

**INFLUENCE OF ENTREPRENEURSHIP EDUCATION INSTRUCTIONAL  
ELEMENTS' ON FOOD AND BEVERAGE STUDENTS' LEVEL OF  
ENTREPRENEURIAL SKILL ACQUISITION IN TECHNICAL AND  
VOCATIONAL COLLEGES IN THE NAIROBI  
METROPOLITAN REGION, KENYA**

**BY**

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A THESIS SUBMITTED TO THE SCHOOL OF TOURISM, HOSPITALITY AND  
EVENTS MANAGEMENT IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF DOCTORATE DEGREE IN  
HOSPITALITY MANAGEMENT

MOI UNIVERSITY

**2022**

## DECLARATION

### Declaration by the Candidate

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## **DEDICATION**

To my wonderful family.

You implicitly dared me to go this far, especially to my late father.

May your spirit find rest.

## ACKNOWLEDGEMENTS

Bravo! It's been done!

I thank God for the gift of life and the strength to persevere in the face of adversity. I extend special gratitude to Dr. Rita Nthiga and Dr. Beatrice Imbaya, my supervisors. Thank you so much for your excellent supervision, constructive criticism, and motherly guidance. Your prompt response to my calls and tireless assistance in obtaining pertinent information was not in vain. You went above and beyond to help me earn my Ph.D. I owe you a debt of gratitude.

I appreciate Prof. Jacqueline Korir's presence in my entire Ph.D. journey. You constantly pushed me to put in extra effort and encouraged me to believe in my academic talents. In addition, I would like to express my gratitude to all of my lecturers, particularly Prof. Boit, Prof. Ipara, Dr. Nassiuma, and Dr. Kisilu, as well as all scholars whose work influenced this research. Thank you for adding to the body of knowledge.

Machakos University and Kenyatta University's administrations need a special note. Besides, I cannot overlook the valuable contributions of KICD and TVET-CCDAC curriculum experts, management, entrepreneurship education trainers, and F&B management students from Railway Training Institute (RTI), Maasai Technical Training Institute (MTTI), PC Kinyanjui Technical Training Institute, and Michuki Technical Institute. Despite your hectic schedules, your responsiveness and tolerance were impressive.

I am also grateful to my colleagues and friends, particularly those from Machakos University and Kenyatta University, for taking their time to review this work despite

their busy schedules. Thank you for your helpful suggestions, which have helped to improve this research.

I can't imagine how proud you would have been to grace my graduation, my late father, Mr. Moses Shirandula. You almost gave up everything to see me get this far. To my wife, my best friend, and the love of my life, and my children, thank you for your unwavering support, especially during the late-night reading and writing of this thesis. Thank you for providing a pleasant learning environment for me. I can't tell you how many lonely and long evenings you had to put up with as I studied. Mrs. Beatrice Shirandula, the iron lady, you always encouraged me to work hard, and your prayers capped everything.

May God's goodness and love be with you every day of your life.

## ABSTRACT

Entrepreneurship education (EE) has been incorporated into middle-level colleges and higher education curricula in Kenya in an attempt to inculcate entrepreneurial skills in students. Consequently, the diploma course in Food and Beverage (F & B) curriculum offered in public Technical and Vocational Colleges (TVCs) in Kenya incorporates a module on EE intended to equip students with entrepreneurial skills. However, there is limited empirical knowledge on the relationship between EE and the level of acquisition of entrepreneurial skills. Therefore, this study examined the influence of EE instructional elements on entrepreneurial skill acquisition among F & B students. The specific objectives of the study include the influence of content; learning activities; learning resources and evaluation methods on the level of entrepreneurial skill acquisition among F & B students and the moderating effect of students' socio-demographic factors on the relationship between EE instructional elements and the level of entrepreneurial skills acquisition. The study also explored the perceptions of curriculum experts and EE trainers on the role of EE instructional elements in the acquisition of entrepreneurial skills among students. The study was guided by the teaching model of EE and DeKeyser's skill acquisition theory. The study was informed by a pragmatic paradigm that supported the use of both descriptive and convergent research designs. A sample of 132 students was selected from a population of 199 students using simple random sampling methods. Besides, 5 EE trainers from the TVCs and 1 curriculum expert from the Kenya Institute of Curriculum Development (KICD) and another from the Curriculum Development, Assessment and Certification Council (CDACC) were purposively selected. Questionnaires were administered to students and interviews were conducted with the trainers and the experts. The questionnaires were analyzed using multiple regression and Hayes Macro 'Process' Model 1 while the interviews were analyzed using content analysis. The study revealed that learning resources ( $B=.194$ ,  $p=.039$ ); and the evaluation methods ( $B=.282$ ,  $p=.002$ ) significantly influenced the level of entrepreneurial skill acquisition as opposed to the content ( $B=.094$ ,  $P=.257$ ), and the learning techniques ( $B=-.116$ ,  $P=.190$ ). Students' gender ( $\Delta R^2=.0068$ ,  $P=.3003$ ) and family entrepreneurial background ( $\Delta R^2=.0204$ ,  $P=.0702$ ) did not significantly moderate the relationship between EE instructional elements and the level of entrepreneurial skill acquisition. However, past entrepreneurial experience ( $\Delta R^2=.0294$ ,  $P=.0294$ ) was found to be a significant moderator. The results imply that learning resources and evaluation methods positively influence the acquisition of entrepreneurial skills, with the moderation of students' past entrepreneurial experience. Qualitative findings revealed that EE's content, learning techniques, and evaluation methods are mainly theoretical, leading to the acquisition of low-level entrepreneurial skills, a challenge attributed to the limited learning resources. This study concluded that TVCs offer theoretical EE that imparts entrepreneurial knowledge to students at the expense of entrepreneurial skills. The findings provide a framework that can be used to analyze EE and for acquisition of entrepreneurial skills in the Kenyan TVET context. The study recommends to EE trainers and CDACC to implement the practical-based approach of EE that aims at cultivating proficient entrepreneurial skills among students. Besides, TVCs should mobilize resources such as qualified trainers, equipped laboratories, ICT and reference materials to sustain the implementation of practical-based learning of EE.

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## **ABBREVIATIONS AND ACRONYMS**

4C/ID	:	Four-Component Instructional Design Model
CBET	:	Competency-based Education and Training
CBETA	:	Competence-Based Education, Training, and Assessment
CDACC	:	Curriculum Development, Assessment, and Certification Council
COVID-19	:	Corona Virus Disease
CRA	:	Commission on Revenue Allocation
EE	:	Entrepreneurship Education
EHL	:	Swiss École hôtelière de Lausanne
F&B	:	Food and Beverage
GDP	:	Gross Domestic Product
HDI	:	Human Development Index
HELB	:	Higher Education Loans Board
IBE	:	International Bureau of Education
ILO	:	International Labour Organization
KAM	:	Kenya Association of Manufactures
KBG	:	Kenya Business Guide
KICD	:	Kenya Institute of Curriculum Development
KMO	:	Kaiser-Meyer-Olkin
KNBS	:	Kenya National Bureau of Statistics
KNEC	:	Kenya National Examination Council
KNQA	:	Kenya National Qualifications Authority
KUCCPS	:	Kenya Universities and Colleges Placement Service
MDGs	:	Millennium Development Goals

MTTI	:	Maasai Technical Training Institute
NCVER	:	National Centre for Vocational Education Research
NEET	:	Neither in Employment, Education nor in Training
NMR	:	Nairobi Metropolitan Region
NQA	:	National Quality Assurance System
NTTI	:	Nairobi Technical Training Institute
OECD	:	Organization for Economic Co-operation and Development
PCKTTI	:	Paramount Chief Kinyanjui Technical Institute
RTI	:	Railway Technical Training Institute
SDGs	:	Sustainable Development Goals
SESOK	:	Social Enterprise Society of Kenya
TESDA	:	Technical Education and Skills Development Authority
TTIs	:	Technical Training Institutes
TVCs	:	Technical And Vocational Colleges
TVET	:	Technical Vocational Education and Training
TVETA	:	Technical Vocational Education and Training Authority
UNCTAD	:	United Nations Conference on Trade and Development
UNESCO	:	United Nations Education, Science and Cultural Organization
UNEVOC	:	International Project on Technical and Vocational Education
VTCs	:	Vocational Training Centres
WBL	:	Women, Business and the Law
WE	:	Workforce Education
WYD	:	Whole Youth Development
YEDF	:	Youth Enterprise Development Fund

## OPERATIONAL DEFINITION OF TERMS

**Content:** For this study, the content of EE refers to the sum of all concepts, facts, themes, beliefs, and topics (UNESCO IBE, 2013). For this study, the content of EE refers to the topics of EE covered, and the duration of coverage.

**Entrepreneurial skills:** They are cross-cutting abilities that can be applied to all aspects of life, from nurturing personal development to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and to starting businesses by demonstrating various types of entrepreneurship, such as intrapreneurship, social entrepreneurship, green entrepreneurship, and digital entrepreneurship to create value (Bacigalupo, Kampylis, Punie & Van den Brande 2016). Entrepreneurial skills will be defined in this study as the valued consequences of idea and opportunity development, resource mobilization, and the perceived confluence of ideas, opportunities, and resources in action for the production of value inside an existing business or in a new endeavor, examined in levels of declarative (novice), procedural (intermediate) to automatic (proficient).

**Entrepreneurship education:** Refers to a set of formalized teachings that informs, trains, and educates learners interested in contributing to socioeconomic development via a project that promotes entrepreneurship awareness, business creation, or small business development (UNESCO/ILO Global, 2006). For this study, entrepreneurship education refers to the formal process of training F&B students by exposing them to entrepreneurship content, using various learning techniques, learning resources and evaluation frameworks to impart

entrepreneurial skills among students, to not only start their businesses but also become more employable and enterprising.

**Entrepreneurship education instructional elements:** Refer to the design of EE subject around five interconnected elements namely; objectives, audiences, assessments, content, and teaching methods (Fayolle & Gailly, 2008). EE instructional elements in this study are defined as the content, learning techniques, learning resources and the evaluation methods adopted in the teaching and/or learning of EE.

**Entrepreneurship:** Refers to the result of innovative economic activity that result in market transformation (Timmons & Spinelli, 2004). For this study, entrepreneurship refers to the creation of value through innovations such as new goods, service lines, administrative procedures, strategies, and competitive tactics within an existing firm or in a new venture.

**Evaluation Methods:** refers to a systematic procedure that allows for the assessment and judgment of whether an instructional program is effective, as well as the determination of the form and extent of behavioral change among students who have been exposed to the instructional process (UNESCO, IBE, 2013). For this study, evaluation methods of EE refers to the systematic assessment of EE using end term sit-in examinations, participation in class by answering questions, sit-in tests, writing of essays/term papers, group/individual presentations, case studies, interpretation of financial statements, assessment of a business plans, business reports, entrepreneurship projects, entrepreneurship attachment field reports and business activities.

**Learning resources:** refer to print and non-print materials and online/open-access resources – which supports and enhances, directly or indirectly, learning and teaching (UNESCO IBE, 2013). For this study, learning resources of EE refer to the information technology, human resources, reference materials, and business and financial support that are deployed in teaching and learning of EE.

**Learning techniques :**refer to methodologies through which learners acquire information, knowledge, understanding, attitudes, values, skills, competencies or behaviours through experience, practice, study or instruction(UNESCO IBE, 2013; Skutil *et al.*, 2016). For this study, learning techniques of EE refer to use of excursions, interviews, simulations, discussions, financial record preparation, role play, demonstrations, presentations, business plan preparation, case studies, brainstorming, and entrepreneurial trait self-assessment methods in teaching EE.

**Skill acquisition level:** Refers to the ability to learn or acquire skills through training or experience (Speelman 2005; Ekong & Ekong 2016). This study defines skill acquisition as the development of entrepreneurial knowledge, behaviour, abilities and attitudes in phases beginning with the lowest level of skill acquisition (declarative) to the most professional level (automatized).

**Skill acquisition:** Refers to the ability to learn or acquire skills. It involves the development of a new skill, practice of a way of doing things usually gained through training or experience (Speelman 2005; Ekong & Ekong 2016). In this study, skill acquisition refers to the development of entrepreneurial knowledge, behaviour, abilities and attitudes.

**Skills:** Refer to the abilities, and proficiency to carry out tasks that come from education, training, practice, or experience. It can enable the practical application of theoretical knowledge to particular tasks or situations. It is applied more broadly to include behavior, attitudes, and personal attributes that make individuals more effective in particular contexts such as education and training, employment, and social (Ministry of Education, Science & Technology, Kenya, 2015). For this study, skills is anonymous to competencies and refers to entrepreneurial skills

**Technical and Vocational Colleges (TVC):** They are institutions which offer technical and vocational education and training at the diploma level (Republic of Kenya, 2013). The TVCs included in this study are Railway Technical Training Institute; Paramount Chief Kinyanjui Technical Institute; Nairobi Technical Training Institute; Maasai Technical Training Institute and Michuki Technical Training Institute.

**TVET Institutions:** Refers to any establishment providing Technical and Vocational Education and Training, including colleges, institutes, centers, and schools (UNESCO, UNEVOC n.d).

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Overview**

This chapter constitutes the background upon which the study was premised, the actual problem which was addressed, the aims and objectives that guided the study, research questions and postulations made, the significance of the study, rationale, conceptual and geographic scopes, and limitations encountered in the study.

#### **1.1 Background to the Study**

Food and Beverage (F&B) continues to be a vital sector in the global hospitality industry's survival. The sector, which includes food and beverage preparation, presentation, and service either on-premise, such as in hotels and restaurants, or off-premise, such as in outside catering, take-out, or food delivery, has the potential to add value to upscale hotel operations by improving F&B offerings (Mun, Woo, & Paek, 2019). The performance of the F&B sector is influenced by elements such as competitiveness (Khor & Ahmad, 2015); profit maximization (McCracken, 2019); competitive input (Apivotanaporn & Walsh, 2013); and hotel revenue maximization (Chen-chi, Tian-Shyug & Yen-Chen, 2013). According to Pfitzer and Krishnaswamy, (2007) the F&B sector is universal to health and life, and it provides access to opportunities such as fresh produce trading, home processing, crop growing for household consumption, and international trade across F&B sectors.

The F&B sector falls under the hospitality industry. Kenya's hospitality industry is regarded as one of the country's economic cornerstones. The industry's earnings increased by 3.9 percent from KSh 157.8 billion in 2018 to KSh 163.6 billion in 2019, while international arrivals increased by 0.4 percent to 2,035.4 thousand in 2019

(Global Tourism Forum, 2020; Kenya National Bureau of Statistics, [KNBS] 2020). The effervescent nature of the industry, at least before the COVID-19 pandemic, piqued the interest of major hotel chain firms seeking to profit from F&B products whose demand had been boosted by accommodation seekers. Indeed, the Kenya Association of Manufacturers (KAM) and Kenya Business Guide (KBG) stated at one point that the food and beverage sector was the largest in Kenya's manufacturing economy, accounting for over 22% of KAM membership (KAM/KBG, 2018).

In Kenya, the food and beverage sector is divided into seven sub-sectors: bakers and millers; cocoa, chocolate, and sugar confectionery; alcoholic beverages and spirits; meat slaughtering and preservation; juice/water/carbonated soft drinks; tobacco and edible oils; and dairy products (KAM/KBG, 2018). Through its diverse range of governmental and private enterprises, the sector provides several job opportunities. According to the KAM/KBG study, the F&B industry, for example, exported Ksh 254,686 million in 2017. Manufacturers of drinks, tobacco, and food contributed 3.5 percent of Kenya's GDP during the same period. Furthermore, in the same year, Ksh245, 280 million was spent on food and beverage imports (KAM/KBG, 2018). Indeed, this demonstrates that the sector benefited a large number of people.

Despite contributing greatly to Kenya's economy, the food and beverage sector face entrepreneurial problems (Shikuri & Chepkwony, 2013). According to Shikuri and Chepkwony (2013), most hotels and other F&B establishments face entrepreneurial challenges such as network formation, information technology adoption, and prudent financial management. The Digital Markets Report/ Statista Market Forecast (2019) highlights the fact that the F&B sector is still confronting entrepreneurial issues such as fast delivery of perishable commodities and lowering the high cost of flexible,

same-day delivery, in addition to technical challenges. It has been proposed that these obstacles can be overcome if hospitality graduates are exposed to EE that can develop entrepreneurial skills (Ministry of Tourism, 2016). In awareness of the importance of entrepreneurial skills, the hotel industry is prioritizing taking trainees through EE alongside fundamental skills to enable them to establish their businesses and, as a result, boost their employability (Kenya Vision 2030, 2007).

It becomes clear that students' ability to learn entrepreneurial skills could be critical to their future work and life success. This is especially true considering that acquiring entrepreneurial skills has traditionally been viewed as a process in which students are exposed to a variety of entrepreneurship-related talents (Ekpe *et al.*, 2015). Entrepreneurial skills, according to Bacigalupo *et al.*, (2016), include competencies that target an individual's job capacities and personal qualities needed to traverse a dynamic society. Ekpe *et al.*, (2015) contend that EE gives students the knowledge and skills they need to take advantage of existing business opportunities.

Scholars have also emphasized policy makers' efforts to encourage the acquisition of entrepreneurial skills, claiming that this equates to enabling individuals to work for themselves (Azim & Al-kahtam, 2014; Robb *et al.*, 2014). In Kenya, for example, the Vision 2030 development blueprint envisions a paradigm shift from knowledge reproduction to knowledge production, and as a result, the government developed a policy framework for education in 2012 that emphasizes entrepreneurial skills among other skills and competencies (Republic of Kenya, 2012). Entrepreneurial attitudes were identified as crucial to business performance in Kenya by Franz and Omolo (2014) in a study on an assessment of youth employment initiatives in Kenya commissioned in conjunction with the World Bank and Kenya Vision 2030. They also

underline the importance that the Kenyan government places on entrepreneurial culture by emphasizing the Youth Enterprise Development Fund (YEDF), a loan scheme aimed at encouraging young people to start businesses (Franz & Omolo, 2014).

The relevance of entrepreneurial abilities is also highlighted in discussions on hospitality practice, emphasizing the importance of entrepreneurial education for hospitality students. For example, Zapalska, Vaidyanathan, and Brozik (2012) argue that improved profitability among tourist and hospitality services in West Virginia is due to variables such as entrepreneurs' education, training, and efficiency gained through innovation. According to Fadda (2018), entrepreneurial qualities such as autonomy, proactiveness, and innovativeness have a substantial impact on tourism performance. Similarly, Xuhua *et al.*, (2018) found that innovativeness, which stems from an entrepreneurial mindset, is substantially associated with patronage and provides a viable option for small hotel expansion in Ghana. Syed (2015), on the other hand, criticizes tourism students' lack of interest in EE, claiming that an entrepreneurial culture might boost entrepreneurial activity and create a greater initiative.

The need of instilling entrepreneurial skills in hospitality students has long been recognized in previous studies. Ana *et al.*, (2017) acknowledge that tourism is one of the economic sectors with a high development potential around the world, but they also point out that the industry is fairly demanding and competitive, thus entrepreneurial skills should be prioritized. An F&B graduate, according to Rahul (2018), has the advantage of thinking large after starting small. For example, a graduate could start social events business such as planning wedding events before

expanding into other food and beverage services. According to Reddy (2018), food is a basic human need, making food and beverage the world's oldest and most stable industry. As a result, most entrepreneurs prefer the food and beverage industry. However, Reddy points out that most F&B start-ups don't last more than three years, ostensibly due to a lack of entrepreneurial skills.

Studies (Rengiah, 2013; Tofan *et al.*, 2017; Mwasalwiba 2010; Awiti *et al.*, 2019) have established the link between EE and entrepreneurial skills acquisition. The current study adopted Mwasalwiba's (2010) perspective, contending that the essence of EE is the acquisition of critical skills that can oversee opportunity recognition, business formulation, and small firm management. Therefore, it was conceivable to conceptualize the study's focus as the level of acquisition of entrepreneurial skills. The study hypothesized that the dependent variable is the perceived level of acquisition of entrepreneurial skills conceptualized in three levels of declarative knowledge, procedural and automatized skills as propounded by Dekeyser (2007) skill acquisition theory.

DeKeyser (2007) argued that learners must be exposed to relevant opportunities to develop skills. The skills are developed in levels, starting with declarative knowledge, (novice) to automatic skills (proficient). The declarative knowledge was assessed based on the students' ability to recall and explain EE concepts while the procedural entrepreneurial skills were assessed by the extent to which students were able to apply the declarative entrepreneurship knowledge to perform entrepreneurial actions. The automatic entrepreneurial skills were evaluated by the ability of students to easily perform entrepreneurship actions with minimum errors.

While agreeing that effective EE is based on appropriate models and pedagogies (Fayolle & Gailly, 2008) the current study postulated the independent variables as the interrelated instructional elements of EE. The variables were adapted from Fayolle and Gailly's (2008) teaching model of EE that describes the design and the implementation of EE. Fayolle and Gailly's (2008) asserted that despite a lack of commonality in defining EE, an ideal and inclusive EE ought to take cognition of a wide audience; be keen on interrelated instructional elements namely, teaching pedagogies, content and objectives. An effective EE program depends on the relevance of the content (Syed, 2015), quality of learning resources (Mkala & Wanjau, 2013; Esmi *et al.*, 2015; Wibowo *et al.*, 2018) learning activities (Skutil *et al.*, 2016) and the evaluation framework of outcomes (Fayolle & Gailly, 2008). Consequently, the current study adapted Fayolle and Gailly's (2008) instructional elements to include the content coverage, learning techniques, learning resources, and evaluation methods of EE.

The investigation of the link between EE instructional elements and entrepreneurial skills acquisition was explored by integrating Dekeyser's skill acquisition theory (2007) and the teaching model of EE (Fayolle & Gailly, 2008). The theories were found suitable because they are experiential based and thus explain the process of acquisition of skills from the learning and teaching of EE an experiential learning approach to EE is more successful (Mandel & Noyes, 2016). When students are exposed to a diverse range of entrepreneurship experiences through experiential learning techniques such as internships, workshops, business planning, role-playing, and starting businesses (Esmi *et al.*, 2015), they are likely to acquire proficient entrepreneurial skills (Pittaway & Edwards, 2012; Syed, 2015).

A vital component of skill acquisition is often overlooked while focusing on EE to nurture entrepreneurial skills. This is about the inevitable contributions that learner-specific and institutional variables will make. The extant literature documents that demographic characteristics, for example, have a positive impact on teachers' ICT readiness (Alazzam *et al.*, 2012); that institutional variables, such as classroom practices and instructional methods, are critical to students' acquisition of employability skills (Atah & Abeng, 2019); and that the path of transition from vocational, educational, and training institutions in terms of knowledge acquisition, self-assessment and skill acquisition is a function of socio-economic factors such as; level of parents education, students grades while in school, and socio-economic conditions (Lavendels, Siticovs & Uhanova, 2012).

Ngware *et al.*, (2019) have elaborately investigated Kenya's TVET students' background characteristics, demonstrating that students differ in several of those factors, which could be a source of skill acquisition variation. For example, Ngware *et al.*, (2019) found that students' ages varied based on characteristics such as the institution's location, category, and socioeconomic position. Ngware and colleagues also discovered that some students are also parents, with this distribution affecting students in the lowest socioeconomic quartile the most. Some students have specific needs, according to Ngware *et al.*, (2019), and this has been observed to affect their learning outcomes (Ali & Rafi, 2016; Price, 2018). Parental education, family socioeconomic background, and student involvement in social activities are among the other prominent dissimilar socio-economic traits discovered by researchers (Ngware *et al.*, 2019; Ali & Rafi, 2016; Price, 2018).

Past research (Ngware *et al.*, 2019; Ali & Rafi, 2016; Price, 2018) have argued that when looking into the level of entrepreneurial skills acquisition among TVET graduates, the focus should not only be on the direct influence of EE on the acquisition of such abilities. The studies (Ngware *et al.*, 2019; Ali & Rafi, 2016; Price, 2018) posit that socio-demographic factors also influence student learning outcomes, including skill acquisition. For instance, variables such as gender (Thrikawala, 2011; Trebar, 2014), family entrepreneurial background (Mustapha & Selvaraju, 2015) and past entrepreneurial experience (Nimalathan & Achchuthan, 2013) have been found to indirectly influence entrepreneurial actions.

Thrikawala (2011) and Trebar (2014) posit that men are almost twice as likely to engage in entrepreneurial activities as women, due to their high positive attitude towards entrepreneurship. Mustapha and Selvaraju, (2015) argue that parents enhance the entrepreneurial self-efficacy of their children to venture in entrepreneurship, by providing a supportive environment. Besides, Nimalathan and Achchuthan (2013) assert that students with previous entrepreneurial experience are more skilled than counterparts. In summary, there is evidence that socio-demographic variables may indirectly have some influence on students' career choice, however the level of influence remains unknown (Mwasalwiba, 2010).

It is in the interest of this study to build up on the findings of Mwasalwiba (2010) to determine the extent to which socio-demographic factors affect acquisition of entrepreneurial skills. Consequently, the researcher hypothesized that socio-demographic characteristics (gender, family entrepreneurial background, and past entrepreneurial experience) had a role in the direct impact of EE on the acquisition of entrepreneurial skills and that it was a moderating variable for this effect.

## 1.2 Problem Statement

Entrepreneurship education (EE) has been highlighted as the necessary catalyst for increasing Kenya's hospitality sector's contribution to the GDP from 9% (Ministry of Tourism, 2016; Ministry of East African Affairs, Commerce & Tourism, 2013). As a result, as indicated in Kenya Vision 2030 (Republic of Kenya, 2007), the sector has focused on EE to augment soft skills alongside core technical abilities in F&B graduates, boosting their employability or potential to start their businesses.

Even though the Kenyan government has placed a strong emphasis on TVET, particularly the integration of Whole Youth Development (WYD) into the system to develop soft skills among trainees through entrepreneurial training, concerns about the lack of soft skills such as marketing and sales, financial planning and management, life skills, and entrepreneurial skills among youth remain (Awiti *et al.*, 2019). This raises questions about whether EE, as envisioned in Kenya's TVET curriculum, instills the necessary entrepreneurial skills for youths to be ready for the workplace or self-employment. This is especially true for F&B professionals, who need abilities like strategic decision-making, innovation, risk-taking, (Marchant & Mottier, 2011), public relations, social media, communication, and marketing (Hollick & Braun, 2005).

Furthermore, the EE syllabus provides little evidence of guidelines and standards for monitoring effective EE implementation, particularly on instructional elements such as learning resources, the teaching content, teaching methods (especially workshops and industrial attachments), and evaluation methods. When the quality of instructional elements such as the learning duration of EE, the delivery methods, the learning

equipment and facilities and the qualifications of the tutors, are not monitored, their compliance with TVETA CBETA Standards and Guidelines (2019) is jeopardized.

This notwithstanding, extant research on EE discourse reveals certain contextual, theoretical, and design shortcomings. To begin with, the majority of the past research reviewed focused on entrepreneurial intent as a function of EE (Ayodele, 2017; Barba-Sanchez & Atienza-Sahuquill, 2018; Kalyoncuoglu *et al.*, 2017; Zhang *et al.*, 2014). From a theoretical standpoint, majority of the past studies do not give credit to skill acquisition theories. As a result, there was a need to investigate the link between EE instructional components and entrepreneurial skills acquisition and the moderation effect of students' socio-demographics using theories that explain learning from an experiential standpoint.

This research was guided by the EE teaching model, and DeKeyser's skill acquisition theory, all of which were found appropriate for examining skill development because they suitably conceptualize the study variables. The teaching model of EE describes instructional design and implementation process of EE using five interrelated instructional elements sequentially, starting with the learning objectives; the target audiences; the evaluation methods; the teaching content, and lastly, the teaching methods (pedagogies) (Fayolle & Gailly, 2008). On the other hand, DeKeyser skill acquisition theory describes the learners' process of acquisition of skills from the novice level and progress gradually to proficient level

From a design standpoint, prior studies assessing the impact of EE have overlooked the possible contributions of extraneous variables present in the study context. The majority of them have prioritized direct relationships over other considerations. Nonetheless, evidence reveals that students in Kenyan TVET colleges demonstrate a

variety of socio-economic characteristics, including parental education, family socio-economic background, educational level, and participation in social activities (Awiti *et al.*, 2019; Ngware *et al.*, 2019). If such important aspects are disregarded, the results will be inconclusive. In line with studies that have documented the moderating potential of socio-demographics in a variety of relationships, including entrepreneurial orientation and intentions (Ekpe & Mat, 2015); and women-owned strategic capabilities and performance (Kimosop, Korir, & White, 2016), it was necessary to investigate the moderating influence of such background characteristics in this study.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective**

The aim of the study was to investigate the influence of EE instructional elements on the level of acquisition of entrepreneurial skills among F&B students drawn from selected TVCs in Kenya. In addition, the moderating effect of socio-demographic factors, on the relationship between EE instructional elements and the level of acquisition of entrepreneurial skills was explored.

#### **1.3.2 Specific Objectives**

- i) To determine the influence of the content of EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.
- ii) To analyze the influence of learning techniques adopted in EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.
- iii) To explore the influence of learning resources employed in EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

- iv) To examine the influence of evaluation methods used in EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.
- v) To establish the moderating effect of socio-demographic factors, on the relationship between EE instructional elements and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.
- vi) To determine the perceptions of curriculum experts and EE trainers on the role of EE instructional elements in the acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

### 1.3.3 Hypotheses

Five hypotheses were formulated to address the five objectives of the study.

**H<sub>01</sub>:** The content of EE does not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>02</sub>:** Learning techniques adopted in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>03</sub>:** Learning resources employed in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>04</sub>:** Evaluation methods used in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>05</sub>:** Socio-demographic characteristics (gender, family entrepreneurial background and entrepreneurial experience) do not significantly moderate the

relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>05a</sub>:** Gender does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>05b</sub>:** Family entrepreneurial background does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

**H<sub>05c</sub>:** Entrepreneurial experience does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.

#### **1.3.4 Research Question**

- i) What are the perceptions of curriculum experts and EE trainers on the instructional elements of EE in the acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya?

#### **1.4 Significance of the Study**

Firstly, the findings of this study may help the Kenyan government realize the Kenya Vision 2030's economic and social pillars. This will result from TVET graduates who can create jobs through the acquired entrepreneurial skills hence, reduce poverty and promote self-reliance and human dignity (Ministry of Devolution & Planning, 2013). Kenya, like many other countries throughout the world, is experiencing a youth bulge, a phenomenon in which youth account for more than 20% of the population. As a result, youth unemployment is on the rise, turning this demographic blessing into a

demographic disaster (Adams, *et al.*, 2013). Furthermore, the integrated Household Budget Survey (Kenya NBS, 2018) revealed that Kenya has an overall poverty rate of more than 36.1% despite having the highest percentage of youth enrollment in educational institutions in the East African Region. As a result, the Kenyan government has put into place a number of youth initiatives based on the idea that entrepreneurship might help to alleviate the unemployment issue.

Secondly, global employment statistics for youth 2020 demonstrate that young people around the world, notably in Sub-Saharan Africa, have low-quality jobs, with three out of every four young employees in the world working in informal jobs as of 2016 (International Labour Organization [ILO], 2020). The findings of this study underscore that demographic factors such as past entrepreneurial experience can enhance young people to realize their full entrepreneurial potential (ILO, 2020). A study that investigates the direct influence of EE on the acquisition of entrepreneurial skills while moderating for socio-demographic characteristics is a sure approach to contribute knowledge that can improve acquisition of entrepreneurial skills among the F&B graduates, and enhance their employability in both the formal and informal sectors.

Thirdly, the outcomes of this study assert that the practical-oriented content and learning activities of EE, coupled with provision of quality learning resources of EE and practical based evaluation methods can enhance acquisition of proficient entrepreneurial skills. These findings may help participants in hospitality education, particularly educators and policymakers, gain a better understanding of EE, and make suggestions to relevant stakeholders, which could lead to legislative changes and/or increased enforcement to promote practice-oriented EE. The findings of this study are

envisaged to contribute to knowledge in the development of EE curricula that meets academic rigor while also meeting the realities of EE, whilst adding literature to future research on EE and entrepreneurial abilities among hospitality trainees in Kenyan TVET programs.

### **1.5 Scope of the Study**

This study investigated the relationship between components of EE and the level of acquisition of entrepreneurial skills by F & B students in selected TVCs in Kenya and the moderating effect of socio-demographic factors on that relationship. This study acknowledges that there are a variety of other EE-related factors that can influence the acquisition level of entrepreneurial skills. The focus of this study, however, was on the content coverage, learning techniques, learning resources, evaluation methods, and students' socio-demographic factors (gender, family entrepreneurial background, and entrepreneurial experience) as the moderating variable of the relationship under study.

Five public TVCs in Nairobi Metropolitan Region (NMR) were used for this investigation. The TVCs were purposively sampled based on their pioneering role in delivering F&B courses as well as their capacity to attract significant numbers of students. The study adopted a convergent mixed methods design based on the pragmatic research paradigm. The F&B module II diploma students, EE trainers, and curriculum specialists from the Kenya Institute of Curriculum Development (KICD) and the Curriculum Development, Assessment and Certification Council (CDACC) were the study's target audience. Data was collected using standardized questionnaire for F&B students, as well as an interview schedule for EE trainers and F&B curriculum experts between April and July in 2019. Quantitative data was analyzed

using multiple regressions in order to find the best EE predictors of the level of acquisition of entrepreneurial skills. The direct and moderation effects were investigated using the Hayes Macro 'PROCESS' Model 1. Interview findings were analyzed using content analysis.

