at the end of the training making a total of 330 shops at the end of the program. The results also agree with the research of Godwill and Geoff (2018) who carried out a study on teaching and learning in technical and vocational agricultural high schools. They used a descriptive survey research design which was similar to our study for demographic data. The participants for the study were 18 teachers and 80 students from 3 agricultural high schools. Their research findings showed that teaching and learning resources should be prioritised to equip youths with technical skills instead of theory, as adequately trained students will have directly employable skills. The results also showed that specific technical skills enabled students to be able to transform agricultural products. Similarly, Cheteni, 2018 used a correlational quantitative design in South Africa in a youth program on agricultural vocational training. The sample size used for the study was 140 youths and a regression analysis was able to show that when youth programs are increased by 1 unit, youths are 8 more times likely to participate in agricultural training programs because it it will lead to an increase in employability and hence revenue. Chravraty in his study conducted in Nepal showed that agricultural training intervention improved technical skills and improved employment outcomes in farming.

Limitations of the Study

The sample size of this study is made up of 69 respondents which is considered to be large enough for non-formal training but the issue with this survey is that not all the questionnaires were returned as the return rate for the questionnaires is 92%. The researcher, however,

believes that the results will be more valid if the sample size was larger that would at least cover the centre and south regions which have the highest number of centres of education and community action.

The research instrument that was used for data collection is the questionnaire made up of closed-structure items. This limited respondents from giving answers that could have reflected their opinions.

Some limitations were also noticed at the level of review of literature as most of the articles were reviewed online and very little information was available on agricultural vocational training programs in Cameroon. At times there was poor connection and some journals and articles were not accessible because of financial limitations. Also, the researcher was restricted in her access to administrative documents at the Ministry of Agriculture and rural development (Minader).

We equally had limitations during the administration of the instrument since it was administered only in one division and only three sub-divisions in Yaounde out of 7 centres. The researcher would have loved to reach out to respondents in other divisions in the centre region as well as to respondents in other regions.

Theoretically, this study was limited to two theories; that is to say the human capital theory of Gary Becker and Mincer and the Innovation theory of Schumpeter.

Recommendations

Vocational education should be the priority of every nation and ensuring successful and quality training which provides trainees with employable skills needed for sustainable development and poverty alleviation especially in priority areas like agriculture as stated in NSDGs vision 2030. Vocational education and training need to be geared more toward preparing workers for non-wage

employment outside the manufacturing sector. This effort begins with relevant course offerings, which only recently started incorporating entrepreneurship and core business skills training that are directly relevant for self-employment. Management of small enterprises, and services. For example, these skills encompass costing, pricing, preparing financial statements, keeping business records, project management, marketing, sales, and preparing business plans, among others(Omaris,2020). Training programs can remedy the technical or job-

specific skills gap of out-of-school youths and adults and build basic cognitive and socio-emotional skills.

It is for this reason that Godwill Mih Chewanchong and Geoff(2018) posited that building a strong, enlightened and prosperous nation rests on education and training that meets the needs of the job market. The world bank report on Fostering Skills in Cameroon (2016) shows that more than half of Cameroon's population is youthful and in need of sustainable employment but the branch of education and training which is supposed to provide learners with employable skills is still lagging behind because of the over-reliance on theoretical aspects of training and very little on the job training. Therefore based on the findings of this study, the following recommendations are proposed which will help to enhance the employability from the trainees from agricultural vocational training in centres of education and community action.

Recommendations for Conceptors and Evaluators of Education Projects

i. From these findings, it can be recommended that the curricula used in agricultural education and training should be adapted to the needs of the labour market and agricultural training institutions should be linked to relevant labour market actors (Vandensbosch,2016). Also, innovations in agricultural vocational training programs should include basic working skills in ; business and soft skills(Freer,2015). So as to make careers in agriculture attractive, especially for young people.
ii. This study recommends that more resources should be made available for teaching and learning in agricultural training institutions specifically in the CsEAC which mostly carry out training with the rural youth and efforts should be made to make sure that the training in these centres are more practical than theoretical (Chewangchong et al,2018) .
iii. This study also recommends the importance of technical skills which have been emphasised in the study through its positive and significant correlation with the achievement of employable skills. Agricultural training should not only focus on traditional knowledge but be open to the full range of activities in the agricultural value chain such as business management and communication skills which will enable trained farmers to market their products (Fao report,2017).
iv. Projects on agricultural training proposed in rural areas should be able to suit the needs of the local community so as to ensure continuity just like the agricultural project carried out by FAO in Niger (Daniela et al,2012).