### **1.6 Limitations of the Study**

The limitations that were encountered during the data collection phase stemmed from the study methodology. First off, several interviewees—especially EE trainers—became emotional over the course of the interviews because they thought the researcher was there to listen to their situation and offer solutions to their day-to-day workplace problems. In addition, interviews are associated with the risk of incredible information, especially when participants self-censor what they say as a result of a miscommunication with the researcher (Saunders *et al.*, 2012).

Consequently, these emotions might have hindered the EE trainers' ability to express real and truthful opinions during the interview. However, by explaining the study's objectives to participants and ensuring them that the data collected would be used only for research, the researcher was able to reduce the proportion of invalid responses.

In addition, using questionnaires as a data gathering tool is typically associated with low response rates, poor validity, and dependability. The use of email and web surveys, inadequate follow-up tactics, the use of lengthy questionnaires, and the selection of respondents who have limited interest in and expertise of the study issue are the main causes of the low response rate. By doing a pre-visit to build rapport with the participants, these risks were reduced (Dillman, 2007). The researcher used self-administered questionnaires that were brief and precise. The questionnaires were

administered to diploma students of F&B Module II, who had completed coverage of theoretical EE and were in the latter stages of development of business plans. Thus, the respondents were knowledgeable in the subject matter under study. Finally, to improve the precision and consistency of responses, the validity and reliability of the answers were examined (see section 3.8).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Overview**

This chapter summarizes the findings of a general and empirical literature review conducted to identify theories, variables, data collection methods, and data analysis approaches related to the concepts of entrepreneurial skill acquisition, entrepreneurial skills for food and beverage, EE as a subject, entrepreneurship in TVET institutions, socio-demographic factors among TVET students, direct effects of entrepreneurial skills, and the moderating influence of socio-demographic factors on entrepreneurial skills.

#### **2.1 The Concept of Entrepreneurship**

Entrepreneurship has been regarded as a necessary strategy for effectively maintaining growth and competitiveness (Youself, Bonbaker & Omri, 2017). Scholars, on the other hand, have differing perspectives on the concept of entrepreneurship. Cantillon, for example, as noted by Foss and Klain, sees an entrepreneur through an economic lens as an individual who owns a business in risky and uncertain circumstances (Foss & Klain, 2007). Zimmerer, Scarborough, and Wilson (2008), on the other hand, define an entrepreneur as a person who, despite the risk and uncertainty that many businesses face, seeks to achieve growth and profit by using necessary resources to exploit available opportunities and starts a new business.

According to Blackburn (2011), entrepreneurship is multi-faceted and entails an examination of people's economic, social, political, institutional, legal, and policy interactions with the environment, all of which legitimize human activities. Furthermore, it is argued that entrepreneurship encompasses a wide range of activities

and levels of analysis, making a single exhaustive definition impossible (Lichtenstein, 2011). Entrepreneurship, according to Baron, Share, and Reuber (2008), is a business discipline that seeks to identify or create opportunities for service or product innovation, manufacturing processes, technology application, and raw material innovation. Brooks (2009) expands on Kao's (1993) definition of entrepreneurship to define it succinctly as a process by which opportunities can be pursued with existing resources.

The French, English, German, American, and Austrian schools of thought all contributed to the development of the entrepreneurship concept. The term entrepreneur was coined by Richard Cantillon (1680-1734), an Irish economist who belonged to the French school of thought (Casson & Godley, 2005). According to Casson and Godley, Cantillon perceived an entrepreneur as someone willing to take the risk of market fluctuations by insuring workers by purchasing their products for resale later, even without knowing how much they would sell for. Cantillon viewed entrepreneurs as having the ability to generate profits through exchange while exercising business judgment, as opposed to landowners who were financially independent and employees who earned relatively stable incomes by maintaining employment contracts but were not involved in decision-making (Hebert & Link 2009).

Based on Cantillon's uncertainty concept, German economist Adolph Reidel (1809-1872) proposed that an entrepreneur is someone who thrives on anticipating the effects of uncertainty to profit by taking risks on behalf of risk-averse income earners (Hebert & Link, 2009). From the American school of thought, Frank Knight (1885-1972) is credited with refining Cantillon's perspective by introducing the concept of

insurable risk (Casson & Godley, 2005). Knight argued that some risks that have occurred multiple times in the past can be calculated and insured. Uncertainty, on the other hand, is not insurable. As a result, Knight saw an entrepreneur as someone who takes uninsurable risks in exchange for a profit (Casson & Godley, 2005).

Jean-Baptiste Say (1767-1832), a proponent of the French school, presented the concept of entrepreneurship as a part of management in his extension of Cantillon's work. Say proposed that an entrepreneur was often at the center of the production and distribution process, as cited by Hebert and Link (2009). In essence, Say's study resulted in the development of a broad theory of entrepreneurship that identified three main functions. The three roles, according to Chell (2008), are scientific understanding of the product, useful application of the knowledge (entrepreneurial industry), and employment of manual labor to manufacture the item (productive industry). Nonetheless, Knight distinguished an entrepreneur from a manager by claiming that managers could only be considered entrepreneurs if they were prone to making mistakes in their judgments and accepted responsibility for the correctness of those judgments (Chell, 2008).

Weighing in on the contrast between entrepreneurs and managers, English school of thought proponent Alfred Marshall (1842-1924) defined an entrepreneur as someone willing to leverage money provided by capitalists to produce additional money. Managers, on the other hand, he claimed, were more averse to challenges and innovations, preferring a more tranquil life (Zaratiegui & Rabade, 2005). From the American school of thought, Amasa Walker (1799-1875) and Francis Walker (1840-1897) believed that entrepreneurs were endowed with foresight and leadership ability to utilize resources and activities to produce riches (Chell, 2008).

Entrepreneurs' task, according to Carl Menger (1840-1921), was to organize factors of production to meet human needs and wants by converting higher-order goods into lower-order items like bread (Hebert & Link, 2009). The four key aspects of entrepreneurial activity, according to Menger, are gathering information on the economic situation, performing all relevant computations for process efficiency, identifying the actions through which higher-order goods could be assigned into the production process, and supervising the production process (Hebert & Link, 2009).

Entrepreneurship was also viewed from an innovation perspective. Jeremy Bentham (1748-1832), a proponent of the English school of thought, saw entrepreneurs as innovators who had to break away from the norm to find new markets, find new supply sources, improve existing products, and reduce production costs (Chell, 2008). Entrepreneurs are critical to the innovation of economic activities required to achieve economic development, according to Joseph Schumpeter (1883–1950), who followed the American school of thought (Hebert & Link, 2009).

In contemporary society, entrepreneurship can be defined as the actions people take to direct their dreams and careers in the directions they want, on their terms, without the constraints of schedules and menacing boxes (Ferreira, 2020). According to Eisenmann (2013), the Harvard Business School has tailored entrepreneurship to represent the pursuit of chances that are not limited by resources. Three keywords emerge from this definition: 'pursuit,' which refers to the unwavering focus that entrepreneurs must maintain; 'opportunity,' which refers to the novel offerings that entrepreneurs make; and 'beyond resources controlled,' which refers to the resource constraints that entrepreneurs must overcome. For this study, the researcher leaned toward the Harvard Business School's definition, because the definition perceives

entrepreneurship from an outcome perspective. This study agrees with the outcome view of entrepreneurship as creation of new ventures, innovations, products and service lines for creation of value for self and society. The outcome view definition of entrepreneurship and an entrepreneur underscores the value outcome as the ultimate regardless of the environment in which it happens (Kozlinska, 2016).

### **2.1.1 Types of Entrepreneurship**

In the recognition of the potential for women and youth entrepreneurs, as well as social and green ethos, various types of entrepreneurships have been identified.

#### **2.1.1.1 Social Entrepreneurship**

The pursuit of novel applications and systems that focus on community-based problems is referred to as social entrepreneurship (Gandhi & Raina, 2018). Social entrepreneurs, according to Gandhi and Rama, demonstrate a willingness to take risks and make efforts to bring about positive change in society. Hayes (2021), who contributes to this discussion on social entrepreneurship, claims that under the social entrepreneurship framework, entrepreneurs start businesses for the greater good rather than for-profit; additionally, they seek to protect the environment while focusing on philanthropic activities. In essence, social entrepreneurs don't want to make money; instead, they want to see widespread improvements in society.

Moreover, social entrepreneurs focus on addressing unmet community expectations by introducing educational programs, microfinance institutions, assisting the vulnerable, and providing banking services in underserved areas (Hayes, 2021). Social entrepreneurship, according to Gandhi and Raina (2018), deviates from the path taken by most types of entrepreneurships by giving the money-making endeavor a heart and a noble social cause. They point out that social entrepreneurship, such as

microfinance institutions, is concerned with societal transformations and the empowerment of transformational progress.

According to Dees (1998), the term "social entrepreneurship" refers to a wide range of organizations with differing beliefs, goals, and sizes.

Social entrepreneurs are typically non-profit or combine profit with societal benefits. Social enterprises are also known for promoting social inclusion by participating in activities that benefit underserved groups. Evidence shows that social enterprises create job opportunities for the unemployed by hiring them as trainees, employees, or providing specialized assistance. Social entrepreneurs, on the other hand, create innovative solutions such as subsidized employment for disadvantaged people (Buckingham & Teasdale, 2013).

The '*Kiondoo Kulture*,' founded by Ivy Nitta, provides a steady income to women of over 60 years of age; Writers Guild, founded by Gabriel Dinda, targets creative Kenyans who are otherwise frustrated by unemployment; Amani Institute, co-founded by Ros, teaches women in rural communities how to develop chicken farms and produce a stable amount of eggs for income necessary to sustain families; Given the sector's growth trajectory and desire to enhance social inclusion, the study hypothesized that food and beverage entrepreneurship has components of social entrepreneurship.

In Kenya, social entrepreneurship is gaining traction, leading to the establishment of the Social Enterprise Society of Kenya (SESOK), a regional umbrella group for social firms in the East African region, in January 2017 (SESOK, 2020). Among the social enterprises in Kenya, include '*Eggpreneur*' developed by Matt Dickson to educate women in rural communities on how to develop chicken farms and produce a stable

amount of eggs for income necessary to sustain families; '*the Kiondoo Kulture*' built by Ivy Nitta that gives a steady income to women aged above 60 years; *Writers Guild* founded by Gabriel Dinda that targets creative Kenyans who are otherwise frustrated by unemployment; Amani institute co-founded by Roshan Paul, and aimed at offering scholarships for local talents and, *Greenchar* started by Tom Osborne together with Ian and Brian which empowers women as *GreenChar* sellers in particular in rural areas (Marlon, 2017). This postulated that entrepreneurship in food and beverage has elements of social entrepreneurship given that the sector is on a growth trajectory and seeks to advance social inclusion.

#### **2.1.1.2 Youth Entrepreneurship**

Youth entrepreneurship is seen as a critical component in addressing unprecedented levels of global unemployment, which, according to the International Labour Organization (ILO), affected 74 million young people as of 2015 (ILO, 2015). The growing number of young people who are neither in Employment, Education nor in Training (NEET). According to ILO (2013), between 2008 and 2010, the number of youths within countries in the Organization for Economic Co-operation and Development (OECD) increased by 2.1%, reaching 15.8%, while the number of NEET youths in Latin America remained high at 19.8%.

As a result, youth entrepreneurship is seen as a way to boost job creation, competitiveness, and innovation among young entrepreneurs. In such a scenario, youths can create jobs for themselves, allowing them to contribute to society positively. Furthermore, it is hypothesized that youth entrepreneurship raises young people's living standards; their income rises, they experience lower poverty levels, and they achieve sustainable livelihoods (Youth Business International, 2016).

According to Micheni (2018), youth unemployment in Kenya has increased to 22.2 percent, compared to 5.2 percent in Tanzania and Uganda (4 percent). Because of Kenya's high rate of youth unemployment, there has been an increase in entrepreneurial activities among the youth, such as small businesses, <sup>1</sup>*bodaboda*, and advancements in art, music, and technology, among other things (Micheni, 2018). According to Chiloane–Tsoka, and Mmako (2014), entrepreneurship has emerged as a critical component of job creation, economic growth, and poverty alleviation in the wake of rising youth unemployment. Recognizing the important role that youth entrepreneurship will play in job creation, Kenya's government has implemented several programs to encourage youth entrepreneurship.

The Youth Enterprise Development Fund, which was proposed by the Ministry of State for Youth Affairs in collaboration with private financial intermediaries, is one such program (Sambo, 2016). This fund focuses on increasing youth self-employment through entrepreneurship initiatives; youth can apply for funds individually or in groups through this program. These funds can either be guaranteed by a group, by parents, or by community leaders (Sambo, 2016). However, given that youth unemployment in Kenya remains high, these youth empowerment initiatives have not been without challenges (Okirigiti & Rafey, 2015).

The Youth Village — a portal for Kenya's youth identifies other institutions that promote youth entrepreneurship including youth entrepreneurship facility, a facility that promotes entrepreneurial culture by enabling youths to engage in gainful enterprise initiatives and access finance; youth polytechnics which, enhances

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<sup>1</sup>Boda boda - (in some countries) a type of motorcycle or bicycle with a space for a passenger or for carrying goods, often used as a taxi (Oxford Learner's Dictionary, 2022).

entrepreneurial culture through a curriculum developed to do so; regional culture for Enterprise Development located at Jomo Kenyatta University of Agriculture and Technology, and enhances skills in management, entrepreneurship, and research; Uwezo Fund, launched in 2013 to provide registered youth groups with loans, and offices in every constituency; and Kenya Entrepreneurship Empowerment Foundation (KEEF) which gives micro-credit to youth-owned micro-enterprises among others (Youth village, n.d.).

Food and beverage entrepreneurship, according to the researcher, includes components of youth entrepreneurship, particularly in sub-sectors including chicken farming, fresh vegetable production, fast food restaurants, outside catering services, festival food coordinating, and vending.

### **2.1.1.3 Women Entrepreneurship**

Women entrepreneurship is conceptualized as an ideal way to promote gender equality and increase economic empowerment among women leading to enhanced economic growth, sustainable development, social inclusion, and reduction in inequality (United Nations (UN), 2017). The notion of women empowerment through entrepreneurship is particularly significant in developing nations and emerging economies. It is acknowledged that women in the labor force in these nations can contribute to the development of their economies (ILO, 2015). Besides, documented evidence shows that enhanced participation of female labor impacts positively on economic growth through improved GDP (Women, Business and the Law (WBL), 2012).

The women's entrepreneurial ventures scope report (The Economist, 2013) adds that in addition to contributing towards economic development via the creation of jobs and

gaining economic empowerment, entrepreneurship among women also has the potential to promote gender equality and reduce their dependence. According to UNCTAD, (2014b), women's economic advancement, gender equality, and poverty reduction are effectively achieved when they are involved in SMEs. Moreover, evidence indicates that entrepreneurship among women is likely to see them contributing towards other sustainable development activities such as re-investing in the well-being of their families and communities (UNCTAD, 2014b).

This study took cognizance of women's entrepreneurship as a facet of F&B considering that in Kenya, several women were credited with successful businesses as of 2019. A self-powered mobile wireless fidelity (WiFi) router was for instance co-founded by Juliana Rotich, a technologist. She is also a co-founder of *Ushahidi Inc.*, a non-profit tech company which, specializes in the development of free and open-source software.

According to Nairobi Garage, (2019) another successful entrepreneurship in Kenya pioneered by a woman is the Glasshouse PR started by Mary Njoki and has gone on to receive various accolades. Perhaps one of the most successful woman entrepreneurs in Kenya is Mrs. Tabitha Karanja who is the Chief Executive Officer (CEO) of *Keroche Breweries* a firm drawn from the F&B industry. Other notable women entrepreneurs are Flora Mutahi, founder of Melvins Tea; Dr. Rose Mutiso co-founder of Mawazo institute, Rebecca Wanjiku CEO of Fireside communications; Dorcas Muthoni founder of Open world Ltd; Dr. Jennifer Riria CEO of Kenya Women Holding; Linet Kwamboka CEO of Data Science Ltd; and Njeri Rionge co-founder of Internet service provider *Wananchi Online* (Nairobi Garage, 2019).

#### **2.1.1.4 Green Entrepreneurship**

Green entrepreneurship is the fourth type of entrepreneurship that has received a lot of attention in the literature. According to the International Labour Organization (ILO), green entrepreneurship refers to green services and products or the use of green production processes that reduce poverty and inequality, ensure safe decent work that is both productive and well-compensated, uses efficient practices, products, and processes to support environmental sustainability, and promotes economic growth through new ventures such as SMEs and job creation. Although it is still a young industry, the green economy is expected to generate between 15 and 60 million jobs globally, alleviating poverty for up to 400 million smallholder farmers in developing countries (ILO, 2012).

According to the United Nations (UN) (2017), Africa has prioritized job creation in the green sector, which has resulted in a resurgence of formal and informal waste management employment opportunities.

However, it should be noted that, in addition to its economic impact, green entrepreneurship taps into the potential of disadvantaged groups such as women, youth, and the poor to create opportunities for themselves, in which case they are socially included (UN, 2017). Green entrepreneurship is also seen to be contributing to environmental sustainability by advocating for environmentally friendly practices such as those used in renewable energy. As a result, SMEs that follow these practices are more likely to create jobs while also promoting environmental sustainability. This is especially true for businesses dealing with food and beverage in Kenya, which must recognize the importance of environmental sustainability in food and beverage production.

## 2.2 Entrepreneurial Skills

Entrepreneurial skills are defined in the literature as a set of abilities that are neither leadership nor management in nature (Hayton, 2015). Entrepreneurial talents, according to Hayton, include identifying client needs, market and technical potential, and exploiting these chances. Entrepreneurial skills, according to Linan and Chen (2009), are the knowledge or actions required to oversee the successful functioning of a business. Pyysiainen *et al.*, (2006) define entrepreneurial skills as the ability to start and run a business. Chell (2013) conducted a thorough assessment of the literature on entrepreneurial skills, noting that skills are multifaceted entities that span across knowledge, emotion, behavior, and circumstance. Chell (2013) defines skill as the ability to perform at a high level of proficiency that can be improved via training and practice. Entrepreneurial skills, according to Teece (2012), include components of sensing, seizing, and changing, and are thus crucial in the development of dynamic capabilities.

Chell (2013) alludes to the contextual nature of entrepreneurial skills by emphasizing that entrepreneurs' and innovators' abilities, skills, and knowledge are numerous and diverse, but that, like personality qualities, they are situational. In essence, Chell contends that experiential learning, which is more likely to expose students to specific scenarios or difficulties than classroom-based learning, is better for developing entrepreneurial abilities. According to Mitchelmore and Rowley (2010), entrepreneurship necessitates a certain set of skills that allow individuals to personalize entrepreneurship in new enterprises. Al-Mamun *et al.*, (2016) define entrepreneurial skills as the ability to use resources wisely to improve the micro-enterprise. Entrepreneurs should root for particular context-specific talents that can boost the performance of the firm (Gerli, Gubitta, & Tognazzo, 2011).

To provide an overview of relevant entrepreneurial skillset, Chell (2013) builds on existing literature of potential skills sets for successful entrepreneurship, including the need to create novel opportunities (Alvarez & Barney, 2007); capacity to identify customer needs, existing market and technical opportunities (Hayton, 2015); capacity to identify market / social needs (Hunter, 2012); and the ability to develop skills to exploit created opportunities. Chell (2013) highlights four primary categories that explain appropriate entrepreneurial talents as being: idea identification/creation; capitalizing on ideas; traits/behavior; and managerial leadership skills (see Table 2.0).

**Table 2.0: Categories of entrepreneurial skills**

<b>Idea identification/creation</b>	<b>Capitalizing on ideas</b>
<ul style="list-style-type: none"> <li>- Idea generation / envisioning</li> <li>- Opportunity recognition and means-end analysis</li> <li>- Ability to acquire information about a potential opportunity, domain knowledge, and associated skills</li> <li>- Recognition of social / market need</li> </ul>	<ul style="list-style-type: none"> <li>- Awareness of environment and factors conducive to opportunity exploitation</li> <li>- Ability to garner the necessary material resources</li> <li>- Ability to convince others of the value of an opportunity</li> <li>- Networking and social embedding</li> </ul>
<b>Traits/behaviors</b>	<b>Managerial/leadership skills</b>
<ul style="list-style-type: none"> <li>- Self-belief, self-awareness, trust in own judgment, etc.</li> <li>- Ability to manage risk and shoulder responsibility</li> <li>- Ability to endure and cope with difficulties. Energy, motivation, persistence, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to manage others</li> <li>- Ability to overcome institutional another constraints</li> <li>- Ability to develop an idea as a commercial opportunity</li> <li>- Decision-making capability</li> </ul>

**Source:** Adapted from Chell (2013, pg.12)

### **2.2.1 TVET Institutions and Development of Entrepreneurial skills**

Technical and Vocational Education and Training (TVET) is defined by UNESCO (2002) as a term that encompasses educational aspects that are not only related to

general education but also technology and the acquisition of attitudes, practical skills, and occupational awareness in various sectors of social and economic life. Although different countries manage TVET in different ways, all TVET programs are recognized to focus on poverty alleviation, peace promotion, environmental conservation, quality of life improvement, and long-term development (UNESCO, 2002). To achieve all of these goals, TVET programs aim to increase individuals' employability so that they can work for the common good of the community and, by extension, for long-term sustainability.

TVET encompasses a wide range of occupational sectors, services, production, and livelihoods, as well as education, training, and skills development (UNESCO, 2015). TVET, according to UNESCO (2015), is lifelong learning that occurs at the secondary, post-secondary, and tertiary levels. It is a type of education that combines ongoing training, work-based learning, and professional development that leads to certification. It also provides a variety of possibilities for skill development that are tailored to local and national situations (UNESCO, 2015). Transversal skills, literacy and numeracy abilities, learning to learn, and citizenship skills are among the other components of education and training that UNESCO attributes to TVET.

TVET refers to post-secondary education and training, which excludes degree and other higher-level programs that offer individuals with occupational or work-related information and skills, according to UNEVOC/NCVER (2009). Wahba (2013) describes TVET as non-academic technical education and practical training targeted at the development of apprenticeship knowledge and skills among individuals working in a variety of industries, as well as students enrolled in various TVET institutions. Wahba (2013) goes on to say that TVET is an educational system that focuses on job-oriented courses and training programs to help students transition from

secondary school to work and to provide qualified apprentices to the market. TVET, on the other hand, is defined by the Technical Education and Skills Development Authority (TESDA) (2010) as the education or training process through which students are exposed to technologies and related sciences, as well as practical skills related occupations in both formal and informal social and economic sectors.

The development of TVET is traced by UNESCO–UNEVOC (2017) to the international congress on TVET held in Seoul, the Republic of Korea, where the word was coined. It is said that Congress saw TVET as wide enough to encompass terminology like Workforce Education (WE) and Technical–Vocational Education (TVE), which were previously used to represent similar training and educational activities (UNESCO-UNEVOC, 2017). The choice to use the acronym TVET led to the creation of UNESCO-UNEVOC, a worldwide center dedicated to Technical and Vocational Education and Training.

The use of TVET has not been widely implemented. Nonetheless, policymakers around the world have begun experimenting with hybrid arrangements with other educational systems (Marope, Chakroun & Holmes, 2015). The <sup>2</sup>*baccalaureate professional* in France, for example, accounts for work experience in the field of specialization, similar to the <sup>3</sup>*Middelbaar beroepsonderwijs* in the Netherlands (Marope *et al.*, 2015). Apprenticeship content has been added to occupational training courses in Germany and Austria, as well as an emphasis on personal skills. Work education has been included in primary school standards in India, and pre-vocational

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<sup>2</sup> Baccalaureate professional – It is a French national academic qualification that students can obtain at the completion of their secondary education, by meeting certain requirements (“Baccalauréat,” 2022).

<sup>3</sup> Middelbaar beroepsonderwijs –translated to 'preparatory middle-level vocational education', (abbr. VMBO). It refers to a school track in the Netherlands that lasts for four years, from the age of twelve to sixteen. It combines vocational training with theoretical education in languages, mathematics, history, arts, and sciences. Sixty percent of students nationally are enrolled in VMBO (“ Middelbaar beroepsonderwijs,” 2021).

education has been included at the lower secondary level to sensitize students on the world of work (Marope *et al.*, 2015). The Republic of Korea, the Russian Federation, the United States of America, and Iraq are among the countries that have implemented a hybrid system involving TVET in their educational systems.

### **2.2.2 TVET and Entrepreneurial Skills in Kenya**

Even before the entrance of European missionaries in the 18th century, Kenyans possessed technical and vocational skills. Building houses, pottery, axes, hoes, cooking utensils, agricultural implements, knives, and spears were among the skills that had already been ingrained and were being passed down through the generations through a traditional apprenticeship system (Okaka, 2001; Simiyu, 2009). The arrival of Indian businessmen and laborers, prompted by the decision to build the Kenya–Uganda railway in the 1890s, was instrumental in the official training of craftsmen at Kabete Industrial Training Depot. Christian missionaries were also interested in seeing Kenyans have the necessary skills for railway repair (Okaka, 2001; Simiyu, 2009).

The Second World War, which lasted from 1939 to 1945 and saw an infusion of more complex equipment and machinery into Kenya, hastened the need for technical training in the country. Motor mechanics, drivers, carpenters, welders, builders, and clerks were all in high demand. The Mombasa Institute of Muslim Education was founded in 1948 to provide technical and vocational skills to Muslim students in East Africa (Okaka, 2001; Simiyu, 2009). Several industrial depots were converted to vocational schools in the early 1950s, and existing vocational schools were upgraded to secondary vocational schools in the early 1960s (Okaka, 2001; Simiyu, 2009).

Since then, numerous interventions have been used by educational systems to target skills training to improve employability and self-reliance. The interventions, on the other hand, have not yielded the intended skill development outcomes. One such initiative was the establishment of a policy requiring secondary schools to include at least one technical and vocational subject in their curricula. The failure of this initiative was caused by high enrolment rates and a lack of adequate funds (Okaka, 2001).

The Kamunge Commission Report of 1988 recommended that entrepreneurship training be taught in TVET institutions, prompting a campaign to incorporate EE within Kenya's educational system (Kamunge, 1988). According to UNESCO-UNEVOC (2013), entrepreneurial education combined with technical training is the most effective way to improve individual capabilities. As a result, TVET has gained traction in Kenya in recent years, with over 700 TVET institutions serving close to 46% of Kenyan youngsters who do not pursue higher education (UNESCO-UNEVOC, 2013).

Institutions providing technical and vocation education and training in Kenya have been classified into youth polytechnics, Technical and Vocational Colleges (TVCs), formerly called Technical Training Institutes), Institutes of Technology (IT), and National Polytechnics, among other categories, to consolidate entrepreneurship skill development (Akala & Changilwa, 2018).

As a result, artisan training and, in some cases, <sup>4</sup>*juakali* apprenticeships are available at youth polytechnics. An Artisan certificate is given upon successful completion of an artisan course. TVCs and ITs offer craft and, in some cases, technician courses that

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<sup>4</sup> Juakali- (in Kenya) the informal jobs that people do to earn money, for example making useful things from metal and wood (Oxford Learner's Dictionary, 2022).

qualify one to be awarded a craft certificate in the former case, and a technician diploma in the latter case. National polytechnics focus on courses touching on technician and technologist careers which qualify an individual to be awarded Technician Diploma and Technologist degree when the host institution liaises with universities (Akala & Changilwa, 2018). TVET's mandate is to reduce unemployment in Kenya by promoting self-employment through artisan, craft, technical, and technological skills, which are needed in both the informal and formal sectors (MoHEST, 2009).

### **2.2.3 Entrepreneurship in the Tourism and Hospitality Industry**

Entrepreneurship in the tourism and hospitality industry, are known to practically come in diverse forms which include but are not limited to restaurants offering organic foods; agri-tourism farms; cafes and restaurants associated with families; homestays; economy hotels; bed and breakfast ventures, gift shops, boutique hotels, travel agencies, farm attractions, car rental companies, and other retail outlets which specialize in specific needs of diverse tourists (Lee–Ross & Lashley, 2010). With emerging trends in tourism developments, coupled with different tourist motivations and industrial competitions, scholars point towards entrepreneurship as the key to the survival of the tourism and hospitality industry (Pirnar & Bulut, 2012).

It is argued that unlike the pro-activeness in entrepreneurship elicited in other industries, the hospitality industry has uncharacteristically evoked low involvement in approaches geared towards entrepreneurship (Koh & Hatten, 2002). However, evidence shows that in the decade spanning from 2005 to 2010, entrepreneurship has gained momentum not only in SMEs but also in global tourism chains (Chang, 2011). Pimar and Bulut (2012) point out that, while entrepreneurship is gaining root in the

hospitality industry, tourism entrepreneurs exhibit a challenging uniqueness in the sense that their motivation leans towards non-economic motives and lifestyles previously associated with the small business sector.

Despite this, tourism and hospitality entrepreneurs have been associated with traits such as; strategic vision, a tendency to be financially independent, innovativeness, risk-taking, will to adopt, and customer orientation (Marchant & Mottier, 2011). Although these traits are similar to those shown by entrepreneurs in other industries, the consensus is that hospitality entrepreneurs depict specific public relations, social, communication, and marketing skills (Hollick & Braun, 2005), and are keener on quality service performance (Tajeddin, 2012). Processes in tourism entrepreneurship are as a consequence, said to be successful due to the impact of distinguished skills in communication, marketing, and innovative abilities (Moriarty *et al.*, 2008). Rimmington, Williams, and Morrison (2009) postulate that trying on new tourism entrepreneurship, leads to the introduction and production of diverse types of innovative applications and types of tourism in the hospitality market. They point to gastronomy tourism in localities, adventure tourism in rural settings, soft tourism, dark tourism in localities, festivals and events, agri-tourism farms, eco-tourism packages in regions, and family-based restaurants as some of the tourism types associated with novel tourism entrepreneurship.

Documentary evidence has shown that tourism and hospitality entrepreneurs contribute significantly to the development of destinations (Russel & Faulkner, 2004). However, Russel and Faulkner, (2004) contend that tourism entrepreneurship can only flourish under the motivation of an environment that promotes economic, social, and political conditions. They argue that like in the case of other industries, individuals

undertaking tourism entrepreneurship have to take advantage of existing opportunities and market conditions to innovate irrespective, of the competition that may exist between individual entrepreneurship and corporate entrepreneurship (Russel & Faulkner, 2004).

Power, Domenico, and Miller (2017) support the competition narrative by noting that, tourism and hospitality entrepreneurship is often defined by the nature of their smallness and their informal and flexible manner. Postulations show that most tourism and hospitality entrepreneurs are pulled by factors such as market potential, the allure for their own business, extra income, retirement preparation, and inherited venture (Ahmad, Jabeen & Khan, 2014). Ahmad *et al.*, (2014) also identify personal satisfaction, personal interest, fun working with people, and encouragement by the community as the push factors associated with tourism entrepreneurship. Demographic factors such as gender, age, income together with factors like fear to fail, entrepreneurial ability, perceptions of what opportunities are, and networking are at the center of the odds of tourism entrepreneurship (Ramos–Rodriguez, Medena-Garrido & Ruiz-Navarro, 2012). In addition, several scholars (Nimalathasan & Achchuthan 2013; Mustapha & Selvaraju 2015; Desjardins & Ederer 2015) have found a moderation nexus between student socio-demographics, especially gender, family entrepreneurial background, prior entrepreneurship experience and skills development in the tourism and hospitality entrepreneurship. *Section 2.4* of this study presents a detailed discourse on the relationship between the student socio-demographics and acquisition of entrepreneurial skills in tourism and hospitality.

In Kenya, entrepreneurship in the tourism and hospitality industry is mainly practiced in the coastal towns which, host renowned investments owing to their popular status of attracting not only foreign tourists but local ones as well (World Bank, 2010). The

World Bank (2010) points out that the presence of a large number of tourists presents locals and other individuals' opportunities for entrepreneurship. The World Bank contends that locals perceive tourists as cash cows and many have migrated to the coastal town, where they have taken on small-scale tourism entrepreneurship in ventures such as fishing, beach boy, small dhow sea sails, and mangrove expeditions among others. Evidence shows that despite the enormous business opportunities offered by the tourism and hospitality industry particularly on the Kenya coast, the external management, and control of tourism establishments have denied locals a competitive edge in the industry that is largely 'knowledge-based' (Akama & Kieti, 2007). As a consequence, most tourism entrepreneurs operate small businesses that are often short-lived. In most cases, tourism entrepreneurs in Kenyan coastal towns are motivated by a desire to make a living (Van der Sterren, 2008).

The major hospitality categories available in Kenya are delineated into three categories (Transit hotels, 2016). They include but are not limited to, the Food and Beverage sector, which is Kenya's hospitality industry's largest. This industry offers entrepreneurship opportunities in the form of high-end restaurants, fast food joints, and catering establishments, among other things. Transit hotels (2016) identified accommodation as another important sector in Kenyan hospitality. Lodges, hotels, and bed and breakfast businesses are examples of investments in this category. The third category is the travel and tourism industry, which may account for the majority of tourism entrepreneurship opportunities (Transit hotels, 2016). According to reports from Transit hotels, the food and beverage area has continued to thrive in recent years, attracting both local and foreign companies. It also ranks as Kenya's largest hospitality category (2016). This study focused on the food and beverage category owing to the understanding that the sector has continued to flourish in the recent past.

#### **2.2.4 Entrepreneurial skills in Food and Beverage Sector**

Dietary supplements, foods, and drinks are produced, manufactured, processed, sold, and served by enterprises in the food and beverage sector (Nestle, 2013). According to Luque *et al.*, (2017), F&B is a food and animal nutrition-focused sector that encompasses the processes of designing, building, maintaining, and supplying solutions to clients. The food sector, it is claimed, has undergone fast changes as a result of the industrial revolution (Karacay, 2018). The sector, according to Karacay, is evolving novel production techniques that have experienced an infusion of complete or partial automation through technology that allows devices along the value chain to connect autonomously. The sector, according to Bughin *et al.*, (2018), has necessitated the development of important skills such as social, higher cognitive, emotional, and technological rather than basic cognitive, manual, and physical abilities.

According to the Swiss École hôtelière de Lausanne (EHL) group, a food entrepreneur is someone who starts a firm in the food or culinary industry (EHL, 2020). Food entrepreneurs can use a combination of business, social, and food entrepreneurship to address difficulties in the food system. The group points out that the food and eating industry's creative expansion has led to food sector leaders embracing technology. Consumer preferences are also moving in favor of direct-to-consumer shopping, with culinary applications extending beyond meal/grocery delivery to personalized services (Swiss École hôtelière de Lausanne, 2020). According to this concept, food entrepreneurs possess both hard skills related to functions and important to completing technical tasks, as well as soft skills relevant to multi-cultural hospitality company situations.

According to Amato (2020), the food and beverage business is rapidly expanding, with new prospects for graduates to develop all the time. Nonetheless, according to Amato, these graduates must demonstrate transferrable talents, which can be divided into hard, technical, and soft skills. Management of staff, employee scheduling, inventory management, and recipe formulation are among the major hard skills required of an F&B entrepreneur, according to Amato. Experience with point-of-sale (POS) software and excellent math abilities are among the technical skills required, while customer service savvy, flexibility, teamwork, dispute resolution, and empathy are among the soft skills required (Amato, 2020). Soft skills, according to the Kenvale College of Hospitality Cookery and Events, are vital talents for the hospitality industry. Team leadership, coaching, problem-solving, and influence are identified as critical soft skills (Kenvale, 2020).

The capacity to develop rapport within a team, according to the college, fosters a favorable climate that encourages listening and cooperation. Furthermore, mentoring team members to improve competency and job happiness could be critical to entrepreneurship in the hospitality industry. An entrepreneur in the hospitality industry should also be able to solve problems. It should be noted that the hospitality industry is heavily reliant on perception and service, which means that employees and customers should receive the best possible treatment. Finally, the college emphasizes the role of entrepreneur influence in molding employee performance and behavior, however only through mutual feedback (Kenvale, 2020).

Several scholars (Kenvale College, 2020; Vulkov, 2022 & Institute of Hospitality, 2022) identify several hard skills associated with hospitality management, emphasizing that such skills are specific, teachable, and easily measured and that they

frequently rely on management role specifications. Hard skills such as food and beverage management, business acumen, sales and marketing skills, hotel operations competency, and human resource management are identified in this regard. According to Kenvale, food and beverage management is a skill that entails a thorough understanding of the foods, wines, and other beverages available. Furthermore, it necessitates knowledge of food safety. Business acumen, which combines financial management and business planning skills, is also important; sales and marketing entail the ability to use, monitor, and measure the success of various marketing channels. Human resource management abilities, according to the institution, frequently blend soft skills in leadership with practical ability in personnel recruitment, vetting, and punishing.

### **2.3 Entrepreneurship Education Subject**

Entrepreneurship development is viewed as a critical component in a country's economic success (Barringer & Ireland, 2012). It is believed, for example, that a country's overall production can be improved by entrepreneurship's creativity and invention, as well as the wealth creation and resultant reduction of unemployment levels (Ikegwu *et al.*, 2014). As a result, programs aimed at acquiring entrepreneurial skills have been introduced into educational institutions around the world, to impart the knowledge needed to exploit entrepreneurship prospects that could eventually lead to economic development (Emaikwu, 2011). Furthermore, it has been established that the acquisition of necessary skills is essential for individuals to take advantage of entrepreneurship chances to gainfully employ themselves (Ekpe *et al.*, 2012).

According to Hahn *et al.*, (2017), the primary goal of EE's subject was to encourage students to start their businesses; however, there has lately been a paradigm change

from this narrow approach to a larger idea that views entrepreneurship as a way of thinking and acting. According to Hahn *et al.*, (2017) citing a report by the European Commission (2008, pg.7) ‘the benefits of EE are not limited to start-ups, innovative ventures, and new jobs’ but rather to ‘an individual’s ability to turn ideas into action and it is, therefore, a key competence for all, helping young people to be more creative and self-confident in whatever they undertake’. Hanh and colleagues conclude that the essence of EE is to stimulate entrepreneurial lifelong learning.

In support of innovation and employability, UNESCO–UNEVOC emphasizes the growing importance of broad-based entrepreneurial learning (UNESCO–UNEVOC, 2019). According to UNESCO-UNEVOC, entrepreneurial learning is gaining global recognition for its ability to foster capabilities that are vital for work and life that may be obtained through the TVET curriculum. The ability to use transformative talents, such as problem solving and creativity, is widely agreed to be the money of the future (World Economic Forum, 2015). Clemensson (2009) agrees that investing in national education creates a pathway for the development of youth with a positive attitude and habits toward entrepreneurship, as well as promoting an entrepreneurial culture.

Teaching ‘*about*,’ teaching ‘*for*,’ and teaching ‘*through*’ are three methods to EE identified by O’Conor (2013). It is hypothesized that teaching ‘*about*’ is primarily used in higher education institutions, is content-rich, and frequently adopts a theoretical approach (Mwasalwiba, 2010). Teaching ‘*for*,’ on the other hand, is seen as a strategy that is occupationally orientated and tries to impart necessary skills and information to aspiring entrepreneurs. Teaching ‘*through*,’ according to Kyro (2005), is an immersive, process-based approach that exposes students to real-world entrepreneurial learning. According to Lackeus (2015), the EE teaching ‘*through*’

approach leads to a broader definition of entrepreneurship and may easily be integrated into other general education disciplines to connect entrepreneurship experiences, processes, and traits to core subjects. According to Handscombe, Rodriguez-Falcon, and Patterson (2008), the *'thorough'* approach to teaching is an ingrained one that is appropriate for all students regardless of their degree of training.

Lackeus (2015); Lundqvist and Williams – Middleton (2013) uses John Dewey's *'learning-by-doing'* concept to characterize EE as *"learning-by-creating-value."* They contend that EE is a pedagogical intervention capable of causing students to produce value. The Danish Foundation for Entrepreneurship defines EE as seizing chances and ideas and changing them to produce value for others. The Foundation believes that entrepreneurial education is concerned with the content, techniques, and activities through which students engage in the creation of knowledge, as well as the abilities and experiences that enable them to participate in the creation of entrepreneurial value (Moberg, Stenbera & Vestergaard, 2012).

The definitions of EE advanced by Lackeus *et al.*, (2013) and the Danish Foundation for Entrepreneurship include the following: created value should be novel, value creators should seize the initiative, relevant resources should be made available, the student who imitates the process should manage and own the value creation, and the student who imitates the process should assume the risk of failure (Okpara & Halkias, 2011). According to Baumeister *et al.*, (2012), value creation is a widespread phenomenon that offers enjoyment to people who are empowered to not only eke out a living, but also to be meaningful, participative, and involved in life fulfillment.

Various scholars continue to advocate for a paradigm shift away from traditional content-focused, passive, single-subject-based and toward an individualized active

multidisciplinary approach that is experiential, collaborative, project-centric, and process-based entrepreneurial education (Kirby, 2004; Kyro, 2005; Olila & Williams–Middleton, 2011). However, some researchers have found parallels between constructivist and EE approaches. Pedagogical approaches including project-based learning, cognitive apprenticeship, and adult learning, according to some experts, are similar to EE (Jarvis, 2006; Helle, Tynjala & Olkinuora, 2006).

Nonetheless, the EE subject is rapidly expanding in higher education institutions around the world, with 1200 business schools in the United States offering it in 2001 (Katz, 2008). In the recent past, policy pressure has been applied to educational institutions all over the world, resulting in enormous progress in the field of EE (Mwasalwiba, 2012). EE is now regarded as a critical component of both educational and industrial strategy throughout nations, according to Hytti and O’Gorman (2004).

As a result, the promotion of EE subject is based on the assumption that entrepreneurship leads to job creation and economic progress (Wong, Ho & Autio, 2005). Furthermore, because of the rising complexity, uncertainty, and globalization, experts argue that individuals need to be prepared with entrepreneurial skills through appropriate education and training (Lackeus, 2015). The ability of entrepreneurship to address societal concerns (Rae, 2010); empower companies and individuals to produce social value (Volkmann *et al.*, 2009); and provide a sense of participation, perceived significance, and motivation are also driving interest in EE (Surlemont, 2007).

The perception of EE as a means of achieving creativity, engagement, joy, and curiosity is viewed as a good place to start in education (Lackeus, 2013). It has been stated that EE subject has the potential to improve students' perceptions of the

relevance of subjects taught in school, boost their participation in school, and remove difficulties such as student boredom and eventual dropouts (Moberg, 2014a).

In the existing research, several models for entrepreneurial education progression have been offered. According to Gibb (2008), entrepreneurship is best incorporated into the educational system if it primarily centers on the student (at the foundational level), the subject (at the secondary level), skills (at the tertiary level), and discipline (at the university level). The Danish Foundation for Entrepreneurship, on the other hand, proposes four aspects in which educators, regardless of educational degree, must anchor entrepreneurship instruction (Rasmussen & Nybye, 2013). According to the Foundation, EE should emphasize learners' practical engagement through teams in which they create value for one another; encourage creativity and innovation; encourage interaction with the outside world, including the development of societal cultures, professional actors, and markets; and aim to instill attitudinal attributes such as self-confidence, tolerance, and risk of failure.

Another progression model holds that entrepreneurial activity produces a wide range of value, not just economic value and that there is an entrepreneurial mindset that favors value creation as well as a generic methodology that can be applied to any situation (Blenker *et al.*, 2011). They argue that the EE subject should include an understanding of entrepreneurship as a daily practice. To maximize learners' entrepreneurial attitudes, Blenker *et al.*, (2011) recommend four building blocks that educators should invest in. The first block is to allow students to create entrepreneurial stories based on their personal experiences to develop the skill of identifying entrepreneurial opportunities. Second, students should be guided toward

developing value creation skills by reflecting on discords and problems in their own lives.

Blenker *et al.*, (2011) identified the third block as allowing students to develop entrepreneurial identity by transforming their imaginary thoughts of becoming entrepreneurs in the future. Working in interdisciplinary teams that expose students to entrepreneurial opportunities is the fourth and final block, which allows students to develop 'team-efficacy.'

This study claims that the success of EE subject is contingent on not only on the selection of an appropriate model but also on the instructional elements namely the content, learning techniques, learning resources, and evaluation methods. Even though efforts have been made, and continue to be made, to decipher the concept of EE, more recent studies have yet to come up with a universally accepted definition.

Mwasalwiba (2010), for example, emphasizes the concept's interchangeability between enterprise education, EE, and entrepreneurial education. EE, on the other hand, is viewed by Kozlinska (2016) as a support framework through which individuals build new companies for themselves or paid employment. Mwasalwiba (2010) defines EE as an educational pedagogy through which an individual's values, behavior, attitude, and intentions are shaped to enhance awareness and appreciation of the role entrepreneurship plays in society, after noting the lack of uniqueness in the names used. EE, according to Rengiah (2013), is defined as an institutions' attempts to foster entrepreneurship by providing adequate curricula and emphasizing necessary teaching methodologies. According to Fayolle and Gailly (2008), EE encompasses all activities aimed at cultivating entrepreneurial mindsets, skills, and attitudes. In their definition, Sadeghi *et al.*, (2013) in their definition regard entrepreneurship education

as an action taken on purpose to stimulate critical thinking needed for generating creative and innovative business ideas.

Despite the lack of agreement in defining EE, the current study inclined toward Fayolle and Gailly's (2008) definition, which stated that an ideal and inclusive education should consider a large audience; be focused on teaching pedagogies, content, and objectives. Following that, this research divided EE subject into four instructional elements namely; content coverage, learning techniques, learning resources, and evaluation methods. The aspects are discussed in detail below.

### **2.3.1 Content as an Instructional Element of EE**

The content of a curriculum refers to the sum of all facts, themes, beliefs, and topics, generally grouped under subject strands and informed by required values, skills, knowledge, and attitudes, and used to form the basis of instruction (UNESCO IBE, 2013). The content is carefully chosen depending on the reason for the learning, how authentic or valid it is, and how well it serves the trainees' interests and welfare. Other considerations in content selection include content utility, learner comprehension, and learner empowerment; resource optimization; content feasibility depending on resource and time availability; content relevance; and importance of the learning process. According to Syomwene *et al.*, (2017), curriculum developers must consider the above elements if the chosen content is to maximize learning experiences.

Arguments over the outcomes of EE content are numerous and nuanced. The three generic themes of EE provision are theoretical-oriented courses that teach (1) "*about*" entrepreneurship (Piperopoulos & Dimov, 2014) to increase awareness of entrepreneurship, encouraging students to choose entrepreneurship as a potential career choice (Fayolle & Gailly, 2013), and considering self-employment (Klapper &

Tegtmeier, 2010); and practical-oriented courses that teach (2) "for" entrepreneurship (Piperopoulos (Bridge, Hegarty, & Porter,2010).

The content of EE subject has been identified as a crucial factor in EE's ability to foster entrepreneurial abilities (Syed, 2015). Syed contends that, in addition to the content, instructor experience plays an important part in the success of acquiring entrepreneurial skills. Questions have been raised about the relevance of the content of EE taught at Kenyan TVET colleges for properly nurturing entrepreneurial abilities required to impact the Kenyan economy (Ngware *et al.*, 2019). They contend that the content used is out of date, having been created in 2006, and does not address the present economic climate.

On the one hand, Fayolle and Gailly (2008) argue that entrepreneurship content should be designed in such a way that it can cover skills and knowledge related to aspects such as the *what* of being an entrepreneur (*know-what*); the ability to handle diverse situations (*know-how*); the capacity to network (*know-who*); the ability to contextualize psychology and behavior of entrepreneurs (*know-why*); and the intuition to know when to seize entrepreneurial opportunities (*know-when*) (know-when).

The *know-what* knowledge relates to understanding what one must do to make decisions and act in a particular way; *know-how* knowledge, on the other hand, refers to entrepreneurial abilities and skills obtained via learning-by-doing (Garud, 1997). In entrepreneurship, *know-who* knowledge relates to social contacts and helpful networks. Furthermore, *know-why* refers to information gained via research into the principles and theories that underpin a phenomenon (Garud, 1997) of what influences human behavior and actions, as well as entrepreneurs' attitudes, values, and drive.

Finally, *know-when* refers to intuition about the time in one's life when it is both possible and desirable to engage in entrepreneurial activity.

The question, therefore, becomes whether EE provided by Kenyan TVET institutions can instill required entrepreneurial capabilities. This dilemma derives from the fact that training in Kenyan TVET institutions is not geared to certain economic sectors, but rather covers a wide range of topics. EE material in TVET colleges is geared to certificate and diploma levels and cuts across all professions, including sciences, business, and humanities (Republic of Kenya, 2012).

The ability of the EE content to sufficiently equip students to practice entrepreneurship is a major source of worry in TVETs in Kenya. According to the 2006 syllabus, EE is only taught for 99 hours in module one, which is the starting level and only exposes students to theoretical knowledge. The duration for coverage of practical learning by developing a business plan is six months. Furthermore, while both theory and practical-oriented core courses are tested for three to six hours, the entrepreneurship project is left open for evaluation (Republic of Kenya, 2006). It is not clear whether this duration is sufficient to impart students with entrepreneurial skills.

Furthermore, the topics of EE content are generic for certificate and diploma level of training in all professions ranging from business, sciences and humanities (Republic of Kenya 2012). The content is not tailored for a particular specialization, but offers a range of common topics to all specializations in technical and business fields. The generic content may not offer students tailored training in line with special requirements of each field to correspond to the diversity of the economic fields (Mwasalwiba 2010).

This study aimed at examining the influence of content coverage on the learning of desired entrepreneurial skills by assessing the duration of coverage, attendance to classes and the relevance of the topics covered according to the EE Syllabus (Technical Education Programmes Syllabi and Regulations, Kenya, 2006). The conceptualization was necessary to determine the parameter that accounts for the majority of the variance in the variable during the Principal Component Analysis (PCA), in order to provide a statistically tested scale of measurement of EE content

### **2.3.2 Learning Techniques as an Instructional Element of EE**

Learning techniques have long been acknowledged as important instructional elements of methodologies that support educational ideals (Skutil *et al.*, 2016). Excursions, interviews, simulations, discussions, financial record preparation, role play, demonstrations, presentations, business plan preparation, case studies, brainstorming, and entrepreneurial trait self-assessment are all listed as common learning techniques in the EE syllabus developed in 2006 (Republic of Kenya, 2006).

Johnson *et al.*, (2015) argue that the best way to develop entrepreneurial skills is to expose students to real-world work environments where they can put what they've learned in class into practice. They suggest that because entrepreneurship is task-oriented, traditional techniques of nurturing specialized abilities should be abandoned in favor of task training. Students can embrace a culture of flexibility and experimentation in this way. Esmi *et al.*, (2015) agree with Johnson *et al.*, (2015) that the teaching of entrepreneurship should take into account the fact that it requires a creative rather than a mechanical process. As a result, EE, especially in this day and age, necessitates the adoption of novel and practical methodologies.

Recent research has focused on the various methods that can be used in EE. Syed (2015), for example, advocates for enhancing entrepreneurial skills through workshops, virtual start-up competitions, simulations, competitions involving the design of business plans, product development, internships, experiential learning, and knowledge exchange interactions, among other methods. Scientific visits, group discussions, case studies, group projects, simulations, interviews, individual projects, problem-solving, investment projects, project support, and official speech are among the pedagogical approaches identified by Arasti *et al.*, (2012) as the most effective in improving entrepreneurial skills. Learning from mistakes, writing business plans, gaining experiential learning for service and product sales, learning that is process-based rather than content-based, and problem-based learning, according to Oyelola (2013), are all important aspects of acquiring entrepreneurial skills.

Esmi *et al.*, (2015) divide entrepreneurship-related learning techniques into three domains: direct, interactive, and practical–operational domains. Direct domain, according to Esmi and colleagues, comprises of techniques that promote direct exposure and include, for example, guest entrepreneurs, official speeches, mentorship, video shooting and shows, entrepreneurship tutoring, extracurricular activities, small business mentorship, and the use of specialized lessons. Group discussions, networking, and learning from mistakes are all classified as interactive learning techniques by Esmi *et al.*, (2015). Meanwhile, the practical-operational domain includes techniques such as site visits, research projects and internships, training workshops, business planning, practical experience, investment projects, role-playing, studying nature, and starting businesses.

The study leaned towards Esmi *et al.*, (2015) conceptualization of learning techniques as direct, interactive, and practical–operational domains. The direct techniques were measured using traditional lecture method, invitation of guest speakers, industrial attachment, conducting seminars on EE and use of videos. The interactive learning techniques were measured using assignments, group discussions, case studies, and visitation to business organizations. Lastly, the practical-operational learning techniques were measured using development of business plans, research projects, role-plays, academic trips business activities startups.

### **2.3.3 Learning Resources as an Instructional Element of EE**

In the existing literature, learning resources are identified as being critical to the effective implementation of EE (Esmi *et al.*, 2015; Wibowo *et al.*, 2018). It is argued that a lack of adequate resources limits teaching effectiveness, lowering students' self-efficacy (Mkala & Wanjau, 2013). The argument is that institutions should recognize that adequate and high-quality resources are key to providing quality EE that fosters creativity and the acquisition of entrepreneurial skills (Wibowo *et al.*, 2018). Institutions that want to teach entrepreneurial skills should prioritize investing in high-quality resources.

Furthermore, studies have shown that the nature of EE is to go beyond classroom learning, which puts pressure on resources (Fayole & Gailly, 2008; Mkala & Wanjau, 2013; Rengiah, 2013). According to Bwisa (2017), institutions should use information resource centers to expose students to start-up businesses such as business incubators, which can help them develop entrepreneurial skills. Equipment, trainers, finance, internet networks, and literature materials, according to other scholars, are critical in

facilitating the acquisition of entrepreneurial skills (Esmi, *et al.*, 2015; Fayolle & Gailly, 2008; Wibowo *et al.*, 2018).

The introduction of EE subject in Kenyan Technical Training Institutions was accompanied by suggestions for the establishment of small business centers within the institutions, which could be used to connect theory to practice (Mkala & Wanjau, 2013). These, however, have not worked out as planned. Mkala and Wanjau have therefore called for the creation of an independent EE department that would be in charge of coordinating networking opportunities as well as providing the necessary resources. Rather than relying solely on internal resources, they advocate for networking between TTIs and local business communities.

Despite this, Kenyan TVET institutions continue to face a scarcity of critical resources such as qualified technical trainers. There is a shortage of universities that offer EE, according to the report. As a result, the majority of trainers who handle EE have specialized in other disciplines and lack the necessary skills to handle the subject (Republic of Kenya, 2012). With strained infrastructure and insufficient trainers, increased enrolment in TVET institutions further complicates the situation (Republic of Kenya, 2012).

In view of the importance of resources in the successful implementation of educational programmes, this study examined the direct effects of learning resources utilized in EE on perceived entrepreneurial skill acquisition. The study conceptualized learning resources in four dimensions of information technology, human resources, reference materials, and business and financial support. The information technology dimension was measured by internet connectivity, and audio visual (projectors and computers). The human resources was evaluated using EE tutors, EE mentors and EE

guest speakers. The reference materials were assessed using sample of business plans, textbooks, teaching manuals, journals and magazines, and articles in newspapers. Lastly, the business and financial support dimension was measured by information resource centres and business incubation laboratories.

### **2.3.4 Evaluation Methods as an Instructional Element of EE**

The term "evaluation" refers to a systematic procedure that allows for the assessment and judgment of whether an instructional program is effective, as well as the determination of the form and extent of behavioral change among students who have been exposed to the instructional process (UNESCO, IBE, 2013). Fayolle and Gailly (2008) emphasize the importance of evaluation by suggesting that the methodologies used in the process should encompass a wide range of EE subject objectives. Despite this, academics have emphasized that developing an optimal evaluation method that can give adequate evidence on students' acquisition of entrepreneurial abilities is a difficult undertaking (Mkala & Wanjau, 2013; Mwasalwiba, 2010).

Fayolle and Gailly (2008), motivated by the lack of clear criteria for evaluation and tools for effective measurement of EE, advocate for the creation of an effective evaluation framework for EE that takes into account the goal of entrepreneurship learning as well as student characteristics. As a result, specific knowledge necessitates a level of interest, the availability of resources and abilities, the level of awareness or intent, the degree of motivation, and involvement, among other elements that define evaluation criteria. The development of a policy to guide the assessment and evaluation of EE is required for theoretical-oriented courses that teach "*about*" entrepreneurship (Piperopoulos & Dimov, 2014) and aim to increase awareness about

entrepreneurship, encourage students to choose entrepreneurship as a potential career choice (Fayolle & Gailly, 2013).

Based on whether the effects are short-term or long-term, indicators for evaluating EE have been divided into two categories (Mwasalwiba, 2010). Exam scores, transition rates, student happiness, attitudinal shift on perceptions, and intents towards entrepreneurship are among the short-term measures of evaluation, according to Mwasalwiba (2010). Long-term indicators, on the other hand, include the type and number of startups, inventions, technologies, job creation, graduate employment rates, and societal contribution. Nonetheless, Mwasalwiba adds that short-term indicators based on behavioral notions appear to be prioritized at the moment, making it difficult to discriminate between the effects of educational interventions and the effects of post-graduation contextual experiences.

Written exams are frequently used in Kenya to assess EE subjects (Mkala & Wanjau, 2013; Mwasalwiba, 2010). Continuous and summative evaluations are undertaken based on the EE subject syllabus published in 2006. Continuous evaluation accounts for 30% of the score, while summative evaluation via written examinations accounts for 70%. The combined score is rated in terms of distinction, credit, pass, refer, or fail when the examination is completed. Refer scores result in retakes of the specific subject's examinations until one is successful (Republic of Kenya, 2006).

Written tests have been criticized for their failure to accurately and efficiently measure the learning of entrepreneurial skills in EE (Mwasalwiba, 2010). Mwasalwiba contends that, on the contrary, written tests effectively reflect only the amount to which entrepreneurial knowledge has been grasped, students' capacity to recollect concepts, and some indication of students' enthusiasm in EE subject. Syed

(2015) recognizes the use of business plans or projects as a realistic and successful strategy to evaluate the acquisition of entrepreneurial abilities, given the constraints of written exams.

This research adapted Pittaway and Edwards' (2012) conceptualization of evaluation methods based three key entrepreneurship learning outcomes of learning about, learning in, and learning for. Under this framework, the study employed end term sit-in examinations, participation in class by answering questions, sit-in tests, and writing of essays/term papers on entrepreneurship to measure the *learning about* outcomes of EE. The *learning in* outcomes were measured using group/individual presentations, case studies and interpretation of financial statements. Lastly, the *learning for* outcomes were evaluated using assessment of a business plans, business reports, entrepreneurship projects, entrepreneurship attachment field reports and business activities.

#### **2.4 Socio-Demographic Characteristics as a Moderator of EE and Acquisition level of Entrepreneurial Skills**

Individuals' socio-demographic features are frequently considered as social components and attributes that help them compete (Abdullahi, 2019). According to Abdullahi, socio-demographic status is determined by a motivational construct that transcends any specific attribute and establishes a person's socio-demographic niche function. Abdullahi considers traits like employment, family, and education to be universal and applicable to all people, as well as age and gender to be universal and applicable to all populations.

Previous research has looked into the socio-demographics of study populations to investigate how they influence diverse occurrences. Various medical-related

phenomena, such as disease occurrences, lifestyle diseases, disease severity, and disease susceptibility, have been found to link with socio-demographics (Bai *et al.*, 2015). Several studies in the existing literature on entrepreneurship point to the effects of socio-demographics on entrepreneurship practices.

It has been shown, for example, that demographic characteristics such as gender and previous experience, as well as family factors such as self-employment and moving to metropolitan areas, all boost the likelihood of students becoming entrepreneurs (Nguyen, 2018). Educational attainment, marital status, age, gender, and having a parent who is an entrepreneur have all been linked to a proclivity for entrepreneurship, however only in the Malaysian context (Rashed *et al.*, 2019). Furthermore, gender is positively correlated with innovation–orientation, whereas educational level is positively correlated with resource leveraging, customer–intensity, innovation orientation, and risk-taking–orientation (Penpece, 2014).

There are few explanations for gender variations in entrepreneurship. Some link the disparities to past entrepreneurial experiences, income, and economic standing (Nimalathan & Achchuthan 2013). However, studies (Thrikawala 2011; Trebar 2014) have refuted these claims, claiming that men are twice as likely as women to pursue business creation and ownership as a career, even when controlling for factors such as household income, wealth, economic status, demographic profiles, and human capital (e.g., work experience, level of education). Women, notably female students, have a less positive attitude toward entrepreneurship and a lesser willingness to establish their firm than men (Trebar 2014).

The reasons for these inequalities, according to Trebar, are due to women having fewer opportunities to interact with female role models who are engaged in

entrepreneurial activity, restricting their capacity to be more enterprising than their male counterparts. Nonetheless, it is said that, as compared to males, females are more interested in EE to improve their skills, face obstacles in their jobs, and create networks with local businesspeople (Mustapha & Selvaraju 2015).

Skills acquisition and proficiency development have also been linked to socio-demographics. According to Desjardins and Ederer (2015), socio-demographic indicators like immigration status, education, and age were all highly associated with proficiency. Gender was a role in the development of employable skills among management students, according to Bholra and Dhanawade (2013). Given the importance of socio-demographics in entrepreneurship and skill acquisition, socio-demographics were thought to have a direct impact on the acquisition of entrepreneurial skills in the food and beverage sector and were used as one of the constructs in this study, measured by gender, family entrepreneurial background, and prior entrepreneurship experience.

## **2.5 Theoretical Framework**

Experiential based methods of EE learning such as interviews with practicing entrepreneurs, the usage of extracurricular activities, and the development of business strategies, are all important in honing entrepreneurial skills. This research was anchored on two experiential learning theories: Fayolle and Gailly's EE teaching model, and DeKeyser's skill acquisition theory to link the relationship between EE instructional elements and the acquisition level of entrepreneurial skills.

### **2.5.1 The Teaching Model for EE**

Fayolle and Gailly (2008) presented an entrepreneurship teaching model that summarizes the design and the implementation of entrepreneurship teaching

programs. The teaching model incorporates two dimensions: ontological and educational. The ontological dimension proposes that there is no universally accepted definition of entrepreneurship in an educational setting. For instance, entrepreneurship may designate attitudes such as autonomy, creativity, innovation, risk-taking (Pretorius *et al.*, 2005), or the act of venture creation (Timmons & Spinelli, 2004; Hahn *et al.*, 2017).

Other scholars (Mwasalwiba, 2010; Hahn *et al.*, 2017; Blenker *et al.*, 2011) defined EE as the development of entrepreneurial attitudes and skills as well as personal qualities (which necessarily are not directly focused on the creation of new ventures). The lack of universal definition is not per se an issue, as long as the EE meets the aims of the selected definitions. Consequently, Fayolle and Gailly (2008) proposed that entrepreneurship course should be based on a clear conception of how entrepreneurship is defined in the course.

The educational dimension identifies key interrelated instructional elements in the design and architecture of EE, addressed in the following sequence: (1) Why (objectives); (2) For whom (audiences); (3) for which results (evaluations); (4) What (content) and (5) How (methods/pedagogies). To begin with, the objectives of EE might change depending on the audience. The learning *for*, learning *about*, and learning *in/through* entrepreneurship are all possible objectives of EE (Hytti & O'Gorman 2004; Co & Mitchell 2006). Learning *for* aims to encourage students to start a business; learning *about* aims to expose students to a better understanding of the entrepreneurship phenomenon; and learning *in/through* aims at equipping students to become more innovative in their businesses or places of employment. In light of the various objectives of EE, Fayolle and Gailly (2008) recommended that EE should

comprehensively address the individual students' objectives and the society's objectives.

Secondly, Fayolle and Gailly (2008) acknowledged that students of EE have diverse socio-demographic characteristics and levels of involvement and aspirations in the entrepreneurial process. The differences in the students' characteristics influence the architecture and the implementation of EE. For instance, teaching EE to learners who are strongly committed to creation of their venture, professionals and other practitioners committed to the field of entrepreneurship will require a practical approach as opposed to students who have neither intention nor a concrete entrepreneurship project.

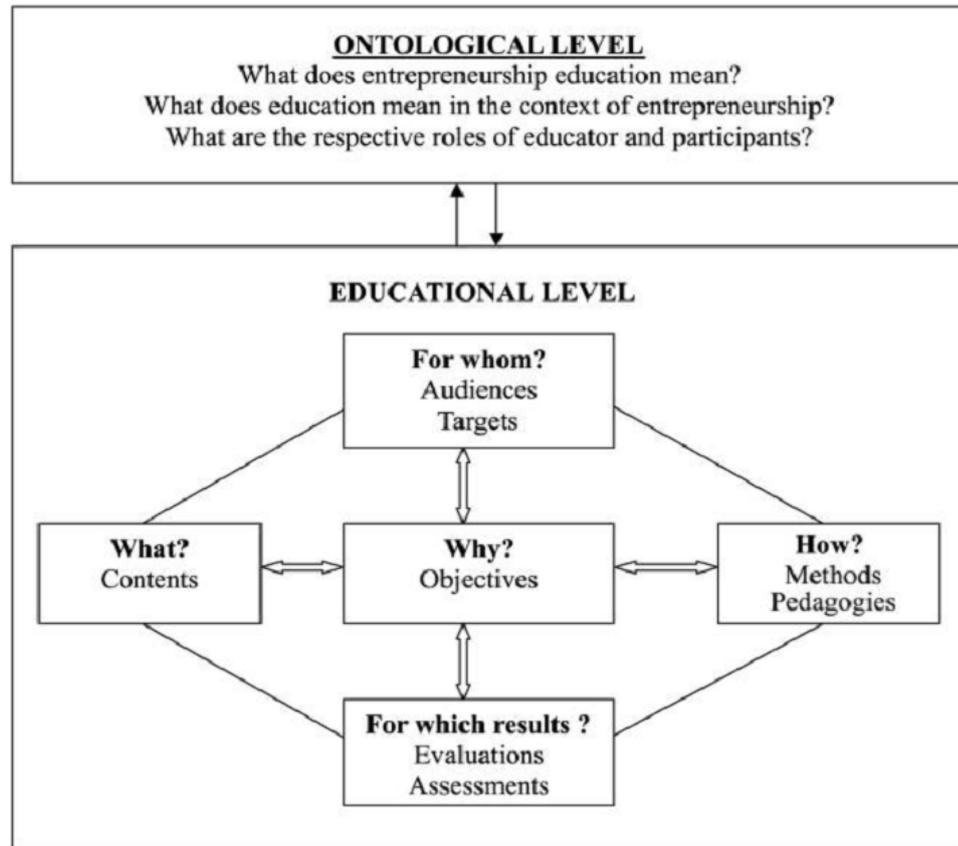
Thirdly, Fayolle and Gailly (2008) suggested the identification of a relevant evaluation criterion in line with EE objectives and the audience characteristics. The evaluation framework can adopt the two approaches of goal-based and/or systems-based approaches. Kirkpatrick's model evaluation is the most influential method of evaluating the goal-based approach. According to Kirkpatrick's model, evaluation should always be done in levels, beginning with level one (reactions), and move sequentially to level two (learning), three (transfer) and lastly, level four (results) (Winfrey, 1999). The most common system approach model that can be used in evaluation of EE is the input-process-output model (Bushnell, 1990).