Recommendations to Trainers of Agricultural Vocational Training Programs in CsECA

i. This study recommends in relation to the agricultural training that they should regularly update their knowledge in order for the training delivered to be in line with the needs of the job market as prescribed by national and international documents like the SDG's and the NDSG's.

ii. One of the reccomendations from the study is that ATVET trainers should be able to build linkages in the labour market with existing agro-processing companies for agricultural training leavers such that they can be able to pursue carears in agriculture by providing them with adequate business, and commercial and technical skills(Akindele,2020).

iii. For findings regarding soft skills it shows that when trainees in agricultural training build competencies in e-skills,it will induce women who form a majority of those who take part in such training especially in rural areas to undertake more income-generating activities which will increase their employability, job creation in agriculture as well their profits and incomes because they will be able to find buyers for their products themselves and sell at better prices (Charkravraty,2016)..

vi. Finally, concerning the technical skills in agricultural vocational training programs trainers should carry out innovations in fieldwork not for it to be limited to traditional methods and obsolete technics but should also include the use of modern tools so as to prepare the trainee to be a farm owner and to be able to transform what they produce thereby making them more employable (William.M,2017).

v. Agriculture suffers from a limited number of workers trained in good farming practices(technical skills), management skills, and access to inexpensive markets(soft skills). As in other sectors, many agricultural jobs are informal. Agricultural trainers and investors could offer opportunities for investment but investors would need to see a potential for returns (Adriana,2016

vi. Agricultural training programs like CsECA need to make their training more attractive for young people who often do not consider agriculture an exciting career path. Reestablishing agriculture as agribusiness, with the potential for technology-based innovations, would make it more attractive(world bank report on Skills,2020).

Recommendations for further studies

This study seeks to find out how innovations in vocational training programs have an effect on employability in centers of education and community action. This study focuses on how management skills, soft skills and technical skills influence employability. The conclusion of

this study is limited in time and scope and therefore in exhaustive. This study has exposed many aspects of agricultural training that could not be covered. Therefore, the researcher recommends the following possible research areas for the sake of advancement of scientific knowledge;

- ❖ This study was carried out in three centers of education and community action in the council areas of ; Yaounde 2,3 and 6, the researcher therefore suggests that a similar study should be carried out in other divisions and other regions like the Far- North region with a large sample size to give the research more value to be generalized in other contexts.
- ❖ This study cannot pretend to have explored all the aspects of agricultural vocational training programs in Cameroon as it focuses only on the innovations in the training program leaving out areas like the financing and the development of curricular, reason why the researcher is recommending that further research should be done concerning the role of finance and partnership between the ministry of agriculture and the ministry of vocational training and employment in agricultural vocational training programs and the ministry of small and medium sized enterprises.
- ❖ Research should also be carried out on the role of the ministry of vocational training in ensuring the quality of vocational training within the framework proposed by the ministry in agricultural vocational training programs like the one proposed by CsEAC.
- ❖ Also, research should be done on the role of local communities in ensuring the quality of agricultural vocational training programs and providing feedback to the ministry of agriculture for further and continuous innovations.

Conclusion

It has been proven that innovations in agricultural vocational training programs have an effect on employability in centers of education and community action. This statement was proven and affirmed using statistical methods and through the results which were analysed in chapter four.

Also the results show that though evidence from other countries requires adequate management skills and business skills in agricultural vocational training and all other forms of vocational training, it is not statistically significant to affect employability in centers of education and community action, however it is still relevant to effect changes in the training program as it may permit those who take part in the training to be self-employed and to be able to better manage their agriculture based businesses as suggested by studies carried out by Danilla et al(2012) in Niger ,William.M(2017) in Zambia and Cheteni(2018) in south-Africa.

Secondly an emphasis has been put on soft skills like team spirit,social skills and leadership skills as experienced in the AFOP project(2020) as well as e-skills which involve the effective use of ICT as proposed by Chakraverty(2016).

Lastly most of the authors emphasised that farmers which received adequate technical skills were more likely to be more productive and experience up to eight times an increase in their incomes as compared to those who had received no agricultural training at all(Cheteni,2018). Therefore innovations in agricultural vocational training programs will lead to an increase in employability and hence revenue.

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ANNEXE

Sample Size Determination Using Krejcie and Morgan Table

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Formula for determining sample size

$$s = X^2NP(1-P) \div d^2(N-1) + X^2P(1-P)$$

s = required sample size.

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size.

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (.05).

Source: Krejcie & Morgan, 1970