Fourthly, the content is critical in orienting and structuring EE. Specifically, the content of EE can be categorized into professional dimension, theoretical dimension and the spiritual dimension. The professional dimension addresses the practical knowledge, or expertise acquired from EE, while the theoretical dimension refers to theories and scientific knowledge of EE. The spiritual dimension enables EE students

to position themselves in space and time for an entrepreneurial phenomenon. Positioning oneself in space consists of identifying the entrepreneurial situation(s), which are consistent with one's profile. Positioning oneself in time implies recognizing the moments in one's life when it is both possible and desirable to engage in an entrepreneurial project.

Finally, the "how" question of EE addresses the methods or pedagogy used to achieve EE objectives. Fayolle and Gailly (2008) recommended that the selection of the pedagogical methods for each EE should be driven by a priori efficiency regarding the objectives, the audience characteristics, the contents and the institutional context constraints.

While other models such as the Four-Component Instructional Design Model (4C/ID) would have underpinned the study, but the model is most influential in teaching general complex skills or professional competencies (van Merriënboer, 2019) unlike the teaching model that is applicable to specific EE situations at each level of skills, from novice to professional. Besides, the 4C/ID model does not acknowledge the contributions of the learner differences in the learning process. Fayolle and Gailly's teaching model addressed this weakness by postulating that learner social differences might influence the design and implementation of EE. Figure 2.1 depicts the EE teaching model.



**Figure 2.0: The Teaching Model for EE**

**Source:** Fayolle and Gailly (2008, pg.572)

### 2.5.2 DeKeyser's Skill Acquisition Theory

DeKeyser proposed the idea of skill acquisition in 1998, arguing that learners must be exposed to relevant opportunities to develop pragmatic meaning. Ellis (2009) elaborates on this, claiming that explicit information serves as a springboard for implicit knowledge. DeKeyser (2007) elaborated on the notion, claiming that basic principles inherent in skill acquisition are the precursors to learning varied skills and involve changes in behavior from initial impressions of knowledge to spontaneous, essentially effortless, fluent, and highly competent conduct. Other supporters of skills acquisition theory accept that the theory is neo-Piagetian in nature, combining parts of behaviorist and cognitive theories and that it fits under the category of human learning (Chapelle, 2009; Parziale & Fischer, 2009).

In establishing the idea of skill acquisition, DeKeyser (1998) leans toward three phases of skill development provided by other scholars. As a result, the first phase of skill acquisition, also known as declarative knowledge, entails providing the learner a novel task that necessitates a cognitively demanding performance, which is generally regulated by declarative knowledge. The learner is intended to participate in a variety of incremental *proceduralization*, which is a repetitive application of declarative information to the point that facts, concepts, and ideas no longer matter.

In the second phase, which DeKeyser refers to as procedural processing. Task-specific productions combined with stimulus-response connection practice lead to skilled performance. The automatic phase, often known as the third phase, entails performance that is not subject to conscious control. Performance is rather autonomous and procedural. After *proceduralization*, automaticity is attained when there is a reduction in error rate, reaction time, and interference with/from other jobs.

Because this study focused on the acquisition of entrepreneurship skills, DeKeyser's hypothesis was deemed ideal. The three steps were perceived to be appropriate in the development of entrepreneurial abilities. In the declarative level, for example, a new task requiring cognitive performance is assigned. This is precisely what is required in entrepreneurship, as one discovers a new opportunity that necessitates cognitive creativity or innovation. The second phase focuses on task-specific production, which necessitates practice with stimulus-response links.

Entrepreneurship in the food and beverage industry requires patience to offer rewards akin to the stimulus-response nature espoused in DeKeyser's skill acquisition theory. Meanwhile, the third phase corresponds to the independent and procedural nature of food and beverage entrepreneurship.

## **2.6 Empirical Review and Critique of Existing Literature**

The review and critique of existing studies focused on the direct effects of EE on skills acquisition on the one hand, and the moderating potential of social demographics on the other. The goal of this review and critique was to find existing gaps that the researcher could take advantage of.

### **2.6.1 The Relationship between EE and the Level of Acquisition of Entrepreneurial skills**

Rengiah (2016) examined how effective EE was at enhancing entrepreneurial intentions among Malaysian university students. Rengiah interrogated if teaching style, entrepreneurship curricular, university role, attitude, and stakeholder support as used in EE are associated with entrepreneurial ambition, fueled by the issue of employability in Malaysia. Rengiah (2016) found that students' purpose to select entrepreneurship was their prerogative and that they were self-motivated to get into entrepreneurship using the Structural Equation Model (SEM) and a sample of 464 final year students.

Although Rengiah (2016) contributed to knowledge by highlighting critical facets of EE such as teaching methodology, curricular, stakeholder support, student attitude, and university role, the study failed to show the direct impacts of these attributes on entrepreneurial intention. Furthermore, the study did not take into account the impact on entrepreneurial skill acquisition when gauging entrepreneurship intention. Rengiah's research also relied only on student questionnaires, implying that the study's target audience was solely students. Other stakeholders' perspectives were not taken into account in this way. There was also a need to repeat Rengiah's (2016) work in other contexts, given that it was conducted in Malaysian universities.

This study was undertaken in the context of Kenyan TVET institutions to account for the identified shortcomings. The study investigated the direct effects of EE instructional elements on the acquisition of entrepreneurial skills, as well as triangulating data collecting to include the perspectives of various stakeholders. The study also utilized a hierarchical regression technique to account for both direct and moderating effects.

In a separate study, Zhang, Dnysters, and Clodt (2014) investigated the influence of EE in predicting entrepreneurial intent among university students in China. The importance of entrepreneurship in economic development was the driving force behind their research. Zhang *et al.*, (2014) studied students from ten Chinese institutions and gathered information from 494 students who completed questionnaires. They found that EE had a favorable impact on entrepreneurial inclinations using the Probit Maximum Likelihood approach to data analysis. Exposure, on the other hand, has a detrimental impact on entrepreneurial inclinations.

Zhang *et al.*, (2014) study had comparable flaws to Rengiah's (2016) in that it depended solely on students' opinions and employed closed-ended questions. Furthermore, it was limited to universities in a context other than Kenya. The validity of the findings was perhaps the most significant restriction of the study, considering that the probit technique was used but only works in binary response circumstances. This study included many stakeholders from the TVET level of education to improve the applicability of the findings. The direct and moderating effects were investigated using a multiple regression analysis that works well with modified data from Likert scales. Data gathering was triangulated to improve the validity of the findings.

Kalyoncuoglu, Aydintan, and Goksel (2017) used an experimental technique to investigate how EE influenced entrepreneurial intention in Turkey. They concluded that EE had a substantial impact on entrepreneurial intention, with the experimental group displaying higher levels of entrepreneurship intents than the control group, using the judgmental sample technique and the pretest-posttest design. In retrospect, Kalyoncuoghi *et al.*, (2017) brought valuable information to the conversation around EE and entrepreneurial intent. Nonetheless, the findings' validity may not have been assured by the use of the judgmental sampling technique. Students were not given equal chances because this was a non-probability technique, therefore representativeness could not be defended. Furthermore, the possibility of researcher bias cannot be ruled out (Sharma, 2017). Although pretest-posttest designs are flexible and provide the best means of assessing change, they are vulnerable to internal validity challenges such as statistical regression and maturation (Salkind, 2010).

This study used a mixed-methods approach that incorporated convergent mixed methods and descriptive techniques to improve external validity and decrease threats to internal validity, taking into account the shortcomings identified by Kalyoncuoglu *et al.*, (2017). The researcher also wanted to duplicate the study in Kenya, despite the Turkish context being more established.

From a Spanish perspective, Barba-Sanchez, and Atienza-Sahuquillo (2018) investigated the role of EE in engineering students' entrepreneurial intentions. Barba-Sanchez and Atienza-Sahuquilla collected a sample of 423 engineering students and used an online questionnaire to obtain data without specifying the sampling techniques used. Again, without going into detail about how the data was examined,

they concluded that EE contributes to engineering students' entrepreneurial intentions in Spain. Despite Barba-Sanchez and Atienza-(2018) Sahuquillo's contributions to the understanding of EE and entrepreneurial intention, the implementation of a closed-ended structured online questionnaire has significant drawbacks. For starters, such a questionnaire does not allow for a more in-depth examination of the nature of the claimed causal linkages, and it may not achieve the requisite response rate (Nayak & Narayan, 2019). Second, collecting a sample from only one university makes it difficult to extrapolate the results.

This study focused on the food and beverage industry and included students from five TVCs to boost external validity. Furthermore, the study included a range of data gathering methodologies, allowing the researcher to investigate the causal relationship between EE and the level of entrepreneurial skill acquisition in greater depth.

From an African viewpoint, Ayodele (2017) examined how students regarded entrepreneurship instruction in terms of entrepreneurial goals at a Nigerian university. Ayodele used a sequential mixed-methods approach to show that curriculum content, pedagogy, teaching methods, university support systems, and trainer competence, all instructional elements of EE, were significant predictors of entrepreneurial intentions among Nigerian university students, fueled by the understanding that EE as a tool can spur entrepreneurial intent (Mwasalwiba (2010). Although Ayodele (2017) adds to current knowledge on how to make EE more effective in terms of instructional elements, his research leaves out some others. Furthermore, the study employs an over-studied academic setting.

Aside from the methodological flaws that have regularly surfaced in research, the empirical evaluation also indicates that the impact of EE instructional elements on

skill acquisition has not been thoroughly explored. Arasti, Falavarjani, and Imanipour (2012) focused on demonstrating that group projects, venture development projects, problem-solving, individual projects, and case studies were effective approaches for teaching entrepreneurship. Few studies appear to have explored the direct effects of basic instructional elements of entrepreneurship, such as resource materials, content delivered, learning techniques used, and evaluation methods used in TVETs in Kenya among F&B students, on level of skill acquisition especially from a TVET institution perspective. As a result, this study focused on the direct effects of the content presented, learning techniques used, evaluation techniques used, and learning resources available on the acquisition of entrepreneurial skills among F&B students in Kenyan TVCs.

### **2.6.2 Moderating Effect of Socio-Demographics**

In terms of the moderating potential of socio-demographic characteristics in entrepreneurial interactions, the existing evidence is minimal. However, some researchers have attempted to investigate how socio-demographic factors influence entrepreneurial ambitions. For example, in the Nigerian university context, Ekpe and Mat (2015) investigated the moderating potential of the social environment in the link between entrepreneurial orientation and female students' entrepreneurial intentions. Ekpe and Mat (2015) discovered that the social environment positively and significantly impacted the link between entrepreneurial inclination and plans for entrepreneurship among female students using a quantitative method with a sample of 120 final-year female undergraduate students.

While Ekpe and Mat (2015) provided valuable insight into how a 'perse' orientation to entrepreneurship was insufficient to ignite entrepreneurial intentions, the use of

entrepreneurial orientation to infer EEs created validity concerns. Furthermore, the current entrepreneurial landscape is more complex and sophisticated than it was in 2015 when Ekpe and Mat did their research. This study explored the moderating effect of socio-demographics on the relationship between EE and acquisition of entrepreneurial skills in the recent past, especially in light of Kenya's push for EE in TVETs.

In another study, Kimosop, Korir, and White (2016) examined demographic variables as mediators of the link between a firm's strategic competencies and its success using female-owned entrepreneurial ventures in Nairobi, Kenya. One of the most important findings was that age was the only factor that showed a negative and significant moderating influence. This study, because it was undertaken in a local setting, added to our understanding of the potential of Kenyan women entrepreneurs. However, crucial social elements such as the entrepreneur's background, and the importance of prior entrepreneurial experience were left out of the study. To cater to both male and female students, this study classified socio-demographics in terms of gender; family entrepreneurial background; and past entrepreneurial experience.

Nguyen (2018) studied the effect of socio-demographic characteristics in the inequalities between business students in the Vietnamese environment. Nguyen established, among other things, that entrepreneurial intentions were higher among males; similarly, students whose parents migrated to urban centers exhibited higher entrepreneurial intent; and that self-employment and prior experience also accounted for higher entrepreneurial intent, using a comparative approach that included both the t-test and one-way ANOVA approaches for the analysis.

Although Nguyen's (2018) findings suggest that these socio-demographic determinants have the potential to moderate entrepreneurial ambition, the study does not set out to investigate this, instead opting for a comparative method, which may or may not confirm moderation. Furthermore, Nguyen's research was carried out in a Taiwanese context, which differs from Kenya's in terms of entrepreneurial potential. Taking all of this into account, the goal of this study was to see how socio-demographic characteristics influence the direct effects of EE on the acquisition of entrepreneurial skills. Furthermore, the study aimed to make use of the Kenyan context, which had hitherto been overlooked.

Shukla, Banerjee, and Adidam (2013) used private label brands to investigate the role of socio-demographics in the relationship between customer psychographics and attitude. They discovered that consumer income had a substantial impact on bargain proneness; consumer income, education, and age had a large impact on end-of-aisle display proneness; and customers with low income and less education were always impulsive to brand attitude. Despite conclusively demonstrating that socio-demographic factors moderate in such connections, the sensitive nature of the F&B industry necessitated an examination of socio-demographic factors' moderating potential.

## **2.7 Summary of Knowledge Gaps**

Several knowledge gaps were identified and summarized in Table 2.1, based on a review of existing empirical studies (Rengiah, 2016; Zhang, Dnysters, & Cloodt, 2014; Kalyoncuoglu, Aydintan, & Goksel, 2017; Barba-Sanchez & Atienza-Sahuquillo, 2018; Ayodele, 2017) relating to EE and level of acquisition of entrepreneurial skill.

Rengiah's (2016) research found no evidence of socio-demographic characteristics having a direct impact on entrepreneurial ambition. Only questionnaires were used in the investigation. Because the study was done at a university, the findings of Rengiah (2016) cannot be utilized in a TVET context. Unlike Rangaiah's study, the current study measured the direct effects of EE instructional elements on the development of entrepreneurial skills in TVCs by triangulating data to include the perspectives of other stakeholders.

Zhang, Dnysters, and Cloddt (2014) investigated the role of EE in predicting entrepreneurial intention among Chinese university students and discovered that EE influenced entrepreneurial intention positively, while exposure influenced entrepreneurial intentions negatively. However, because Zhang *et al.*, (2014) study primarily focused on institutions in China, their findings may not apply to Kenya's hospitality and TVET sectors. The study relied exclusively on students' opinions and used a closed-ended questionnaire, the conclusions are limited, especially because the probit technique was used, which only works in binary response circumstances. To investigate direct and moderation effects, the current research used multiple regression and the Hayes Process Model. Data triangulation was used to strengthen the validity of the findings, which encompassed numerous stakeholders in TVET education.

Another study on the effect of EE on entrepreneurial intention was conducted in Turkey (Kalyoncuoglu, Aydintan, & Goksel, 2017). The experimental group had higher levels of Ep intentions than the control group, indicating that EE had a significant impact on entrepreneurial intent. The study relied on judgemental sampling, which could have thrown off the findings' validity. Because this was a non-

probability method, students were not given equal opportunities, hence representativeness could not be justified. To close this gap, the current study used a mixed-methods approach that integrated convergent mixed methods and descriptive techniques to increase external validity while reducing threats to internal validity.

Additionally, Barba–Sanchez, and Atienza–Sahuquillo (2018) revealed that EE has a beneficial impact on engineering students' entrepreneurial intentions. The study was conducted in Spain using a sample of 423 engineering students, hence the findings may not apply to Kenyan hospitality training. Furthermore, the study relied on closed-ended structured online questionnaires, which limit the depth with which the nature of the predicted causal linkages may be explored (Nayak & Narayan, 2019). The current study, unlike Barba–Sanchez and Atienza–Sahuquillo (2018), focused on the food and beverage setting and gathered students from five public TVCs to enhance the validity of findings at least in the Kenyan context. It used a variety of data gathering approaches to allow the researcher to investigate the causal relationship between EE and the level of entrepreneurial skill acquisition in greater depth.

Finally, using a sequential mixed-methods approach, Ayodele (2017) investigated students' perceptions of EE and entrepreneurial goals among Nigerian university students. Curriculum content, pedagogy, teaching methods, university support networks, and trainer competence were discovered to be important predictors of entrepreneurial intents in the study. However, other instructional elements including learning resources and evaluation methodologies were left out of the study. The academic setting was also utilized in the study. The knowledge gaps are listed in Table 2.1.

**Table 2.1 Knowledge Gaps**

<b>Author</b>	<b>Study focus</b>	<b>Methodology</b>	<b>Findings</b>	<b>Knowledge gaps</b>	<b>Action</b>
Rengiah (2016)	Effectiveness of EE in honing entrepreneurial intentions among students.	- Structural Equation Model (SEM)	- Intention to choose EP was students' prerogative, and that they were self-motivated to go into EP	- The study failed to show the direct impacts of these attributes on entrepreneurial intention. - Relied solely on questionnaires - University context	- Examined the direct effects of instructional elements of EE on the acquisition of ES. - Triangulated data collection to cover the views of other stakeholders. - Used the TVET context
Zhang, Dnysters, and Cloodt (2014)	Role EE in predicting entrepreneurial intention among university students in Chinese	- Target population- students from 10 Chinese universities - Data collected from 494 students using the questionnaire - Probit Maximum Likelihood approach for data analysis	- EE impacted positively on entrepreneurial intentions. However, exposure impacted negatively on entrepreneurial intentions	- Relied solely on students' views and used a closed-ended questionnaire - Focused only on universities - Doubts on the validity of the findings, given that the probit approach was employed yet it works in binary response situations	- This study used various stakeholders in TVET sector. - The regression approach was employed to examine direct and moderation effects. - To improve the validity of findings, data collection was triangulated.
Kalyoncuoglu, Aydintan and Goksel (2017)	Effect of EE on entrepreneurial intention in the Turkish context	- Experimental approach, - Judgmental sampling technique - Pretest-posttest design	EE impacted significantly on the entrepreneurial intention with, the experimental group depicting higher levels of EP intentions than the control group	- The use of judgmental sampling may not have guaranteed the validity of the findings. Being a non-probability technique, students were not given equal chances meaning that representativeness could not be defended.	- This study employed a mixed-methods design that combined convergent mixed methods and descriptive techniques to improve external validity and minimize threats to internal validity. - The researcher also sought to replicate the study in the Kenyan context noting the more developed nature of the Turkish context.

Barba-Sanchez and Atienza-Sahuquillo (2018)	- The role EE plays among engineering student's entrepreneurial intention from a Spanish context	- Sampling techniques and data analysis methods are not detailed. - Used a sample of 423 engineering students and online questionnaires to collect data.	- EE makes a positive contribution towards engineering student's entrepreneurial intention in Spain	- The use of a closed-ended structured online questionnaire does not allow for greater depth in exploring the nature of the hypothesized causal relationships (Nayak & Narayan, 2019). - By drawing a sample from only one university, it becomes difficult to generalize the findings.	- This study focused on the food and beverage context and drew students from five TVCs to improve external validity. - The study employed a variety of data collection tools which allowed the researcher to explore in-depth, causality between EE and the level of acquisition of ES.
Ayodele (2017)	Students' perceived EE in relation to the entrepreneurial intentions among Nigerian University students.	- Sequential mixed methods approach	Curriculum content, pedagogy, teaching methods, university support systems, and trainer competence are significant predictors of entrepreneurial intentions	- This study omitted an array of other instructional elements. - The study uses the university context	- Examined more instructional elements of EE such as learning resources and assessment and their influence on the acquisition of ES - Used the TVET context

## 2.8 Conceptual Framework

For this study, three constructs namely; entrepreneurship education (EE) subject, level of acquisition of entrepreneurial skills, and socio-demographic characteristics were developed. EE is recognized as an avenue through which students are through the categories of teaching ‘about’, teaching ‘for’ and teaching ‘through’ (O’Conor, 2013). According to Moberg *et al.*, (2017), EE is concerned with the content, methods, and activities utilized to involve students in the creation of value. This viewpoint is shared by Fayolle and Gailly (2008), who argue that EE must include teaching methods, content, and goals. As a result, EE was conceptualized as an independent variable in this study, including the content offered, learning techniques adopted, evaluation methods employed, and learning resources available at Kenyan TVETs (Fig 2.1).

Bacigalupo *et al.*, (2016) used Dekeyser's (2007b) skill acquisition theory to identify three crucial levels at which entrepreneurial abilities are acquired: declarative, procedural, and automatic. As a result, the dependent variable was conceptualized as skill acquisition level and was measured at three levels of declarative knowledge, procedural, and automatic. The declarative knowledge was assessed based on the students’ ability to recall and explain EE concepts such as the importance of entrepreneurship to society and individuals, factors that affect entrepreneurship, the history of entrepreneurship, myths associated with entrepreneurship, roles of an entrepreneur in an enterprise, role of ICT in entrepreneurship, forms of business ownership, process of entrepreneurship and entrepreneurial culture, behaviour, traits and intentions.

The procedural entrepreneurial skills were assessed by the extent to which students were able to apply the declarative entrepreneurship knowledge to: perform activities

such as develop a business plan, identify and seize business opportunities, prepare and interpret entrepreneurship financial information, assess risks and uncertainties, conduct market research of entrepreneurship ventures, use ICT in enterprises, establish new networks and connections, develop an entrepreneurial vision, assess their needs, aspirations and wants in the short, medium and long term, assess their strengths and weaknesses in entrepreneurship, exercise patience and resilience, mobilize and maximize the use of limited resources among others.

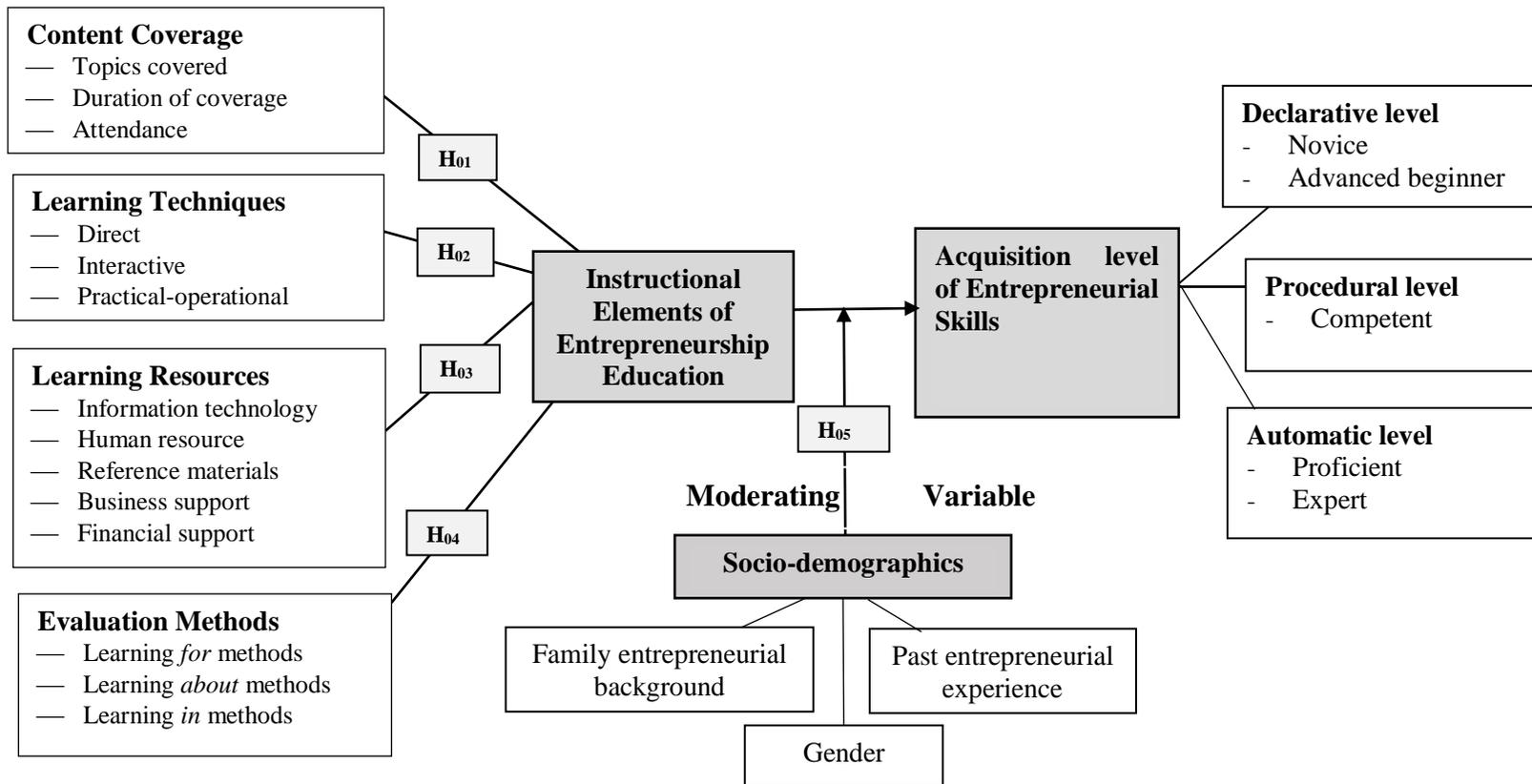
Lastly, the automatic entrepreneurial skills were evaluated by the ability of students to naturally and easily perform entrepreneurship tasks with minimum errors. The skills assessed included initiating entrepreneurial startups that create value, running an entrepreneurship venture, turning entrepreneurship ideas into actions, managing finances, communication, persuasion, and negotiation skills, taking up challenges work independently, exploring innovative ideas, adapting to changes, making informed decisions, handling emergency situations, problem solving, and creating valuable networks among others.

Meanwhile, socio-demographic factors like gender, past entrepreneurial experience, relocation to metropolitan areas, and parental self-employment have been proven to favorably affect entrepreneurial intent (Nguyen, 2018; Rashed *et al.*, 2019). Furthermore, socio-demographic characteristics have previously been linked to the learning of skills and the development of competency (Bhola & Dhanawade, 2013; Desjardins & Ederer, 2015).

Previous studies (Thrikawala, 201; Trebar, 2014) have argued the gender as a critical determinant in the acquisition of entrepreneurial skills. As such, men are perceived to have a high degree of entrepreneurial self-efficacy and thus responsive to

entrepreneurial skills than females. Yan (2010) argued that prior entrepreneurial experience directly affects perceived feasibility and desirability of entrepreneurial actions. Similarly, Nimalathan and Achchuthan (2013) observed that students with past entrepreneurial experience are more knowledgeable and skilled in matters such as networking and marketing among others. Lastly, the role of a family in entrepreneurship is significant. Mustapha and Selvaraju (2015) argued that a family with entrepreneurship background provides the background experience and motivation for students to lead entrepreneurial activities. Families act as the preferred source of advice and provide a supportive environment. In summary, Mwasalwiba (2010) claimed that students' demographics may influence students' career choice but the level of influence remains unknown. Thus this study investigated the moderation effect of socio-demographic factors namely gender, family entrepreneurial background, and previous entrepreneurial experience in the link between institutional elements of EE and the acquisition level of entrepreneurial skills.

### Independent Variables (IVs)



**Figure 2.1 Conceptual Framework: A Framework of Teaching EE for Acquisition of Entrepreneurial skills**

Source: Modified from Dekeyser (2007b); Hytti and O’Gorman (2004); Co and Mitchell (2006); Fayolle and Gailly (2008); Mwasalwiba (2010); Esmi *et al.*, (2015) and Bacigalupo *et al.*, (2016)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Overview**

The research approach and methods used by the researcher are described in this chapter. The chapter presents the contextual settings of the study in terms of the location where it was conducted and highlights the suitability of the principal research paradigms that informed the choice of the research design. The chapter also identifies and justifies the target population, sampling design, data collection instruments and processes, data collection tool validation and reliability, data analysis approaches, and ethical considerations considered throughout the research process.

#### **3.1 Study Area**

The study was conducted in Nairobi Metropolitan Region (NMR). The region comprises of the capital city, Nairobi, and surrounding counties of Kajiado, Kiambu, Machakos, and Murang'a (Cyttonn, 2019). The NMR extends some 32,000 square kilometers that substantially depend on the city for employment and social facilities, initially covering 4 counties namely Nairobi, Kiambu, Machakos and Kajiado (Ministry of Nairobi Metropolitan Development, 2008).

However in 2013, the government by way of gazette notice included Murang'a County in the NMR for purposes of balanced planning and development (Republic of Kenya, 2013). The NMR generates about 60% of the nation's wealth ("Nairobi County," 2022). Table 3. 0 summarizes key NMR statistics.

**Table 3.0 NMR Statistics**

<b>Area</b>	<b>County</b>	<b>Area (km<sup>2</sup>)</b>	<b>Population Census 2019</b>	<b>Cities/Towns/Municipalities in the Counties</b>
Core Nairobi	Nairobi	694.9	4,397,073	Nairobi
Northern Metro	Kiambu	2,449.2	2,417,735	Kiambu, Thika, Limuru, Ruiru, Karuri, Kikuyu
North Eastern Metro	Murang'a	2,325.8	1,056,640	Gatanga, Kandara, Kenol/Kabati, Murang'a
Southern Metro	Kajiado County	21,292.7	1,117,840	Kajiado, Olkejuado, Bissil, Ngong, Kitengela, Kiserian, Ongata Rongai
Eastern Metro	Machakos County	5,952.9	1,421,932	Kangundo-Tala, Machakos, Athi River
<b>Totals</b>	Nairobi Metro	32,715.5	10,411,220	

**Source:** Kenya National Bureau of Statistics (2019)

NMR is faced with numerous problems and challenges, which include rapid urbanization, population growth, high unemployment and low incomes (Ministry of Nairobi Metropolitan Development, 2008). These challenges slow the efforts of the NMR to becoming a regional and global service hub. One of the major opportunities and strength that NMR aims to leverage and become a competitive global city is the high concentration of education and research institutions.

The transformation of the NMR into a competitive economy has to be driven with world class infrastructure, good security, globally competitive businesses, and world class educational and health institutions.

Among the strategies, goals and actions that NMR strives to implement to become a competitive economy included building a regional trade and business services hub. This was envisioned through implementation of several measures including encouraging an entrepreneurship culture, and development of entrepreneurship

training programs among institutions of learning located within NMR by the year 2009. After over 10 years from the development of the Nairobi Metro 2030 strategy, it can be deduced that several milestones that aim at enhancing quality of entrepreneurship training at least in TVETs located within the region have been attained. It can be assumed that TVETs located in NMR are better placed than counterparts, have better conditions of the learning environment, such as government goodwill, infrastructure, resource materials, industrial linkages and collaborations, and exposure. These assumptions were the major motivating factors of conducting this study in NMR.

### **3.1.1 Study Institutions**

The research was carried out in several public TVCs. According to the Technical and Vocational Education and Training Act No. 29 of 2013 public TVCs refer to institutions established or maintained by use of public funds or by the community (Republic of Kenya, 2013). The TVCs were chosen for their pioneering role in delivering F&B courses as well as their capacity to attract significant numbers of students. The research was carried out in several public TVCs that were chosen for their pioneering role in delivering F&B courses as well as their capacity to attract significant numbers of students. The colleges include Railway Technical Training Institute (RTI) in Nairobi County, the Paramount Chief Kinyanjui Technical Institute (PCKTTI) in Nairobi County, the Nairobi Technical Training Institute (NTTI) on the outskirts of Nairobi County, the Maasai Technical Training Institute (MTTI) in Kajiado County, and the Michuki Technical Training Institute in Muranga County.

To begin with, the RTI is one of the oldest technical training schools in Africa. According to information from the college website ([www.rti.ac.ke](http://www.rti.ac.ke)) (Railways

Technical Institute, 2017), the college was founded to create a human workforce for the East African Railways and Harbours. It was inaugurated in 1956 by Sir Fredrick Crawford, the Deputy Governor of Kenya at the time. According to the website, commercial courses were started in 1988 as a result of the institution's inefficient utilization of infrastructure, culminating in its registration by the Ministry of Education, Science, and Technology in 1990. The institute endeavors to establish itself as a center of excellence in the training of transport and logistics management in response to increased demand for efficient transportation. The RTI was chosen as one of the study's institutions based on the fact that, in addition to pioneering F&B training, it has also attracted huge student enrolments. Furthermore, the institute is a lead agent in the railway's skills gap audit and is recognized as a center of excellence in railway under the Northern Corridor Integrated Project Framework ([www.rti.ac.ke](http://www.rti.ac.ke)), making it an appropriate study context.

For PCKTTI, the college first opened its doors in 1979 as a Technical Secondary School. The university is named after Paramount Chief Kinyanjui Gathirimu, who ruled from 1893 to 1929. At its beginning, the Institute provided artisan and certificate training (PCKTTI, 2018). The institute has experienced remarkable growth in both student and tutor populations since its founding. It now comprises eight academic departments, including hospitality and entrepreneurship, that provide a variety of diploma and certificate programs. The Hospitality department provides outstanding instruction in food and beverage manufacturing, sales, catering, and lodging, as well as cake baking and decorating. Trainees can get hands-on experience in the department (PCKTTI, 2018).

Concerning NTTI, it began in 1951 as a "Modern High School" that primarily served the Asian community in the neighborhood. The school's name was changed to Technical High School in 1953, and then to Cambridge School Certificate Examination in 1954. The institute welcomed students of all races after independence, in accordance with the Ominde Education Commission of 1964. The emphasis on technical education was highlighted in the curriculum (NTTI, 2019). The Institute has expanded to fourteen departments since then. The department of institutional management houses the food and beverage program, as well as associated courses. The department began offering a Garment Making Craft Course in 1994. The department has seen substantial growth in both student and tutor enrollments since then. To satisfy the increased demand for the course, the department plans to expand its capacity by creating three modern and well-equipped training workshops in the future (NTTI, 2019).

The Maasai Technical Training Institute was established in 1975. It was designated as a Technical Training Institution in 1985. Kajiado County is home to the institute. Pastoralism, wholesale and retail trade, mining (particularly soda ash and marble in Magadi), and agriculture are the main economic activities of Kajiado. In addition, Amboseli National Park, one of the most visited national parks in Kenya, is located in the county (County Statistical Abstract, Kajiado County 2015). The Maasai Technical Institute provides students with technical and vocational education as well as training in science, technology, and entrepreneurship. The Food and Beverage department has qualified staff, enough equipment, and is currently constructing a state-of-the-art hotel complex that will provide students with real-world experience (Masai Technical Training Institute, 2017).

Finally, Michuki Technical Training Institute began as a youth training center in 1956, and the institution was changed to Michuki Technical High School the following year. The school became a technical training institute in 1986, and in 1990, it was renamed Kaneda Technical Training Institute. Michuki Technical Training Institute was renamed Michuki Technical Training Institute in 2003 (Michuki Technical Training Institute, 2017). The institute lies in Murang'a County, where agriculture is the primary source of revenue. There are ten academic departments in the institute. The institutional management department hosts the F&B courses. The college boasts adequate training facilities to train courses ranging from artisan to diploma level. Furthermore, the department is adequately staffed (Michuki Technical Training Institute, 2017).

### **3.2 Research Paradigms**

The pragmatic philosophical premise was used in this study. A philosophical paradigm is defined as an individual's philosophical ideas and mandates, which influence the study design that the individual chooses (Baskarada & Koronios, 2018; de Villiers & Fouche, 2015; Kivunja & Kuyini, 2017; Zukauskas, Vveinhardt & Andriukaitiene, 2018). Individual researchers' conclusions are typically guided by research paradigms, which often present contrasting worldviews. To meet the study's aims, the researcher considered three important paradigms (i.e. post-positivism, interpretivism and pragmatic) offered by Creswell (2014) before opting for the pragmatic philosophical viewpoint.

Firstly, post-positivism, according to Creswell (2014), is a philosophical worldview that is inherent in the standard positivist approach. The presence of social reality with enough stability and patterning to be known is the ontology that underpins

postpositivist inquiry. In other words, post-positivistic research assumes that, despite its difficulty, social reality may be measured and understood (Creswell, 2014). Quantitative tools are appropriate for investigating casual partnerships in this situation. The goal of this study was to investigate the influence of EE on the acquisition of entrepreneurial skills, making post-positivism a viable option. The study did, however, necessitate the creation of socio-demographic profiles of students enrolled in the food and beverage program. As a result, relying solely on post-positivism may not have adequately addressed the potential consequences of these social-economic elements.

Secondly, interpretivism according to Creswell (2014), is an alternative paradigm that pushes research toward qualitative methodologies. According to Rosman and Rallis (2012), understanding the development and maintenance of social worlds requires an examination of socially constructed and meaningful behaviors obtained by direct observations of actions in their natural environments. In the sense that it intended to interpret students' perceptions of their skill acquisition level, this study contained features of this paradigm. Nonetheless, the need to demonstrate the direct impact of EE on skill acquisition meant that interpretivism alone was insufficient. As a result, an optimal paradigm for informing research design was determined to be capable of incorporating the positivist and interpretive features present in this investigation.

Thirdly, pragmatism is thought to be a paradigm that builds on events, acts, and consequences as they arise, rather than having antecedent actions and conditions as post-positivism does (Creswell, 2014). Truth, according to the pragmatist school of thinking, is a normative concept for which knowledge cannot be separated from contingent beliefs, desires, or projections (Creswell, 2014). The pragmatic worldview

focuses on the situation at hand, which should be solved by combining all available techniques. The pragmatic philosophical paradigm was considered to be the optimal paradigm for this study since it investigated the direct influence of entrepreneurial education on the level of skill development while controlling for socioeconomic backgrounds. As a result, this study followed the pragmatic paradigm, which suggests using a combination of ways to solve problems (Brierley, 2017; Frey, 2018; Morgan, 2014).

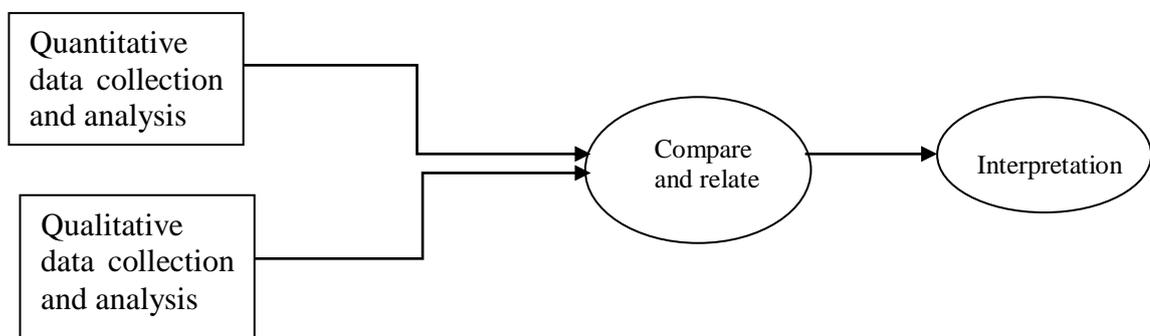
### **3.3 Research Design**

The study used a convergent mixed methods design based on the pragmatic viewpoint espoused. A research design is a thorough strategy that outlines the methods and procedures that will be utilized to collect data and conduct analysis. As a result, the evidence gathered helps the researcher to address the study questions in a logical manner (Alexandrie, 2017; Kapoor, 2016). The research design, according to Kothari (2004), provides a structure within which data collection, measurement, and analysis can be facilitated.

Convergent mixed methods design is also known as parallel or concurrent mixed methods design. It entails collecting quantitative and qualitative data at the same time, combining them, and using the results to investigate a research problem. The researcher considers both quantitative and qualitative data to be roughly equivalent sources of information and therefore collects both quantitative and qualitative data at the same time during the study. The results of the quantitative and qualitative analyses are then compared to see if the two databases produce similar or different results. The most common method of comparison is to compare quantitative and qualitative data side by side in a study's discussion section. For instance, the researcher might present

quantitative statistical findings first, followed by qualitative citations that either validate or dispute the statistical findings (Creswell, 2012).

In this study, both quantitative and qualitative methodologies were incorporated in the convergent design, as recommended by Creswell (2012); Creswell and Plano - Clark (2011); and Ayiro, (2012). Both approaches were used in tandem with each other to improve the overall strength of the research findings (Creswell, 2014). As a result, during the same phase of the investigation, the researcher conducted both quantitative and qualitative elements of the study; weighed techniques equally; conducted independent assessments of the two components; and consolidated the results of each form (Creswell & Plano - Clark, 2011). The goal was to make a direct comparison of quantitative statistical results with qualitative discoveries to triangulate the outcomes (Fig 3.0).



**Figure 3.0 Convergent Parallel Design**

**Source:** Creswell and Plano-Clark (2011)

Apart from the use of the convergent mixed methods design, this study utilized a descriptive research design. The object of descriptive research is to portray an accurate profile of students, events or situations (Robson, 2002; Saunders *et al.*, 2012). The descriptive research design supported the profiling of the student's socio-demographic information.

### **3.4 Target Population**

The study included curriculum experts from the Curriculum Development, Assessment, and Certification Council (CDACC) Directorate and the Kenya Institute of Curriculum Development (KICD), as well as Module II diploma students studying the F&B management course and EE trainers in selected TVCs in Kenya. The findings of this study were consistently referred to by F&B and entrepreneurial students enrolled in module II of their diploma program, as well as trainers and curriculum experts. The F&B Module II diploma students were targeted because they had been exposed to both the theoretical and practical EE in Module I and Module II respectively, and thus were found suitable to provide the information the study was seeking. The EE trainers and curriculum experts were targeted to provide information that would supplement the data gathered from the students. Besides, the information sought from the EE trainers and curriculum experts helped in answering one of the objectives of the study which sought to determine the role of EE instructional elements in the acquisition of entrepreneurial skills among F&B students.

Railway Training Institute (RTI), Maasai Technical Training Institute (MTTI), PC Kinyanjui Technical Training Institute, and Michuki Technical Institute were the TVCs chosen for the study. As of August 2017, there were fifteen (15) TVCs that offered the F&B diploma course, according to the TVET register of accredited institution in Kenya (Republic of Kenya, 2017). The accreditation was based on the college's student population capacity. The five colleges, on the other hand, were selected based on two criteria. First, the colleges were among the first to provide the F&B diploma course examinable by KNEC, and secondly, they had been approved to enroll the largest student population in the F&B course of at least 50. The high

enrollment capacity increased the chances of access to information from students and EE trainers.

The units of analysis consisted of module II F&B diploma students, EE trainers, and curriculum experts, whereas the sampling units were the hospitality departments of the individual institutions. Student course registration records acquired from departments; records of teachers managing F&B; and human resource records of curriculum specialists at both the CDACC Directorate and the KICD were used as sampling frames. According to a reconnaissance study of the selected TVCs, there were 199 students registered in the module II diploma in F & B in the five institutions (see Table 3.1).

**Table 3.1: Summary of the Student Population**

<b>TVCs</b>	<b>Students (F&amp;B module II)</b>
Railways	52
Maasai	24
Nairobi	35
PC Kinyanjui	40
Michuki	48
<b>Total</b>	<b>199</b>

**Source:** Researcher (2019)

Apart from the population of 199 F&B students, this study also targeted EE trainers from the 5 TVCs. Besides, F&B curriculum specialists were also included in the final target population, from the CDACC Directorate and from the KICD's TVET Division.

### **3.5 Sampling Design**

The study's sampling design is based on the computation of acceptable sample size, as well as the identification and application of relevant methodologies to arrive at that

sample size. According to Cohen, Marion, and Morrison (2007), one of the aspects that influences the quality of study is the adequacy of the sampling approach used. According to Sekaran (2010), sampling overcomes the impracticality of working with big populations that may not generate new data.

### 3.5.1 Determination of Sample Size

A sample size of 132 students was computed from the population of 199 students using the correction formula suggested by Cochran in 1963 (as cited in Singh & Masuku, 2014). Thus,

$$n = \frac{n_0}{1 + \frac{n_0}{N}},$$

where

$$n_0 = \frac{Z_{\alpha/2}^2 \times p \times (1-p)}{e^2}$$

And,

$n_0$  = Sample size under infinite conditions

$p$  = the estimated proportion of the required attribute which is in the population, considered to be 50 percent for a fifty-fifty situation

$Z_{\alpha/2}^2$  = Standardized score corresponding to the  $\alpha$  level of confidence, which

in this study was 5%.

$e$  = the desired level of precision set a 5% in this study

$$n_0 = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2}$$

$$= 384$$

$$\Rightarrow n = \frac{384}{1 + \frac{384}{199}}$$

$$= 131.07 \cong 132$$

The sample size was 132

In addition, the study through census sampling technique identified and interviewed 5 EE subject trainers and the 2 curriculum experts.

### **3.5.2 Sampling Procedure**

To create the requisite sample from each type of participant, many strategies were used. First and foremost, the TVCs were purposively based on the criteria that they were among the first to provide F&B diploma course examinable by KNEC, and secondly, they had been approved to enroll the largest student population in the F&B course of at least 50 (to increase the chances of access to information) The required sample of F&B students was chosen using simple random selection procedures. To begin, the students were proportionately sampled among their colleges.

The required number of students from each college was then selected using simple random sampling and the lottery method. For interviews, all the five trainers in charge of EE for F&B students in the institutions, as well as two F&B curriculum specialists, were identified using census sampling (see Table 3.2).

**Table 3.2: Total Sample Size Distribution of Students**

<b>Technical Training Institute</b>	<b>Population</b>	<b>Proportion</b>	<b>Sample Size</b>
Railways	52	$52/199 \times 132$	34
Maasai	24	$24/199 \times 132$	16
Nairobi	35	$35/199 \times 132$	23
PC Kinyanjui	40	$40/199 \times 132$	27
Michuki	48	$48/199 \times 132$	32
<b>Total Population</b>	<b>199</b>		<b>132</b>

**Source:** Researcher (2019)

### **3.6 Research Instrument**

Primary data from F&B students, EE trainers, and F&B curriculum specialists was used in the study. Primary data, according to Galvan (2013), is information gathered directly from sources. Research reports, observation, interviews, and other types of information are examples of this type of information. Given the reliance on primary data sources, Bastos *et al.*, (2014) advocate identifying and selecting ideal equipment for data collecting. The main goal was to choose instruments that would ensure that accurate and reliable data was collected.

Three research instruments were used to collect the required primary data, according to the three groups of participants identified for this study. They included a standardized questionnaire for F&B students, as well as an interview schedule for EE trainers and F&B curriculum experts. The employment of the three tools was required to triangulate data gathering tools, which would ideally improve validity by accounting for the shortcomings of relying on single data collection methods (Perlesz & Lindsay, 2003).

### 3.6.1 F& B Students' Questionnaire

The main data collection tool in this study was the F&B students' questionnaire (appendix I). The questionnaire had six sections and was self-developed by the researcher. The first section focused on the socio-demographic information of the participants. This information was necessary because previous studies had identified them as crucial in a variety of relationships (Ali & Rafi, 2016; Ngware *et al.*, 2019; Price, 2018). As a result, socio-demographic data was used as a moderating variable in this study. The second section sought information on the content coverage of EE in terms of duration and attendance. Such data was required for a comprehensive view of EE that included the element of content coverage. The third section contained items that gathered information about the teaching techniques of EE. Sections four and five gathered information on EE learning resources and evaluation methods, respectively. The sixth and final section obtained information about the acquisition of declarative, procedural, and automatic entrepreneurial skills. On a 5-point Likert scale, items measuring the various constructs were elicited (5 –strongly agree, 4- agree, 3- moderately agree, 2- disagree, and 1-strongly disagree).

Questionnaires have been criticized for their low response rate and lack of reliability, particularly when the subject misinterprets a question or provides an incomplete or indefinite response (Saunders *et al.*, 2012). To reduce these drawbacks, the researchers conducted a pre-visit to establish rapport with the subjects and persuade them of the study's importance (Dillman, 2007). In addition, the questionnaires were meticulously constructed in terms of layout, length, and consideration of the subjects' abilities (Dillman, 2007).

### **3.6.2 Education Trainers and F&B Curriculum Experts Interview Schedule**

To collect their perspectives, an interview schedule for EE trainers from the five TVCs and curriculum experts (appendix II) was created. The five items on the interview schedule focused on trainers' and experts' perspectives on the adequacy of EE content, the ability of EE learning techniques to acquaint students with required entrepreneurial skills. In addition the schedule focused on the appropriateness of evaluation methods used, the adequacy and appropriateness of EE learning resources, and potential mechanisms for integrating socio-demographics of students in EE training.

Interviews are effective and powerful tools for eliciting in-depth information about people's perspectives (Berg, 2007, Kvale & Brinkmann 2009, Cohen, Manion & Morison, 2007). However, they have been criticized for being ineffective, particularly when participants self-censor what they say as a result of a miscommunication with the researcher (Saunders *et al.*, 2012). This challenge risks the credibility of the findings. The researcher made a pre-visit to establish rapport with the participants and provide additional information about the study to increase the credibility of the interviews.

### **3.7 Data Collection Procedure**

Data collection was facilitated by an introductory letter from Moi University, confirming the researcher as a student in the institution. A permit to research the selected TVCs was sought from the National Commission for Science Technology and Innovation (NACOSTI) which is the statutory body mandated to advise the Government on innovation and Research required for proper coordination and economic development of the country among other matters. The permit (*Appendix III*)

was used to secure permission from relevant authorities to collect data in the identified institutions.

The mode of administration of questionnaires was self-completion. Using two research assistants recruited to help in the administration of questionnaires, the researcher was able to reach the sampled participants. The research assistants were briefed on the study requirements, what their roles were and the ethical principles and rules to observe. They were then asked to drop the questionnaires to the sampled students and pick them back when complete. The self-completion approach was deemed to be a more confidential mode of collecting data.

The researcher took the responsibility of conducting interviews with the sampled trainers and curriculum experts. The respective participants were first notified of the purpose of the study and persuaded to suggest a suitable date and time for the face-to-face interview. On the material day, the researcher took the participant through the interview session focusing on the various items within the guide.

### **3.8 Validity and Reliability of Instruments**

Instruments used to collect data for research objectives must do so validly and reliably. According to Hamed (2016), the accuracy and consistency of an instrument represent its validity and reliability, which are important aspects of research technique. It is acknowledged that social theory notions can be vague at times, in addition to not being directly observable (Neuman, 2007), hence the necessity to assess the validity and reliability of scales that are used to measure such instruments.

#### **3.8.1 Validity of the Instruments**

The F&B students' questionnaire was validated using two methods. Face validity was the first strategy, and content validity was the second. The validity, according to

Neuman (2007), refers to the actual reality as portrayed by a construct. As a result, validity assesses how well a person's conceptualization of reality corresponds to actuality (Bolanirwa, 2015). Face validity, according to Bolanirwa (2015), is a validation method that relies on a scientific assessment of whether the indicators used to reveal the concept are accurate. Face validity, according to Neuman (2007), is a validation that ensures that the questionnaire's design and structure are appropriate for the problem under investigation. As a result, the researcher sought feedback from supervisors and other food and beverage specialists on the questionnaire's applicability, both in terms of form and structure, in accordance with other studies' suggestions (Helen & Joanna, 2015; Haradhan, 2017).

The content validity approach was used as the study's second method of validation. Content validity is defined by Sangoseni, Hellman, and Hill (2013) as the extent to which an instrument covers the needed content of a certain construct. Expert raters should conduct a reasonable analysis to determine content validity, according to Sangoseni *et al.*, (2013). On this basis, the researcher asked assigned supervisors and F&B experts to conduct a rational examination of the questionnaire to check if it contained all of the material about the respective scales and if it was based on current literature.

The legitimacy of the study findings was considered crucial in the case of qualitative interview schedules. According to Neuman (2007), the validity of findings is determined by the balance, fairness, and honesty displayed by participants during interviews on topical themes. The researcher assumed that participants would be truthful and candid in their comments while interviewing trainers and curriculum experts.

### 3.8.2 Reliability of the Instruments

Cronbach's alpha was used to test the internal consistency of scale items using data from the pilot study to ensure the reliability of scales used in the F& B students' questionnaire. Neuman (2007) defines reliability as an instrument's consistency in measuring needed constructs. Miller (as referenced in Bolanirwa, 2015) defines reliability as an instrument's capacity to produce consistent results following several trials. Cronbach's alpha, on the other hand, is a method for determining the internal consistency of scale items, with a value of 0.7 or higher indicating that the instrument is reliable (Hair *et al.*, 2010).

The Cronbach's alpha reliability coefficients were computed using data from a pilot study done at Machakos University's Directorate of TVET to determine the reliability of the six scales used in the students' questionnaire. A total of 20 F&B students from the Directorate participated in the pilot study. A convenient sample of twenty F&B students was taken, and questionnaires were given to them. Three factors led to the selection of this particular Directorate. First and foremost, the Machakos Directorate of TVET was one of the first to offer F&B training; second, the Directorate has been designated as a center of excellence, making it an ideal location for a pilot study aimed at skill acquisition. To avoid challenges to internal validity, such as maturation, which could have come from past exposure of F&B students to the questionnaire, the pilot had to be conducted outside of selected TVCs (Flannelly, Flannelly, & Jankowski, 2018).

The Cronbach's alpha coefficients for the independent variables (content coverage, learning techniques, learning resources, and evaluation methods) were 0.745, 0.887, 0.891, and 0.781, respectively, indicating strong internal consistency of the elements

measured. The Cronbach's alpha coefficient for the dependent variable (level of acquisition of entrepreneurial skills) was 0.930. In general, all of the variables in the study had acceptable internal consistency, because all the variables

**Table 3.3 Results of reliability test**

<b>Reliability Statistics</b>	<b>No of items</b>	<b>Cronbach's Alpha Based on standardized items</b>
Content coverage (X <sub>1</sub> )	10	0.745
Learning techniques (X <sub>2</sub> )	15	0.887
Learning resources (X <sub>3</sub> )	16	0.891
Evaluation methods (X <sub>4</sub> )	11	0.781
Level of acquisition of ES (Y)	42	0.930

**Source:** Survey Data (2019)

Reliability was centered on demonstrating the credibility of information presented in the case of Trainers and curriculum experts' interview schedules, which were solely qualitative. This was accomplished through the different stories provided by respondents during the piloting process, as well as the use of a range of data collection instruments. In addition, the researcher looked at how easily the findings could be applied to other similar situations. The respective interview schedules were piloted by one entrepreneurship expert from the Directorate of TVET and one curriculum expert from KICD.

### **3.9 Data Analysis**

Quantitative data was analyzed in compliance with due procedures of quantitative data analysis. As a result, the acquired data was checked and cleansed for missing data and outliers. Then came a descriptive analysis, which explored the prevailing state of the variables under examination in the context of the study. Multiple

regression was used in the second stage to find the best predictors of the outcome variable (level of acquisition of entrepreneurial skills). The direct and moderation effects were investigated in the last step of data analysis. To determine direct and moderation effects, the Hayes Macro 'PROCESS' Model 1 which is incorporated in the Statistical Packages for Social Sciences (Hayes, 2018) was employed.

Content analysis was utilized to describe and analyze the interviews with curriculum experts and EE trainers for qualitative data. Content analysis is a method for assessing documents received or generated during research that is methodical and thorough (White & Marsh, 2006). Content analysis, according to Lune and Berg (2017), is both a qualitative research method and the backbone of most qualitative analysis. Content analysis was used because it enables the analysis of data presented in words and themes, allowing for interpretations to be drawn (Bengtsson, 2016).

The study was conducted according to Bengtsson (2016)'s recommendations of content analysis stages namely: planning, data gathering, data analysis, and report writing. Various initiatives were involved in the planning stage. The first step was to agree on the study's scope, who would conduct it, and how it would be conducted. Data was gathered for this study through interviews with curriculum experts from KICD and TVET-CCDAC, as well as EE trainers from the TVCs. The decision was made to use deductive reasoning, in which the text was examined based on the predictor variables (the content coverage, learning techniques, learning resources, and evaluation methods of EE). Deductive reasoning, according to Lune and Berg (2017), entails the application of analytic codes and categories generated from existing theories and explanations relevant to the research subject. Second, manifest analysis was chosen because it allowed the researchers to stay close to the text, use the words

themselves, and express what was evident and obvious (Berg, 2001; Catanzaro, 1988; Down-Wambolt, 1992).

Table 3.4 illustrates a summary of the approaches used to analyze each specific research objective.

**Table 3.4: Summary of Data Analysis Methods**

Specific Research Objective	Research Instrument	Method of Analysis
To determine the influence of the content of EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.	Questionnaires Interview schedules	Descriptive analysis Multiple regression Content analysis
To analyze the influence of learning techniques adopted in EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.	Questionnaires Interview schedules	Descriptive analysis Multiple regression Content analysis
To explore the influence of learning resources employed in EE on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.	Questionnaires Interview schedules	Descriptive analysis Multiple regression Content analysis
To examine the influence of evaluation methods used in EE on the level of acquisition entrepreneurial skills among F&B students in selected TVCs in Kenya.	Questionnaires Interview schedules	Descriptive analysis Multiple regression Content analysis
To establish the moderating effect of socio-demographic factors, on the relationship between EE instructional elements and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.	Questionnaires	Descriptive analysis Hayes Macro 'PROCESS' Model 1
To determine the perceptions of curriculum experts and EE trainers on the role of EE instructional elements in the acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.	Interview schedules	Content analysis

**Source:** Researcher (2019)

### 3.9.1 Data Cleaning

The existence of missing values and outliers in quantitative data was first inspected and cleaned. Missing values are recognized to be a common occurrence in this type of social science research (Baraldi & Enders, 2010). Major reasons for missing data,

according to Baraldi and Enders, (2010) include respondents' refusal to answer sensitive matters and natural attrition. Although numerous strategies can be used to investigate missing values (Tabachnick & Fidell, 2013; Polit & Beck, 2012), the analysis of missing values was based on missing data patterns. This method has been used successfully in previous investigations (Baraldi & Enders, 2010). Under this strategy, the researcher assumed that missing data were missing at random and that situations with less than 5% missing data may be restored using Myers' hot deck imputation method (2011).

This study tested for both univariate and multivariate outliers. Scores that differ significantly from others on a single or multiple variables have previously been described as outliers (Masconi *et al.*, 2015). Univariate outliers were investigated using standardized scores, with scores outside the range [-3, 3] being considered univariate outliers (Liuzhan, 2014). On the other hand, Mahalanobis distance was utilized to check for multivariate outliers. Mahalanobis distance, according to Tabachnick and Fidell (2013), is the distance a given case deviates from the centroid of all cases of predictor variables. All cases with Mahalanobis distance values of probability less than 0.001 were considered multivariate outliers using this method.

### **3.9.2 Descriptive Data Analysis**

The descriptive research focused on the socio-demographic features of F&B students in the selected TVCs. Furthermore, the descriptive analysis aimed to learn more about the current state of EE and the level of entrepreneurial skill acquisition among F&B students at the TVCs. Percentage answer scores, as well as corresponding item means and standard deviations, were used to obtain this. Standard deviations represent the

constancy of response scores, whereas mean scores report typical replies across participants.

### **3.9.3 Inferential Analysis**

Inferential analysis was used to model direct and moderation effects. The main inferential approaches employed to analyze both the direct and moderation effects were Multiple Regression and Hayes Macro 'PROCESS' Model 1. The regression assumptions were checked first, before the tests.

#### **3.9.3.1 Assumptions of Regression Analysis**

The assumptions of regression analysis, according to Lund Research Ltd (2018), include normality, linearity, homoscedasticity, multicollinearity, and autocorrelation. The normality of the study variables' distributions was determined using skewness and kurtosis statistics, as suggested by Kline (1988). Variables with skewness values greater than three were considered extremely skewed, and variables with kurtosis values greater than eight were considered to have extreme kurtosis. Boxplots were also used to check for significant outliers. This was necessary to reduce their impact on sample means and correlation coefficients (Serem *et al.*, 2017).

The scatter plot of studentized residuals (SRE 1) against (unstandardized) predicted values (PRE 1) was used to test the assumption of linearity. Non-violation of linearity was determined in this method if the ensuing scatter plot showed residuals that formed a horizontal band (Hair *et al.*, 2014). A homoscedasticity test was also performed to check if the data values for the dependent and independent variables had the same variances (Saunders *et al.*, 2012). The variances along the line of best fit must remain similar as you proceed down the line to meet the assumption of homoscedasticity (Lund Research Ltd, 2018)

A multi-collinearity test was also performed to confirm that the assumptions were not violated. Multicollinearity refers to the occurrence of correlations between independent variables, which can harm regression estimations (Field, 2009; Hair *et al.*, 2014). The presence of multicollinearity was tested using Variance Inflation Factors (VIFs). VIFs have been linked to the evaluation of predictor variable correlations that would raise variances in regression coefficients computed (Tabachnick & Fidell, 2013). Tolerance must be close to zero, and the variance inflation factor (VIF) must be close to ten for multi-collinearity to exist (Coakes, 2005).

Finally, autocorrelation was investigated. The autocorrelation of regression residuals is a measure of serial correlation (Tabachnick & Fidell, 2013). To test serial correlation, the Durbin-Watson (DW) statistic was used. Because it considers the order in which cases are chosen, this statistic is regarded as the best measure of error independence. If the DW statistic was in the range  $1.5 < d < 2.5$ , the regression residuals were considered independent.

### **3.9.3.2 Testing for Direct and Moderation Effects**

Andrew Hayes' macro 'PROCESS' model 1 was used to investigate direct and moderating effects (Hayes, 2018). The level of entrepreneurial skill acquisition was used as the criterion variable, while EE was used as the predictor variable in this approach. As for moderating variables, socio-demographic data (gender, family entrepreneurial background, and past entrepreneurial experience) were input separately.

The ability to show the conditional effect of EE on the acquisition of EE at various levels of moderation influenced the choice of this technique. The number of bootstrap

samples was set at 10,000, and interactions were checked at a 10% level of significance. The conditional values were set to -1SD, 0SD, and + 1SD, with the 'low level' of socio-demographics, the average level of socio-demographics, and the high level of socio-demographics, respectively.

### 3.9.4 Model Formulation and Estimation

One model was developed in accordance with the conceptualized relationships to test the four hypotheses on the association between EE and the level of acquisition of entrepreneurial skills by F&B students. The general model was as follows:

$$LSA = B_0 + B_1CC + B_2LT + B_3EM + B_4LR + \varepsilon$$

Where;

LSA≡Level of skills acquisition

CC≡ Content delivered

LA≡Learning Techniques

EM≡Evaluation methods

LR≡Learning Resources

$B_0$  ≡ Constant term

$B_{1, 2, 3}$ ≡Unstandardized coefficients of the regression

$\varepsilon$  ≡ Error term

The four entrepreneurial education variables were combined into a composite variable to test for moderation.

The following models were used to test the moderation effect of each of the socio-demographic characteristics of students (gender, family entrepreneurial background,

and previous entrepreneurial experience) on the relationship between EE and the level of acquisition of entrepreneurial skills:

$$LSA = B_0 + B_1EE + B_2GEN + (B_3EE * GEN) + \varepsilon_1$$

$$LSA = B_0 + B_1EE + B_2FEB + (B_3EE * FEB) + \varepsilon_1$$

$$LSA = B_0 + B_1EE + B_2EPxp + (B_3EE * EPxp) + \varepsilon_1$$

Where;

LSA≡Level of skills acquisition

EE≡ Entrepreneurship education

GEN≡Gender

FEB ≡Family entrepreneurial background

EPxp ≡Past entrepreneurial experience

EE\*GEN≡Interaction of EE and gender

EE\*FEB ≡Interaction of EE and family entrepreneurial background

EE\*EPxp ≡Interaction of EE and past entrepreneurial experience

B<sub>1, 2, 3</sub>≡Unstandardized coefficients of the regression

ε ≡ Error term

### 3.9.5 Analysis of Interviews

Content analysis was used to examine interviews with curriculum experts and EE trainers. Content analysis was used for this study because it allows for the analysis of data presented in words and themes, allowing for interpretations to be drawn (Bengtsson, 2016). The data analysis was carried out according to Bengtsson's recommendations (2016). The de-contextualization stage was the initial phase. This stage includes reading over the interviews to acquire a sense of the entire and understanding/familiarizing with the data.

The interviews were also broken down into smaller meaning units that provided the insights the researcher required at this level. The meaning units have been described as a collection of phrases or paragraphs that contain aspects that are related to one another and answer questions relating to the study's goal (Catanzaro 1988; Graneheim & Lundman 2004). The meaning units were next submitted to the open coding procedure (Berg, 2001), which involved assigning a code to each detected meaning unit.

Table 3.5 illustrates a summary of the codes used in reference to the respondents.

**Table 3.5 Summary of Interview Codes**

S.No	Description	Code
1.	Curriculum expert 1	EO <sub>1</sub>
2.	Curriculum expert 2	EO <sub>2</sub>
3.	Entrepreneurship education trainer 1	TO <sub>1</sub>
4.	Entrepreneurship education trainer 2	TO <sub>2</sub>
5.	Entrepreneurship education trainer 3	TO <sub>3</sub>
6.	Entrepreneurship education trainer 4	TO <sub>4</sub>
7.	Entrepreneurship education trainer 5	TO <sub>5</sub>

**Source:** Researcher (2019)

### 3.10 Operationalization of Study Variables

The content coverage, learning techniques, learning resources, evaluation methods, socio-demographic characteristics, and level of acquisition of entrepreneurial skills were the six major variables in this study, as shown in Table 3.6.

**Table 3.6: Operationalization of Study Variables**

Variable	Type	Indicator
Content coverage	Independent	Topics Attendance Duration of coverage
Learning techniques	Independent	Direct activities Interactive activities Practical-operational activities
Learning resources	Independent	Information technology Human resource Reference materials Business and financial
Evaluation methods	Independent	Learning <i>for</i> methods Learning <i>about</i> methods Learning <i>in</i> methods
Socio-demographic characteristics	Moderator	Gender Family entrepreneurial background Past entrepreneurial experience
Level of acquisition of ES	Dependent	Declarative level-skills Procedural level-skills Automatic level-skills

**Source:** Researcher (2019)

### 3.11 Ethical Considerations

According to Miller and Brewer (2003), qualitative research methods that involve sustained and intensive involvement with participants raise several ethical and personal issues. According to Saunders *et al.*, (2012), ethics in research refers to the rules of conduct that guide researchers' actions. Ethics is concerned with the study's subjects or those who will be influenced by it.

The study preserved integrity and objectivity by disclosing the research's purpose to promote ethical consideration. All subjects gave their informed consent without pressure or improper influence. The researcher avoided any scenarios that could have been harmful to the subjects. The researcher did not conduct this study without first obtaining the approval of any vulnerable or special populations. Subjects' privacy was respected. Furthermore, voluntary discretion of the involvement of participants and withdrawal from the study was allowed. The importance of data confidentiality was also noted. The researcher did not engage in inappropriate data analysis or reporting of findings.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

#### 4.0 Introduction

The results of the influence of instructional elements of EE on the level of acquisition of entrepreneurial skills by F&B students at selected Kenyan TVCs are presented in this chapter. The findings are analyzed and interpreted using a pragmatic research philosophy to best address the research specific objectives. Quantitative and qualitative findings were integrated to advance the understanding of the study variables. Descriptive statistics were used to inform the characteristics of variables while inferential statistics established the direction and magnitude of the relationships between variables and also test the hypothesized relationships.

#### 4.1 Response Rate

In the survey research literature, nonresponse bias has gotten a lot of attention. Though there is some disagreement on how to define nonresponse bias, it is widely thought to be a function of the response rate and nonresponse effects, or how much respondents and non-responders differ on survey variables of interest (Keeter, *et al.*, 2000). In other words, low response rates may or may not result in nonresponse bias because survey responses may not differ significantly between respondents and non-responders (Groves, 2006).

A response rate of 60% or higher of the desired sample population should suffice, according to Kothari (2004). According to Fosnacht (2013), the response rates of 75% can give credible survey estimates.

Although the study called for a sample of 132 students, only 125 were able to complete the questionnaires. As a result, the response rate was 94.7%, which was

sufficient to produce trustworthy results (Kothari, 2004; Fosnacht, *et al.*, 2013). The high response rate contributes to the study's statistical inferences being more confident (Saunders *et al.*, 2012).

#### **4.2 Descriptive Statistics**

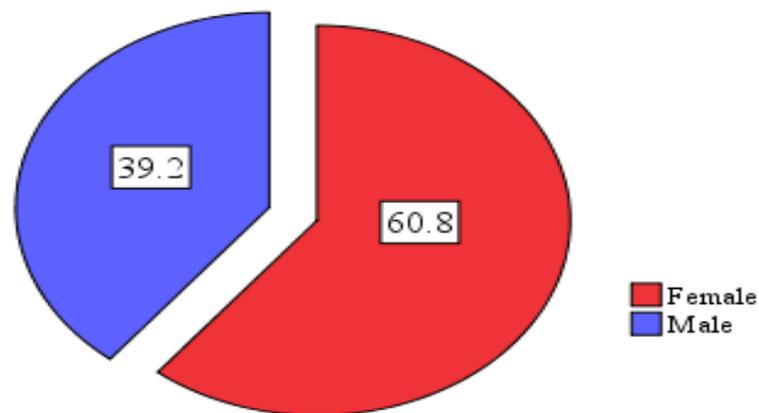
Descriptive statistics enable the description and comparison of variables numerically using measures of central tendency and measures of dispersion. Measures of central tendency are used to quantitatively represent data for both samples and populations by giving an overall impression of values that could be considered common, middle, or average. Dispersion measurements are also used to characterize how data values are distributed around the central tendency (Saunders *et al.*, 2012).

The socio-demographic characteristics of the respondents were described using descriptive statistics such as frequencies, percentages, means, and standard deviations. In addition, the Skewness and Kurtosis statistics were used to determine the normalcy of each variable's distribution. For ease of interpretation, the data was presented in tabular diagrams and charts. Based on the conceptual framework, it was necessary to profile students' socio-demographic characteristics when they were studying entrepreneurship in the TVCs.

Socio-demographic data was important not only for profiling the sample's makeup but also for determining whether socio-demographic features had a moderating effect on the association between EE and the level of entrepreneurial skill acquisition. The gender, age range, family entrepreneurial background, and previous entrepreneurial experience were among the socio-demographic data gathered.

#### 4.2.1 Descriptive results for Socio-demographic information of students

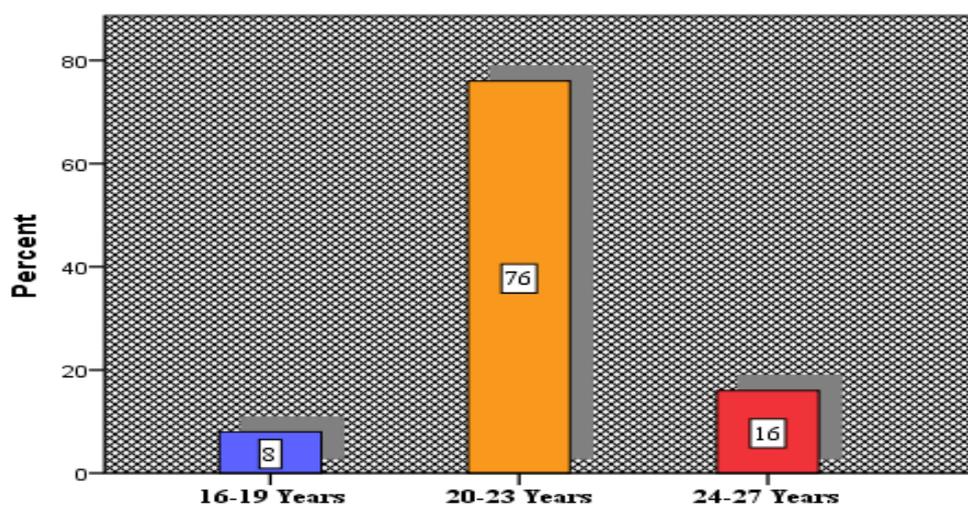
The study's first goal was to determine the gender of students. As shown in fig. 4.0, females made up the majority (60.8 %) of students enrolled in diploma courses in food F&B at the time of data collection (39.2 %) compared to males (39.2%).



**Figure 4.0 Gender distribution of the student**

Source: Survey Data (2019)

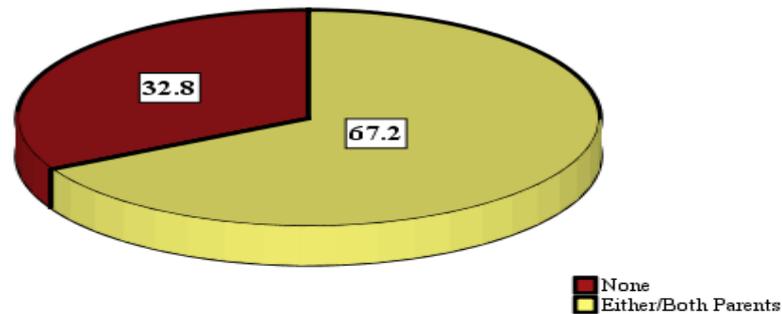
Secondly, figure 4.1, shows that most of the students ranged between the age group of 20-23 years (76%), followed by 24-27 years (16%). The least group ranged between 16-19 years (8%). None was less than 16 years old or more than 27 years old.



**Figure 4.1 Age group distribution of the students**

Source: Survey Data (2019)

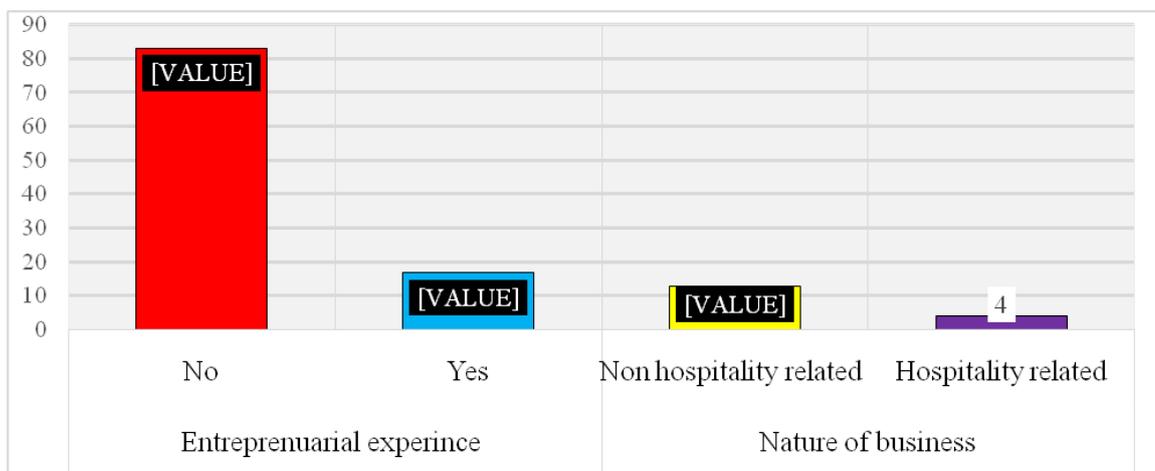
Thirdly, study assessed the distribution of family entrepreneurial background among students enrolled in the F&B diploma course. From figure 4.3, a large number of students (67.2%) had parent(s)/guardian(s) who had started or run their businesses as opposed to those who had not (32.8%).



**Figure 4.2 Distribution of family entrepreneurial background among students**

Source: Survey Data (2019)

Finally, figure 4.4 depicts the students' entrepreneurial experience and the nature of the business they were involved in at the time of data collection. A huge percentage of students (83.2%) did not engage in any sort of entrepreneurship, while only 16.8% were involved in non-hospitality-related small businesses (12.8%). Only 4% of students were involved in hospitality-related small businesses.



**Figure 4.3: Students' entrepreneurial experience and nature of business students engaged in**

Source: Survey Data (2019)

## **4.2.2 Descriptive Results for Instructional Elements of EE**

The instructional elements of the EE variable were assessed by determining the extent to which the EE syllabus covered the content of EE, learning techniques, learning resources, and EE evaluation methods (Republic of Kenya 2006).

### **4.2.2.1 Descriptive results for Content of EE**

Students were asked to rate their responses on criteria that indicated how long the subject was covered. On a 5-point Likert scale, [5] Strongly Agree, [4] Agree, [3] Moderately Agree, [2] Disagree, and [1] Strongly Disagree were used to score the content indicators for the EE subject.

According to the findings, 37.6% of students said the length of theory study sessions was sufficient. Furthermore, a sizable percentage (32%) believed that test and examination durations were sufficient.

A great part of students (32.8%) highly agreed that covering EE once in Module I exposed students to enough understanding of being an entrepreneur. However, a sizable percentage (27.2%) had misgivings regarding the effectiveness of practical learning sessions. The overall mean response on the attributes of the extent of content covered in the EE subject was 3.6 in general (agree). This means that the content of EE inspire F & B students to acquire entrepreneurial skills. Table 4.0 (a) shows a summary of the descriptive analysis.

**Table 4.0 (a) Content of EE**

<b>Statement</b>	<b>5 (%)</b>	<b>4 (%)</b>	<b>3 (%)</b>	<b>2 (%)</b>	<b>1 (%)</b>	<b>Mean</b>	<b>Std. Dev.</b>
The time allocated for theory learning sessions was adequate	35.2	37.6	16.8	4.0	6.4	3.91	1.122
The duration of tests and exams was adequate	29.6	32.0	27.2	4.8	6.4	3.74	1.130
Covering EP once in Module I exposed me to adequate knowledge on becoming an entrepreneur	32.8	24.8	<b>26.4</b>	5.6	10.4	3.64	1.279
The time allocated for practical learning sessions was adequate	14.4	26.4	27.2	10.4	21.6	3.02	1.350

**Note:** N (listwise) =125; Overall mean = 3.6

[5] Strongly agree, [4] Agree, [3] Moderately Agree, [2] Disagree, [1] Strongly disagree

**Source:** Survey Data (2019)

The study intended to determine the type of knowledge covered by the content of EE presented, in addition to the duration of coverage of the content. As a result, students were asked to grade their responses on attributes that measured how often each sort of knowledge was covered. A 5-point Likert scale was used to quantify and analyze the qualities, with [5] very high extent, [4] high extent, [3] moderate extent, [2] low extent, and [1] very low extent.

According to the results, 39.2% of respondents thought the content focused on knowledge related to seizing opportunities in starting a business. Furthermore, a considerable percentage of students (32%) believed that the content covered issues that focused on how to be successful in entrepreneurship to a large level. When asked if the topics offered addressed knowledge about resource persons important in entrepreneurship, the highest percentage of students (37.6%) were convinced to a high degree. Furthermore, 28.8% of respondents agreed that the content provided them with a lot of information about entrepreneur behavior and psychology.

In addition, a great percentage of students (36%) felt the content empowered them to a high extent, with knowledge on EE activities. Finally, a large portion (32.8%) felt that content on key partners and stakeholders' knowledge to network within entrepreneurship was covered to a moderate extent. The overall mean of responses on the content covered attributes was 3.6 (high extent), indicating that the knowledge gained from each type of EE topic covered was high. Table 4.1(b) shows a summary of the findings.

**Table 4.1(b) Content of EE**

<b>Statement</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Mean</b>	<b>Std.</b>
	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>		<b>Dev.</b>
Seizing opportunities in starting a business	39.2	28.0	21.6	4.0	7.2	3.88	1.189
What to do to be successful in EP	32.0	31.2	24.0	8.8	4.0	3.78	1.111
Resource people to interact within EP	19.2	37.6	25.6	17.6	0.0	3.58	.993
Behaviors and psychology of entrepreneurs	25.6	28.8	28.0	10.4	7.2	3.55	1.188
EP activities in dealing with common issues	16.0	36.0	30.4	17.6	0.0	3.50	.964
Key partners and stakeholders to network with	16.0	26.4	32.8	24.8	0.0	3.34	1.023

**Note:** N (listwise) =125; Overall Mean = 3.6

[5] very high extent, [4] high extent, [3] moderate extent, [2] low extent [1] very low extent

**Source:** Survey Data (2019)

#### 4.2.2.2 Descriptive results for learning techniques of EE

The study sought to determine the frequency of learning techniques employed by entrepreneurship trainers in teaching EE. On a 5-point Likert scale, from [5] very often, [4] often, [3] half the time, [2] seldom, and [1] never, the learning techniques were assessed utilizing direct, interactive, and practical-operational techniques. Table 4.2 shows an overview of the findings.

Beginning with direct learning techniques, a great part of students (32.8%) indicated that trainers never used lecture methods in teaching EE subject. On the other hand, a great part of students (48.8%) said they had never seen an entrepreneur invited to speak on a topic related to entrepreneurship. Similarly, the highest percentage of students (56.8%) stated that they had never gone for attachment in entrepreneurship. Likewise, a great part of students (57.6%) stated that they had never conducted seminars on the subject while in school. Finally, a large percentage of students (69.6%) stated that they had never watched a video on EE.

When it came to measures of interactive learning techniques, a large part of students (40 %) said that the lecturers frequently assigned entrepreneurship tasks and that they frequently engaged in group discussions (26.4 %). Furthermore, a large percentage (25.6 %) were certain that they discussed cases of business, which failed at least in half the time of learning of EE. Finally, 49.6% stated that they had never visited an organization while studying entrepreneurship.

Finally, when it came to assessing practical-operational learning techniques, a high percentage of students (44%) stated that they frequently prepared a business plan as part of their coursework. On the other hand, a great part of respondents (33.6%) stated that they had never done an entrepreneurship research project. Similarly, 40% disagreed that they had never participated in role-playing exercises or gone on academic tours for the EE subject (51.2%). Finally, the highest percentage of respondents (56%) stated that they never started a business activity while pursuing EE.

The overall mean (3.1) suggests that interactive learning techniques are used half as much in EE learning and teaching. However, direct learning techniques (mean=2.0)

and practical-operational learning techniques (mean=2.6) were rarely used. A summary of findings is shown in Table 4.2

**Table 4.2 Learning Techniques of EE**

Statement	5 (%)	4 (%)	3 (%)	2 (%)	1 (%)	Mean	Std. Dev.	Overall mean
<b>Direct learning techniques</b>								
Lecturers used the traditional lecture method to teach	13.6	18.4	18.4	16.8	32.8	2.63	1.445	2.0
Entrepreneurs were invited to speak on Ep topics	5.6	16.0	14.4	15.2	48.8	2.14	1.330	
We went for attachment on specifically Ep	9.6	9.6	12.8	11.2	56.8	2.04	1.399	
We conducted seminars on EE during learning	0.0	0.0	24.0	18.4	57.6	1.66	0.842	
We watched videos covering EE	0.0	0.0	18.4	12.0	69.6	1.49	0.789	
<b>Interactive learning techniques</b>								
The lecturer gave us assignments on EE tasks	40.0	26.4	14.4	6.4	12.8	3.74	1.379	3.1
We used group discussions during EE lectures	25.6	26.4	17.6	12.0	18.4	3.29	1.441	
We learned by discussing cases of businesses	21.6	16.0	25.6	14.4	22.4	3.00	1.442	
We visited business organizations during learning	9.6	11.2	13.6	16.0	49.6	2.15	1.392	
<b>Practical-operational learning techniques</b>								
We developed a business plan during coursework	44.0	17.6	9.6	8.0	20.8	3.56	1.598	2.6
We carried out research projects on EE	14.4	23.2	14.4	14.4	33.6	2.70	1.492	
We performed role-plays during learning sessions	13.6	15.2	14.4	16.8	40.0	2.46	1.478	
We went for academic trips for EE	10.4	6.4	16.8	15.2	51.2	2.10	1.370	
During coursework, we started a business activity	8.0	12.0	11.2	12.8	56.0	2.03	1.373	

**Note:** N (listwise) = 125

[5] Very often, [4] Often, [3] Half the time, [2] Rarely, [1] Never

**Source:** Survey Data (2019)

#### **4.2.2.3 Descriptive Results for Learning Resources of EE**

The extent to which learning resources were available to teach EE in the selected TVCs was also studied. Information technology, human resources, reference materials, business, and financial support were among the resources assessed. On a 5-point Likert scale, [5] very high extent, [4] high extent, [3] moderate extent, [2] low extent, and [1] very low extent, the availability of learning resources was appraised.

To begin with, the highest percentage of students (47.2%) believed that EE trainers were readily available. A great part (36.0%) also noted that business plan samples were offered in large quantities, followed by EE textbooks (28.0%). On the other hand, a considerable percentage of students (26.4%) said that EE teaching manuals were provided infrequently. There was a tie (28.0%) between those who said EE journals, magazines, and newspaper articles were available to a very limited extent and those who said they were available to a very limited extent. Similarly, 36% of students indicated that the internet was rarely used, and the same was said of EE mentors (36.8%).

When it came to information resource centers, the biggest percentage of students (46.4%) thought they were scarce. Slightly more than half the students (52.0%) indicated that EE guest speakers and audiovisual learning resources (54.4%) were scarce. Finally, the highest percentage of respondents (63.2%) believed that their TVCs lacked or did not have any business incubation laboratories.

Based on the overall mean (2.7), entrepreneurial learning resources were generally provided to a moderate extent (see Table 4.3). A summary of the descriptive results is illustrated in table 4.3 (a)

**Table 4.3(a) Learning resources of EE**

<b>Statement</b>	<b>5 (%)</b>	<b>4 (%)</b>	<b>3 (%)</b>	<b>2 (%)</b>	<b>1 (%)</b>	<b>Mean</b>	<b>Std. Dev.</b>
Entrepreneurship education teachers	47.2	23.2	12.8	5.6	11.2	3.90	1.355
Sample of business plans	36.0	17.6	12.0	7.2	27.2	3.28	1.649
Entrepreneurship education textbooks	28.0	22.4	15.2	11.2	23.2	3.21	1.536
Entrepreneurship education teaching manuals	22.4	20.0	17.6	13.6	26.4	2.98	1.519
Entrepreneurship education journals and magazines	20.8	18.4	20.8	12.0	28.0	2.92	1.506
Entrepreneurship education articles in newspapers	17.6	17.6	20.8	16.0	28.0	2.81	1.463
Internet connectivity	16.8	16.8	15.2	15.2	36.0	2.63	1.522
Entrepreneurship education mentors	12.0	14.4	23.2	13.6	36.8	2.51	1.418
Information resource centers	13.6	13.6	13.6	12.8	46.4	2.35	1.504
Entrepreneurship education guest speakers	12.0	12.0	17.6	6.4	52.0	2.26	1.486
Audiovisual (projectors and computers)	11.2	9.6	8.8	16.0	54.4	2.07	1.427
Business incubation laboratories	0.0	0.0	16.0	20.8	63.2	1.53	.758

**Note:** N (listwise) = 125; Overall mean =2.7

[5] Very high extent, [4] High extent, [3] Moderate extent, [2] Low extent [1] Very low extent

**Source:** Survey Data (2019)

The study examined the lecturer's performance in teaching EE as well as the extent to which learning materials were available to teach and learn EE. Furthermore, the research aimed to determine whether the resources created a conducive learning atmosphere and piqued students' enthusiasm in putting their entrepreneurship knowledge into practice.

Using a 5-point Likert scale ranging from [5] strongly agree to [1] strongly disagree, it is clear that the biggest percentage of students (37.6%) had faith in their trainers' topic competence. Furthermore, the greatest part of students (43.2%) said that their trainers paid sufficient attention to the supervision of their business plans. Furthermore, a high percentage of respondents (33.6%) strongly felt that the resources provided a pleasant learning atmosphere. Finally, the biggest percentage of students (27.2%) believed that the materials they had interacted with sparked an interest in starting a business. In conclusion, students agreed that lecturers were knowledgeable and paid attention to the supervision of the business plans adequately.

They also felt that the learning resources offered a pleasant learning environment, but that the resources only mildly piqued the students' interest in starting their own business. A summary of results is shown in Table 4.4 (b)

**Table 4.4 (b) Learning resources of EE**

<b>Statement</b>	<b>5 (%)</b>	<b>4 (%)</b>	<b>3 (%)</b>	<b>2 (%)</b>	<b>1 (%)</b>	<b>Mean</b>	<b>Std Dev.</b>
The lecturer was reasonably knowledgeable in the topics presented	37.6	30.4	21.6	7.2	3.2	3.92	1.082
The lecturer gave adequate attention to the supervision of the business plans	43.2	24.8	9.6	8.0	14.4	3.74	1.447
The resources provided a comfortable learning environment	33.6	24.0	26.4	5.6	10.4	3.65	1.284
The resources stimulated my interest in venturing into entrepreneurship	20.8	27.2	26.4	15.2	10.4	3.33	1.256

**Note:** N (listwise) = 125

[5] Strongly agree, [4] Agree, [3] Moderately Agree, [2] Disagree, [1] Strongly disagree

**Source:** Survey Data (2019)

#### 4.2.2.4 Descriptive Results for Evaluation Methods of EE

Finally, the study explored the most prevalent ways for assessing the level of EE learning. On a 5-point Likert scale, [5] very often, [4] often, [3] half the time, [2] seldom, and [1] never was the technique of evaluation employed. The results of the analysis are presented in Table 4.5. The a big part of students felt that end-of-term sit-in examinations (64%), involvement in the class sessions by answering questions (50.4%), and sit-in tests (49.6%) are the most common ways to evaluate the topic. Aside from that, the biggest part of students stated that they are frequently evaluated using the following methods: an examination of business plans and business reports (38.4%), group/individual presentations (30.4%), case studies (21.6%), and financial statement interpretation (28.0%). Furthermore, a sizeable percentage of students stated that the following methods have never been used to evaluate the subject: evaluation of a business project (29.6%); evaluation of entrepreneurship attachment field reports (34.4%); writing of entrepreneurship essays/term papers (33.6%); and observation and assessment of business activity (30.4%).

Finally, the mean scores show that end-of-term sit-in exams, participation in class by answering questions, and sit-in tests are the most regularly used evaluation techniques. These methods are frequently supplemented with techniques including the utilization of business plans and project reports, presentations, case studies, and financial statement interpretation. These methods, on the other hand, are strongly associated with theoretical learning rather than practical learning. This means that the assessment of theoretical learning receives a lot of focus at the expense of practical learning.

Assessment of business plans and business reports, group/individual presentations, case studies, and financial statement interpretation were the moderately used methods of evaluation. The following evaluation procedures were also found to be infrequently used: assessment of a business project; assessment of entrepreneurship attachment field reports; writing of entrepreneurship essays/term papers; observation and assessment of business activities. A summary of descriptive results is shown in Table 4.5.

**Table 4.5: Evaluation methods of EE**

<b>Statement</b>	<b>5 (%)</b>	<b>4 (%)</b>	<b>3 (%)</b>	<b>2 (%)</b>	<b>1 (%)</b>	<b>Mean</b>	<b>Std. Dev.</b>
End term sit-in examinations	64.0	24.8	11.2	0.0	0.0	4.53	.691
Participation in class by answering questions	50.4	34.4	15.2	0.0	0.0	4.35	.732
Sit-in tests	49.6	22.4	16.8	4.8	6.4	4.04	1.201
Assessment of business plans and business reports	38.4	22.4	17.6	6.4	0.0	3.62	1.435
Group/individual presentations	30.4	23.2	24.0	8.8	13.6	3.48	1.365
Case studies	21.6	20.8	24.0	13.6	20.0	3.10	1.419
Interpretation of financial statements	17.6	22.4	28.0	12.8	19.2	3.06	1.354
Assessment of a business project	26.4	19.2	11.2	13.6	29.6	2.99	1.609
Assessment of entrepreneurship attachment field reports	13.6	17.6	19.2	15.2	34.4	2.61	1.453
Writing of essays/term papers on entrepreneurship	12.8	16.0	17.6	20.0	33.6	2.54	1.423
Observation and assessment of a business activity	7.2	16.8	28.8	16.8	30.4	2.54	1.280

**Note:** N (listwise) =125; Overall mean =3.4

[5] Very often, [4] Often, [3] Half the time, [2] Rarely, [1] Never

**Source:** Survey Data (2019)

#### **4.2.3 Descriptive Results for the Level of Acquisition of Entrepreneurial Skills**

The level of acquisition of entrepreneurial skills variable was examined using Dekeyser's three levels of skills (2007b). Declarative, procedural, and automated

skills were examined. The degrees of the acquisition were rated using a 5-point Likert scale ranging from [5] Strongly agree, [4] Agree, [3] Moderately agree, [2] Disagree, and [1] Strongly disagree.

#### **4.2.3.1 Descriptive Results for Declarative Level of Acquisition of Entrepreneurial Skills**

The importance of entrepreneurship to society and individuals was highly agreed upon by a substantial percentage of students (67.2%). Similarly, a great part of students (53.6%) strongly said that they understood the functions of an entrepreneur in a business.

Furthermore, a large percentage of students (48.8%) said they could explain the role of information communication technology in entrepreneurship in detail, and 44.8% said they have a good understanding of the elements that influence entrepreneurship. Similarly, 54.4% strongly agreed that they knew the various types of firm ownership, compared to 50.4 % strongly agreeing that they could explain entrepreneurial culture, behavior, attributes, and intentions.

In addition, a large proportion of 45.6% and 42.4% of students strongly agreed that they were able to explain the process and history of entrepreneurship respectively. Correspondingly, a large section of students strongly agreed that they were familiar with the attitudes of entrepreneurs (42.4%) and myths associated with entrepreneurship (44%). Lastly, a great composition of students (50.4%) moderately agreed that they were familiar with the challenges associated with entrepreneurship. In conclusion, the overall mean of the responses was 4.09 (agree), which implies that most students had the confidence that they possess a declarative level of entrepreneurial skills. A summary of the results is shown in Table 4.6.

**Table 4.6: Declarative level of acquisition of entrepreneurial skills**

Statement	5 (%)	4 (%)	3 (%)	2 (%)	1 (%)	Mean	Std. Dev.
Importance of entrepreneurship to society and individuals	67.2	18.4	14.4	0.0	0.0	4.53	.736
Roles of an entrepreneur in an enterprise	53.6	22.4	24.0	0.0	0.0	4.30	.833
Role of information communication technology in entrepreneurship	48.8	26.4	24.8	0.0	0.0	4.24	.827
Factors that affect entrepreneurship	44.8	31.2	24.0	0.0	0.0	4.21	.806
Forms of business ownership	54.4	16.0	24.0	3.2	2.4	4.17	1.053
Entrepreneurial culture, behavior, traits, and intentions	50.4	20.8	16.0	8.0	4.8	4.04	1.194
Process of entrepreneurship	45.6	21.6	24.0	5.6	3.2	4.01	1.103
History of entrepreneurship	42.4	25.6	24.0	5.6	2.4	4.00	1.055
The attitudes of entrepreneurs	42.4	20.8	25.6	6.4	4.8	3.90	1.170
Myths associated with entrepreneurship	44.0	23.2	17.6	6.4	8.8	3.87	1.289
Challenges of entrepreneurship	34.4	11.2	50.4	2.4	1.6	3.74	1.015

**Note:** N (listwise) = 125; Overall mean = 4.09

[5] Strongly agree, [4] Agree, [3] Moderately agree, [2] Disagree, [1] Strongly disagree

**Source:** Survey Data (2019)

#### 4.2.3.2 Descriptive Results for the Procedural level of Entrepreneurial Skills

##### Acquisition

The highest percentage of students perceived strong abilities to develop a business plan (65.6%), identify and seize business opportunities (36%) and carry out negotiations in entrepreneurship (36.8%) respectively. Contrastingly, the skills of self-assessment of strengths and weaknesses in entrepreneurship, evaluation of the potential of ideas that can create value, and exercising of patience while trying to achieve self-goals were rated as ‘moderate’ by 40.8%, 37.6%, and 48% correspondingly.

When it came to the use of ICT in businesses, a considerable percentage (33.6%) said they had a high ability. In contrast, most students rated their ability to maximize the use of limited resources (37.6%) and obtain and manage resources needed to turn ideas into actions as "moderate" (40.8%). Furthermore, a big part of respondents significantly ranked the required skills for preparing and interpreting fundamental entrepreneurship financial information at 30.4 %. On the other hand, a sizable percentage of students (51.2%) said they could modestly practice resilience even while under stress or faced with failure.

A great part of students (31.2%) thought their capacity to develop networks in entrepreneurship was 'strong.' Furthermore, a sizable percentage of students (56%) ranked their ability to affect the course of events despite uncertainty, setbacks, and previous failures as moderate. Similarly, the largest percentage of students (47.2%) were uncertain about their ability to reflect on short, medium, and long-term goals.

Similarly, the highest population of students reported moderate confidence in their capacity to do entrepreneurship market research (30.4%), handle legal difficulties linked to entrepreneurial activity (32%), and build an entrepreneurial vision (29.6%). The overall mean response on the attributes of the level of procedural skill development was 3.63 (moderately agree). This suggests that F & B students' perceptions of EE's ability to nurture procedural skills were moderate. A summary of the findings is found in Table 4.7.

**Table 4.7: Procedural level of acquisition of entrepreneurial skills**

<b>Statement</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>Mean</b>	<b>Std. Dev.</b>
	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>	<b>(%)</b>		
Develop a business plan	65.6	12.0	22.4	0.0	0.0	4.43	.836
Identify and seize business opportunities	36.0	29.6	25.6	3.2	5.6	3.87	1.114
Conduct negotiations in entrepreneurship	36.8	26.4	16.8	12.0	8.0	3.72	1.293
Assess my strengths and weaknesses	16.8	38.4	40.8	4.0	0.0	3.68	.799
Evaluate the potential an idea has for creating value	24.0	28.8	37.6	9.6	0.0	3.67	.948
Exercise patience and keep trying to achieve my goals	17.6	32.8	48.0	1.6	0.0	3.66	.782
Use ICT in enterprises	33.6	24.0	27.2	5.6	9.6	3.66	1.263
Maximize the use of limited resources	24.8	26.4	37.6	11.2	0.0	3.65	.978
Obtain and manage resources needed to turn ideas into actions	20.8	28.8	40.8	9.6	0.0	3.61	.924
Prepare and interpret financial information	30.4	22.4	25.6	13.6	8.0	3.54	1.273
Exercise resilience even when under pressure or when faced with failure	16.0	25.6	51.2	7.2	0.0	3.50	.848
Establish networks and connections	31.2	19.2	27.2	12.0	10.4	3.49	1.324
Influence the course of events despite uncertainties, setbacks, and past failures	14.4	24.0	56.0	5.6	0.0	3.47	.809
Reflect on my aspirations in the short, medium and long term	14.4	27.2	47.2	11.2	0.0	3.45	.875
Conduct market research of ventures	25.6	24.0	30.4	9.6	10.4	3.45	1.260
Handle legal issues in entrepreneurship	25.6	21.6	32.0	12.0	8.8	3.43	1.240
Develop an entrepreneurial vision	26.4	21.6	29.6	9.6	12.8	3.39	1.319

**Note** (listwise) = 125; Overall mean = 3.63

[5] Strongly agree, [4] Agree, [3] Moderately agree, [2] Disagree, [1] Strongly disagree

**Source:** Survey Data (2019)

#### **4.2.3.3 Descriptive Results for Automatic Level of Acquisition of Entrepreneurial Skills**

Table 4.8 shows that a high percentage of students (32.8%) lacked confidence in their abilities to absorb important entrepreneurship lessons from other people's experiences to embrace triumphs and avoid failures. Similarly, the biggest part of respondents (31.2%) were moderately confident in their abilities to communicate and persuade others quickly and effectively. Surprisingly, a higher percentage (26.4%) thought they had a strong capacity to naturally transform ideas into action to achieve goals, but 29.6% had moderate confidence in their ability to take on obstacles in their careers.

There was a distinct balance between students who agreed (24%) and moderately agreed (24%) to the assertion that they could readily collaborate with others to generate ideas and put them into action. Notably, the greatest number of students (26.4%) indicated a moderate competence to manage resources to extend the life of entrepreneurial activity. Similarly, most students (28.8%) felt moderately confident in their abilities to handle business or workplace issues quickly. Furthermore, a considerable percentage of students (33.6%) rated their ability to initiate value-creating entrepreneurial processes as moderate. Furthermore, a higher percentage (32%) believed they were moderately capable of working independently to achieve goals and complete tasks.

A great part of respondents (27.2%), on the other hand, felt less confident in their ability to quickly acquire support to attain valuable outcomes. Furthermore, a large percentage of students (28%) were skeptical about their automatic capacity to build valuable networks for their job success. Furthermore, 38.4% of respondents said

their ability to spontaneously explore and experiment with novel approaches is moderate. In situations when the outcome of a decision is uncertain when there is limited information to make the decision, or there is a danger of failure, a higher percentage of students (28.8%) expressed modest confidence in their ability to make the appropriate option. Finally, 24.8% of students doubted their capacity to manage an entrepreneurship firm successfully. In conclusion, the average response was 3.23. (Moderately agree). This indicates that F & B students were uncertain about acquisition of automatic entrepreneurial skills from the EE (see Table 4.8).

**Table 4.8: Automatic level of acquisition of entrepreneurial skills**

<b>Statement</b>	<b>5 (%)</b>	<b>4 (%)</b>	<b>3 (%)</b>	<b>2 (%)</b>	<b>1 (%)</b>	<b>Mean</b>	<b>Std. Dev.</b>
Effectively learn from both my success and failure or of other people	24.0	23.2	32.8	20.0	0.0	3.51	1.067
Easily and effectively communicate and persuade	25.6	18.4	31.2	16.8	8.0	3.37	1.254
Naturally, turn ideas into action to achieve goals	26.4	20.8	25.6	17.6	9.6	3.37	1.305
Naturally take up challenges for success in my career	23.2	18.4	29.6	24.0	4.8	3.31	1.208
Easily work with others to develop ideas and turn them into action	22.4	24.0	24.0	19.2	10.4	3.29	1.294
Manage finances to make sure my value-creating activity lasts for a long time	24.0	17.6	26.4	25.6	6.4	3.27	1.260
Promptly handle emergencies in business or at the workplace	22.4	20.0	28.8	19.2	9.6	3.26	1.271
Easily initiate entrepreneurial processes that create value	21.6	15.2	33.6	23.2	6.4	3.22	1.211
Work independently to achieve goals and carry out planned tasks	16.0	24.0	32.0	21.6	6.4	3.22	1.147
Easily find the support needed to achieve valuable outcomes	20.0	21.6	23.2	27.2	8.0	3.18	1.260
Automatically create valuable networks for my career success	16.0	21.6	28.0	28.0	6.4	3.13	1.178
Naturally explore and experiment with innovative approaches	13.6	19.2	38.4	24.0	4.8	3.13	1.077
Make the right decisions when the results of those decisions are uncertain, or when there is limited information to make the decisions.	12.0	24.8	28.8	16.0	18.4	2.96	1.279
Effortlessly run an entrepreneurship venture	15.2	20.8	24.8	22.4	16.8	2.95	1.313

**Note:** N (listwise) = 125; Overall mean = 3.23

[5] Strongly agree, [4] Agree, [3] Moderately agree, [2] Disagree, [1] Strongly disagree

**Source:** Survey Data (2019)

### 4.3 Variable Reduction of EE

Many indicators were used to characterize the predictor variables, such as content, learning techniques, learning resources, and evaluation techniques, therefore Principal Components Analysis (PCA) was used to decrease certain items by eliminating those that were ambiguous. PCA was also used to condense a large number of variables into a smaller number of 'artificial' variables known as 'principal components,' which account for the majority of the variance in the original variables (Lund Research Ltd, 2018).

The Kaiser–Meyer–Olkin (KMO) statistics were used to perform the sampling adequacy tests and Bartlett's test of sphericity before PCA. The KMO is a metric that verifies the existence of a linear relationship needed to run PCA (Lund Research Ltd, 2018). Kaiser's 1974 classification, presented in Table 4.9, was used to interpret the KMO data.

**Table 4.9 KMO Classification**

<b>KMO measure</b>	<b>Interpretation</b>
$KMO \geq 0.9$	Marvelous
$0.8 \leq KMO < 0.9$	Meritorious
$0.7 \leq KMO < 0.8$	Middling
$0.6 \leq KMO < 0.7$	Mediocre
$0.5 \leq KMO < 0.6$	Miserable
$KMO < 0.5$	Unacceptable

**Source:** Kaiser (1974)

#### 4.3.1 Variable Reduction of the Content of EE

The Kaiser-Meyer-Olkin sampling adequacy measure for Ep education content was .779. These results were classified as 'middling' on the Kaiser scale, making them acceptable (see Table 4.10). The factor model was tested using Bartlett's test of

sphericity to test whether the correlation matrix was an identity matrix, which would suggest that the factor model was incorrect. There is evidence of significant Bartlett's test  $\chi^2 (45) = 235.499$ ,  $p=0.000$ . These findings suggested that the data used to assess the content of Ep instruction may be factorizable.

**Table 4.10 KMO and Bartlett's Test for the Content of EE**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.779
Bartlett's Test of Sphericity	Approx. Chi-Square	235.499
	Df	45
	Sig.	.000

**Source:** Survey Data (2019)

The number of common factors compounded, the eigenvalues associated with these factors, the percentage of total variance accounted for by each factor, and the accumulative percentage of total variation accounted for by the factors are all shown in the total variance explained.

The construct of the EE subject was measured using three indicators: topics covered, attendance, and duration of coverage. Using the criterion of retaining only factors with reasonable percentages of variance eigenvalues, the first 2 factors were retained for rotation. As indicated in table 4.11, the first component accounted for 31.564% of the variance and was designated topics of Ep education while the second component had 13.637% variance and was designated duration of coverage. The 2 factors accounted for a total cumulative variance of 45.201%.

**Table 4.11 Total Variance Explained for the Content of EE**

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Topics of Ep education	3.156	31.564	31.564
Duration of coverage	1.364	13.637	45.201

**Source:** Survey Data (2019)

To cluster the elements in each factor, the varimax rotation was applied. The best indication of the significance of the components is found in the clustering and wording of the items. To eliminate multi-collinearity and so account for 100 percent of the variance, the components were rotated using the Varimax Criterion. The 2 components were clustered and denoted as topics of Ep education and duration of coverage. The components explain a total of variables grouped into each of the 2 principal components (factors). The interactions converged in 14 iterations. Table 4.12 presents the findings.

**Table 4.12 Rotated Component Matrix for the Content of EE**

	Component	
	Topics of Ep Education	Duration of Coverage
Resource people to interact within EP	.750	
Seizing opportunities in starting a business	.734	
Behaviors and psychology of entrepreneurs	.722	
Key partners and stakeholders to network with	.702	
EE activities in dealing with common issues	.645	
The time allocated for theory learning sessions was adequate		.725
Covering EE once in Module I exposed me to adequate knowledge on becoming an entrepreneur		.619
The duration of tests and exams was adequate		.591
The time allocated for practical learning sessions was adequate		.531

**Source:** Survey Data (2019)

### 4.3.2 Variable Reduction of the Learning Techniques of EE

EE subject learning techniques were characterized as the second predictor variable. The fifteen items originally intended to evaluate learning techniques were subjected to a Principal Component Analysis (PCA) utilizing a forced extraction approach. The KMO index of 0.867 was in the meritorious classification and Bartlett's test of sphericity was statistically significant,  $\chi^2 (105) = 857.360$ ,  $p = .000$ .

**Table 4.13: KMO and Bartlett's Test for the Learning Techniques of EE**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	857.360
	Df	105
	Sig.	.000

**Source:** Survey Data (2019)

Only two of the fifteen items originally proposed to measure learning techniques were kept for rotation. The two components together explained 52.732% of the variance in the Ep education learning techniques construct (Table 4.14).

**Table 4.14: Total Variance Explained for the Learning Techniques of EE**

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Active techniques	6.098	40.657	40.657
Passive techniques	1.811	12.076	52.732

**Source:** Survey Data (2019)

The varimax rotation was conducted. The two components of EE were clustered and denoted active and passive learning techniques. The components account for a total of variables that are categorized into each of the two main components (factors). The interactions converged in 3 iterations (Table 4.15).

**Table 4.15 Rotated Component Matrix for Learning Techniques of EE**

	Component	
	Active techniques	Passive techniques
The class conducted seminars	.847	
We watched videos covering EE	.774	
We visited business organizations during learning	.760	
We went for academic trips for EE	.746	
We conducted seminars on EE during learning	.732	
We went for attachment on specifically EE	.702	
During coursework, we started a business activity	.620	
Entrepreneurs were invited to teach/speak on some topics	.597	
The class performed role-plays during learning sessions	.596	
We carried out research projects on entrepreneurship	.526	
Lecturers used the traditional lecture method to teach	.455	
We learned by discussing cases of businesses that failed	.451	
The lecturer gave us assignments on entrepreneurship tasks		.858
We used group discussions during entrepreneurship lectures		.772
We developed a business plan during coursework		.691

**Note:** Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

**Source:** Survey Data (2019)

#### 4.3.3 Variable Reduction of the Learning Resources of EE

The third predictor variable, EE learning resources, was envisioned as having the ability to positively influence the acquisition of entrepreneurial abilities. Initially, sixteen items were proposed to assess learning resources. The sixteen items were subjected to PCA. The overall KMO index value of .867 was within the meritorious classification and indicated the suitability of PCA. Bartlett's test of sphericity was statistically significant,  $\chi^2 (120) = 848.920$ ,  $p = .000$ , implying that the data measuring the learning resources were factorizable (Table 4.16).

**Table 4.16 KMO and Bartlett's Test for the Learning Resources of EE**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.867
Bartlett's Test of Sphericity	Approx. Chi-Square	848.920
	Df	120
	Sig.	.000

**Source:** Survey Data (2019)

Although four variables were provided to quantify EE learning resources, the PCA extracted three components that explained 57.54% of the variation (Table 4.17).

**Table 4.17 Total Variance Explained for Learning Resources of EE**

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Infrastructure	6.181	38.633	38.633
Reference materials	1.831	11.441	50.075
Human resources	1.195	7.466	57.540

**Source:** Survey Data (2019)

The varimax rotation was successful in retaining fifteen of the sixteen items proposed to assess learning resources. Infrastructure, reference materials, and human resources were the three components of the fifteen items. The interactions converged in 5 iterations (Table 4.18).

**Table 4.18 Rotated Component Matrix for Learning Resources of EE**

	Component		
	Infrastructure	Reference materials	Human Resource
Business incubation laboratories	.803		
Information resource centers	.746		
Internet connectivity	.688		
Audiovisual (projectors and computers)	.632		
Entrepreneurship education journals and magazines		.778	
Entrepreneurship education articles in newspapers		.721	
Entrepreneurship education textbooks		.710	
Entrepreneurship education teaching manuals		.669	
Sample of business plans		.550	
The learning resources provided a comfortable learning environment			.791
Entrepreneurship education guest speakers			.758
The resources stimulated my interest in entrepreneurship			.747
The lecturer was reasonably knowledgeable in the topics presented			.724
Entrepreneurship education mentors			.667
The lecturer gave adequate attention to the supervision of the business plan			.585

**Note:** Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

**Source:** Survey Data (2019)

#### 4.3.4 Variable Reduction of the Evaluation methods of EE

The construct of the evaluation methods was conceptualized to predict EE. A forced PCA approach was run on the thirty-two items initially proposed to measure the construct ‘evaluation methods of EE’. Results summarized in table 4.19 show that the KMO index of .777 was in the middling classification and Bartlett’s test of sphericity was statistically significant,  $\chi^2 (55) = 439.341$ ,  $p = .000$ .

**Table 4.19 KMO and Bartlett's Test for the Evaluation Methods of EE**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.777
Bartlett's Test of Sphericity	Approx. Chi-Square	439.341
	Df	55
	Sig.	.000

**Source:** Survey Data (2019)

The PCA extracted three components namely; long-term based, medium-term based, and short-term based methods of evaluation. The components explained 60.877% of the variance in the methods of evaluation of EE (Table 4.20).

**Table 4.20 Total Variance Explained for Evaluation Methods of EE**

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Long term-based methods	3.909	35.533	35.533
Medium-based methods	1.714	15.578	51.111
Short-term based methods	1.074	9.766	60.877

**Source:** Survey Data (2019)

The varimax rotation retained eleven items proposed to measure the construct learning methods. The eleven items were clustered into 3 components and denoted long-term based, medium-term based, and short-term based methods. The interactions converged in 5 iterations (Table 4.21).

**Table 4.21 Rotated Component Matrix for Evaluation Methods of EE**

	Component		
	Long-term based	Medium-term Based	Short-term based
Observation and assessment of a business activity	.804		
Assessment of entrepreneurship attachment field reports	.794		
Writing of essays/term papers on entrepreneurship	.789		
Assessment of a business project	.565		
Assessment of business plans and business reports		.878	
Group/individual presentations		.663	
Case studies		.539	
Sit-in tests			.790
Participation in class by answering questions			.716
End term examinations			.687
Interpretation of financial statements			.645

**Note:** Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

**Source:** Survey Data (2019)

#### **4.4 Variable Reduction of the Perceived level of Acquisition of Entrepreneurial Skills**

The Kaiser-Meyer-Olkin measure of sampling adequacy for the perceived level of acquisition of entrepreneurial skills was 0.857. From the Kaiser Classification scale, these results were ‘meritorious’ (see Table 4.9). Bartlett’s test of sphericity was conducted to test whether the correlation matrix was an identity matrix, which would indicate that the factor model was inappropriate. There is evidence of significant Bartlett's test  $\chi^2 (861) = 3513.599$ ,  $p=0.000$ . These results implied that the data collected to measure entrepreneurial skills was factorizable.

**Table 4.22: KMO and Bartlett's Test of the Perceived level of Acquisition of Entrepreneurial Skills**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	3513.599
	Df	861
	Sig.	.000

**Source:** Survey Data (2019)

Although 42 factors were computed, not all the factors were useful in representing the list of variables. Using the criterion of retaining only factors with reasonable percentages of variance eigenvalues, 2 components were retained for rotation. As indicated in table 4.23, the first component accounted for 27.613% of the variance while the second component had a 17.384% variance. The 2 factors accounted for a total cumulative variance of 44.997%.

**Table 4.23: Total Variance Explained of the Perceived level of Acquisition of Entrepreneurial Skills**

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Proficient level	11.597	27.613	27.613
Novice level	7.301	17.384	44.997

**Source:** Survey Data (2019)

The varimax rotation was conducted to cluster the items in each factor. The two components were clustered and denoted as the proficient level of entrepreneurial skills and the novice level of entrepreneurial skills respectively. The components explain a total of variables grouped into each of the 2 principal components. The interactions converged in 14 iterations (Table 4.24).

**Table 4.24: Rotated Component Matrix of the Perceived level of Acquisition of Entrepreneurial Skills**

	Component	
	Proficient level	Novice Level
Manage finances to make sure my value-creating activity lasts for a long time	.845	
Effortlessly run an entrepreneurship venture	.819	
Easily find the support needed to achieve valuable outcomes	.813	
Naturally take up challenges for success in my career	.796	
Naturally, turn ideas into action to achieve goals	.793	
Naturally, explore and experiment with innovative approaches	.762	
Promptly handle emergencies in business or at the workplace	.761	
Easily and effectively communicate and persuade	.754	
Easily work with others to develop ideas and turn them into action	.747	
Automatically create valuable networks for my career success	.737	
Make right decisions when the result of that decision is uncertain, when there is limited information to make the decision, or when there is a risk of failure	.731	
Easily initiate entrepreneurial processes that create value	.731	
Work independently to achieve goals and carry out planned tasks	.711	
Influence the course of events despite uncertainties, setbacks, and past failures	.676	
Effectively learn from both my success and failure or of other people	.676	
Exercise patience and keep trying to achieve my goals	.655	
Maximize the use of limited resources	.622	
Obtain and manage resources needed to turn ideas into actions	.581	
Establish networks and connections in entrepreneurship		.725
Use information communication technology in enterprises		.725
Roles of an entrepreneur in an enterprise		.705
Handle legal issues in entrepreneurship		.698
Role of information communication technology in entrepreneurship		.695
Forms of business ownership		.672
Conduct negotiations in entrepreneurship		.652
Process of entrepreneurship		.626
Develop an entrepreneurial vision		.616
Entrepreneurial culture, behaviour, traits, and intentions		.613
Identify and seize business opportunities		.603
Prepare and interpret entrepreneurship financial information		.595
Factors that affect entrepreneurship		.580
The attitudes of entrepreneurs		.577
Conduct market research of entrepreneurship ventures		.571
History of entrepreneurship		.558

**Note:** Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 14 iterations.

**Source:** Survey Data (2019)

## 4.5 Results of Inferential Statistics

The relationship between the instructional elements of EE and the acquisition of entrepreneurial skills was investigated using multiple regression statistics in this study. The regression diagnostic tests were run first, before the regression tests.

### 4.5.1 Results of the Diagnostic Tests of the Regression Analysis

Based on the results shown in Table 4.25, the values of skewness and kurtosis were significantly below three and eight in all variables under study, implying a lack of skewness or kurtosis. Concerning the normality of the variance test, the Shapiro-Wilk test was conducted. Results indicated a p-value > 0.05 in all the variables, implying a homogenous variance among the sample.

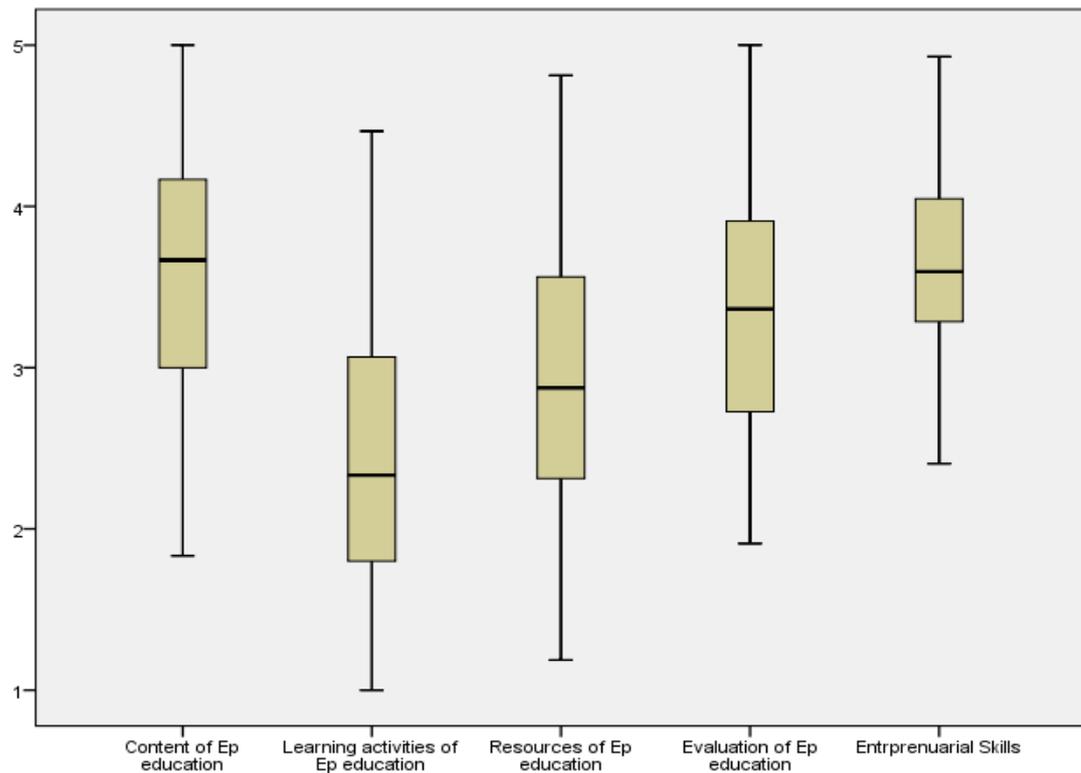
**Table 4.25: Skewness, Kurtosis, and Shapiro-Wilk**

Variable	Skewness		Kurtosis		Shapiro-Wilk Sig.
	Statistic	Std. error	Statistic	Std. error	
Content (X <sub>1</sub> )	-.100	.217	-.302	.430	.989
Learning techniques(X <sub>2</sub> )	.054	.217	-.780	.430	.983
Learning resources (X <sub>3</sub> )	.061	.217	-.740	.430	.985
Evaluation methods (X <sub>4</sub> )	-.235	.217	-.892	.430	.971
Level of Acquisition of ES(Y)	-.009	.217	-.341	.430	.991

**Note:** N=125

**Source:** Survey Data (2019)

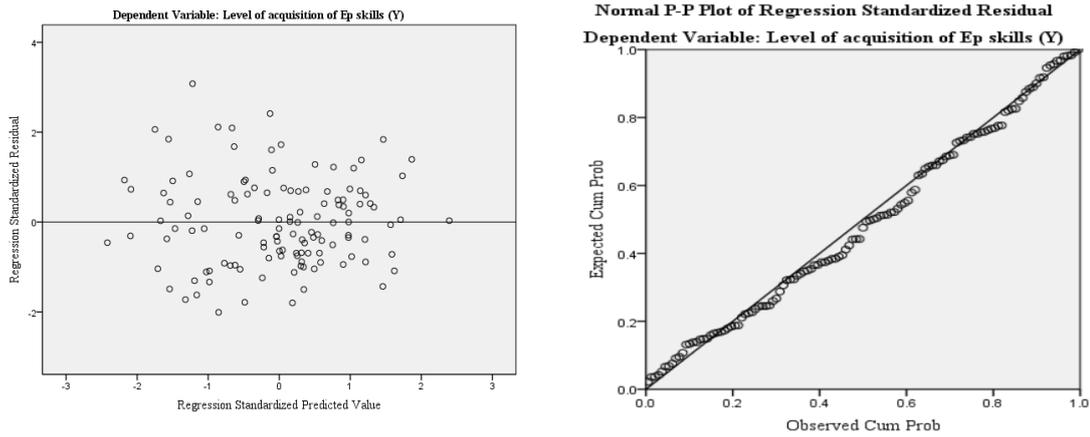
Significant outliers were examined using boxplots to see whether the multiple regression model could be employed for the investigation. There were no notable outliers in the sample means or correlation coefficients, according to the results (Figure 4.4).



**Figure 4.4. Test for outliers**

**Source:** Survey Data (2019)

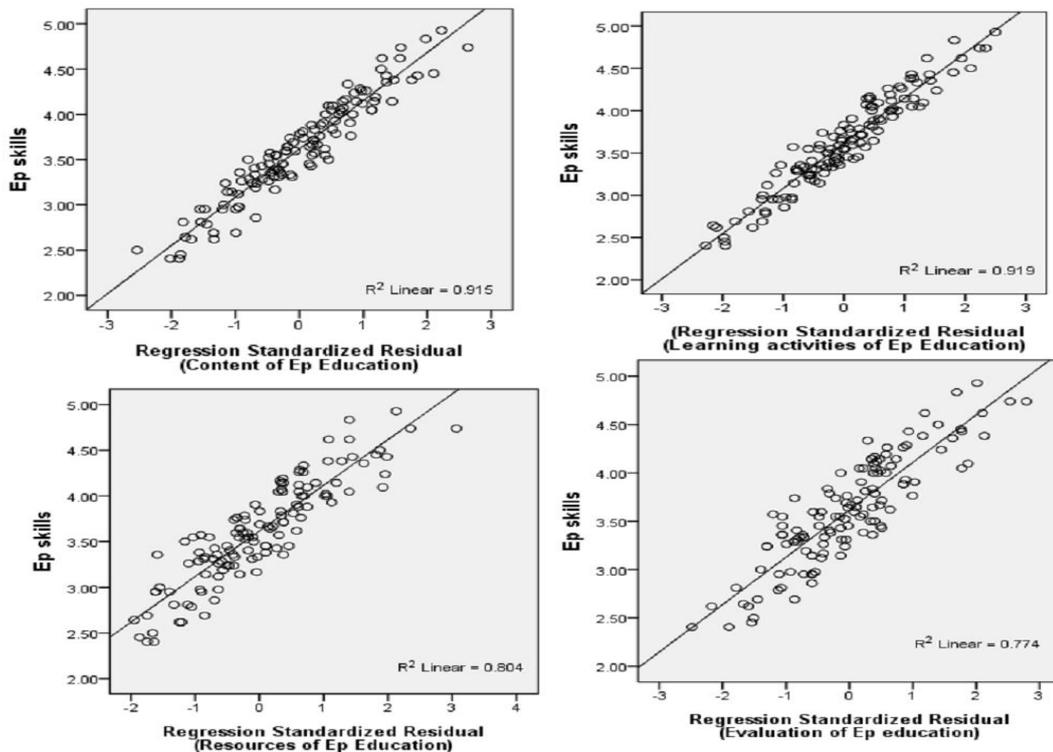
The assumption of linearity was tested using a scatter plot of studentized residuals (SRE 1) against (unstandardized) predicted values (PRE 1). Figure 4.5 shows the results of the scatter plot test, which show that there was no violation of linearity because the residuals formed a horizontal band on the resulting scatter plot (Hair *et al.*, 2014). Furthermore, the residuals' normal plot displays points that are close to a diagonal line, showing that the linearity requirement is met.



**Figure 4.5: Results of linearity test**

Source: Survey Data (2019)

Besides, a homoscedasticity test was conducted to test the extent to which data values for the variables had equal variances (Saunders *et al.*, 2012). Results, as shown in Figure 4.6, indicate equal variances between variables under the study.



**Figure 4.6 Results of Homoscedasticity test**

Source: Survey Data (2019)

To ensure that the assumption was not violated, a multi-collinearity test was performed. Tolerance must be close to zero, and the Variance Inflation Factor (VIF) must be close to ten for multi-collinearity to exist (Coakes, 2005). The results show that Tolerance is above zero, but the Variance Inflation Factor (VIF) is far below 10, showing that the predictor variables are not multi-collinear.

Finally, autocorrelation was investigated. The autocorrelation of regression residuals is a measure of serial correlation (Tabachnick & Fidell, 2013). To test serial correlation, the Durbin-Watson (DW) statistic is used. Because it takes cognizance of the order in which cases are selected. If the DW statistic is between 1.5 and 2.5, the regression residuals are deemed independent. As a rule of thumb, test statistic scores in the 1.5 to 2.5 range are considered normal. The Durbin-Watson statistic value of 1.629 was considered normal, meaning that the regression residuals were independent. Table 4.26 summarizes the outcomes of the multicollinearity and autocorrelation assumption testing.

**Table 4.26 Multicollinearity and Autocorrelation Tests**

Variables	Collinearity Statistics		Durbin-Watson statistic
	Tolerance	VIF	
Content (X <sub>1</sub> )	.675	1.481	1.629
Learning techniques(X <sub>2</sub> )	.460	2.175	
Learning resources (X <sub>3</sub> )	.356	2.806	
Evaluation methods (X <sub>4</sub> )	.504	1.985	
Dependent Variable: Level of acquisition of ES (Y)			

**Source:** Survey Data (2019)

#### 4.5.2 Correlation Results of Variables

A correlation test of variables was performed before the multiple regression analysis to determine the statistical significance of the relationship between measures of EE and the acquisition of entrepreneurial skills. Table 4.27 shows that the taught content of EE ( $r=.338$ ,  $P=.000$ ) and the learning techniques of EE ( $r=.301$ ,  $P=.001$ ) have a weak positive association with the acquisition of entrepreneurial skills, but the correlations are statistically significant. Furthermore, both the learning resources of EE ( $r=.45$ ,  $P=.000$ ) and the evaluation methods of EE ( $r=.475$ ,  $P=.000$ ) were moderately associated with the acquisition of entrepreneurial skills. It was important to undertake linear regression analysis after establishing the correlations between the variables under investigation to determine the predictive potential of each independent variable on the dependent variable.

**Table 4.27: Correlation of X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub> against Y**

Predictors (X)	Correlations	Level of Acquisition of ES (Y)	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>
EE Subject	Pearson Correlation Sig. (2-tailed)	1				
Content (X <sub>1</sub> )	Pearson Correlation Sig. (2-tailed)	.338** .000	1			
Learning Techniques (X <sub>2</sub> )	Pearson Correlation Sig. (2-tailed)	.301** .001	.339* *	1		
Learning resources (X <sub>3</sub> )	Pearson Correlation Sig. (2-tailed)	.450** .000	.529* *	.723* *	1	
Evaluation methods (X <sub>4</sub> )	Pearson Correlation Sig. (2-tailed)	.475** .000	.402* *	.639* *	.665**	1

Note: N=125

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

Source: Survey Data (2019)

### **4.5.3 Multiple Regression of X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, X<sub>4</sub> against Y**

Multiple regression analysis is carried out to explore the cause-effect relationships between the predictor variables and the outcome variable, to make predictions on the outcome (Kaya& Güler, 2013). Thus, after ascertaining the correlation between EE instructional elements (content, learning techniques, evaluation methods, and learning resources) and the level of acquisition of entrepreneurial skills, the study sort to determine the variable that best predicts the outcome (the level of acquisition of entrepreneurial skills). Thus, a multiple regression was conducted.

#### **4.5.3.1 Model Summary of Multiple Regression**

The R statistic is used to determine the strength of the independent and dependent variables' relationship. When the R statistic is between 0.5 and 0.7, the rule of thumb indicates a moderate association (Moore, Notz & Flinger, 2013). As shown in Table 4.28, the R statistic value of .527 indicates a moderate link between the instructional elements of EE and the level of acquisition of entrepreneurial skills.

$R^2$  by definition refers to the proportion of total variation in the dependent variable (Y) explained by the regression of Y on X (Koutsoyiannis, 1993). It is the percentage of variance in the dependent variable explained by all of the model's predictors (Saunders, *et al.*, 2012). Hair *et al.*, (2013) addressed the difficulty of determining adequate  $R^2$  using rules of thumb because it is dependent on model complexity and research discipline. Urbach and Ahlemann (2010), on the other hand, argue that  $R^2$  values should be high enough for the model to have a minimum degree of explanatory power.  $R^2$  values was determined for this study using Cohen's (1988)  $R^2$  value rule of thumb: 0.26 substantial, 0.13 moderate, and 0.02 weak.

The model yielded a coefficient of determination ( $R^2$ ) of .278. This value was substantial, implying that 27.8% of the variation in the level of acquisition of ES could be explained by EE instructional elements. All four predictors of EE instructional elements (content, learning techniques, evaluation methods, and learning resources) were included in the model, as well as the three levels of EP skill acquisition as the outcome variable. The model was significant at  $F(4, 120) = 11.531$ ,  $p = .000$ .

**Table 4.28 Model Summary of Multiple Regression**

Model	R	R Square	F Change	df1	df2	Sig. F Change
1	.527	.278	11.543	4	120	.000

**Note:** Predictors: (Constant), Content; Learning techniques; Learning resources; Evaluation methods

**Source:** Survey Data (2019)

#### 4.5.4 ANOVA of the Multiple Regression Analysis

The ANOVA result in Table 4.29 indicates the significance of the model (with four predictors). The model was significant at  $F(4, 120) = 11.543$ ,  $p = .000$ . Thus, there is sufficient evidence to conclude that the regression model fits the data better than the model with no independent variables. This means that the independent variables in the model improve the fit of the model.

**Table 4.29 ANOVA of the regression analysis**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.757	4	3.189	11.543	.000 <sup>b</sup>
	Residual	33.155	120	.276		
	Total	45.912	124			

**Note:**

a. Dependent Variable: Level of acquisition of ES

b. Predictors: (Constant), Content; Learning techniques; Learning resources; Evaluation methods

Source: Survey Data (2019)

#### 4.5.5 Hypotheses Testing and Coefficients of Predictors against the Outcome Variable

To test the hypotheses of the current, a multiple regression test was conducted. Table 4.30 presents a summary of the regression coefficients. Four predictors of EE instructional elements (content; learning techniques; learning resources and evaluation methods) to determine their predictive power on the outcome variable; level of acquisition of entrepreneurial skills.

Results of the first predictor —the content of EE, (B= .094, P=.257) were not significant. This is because the p-value for the predictor was greater than the significance level of  $P \leq 0.05$ . Thus, there is no sufficient evidence to reject the following null hypothesis;

*H<sub>01</sub>: The content of the EE does not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

Results of the second predictor —learning techniques of EE yielded (B= -.116, P=.190) insignificant results. Hence the postulated null hypothesis below was not rejected;

*H<sub>02</sub>: Learning techniques adopted in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

The third predictor (learning resources of EE) was found to be a statistically significant and positive predictor of entrepreneurial skill acquisition ( $B=.194$ ,  $p=.039$ ). These findings suggest that if learning resources improve by one unit percentage, the level of entrepreneurial skill acquisition among the sampled students is likely to increase by 19.4%.

As a result, the following null hypothesis was rejected.

*H<sub>03</sub>: Learning resources employed in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

Finally, the fourth predictor (evaluation methods of EE) produced significant results with positive predictive power. Table 4.30 shows that the evaluation methods of the EE used in TVCs were a significant predictor of entrepreneurial skill acquisition ( $B=.282$ ,  $p=.002$ ). This means that when a one-unit percentage of the adopted methods of evaluating EE is used, the level of acquisition of entrepreneurial skills among the sampled students is likely to improve by approximately 28.2%. As a result, the following hypothesis was rejected:

*H<sub>04</sub>: Evaluation methods used in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

From the multiple regression results, the best fitting model for predicting the level of entrepreneurial skill acquisition among F&B students in TVCs in Kenya would be the linear combination of the methods of evaluation and learning resources of EE employed as illustrated:

$$LSA = B + B_4LR + B_3EM + \varepsilon \quad LSA = .194LR + .282EM + \varepsilon$$

Where;

LSA ≡ Level of acquisition of Entrepreneurial Skills

LR ≡ Learning Resources of EE

EM ≡ Evaluation methods of EE

$B_0$  ≡ Unstandardized coefficient

$\varepsilon$  ≡ Error term

**Table 4.30 Coefficients for predictors of acquisition of entrepreneurial skills**

Model	Unstandardized Coefficients B	Std. Error	Sig.
(Constant)	2.014	.278	.000
Content	.094	.083	.257
Learning Techniques	-.116	.088	.190
Learning Resources	.194	.093	.039
Evaluation Methods	.282	.088	.002

a. Dependent Variable: Level of acquisition of ES

Source: Survey Data (2019)

#### **4.5.6 Test for Moderation Effects**

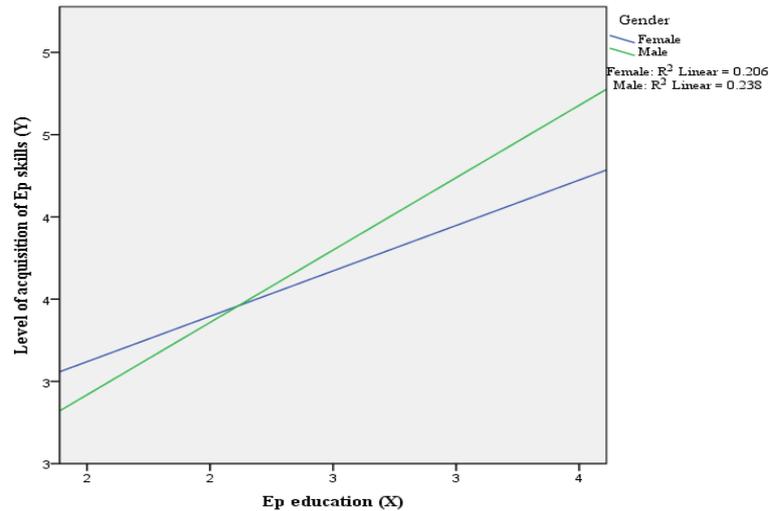
This study hypothesized that socio-demographic factors are not statistically significant moderators of the relationship between the instructional elements of EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs. The socio-demographic factors were measured using three indicators namely; gender, family entrepreneurial background, and previous entrepreneurship experience.

##### **4.5.6.1 Screening of Socio-Demographic Factors for Moderation**

Before the tests for moderation were conducted, the socio-demographic factors (gender; family entrepreneurial background; past entrepreneurial experience) were screened to determine whether they are moderators of the relationship between exposure to EE and acquisition of entrepreneurial skills.

Scatter plots can be used to establish if a dichotomous variable is a moderator or not, according to Zero (2020). The dichotomous variable fails to moderate the relationship between the independent and dependent variables if the scatter plots yield two separate parallel lines, implying that both groups are affected in the same way. However, if the lines cross, the variable is most likely a moderator.

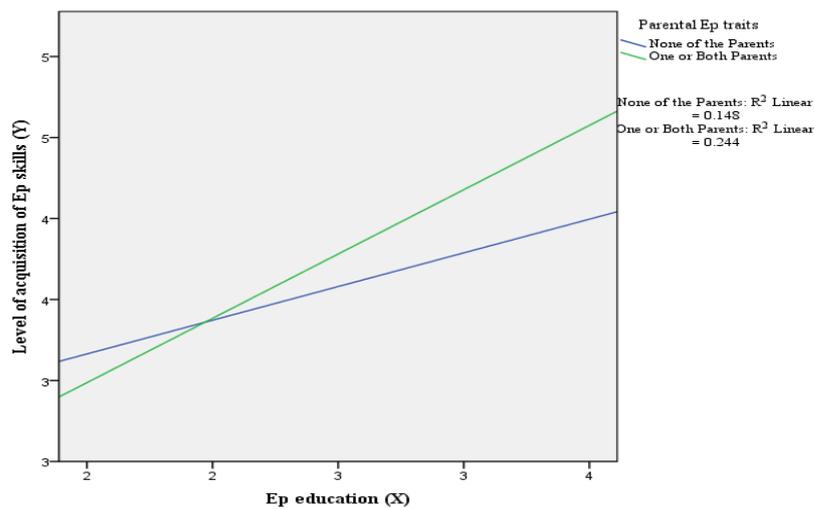
Gender can influence the association between exposure to the EE and the level of learning of entrepreneurial skills among students, as demonstrated in figure 4.7. According to the findings, the more EE learning sessions male students attend, the more likely they are to develop higher levels of entrepreneurial skills ( $R^2=0.238$ ) than their female counterparts ( $R^2=0.206$ ).



**Figure 4.7 Test of gender for moderation**

Source: Survey Data (2019)

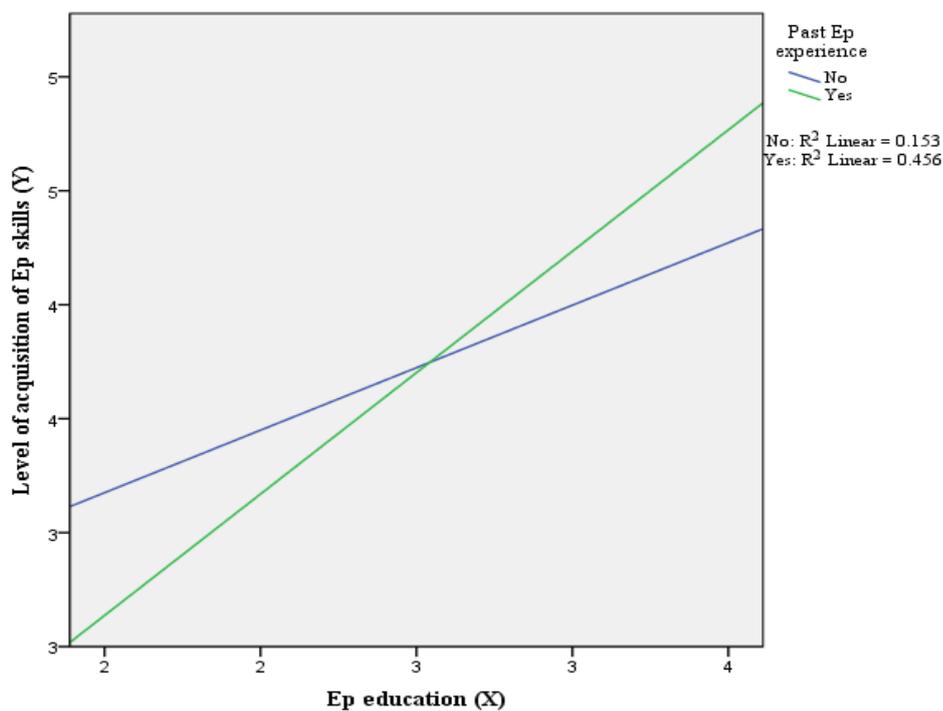
The results of family entrepreneurial background screening demonstrate that the EE improves the level of entrepreneurial skill acquisition among students whose family exhibit entrepreneurial traits ( $R^2=0.244$ ) compared to their counterparts ( $R^2=0.148$ ). This suggests that the association between the exposure to EE and the level of entrepreneurial skill development among students is likely to be moderated by family entrepreneurial background.



**Figure 4.8 Test of family entrepreneurial background for moderation**

Source: Survey Data (2019)

The results for a screen of students' past entrepreneurial experience indicate that the level of acquisition of entrepreneurial skills as predicted by the delivery of EE is likely to be higher among the students with some form of entrepreneurial experience ( $R^2=0.456$ ) compared to those without ( $R^2=0.153$ ). This implies that past entrepreneurial experience is likely to moderate the relationship between exposure to the EE and the level of acquisition of entrepreneurial skills.



**Figure 4.9 Test of past entrepreneurial experience for moderation**

Source: Survey Data (2019)

#### 4.5.6.2 Moderation Test Results

To test the hypothesized moderation, Andrew Hayes macro 'PROCESS' model 1 (Hayes, 2018). The level of entrepreneurial skills acquisition was entered as the criterion variable, a composite variable of the instructional elements of EE as the predictor variable and socio-demographic indicators (gender, family entrepreneurial background, and past entrepreneurial experience) were as the moderating variables. This resulted in three models.

The first model tested the interaction between gender and EE delivery against the level of acquisition of entrepreneurial skills. The overall moderation model results had significant effects  $F(3, 121) = 12.5372$ ;  $P = .000$ ;  $R^2 = .2371$  (see table 4.31).

**Table 4.31 Model summary of the Moderation of Gender against Level of Acquisition of Entrepreneurial Skills**

R	R-sq.	MSE	F	df1	df2	p
.4870	.2371	.2895	12.5372	3.0000	121.0000	.0000

**Source:** Survey Data (2019)

The results of interaction were insignificant  $\beta = .1665$ ;  $t(121) = 1.0402$ ;  $P = .3003$ ; CI (-.1504, .4833) (see table 4.32). This implies that gender is not a statistically significant moderator, in the relationship between EE and the level of acquisition of entrepreneurial skills. Thus the following hypothesis was not rejected.

*H<sub>05a</sub>: Gender does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

**Table 4.32 Moderation of Gender against Level of Acquisition of Entrepreneurial Skills**

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	2.3398	.2879	8.1258	.0000	1.7697	2.9099
EP education (X)	.3980	.0927	4.2951	.0000	.2145	.5814
Gender (W)	-.4586	.4992	-.9186	.3601	-1.4469	.5297
Interaction (X*W)	.1665	.1600	1.0402	.3003	-.1504	.4833

**Note:** N=125; Level of confidence for all confidence intervals in output: 95%

**Source:** Survey Data (2019)

The test (s) of highest order unconditional interaction(s) yielded insignificant change of  $R^2$  at  $F(1, 121) = 1.0820$ ;  $P = .3003$ ;  $\Delta R^2 = .0068$ . The test for highest-order unconditional interaction(s) is based on a likelihood ratio test, comparing the fit of the model of Y that includes the interaction compared to a model that excludes it. The insignificant  $\Delta R^2$  implies that the change in variance in the level of acquisition of skills was the same between the model with the interaction (gender\*EE) and the model without (see table 4.33).

**Table 4.33 Test(s) of highest order unconditional interaction(s) of Gender and EE**

<b>Test(s) of highest order unconditional interaction(s):</b>					
	R2-change	F	df1	df2	p
X*W	.0068	1.0820	1.0000	121.0000	.3003

**Source:** Survey Data (2019)

The second model tested the interaction between family entrepreneurial background and the instructional elements of EE against the level of acquisition of entrepreneurial skills. Results of the general moderation model had significant effects  $F(3, 121) = 14.3297$ ;  $P = .000$ ;  $R^2 = .2621$  (see table 4.34).

**Table 4.34 Model summary of the Moderation of Family Entrepreneurial Background against Level of Acquisition of Entrepreneurial Skills**

<b>Model Summary</b>						
<b>R</b>	<b>R-sq.</b>	<b>MSE</b>	<b>F</b>	<b>df1</b>	<b>df2</b>	<b>P</b>
.5120	.2621	.2800	14.3297	3.0000	121.0000	.0000

**Source:** Survey Data (2019)

Table 4.35 shows the results of interaction that were insignificant  $\beta=.2817$ ;  $t(121) = 1.8269$ ;  $P = .0702$ ;  $CI (-.0236, .5869)$ . The results can be used to deduce that that family entrepreneurial background is not a statistically significant moderator, in the relationship between the instructional elements of EE and the level of acquisition of entrepreneurial skills. Thus the following hypothesis was not rejected.

*H<sub>05b</sub>: Family entrepreneurial background does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya.*

**Table 4.35 Moderation of Family Entrepreneurial Background against Level of Acquisition of Entrepreneurial Skills**

Model	Coefficient	Se	T	p	LLCI	ULCI
Constant	2.6405	.3735	7.0688	.0000	1.9010	3.3800
Entrepreneurship Education (X)	.2693	.1223	2.2030	.0295	.0273	.5114
Family entrepreneurial background (W)	-.7016	.4761	-1.4736	.1432	-1.6443	.2410
Interaction (X*W)	.2817	.1542	1.8269	.0702	-.0236	.5869

**Note** N=125; Level of confidence for all confidence intervals in the output: 95%.

**Source:** Survey Data (2019)

The test (s) of highest order unconditional interaction(s) yielded insignificant change of  $R^2$  at  $F(1, 121) = 3.3376$ ;  $P = .0702$ ;  $\Delta R^2 = .0204$ ; implying an insignificant change in variance in the level of acquisition of skills between the model with the interaction (family entrepreneurial background\*EE) and the model without (see table 4.36).

**Table 4.36: Test(s) of highest order unconditional interaction(s) of Family Entrepreneurial Background and EE**

<b>Test(s) of highest order unconditional interaction(s):</b>					
	R2-change	F	df1	df2	p
X*W	.0204	3.3376	1.0000	121.0000	.0702

**Source:** Survey Data (2019)

Lastly, the interaction between students' past entrepreneurial experience and the instructional elements of EE against the level of acquisition of entrepreneurial skills was tested. The overall moderation model generated significant effects  $F(3, 121) = 14.7540$ ;  $P = .000$ ;  $R^2 = .2678$  (see table 4.37).

**Table 4.37: Model summary of the Moderation of Past Entrepreneurial Experience against Level of Acquisition of Entrepreneurial Skills**

<b>Model Summary</b>						
<b>R</b>	<b>R-sq.</b>	<b>MSE</b>	<b>F</b>	<b>df1</b>	<b>df2</b>	<b>P</b>
.5175	.2678	.2778	14.7540	3.0000	121.0000	.0000

**Source:** Survey Data (2019)

The results shown in table 4.38 indicate that the interaction was significant  $\beta = .4166$ ;  $t(121) = 2.2048$ ;  $P = .0294$ ; CI (.0425, .7907), implying that past entrepreneurial experience is a statistically significant moderator, of the relationship between the instructional elements of EE and the level of acquisition of entrepreneurial skills. Consequently, the postulated null hypothesis was rejected:

*H<sub>05c</sub>: Entrepreneurial experience does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&B students in TVCs in Kenya.*

**Table 4.38: Moderation of Past Entrepreneurial Experience against Level of Acquisition of Entrepreneurial Skills**

Model	Coefficient	Se	T	p	LLCI	ULCI
Constant	2.4711	.2574	9.6008	.0000	1.9615	2.9807
Entrepreneurship education (X)	.3709	.0823	4.5061	.0000	.2079	.5338
Past experience (W)	-1.4067	.5792	-2.4286	.0166	-2.5535	-.2600
Interaction (X*W)	.4166	.1889	2.2048	.0294	.0425	.7907

**Note:** N=125; Level of confidence for all confidence intervals in the output: 95%

**Source:** Survey Data (2019)

The test (s) of highest order unconditional interaction(s) yielded significant change of  $R^2$  at  $F(1, 121) = 4.8612$ ;  $P = .0294$ ;  $\Delta R^2 = .0294$  (see table 4.39), implying that the change in variance in the level of acquisition of skills in the model with the interaction (past experience in entrepreneurship\*EE) was significant.

**Table 4.39: Test(s) of highest order unconditional interaction(s) of Past Entrepreneurial Experience and EE**

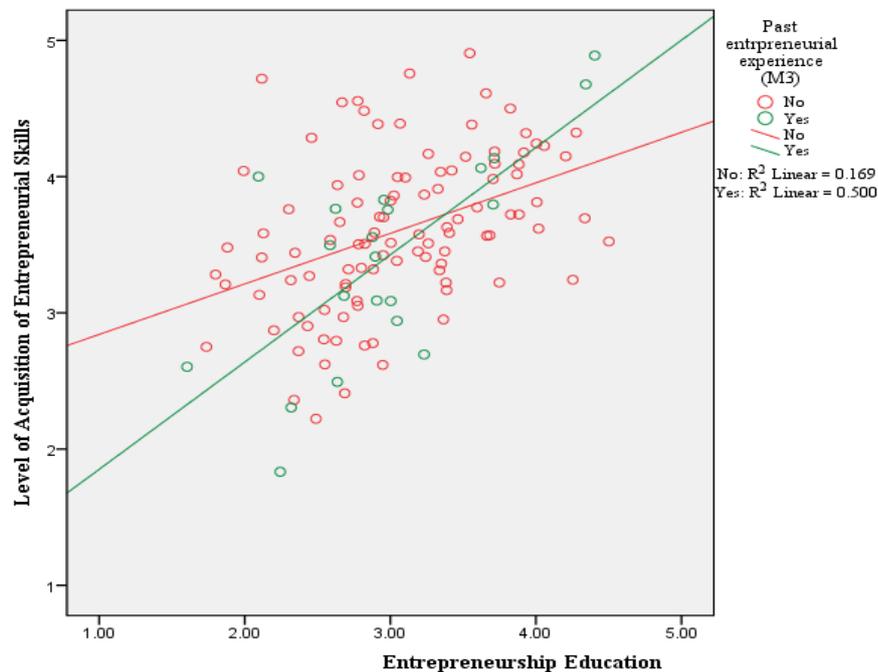
Test(s) of highest order unconditional interaction(s):					
	R2-change	F	df1	df2	p
X*W	.0294	4.8612	1.0000	121.0000	.0294

**Source:** Survey Data (2019)

In conclusion, there is no empirical evidence of moderation of gender and family entrepreneurial background on the relationship between the instructional elements of EE and level of acquisition of entrepreneurial skills. However, there is empirical evidence that past entrepreneurial experience has a moderating effect on the

relationship between the instructional elements of EE and the level of entrepreneurial skill acquisition.

The findings of the scatter plot test (see fig.4.10) show that students with some type of entrepreneurial experience ( $R^2=0.500$ ) have twice the ability of acquiring entrepreneurial skills as than counterparts ( $R^2=0.169$ ). This means that students' acquisition of entrepreneurial skills is enhanced by prior entrepreneurial experience.



**Figure 4.10 Scatterplot results of the past entrepreneurial experience**

Source: Survey Data (2019)

#### **4.6 Interview Results of the perceptions of curriculum experts and EE trainers on the role of EE in imparting entrepreneurial skills**

Interviews with selected EE trainers and curriculum experts from TVET-CCDAC and KICD yielded several themes. The themes were organized around the four variables that were investigated: the content taught, learning techniques, learning resources, and

evaluation methods. In the following sections, the results for each of the variables are presented.

#### **4.6.1 Interview findings on the Content of EE**

The first variable analyzed was the content of EE. The variable yielded three themes namely; practical skills, theoretical knowledge, and duration of learning. Concerning the first theme-practical skills, respondents agreed that the EE should impart learners with skills that can be utilized in day-to-day operations.

*“The content should be practical in the sense that students can acquire skills and utilize the skills in day-to-day operations” (EO<sub>1</sub>&TO<sub>1</sub>, 2019).*

Concerning the second element (theoretical knowledge), it was pointed out that some important issues, such as customer service, were not covered in the EE subject syllabus. Despite this, one respondent stated that the syllabus provided did not effectively educate students to learn entrepreneurial abilities because it is too theoretical.

*“The content does not provide students with the skills they need to become entrepreneurs. It is overly concerned with passing exams” (TO<sub>2</sub>, 2019).*

Finally, some trainers claimed that the time allotted for covering EE content was too short, forcing them to combine classes, skip some topics, and cover others quickly to finish the syllabus. One respondent observed that;

*“We only have a short time to teach... We cover some topics quickly due to time constraints, while others are taught in sections that address business plans, forms of business ownership, the procedure for starting a business, factors to consider, the business life cycle, challenges faced when starting a small business, and enterprise management... after that, you can talk about business plans”(TO<sub>2</sub>,2019).*

However, another respondent felt that it is the content of EE that is too wide for F&B students. The respondent observed that;

*"For F&B students, the content is too much... We teach them EP theory, how to write a business plan, and how to write a project, among other things..... "(TO<sub>4</sub>, 2019).*

In general, the content of EE was thought to be overly theoretical, making it ineffective in developing entrepreneurial skills among F&B students. Table 4.40 presents a summary of the findings.

**Table 4.40 Interview Findings on the Content of EE**

Case	Sub-themes	Meaning unit	Theme
EO <sub>1</sub>	Identify business opportunity	<i>The content should focus on identifying a gap and a viable business opportunity, and train students on how to identify business opportunities ...</i>	Practical skills
TO <sub>1</sub>	Utilize skills	<i>The content should be practical in the sense that students can acquire skills and utilize the skills in day-to-day operations</i>	
EO <sub>2</sub>	Customer service	<i>A topic on customer service should be included. How you treat a customer in business determines the customer comes back or not</i>	Theoretical knowledge
TO <sub>2</sub>	Focus on passing exams	<i>The content ..... is overly concerned with passing exams."</i>	
TO <sub>3</sub>	Merge topics	<i>Normally, I merge the topics... I do that because of the limited time we have to teach, you are expected to perform these things quickly."</i>	
TO <sub>3</sub>	Short time	<i>We have a short time to teach...</i>	Duration of learning
TO <sub>4</sub>	Overboard	<i>For F&amp;B students, the content is excessive... We teach students EP theory, how to write a business plan, how to write a project and a variety of other topics..... "It's too much for them</i>	
TO <sub>5</sub>	Short time	<i>The time we have to cover the syllabus is really short..... we are just given two terms.....in the second term, students are supposed to produce a business plan. If you follow the syllabus accurately the first term may come to an end before you teach them the business plan. So mostly we cover the introduction, then we go straight to the business plan topic</i>	

**Source:** Interview transcriptions (2019)

#### 4.6.2 Interview Finding on the Learning Techniques of EE

Three themes emerged as a result of the learning techniques used in the delivery of EE: practical-based, lectures and lecture notes, and manuals. In terms of the practical-

based theme, the respondents agreed that teaching entrepreneurship required a combination of numerous practical tasks, such as organizing trade shows. Instead of going to trade shows, one interviewee suggested that students be permitted to create their events so they might get more from the experience.

One of the respondents expounded that;

*"Teaching entrepreneurship requires a combination of many practical methods..... students could open and manage a business venture, such as a restaurant, to learn Ep education, or they could plan exhibitions and events such as cake fairs and sports events to enable them to market and sell their products"(EO<sub>1</sub>,2019).*

Furthermore, it was discovered that the biggest part of respondents support the use of interactive and practical-operational techniques of learning such as industrial trips, guest lecturers, and trade show trips. However, certain TVCs were found to be overly reliant on the lecture technique. One respondent observed that;

*"Entrepreneurship education is taught here in the same way as it is taught in most colleges, as any other topic... "(TO<sub>3</sub>, 2019).*

According to the respondent's narrative, the situation is even worse. Cited verbatim, the respondent observed that;

*".....no one teaches them; they are given instructions....." Some lecturers only send notes via email"(TO<sub>5</sub>, 2019).*

Financial restrictions appeared to be a major impediment to interactive learning.

*"..... is not possible owing to financial constraints...."(TO<sub>4</sub>, 2019).*

Table 4.41 provides a summary of the findings.

**Table 4.41: Interview Findings on the Learning Techniques of EE**

Case	Sub-themes	Meaning unit	Theme
EO <sub>1</sub>	Practical-oriented	<i>Teaching entrepreneurship requires a combination of many practical methods...</i>	Practical-based
EO <sub>2</sub>	Manage a business venture	<i>The best way to learn is by doing....students could open and manage a business venture like a restaurant.... They can be planning for exhibitions and events such as cake fairs and sports events to enable them to market and sell their products</i>	
TO <sub>1</sub>	Guest speakers; academic trips	<i>We rarely invite guest speakers.... we try as much as possible to take students for industrial visits”.</i>	Lectures
TO <sub>2</sub>	Guest speakers; trade fairs and exhibitions	<i>... we go to trade fairs and exhibitions, we also invite guest speakers from the industry, especially former students who have excelled in entrepreneurship.</i>	
TO <sub>4</sub>		<i>We have always endeavored to travel on academic vacations, but that is not possible owing to financial constraints...</i>	
TO <sub>3</sub>	<i>Taught like any other subject</i>	<i>Entrepreneurship education is taught here in the same way as it is taught in most colleges, as any other topic... because we anticipate the students taking an examination”</i>	
TO <sub>5</sub>	<i>Lecture notes and manuals</i>	<i>in some cases, no one teaches them; they are given instructions.....Some lecturers only send notes via email.</i>	Lecture notes and manuals

**Source:** Interview transcriptions (2019)

#### 4.6.3 Interview Findings regarding the Learning Resources of EE

The topic of learning resources of EE elicited a lot of reactions. As a result, five themes were delineated. They include; quality and adequacy of materials and facilities, adequacy of personnel, service quality, budgets, and internet. Concerning the first theme on quality and adequacy of materials and facilities, it was noted that the most important resources for F&B students pursuing the EE include recipe cards, production, and the restaurant lab. However, one challenge that was reported was the access and adequacy of quality lab resources. It was noted that;

*... access to high-quality resources is a challenge; occasionally we visit TVETs and discover only one <sup>5</sup>jiko for roughly 50 students” (EO<sub>2</sub>, 2019).*

<sup>5</sup>Jiko - a container made of metal or clay and used for burning charcoal or small pieces of wood. It is used for cooking or to give heat (Oxford Learner’s Dictionary, 2022).

The challenge of the adequacy of resources was also highlighted in the second theme-adequacy of personnel. Respondents underscored that EE trainers were very few. In many TVCs, there was an average of one or two qualified EE trainers teaching across all the departments.

*“I teach across all the departments...” (TO<sub>2</sub>, 2019).*

Another respondent underscored that;

*“What do you expect from us with only two trainers and 2000 students?” (TO<sub>3</sub>, 2019).*

The challenge of inadequate trainers adversely affected the quality of training, especially for students. The scarcity of trainers would provide an opportunity for students to cheat scot-free as trainers were already overwhelmed with the heavy workload of teaching, supervising business plans, and assessing students.

*“It is overwhelming, a student can download a business plan from the internet, do a few changes and bring it to you...” (TO<sub>2</sub>, 2019).*

The shortage of facilities and trainers as pointed out in themes one and two respectively, adversely affected the quality of delivery, hence theme three (service quality). The interview revealed that some TVCs have resorted to recruiting temporary trainers on a short-term basis to supplement those employed by the government.

However, most of the trainers lacked the pedagogical skills and expertise in the delivery of EE. Thus, they were not able to influence students' interest in entrepreneurship. A respondent cited verbatim reported that;

*“The majority of us who teach EE subject are not oriented towards entrepreneurship...” (TO<sub>3</sub>, 2019).*

Perhaps, this explains the reason why one interviewee emphasized that students should only be taught EE by trainers specializing in their discipline. The interviewee observed that;

*“I wish this course was taught by hospitality trainers, not by a business trainer, because a specialist is likely to know the industry trends and challenges and advice students accordingly” (EO1, 2019).*

The scarcity of resources could be attributed to theme four-budgets. It was evident that limited finances constrained the learning techniques which enhance linkage and partnerships with the industry. Lastly, the theme-internet was also elicited from the interview sessions. It was noted that the internet played a major role in the teaching of EE. Trainers were able to access online information with ease. In conclusion, learning resources such as qualified trainers, well-equipped labs, and financial budgets were found to be limited. Table 4.42 presents a summary of the interview analysis.

**Table 4.42: Interview Findings regarding the Learning Resources of EE**

Case	Sub-themes	Meaning unit	Theme
EO <sub>2</sub>	Laboratories; Quality resources One <i>jiko</i>	<i>The recipe cards, the kitchen and restaurant labs are the most significant resources for the F&amp;B course. However, access to high-quality resources is a challenge; occasionally we visit TVETs and discover only one jiko for roughly 50 students.</i>	Quality and adequacy of materials and facilities
TO <sub>2</sub>	All the departments  Overwhelming	<i>I teach across all the departments.... "It is overwhelming, a student can download a business plan from the internet, do a few changes and bring it to you..."</i>	Adequacy of personnel
TO <sub>3</sub>	Two trainers	<i>What do you expect from us with only two trainers and 2000 students? Do you believe we'll have enough time to mark those business plans? We just do it because of the tests.</i>	
TO <sub>3</sub>	Entrepreneuria l mindset	<i>The majority of us who teach the EE subject are not oriented towards entrepreneurship..... How can you get students to believe in entrepreneurship if you don't have an entrepreneurial mindset? You only teach it because you've been assigned an extra subject. I'd like to demonstrate that, no matter how much content is covered, it's not enough to motivate a student to start a business.... you need someone who believes in it.</i>	Service quality
EO <sub>1</sub>	Hospitality trainer	<i>I wish this course was taught by hospitality trainers, not by a business trainer because a specialist is likely to know the industry trends and challenges and advice students accordingly</i>	
TO <sub>4</sub>	Financial constraint	<i>We have always endeavored to travel on academic vacations, but that is not possible owing to financial constraints...</i>	Budget
EO <sub>2</sub>	Internet; E-books; YouTube videos;	<i>TVETs can take advantage of technology.... E-books can be used for the recommended texts, trainers and students should also embrace the use of YouTube videos to try out recipes and modify them accordingly.</i>	Internet
TO <sub>1</sub>	Internet	<i>.....we get a lot of information online</i>	

**Source:** Interview transcriptions (2019)

#### 4.6.4 Interview Finding on the Evaluation Methods of EE

Two themes were elicited from the interviews on evaluation methods. Firstly, trainers and experts emphasized the use of practical-oriented methods of evaluation, hence theme one. Some trainers noted that the evaluation methods adopted were not suitable in assessing the level of acquisition of entrepreneurial skills. The respondents recommended the use of presentations, business plans, and projects. One respondent observed that;

*“The methods of evaluation should be more practical oriented...they should assess how to produce something” (EO<sub>1</sub>, 2019).*

Another respondent underscored that:

*“It is preferable to use practical-based assessment approaches. The assessment approach should be based on something practical, such as evaluating a project.....” (TO<sub>5</sub>, 2019).*

One respondent stressed the significance of using business plans to assess entrepreneurial skills. The respondent did emphasize, however, that the procedure can only be effective if it is utilized correctly. The respondent stated, as quoted verbatim;

*“I always stress the importance of using business plans; if we take it seriously, it's a good way to go. The process of business planning is highly practical.....” (TO<sub>2</sub>, 2019).*

However, the respondent found certain difficulties in using business plan reports, particularly in cases where one trainer supervises and reviews the reports at the same time. When the trainer is dealing with a large group of students, it becomes impractical. The respondent remarked;

*“....a student can download a business plan from the internet, make a few adjustments, and hand it back to you for assessment, but in reality, the student has done nothing” (TO<sub>2</sub>, 2019).*

Another respondent stated that using projects rather than tests or business plans can be more beneficial. The respondent stated unequivocally that;

*“... A project is not like an exam where you can get answers from friends or classmates...” (TO<sub>1</sub>, 2019).*

The second theme that emerged was theoretical exams. This theme elicited mixed reactions as some respondents felt it was a significant method of evaluation while others disputed it. However, it was noted that the use of written examinations was a common practice in most TVCs since it makes students give attention to EE. One respondent noted that were it not for written examinations, students would rarely give

attention to EE. They would forego the time for EE for other subjects examinable by written examination.

*"..... when theoretical examinations were introduced, I believe it helped students to seriously concentrate on the subject "(TO<sub>4</sub>, 2019).*

In summary, the methods of evaluation were reported to be more theoretical and thus inadequate in assessing the acquisition of entrepreneurial skills among F&B students.

See table 4.43 for the summary of findings.

**Table 4.43 Interview Findings on the Evaluation Methods of EE**

Case	Sub-themes	Meaning unit	Theme
EO <sub>1</sub>	Practical-oriented	<i>The methods of evaluation should be more practical oriented...they should assess how to produce something</i>	Practical-oriented
TO <sub>1</sub>	Presentations	<i>...the current methods of evaluation are insufficient... We're moving towards competency-based training, and we've recommended assessing skills via presentations. Students will defend their CBET projects through presentations once we begin implementing it... A project is not like an exam where you can get answers from friends or classmates you know..</i>	
TO <sub>2</sub>	Business plans	<i>I always stress the importance of using business plans; if we take it seriously, it's a good way to go. The process of business planning is highly practical....students can come up with a business idea and put it into action.... some years back.....we used to prepare business proposals and send them to KNEC for evaluation. There was a sense of seriousness in studying because we knew it would be graded by KNEC. However, this was eventually dropped, and now the trainers are in charge of teaching, supervising business plans, and evaluating students. It's daunting; a student can download a business plan from the internet, make a few adjustments, and hand it back to you for assessment, but in reality, the student has done nothing</i>	
TO <sub>5</sub>	Projects	<i>It is better to use assessment methods that are practical-based. It should be based on something practical like assessing a project and managing it.... that is the best method of evaluation</i>	
TO <sub>4</sub>	Theory exam	<i>Initially, there was no theory, so students would just draft a business plan." You can guess what the students would do in the absence of theoretical examinations and especially when there are other topics to consider? Students would unlikely take the entrepreneurship education subject seriously... So, when theoretical examinations were introduced, I believe it helped students to seriously concentrate on the subject</i>	Theoretical exams

**Source:** Interview transcriptions (2019)

## CHAPTER FIVE

### DISCUSSION OF FINDINGS

#### 5.0 Introduction

This study investigated the influence of instructional elements of EE on the level of acquisition of entrepreneurial skills among F&B students drawn from selected TVCs in Kenya. In this chapter, key findings are discussed and compared or contrasted with theories and empirical findings according to each objective of the study.

#### 5.1 The influence of the content of EE on the level of acquisition of entrepreneurial skills

Entrepreneurial theoretical knowledge (*know-what*) predominates in the EE content taught to hospitality students in Kenyan TVCs, at the expense of entrepreneurial skills and competencies (*know-how*). These findings are supported by Mwasalwiba (2010) which reported that the content of EE hardly covers practical entrepreneurial skills and knowledge on areas such as legal issues; management of innovations and technology; franchising; family business; negotiation skills; communication skills; and problem-solving skills.

Besides, empirical evidence indicated that the duration of learning was inadequate. More learning hours were dedicated to theoretical learning and assessment than practical learning. Furthermore, a few subjects addressed entrepreneurship actors and agencies, entrepreneurship attitudes, motivations, and values, and entrepreneurial awareness. This challenge may have implications on students' capacity to assess their abilities to identify and match their competencies with business opportunities. These findings correspond with Kirby (2004) that alleged that EE is mostly focused on

teaching theoretical concepts that may increase awareness at the expense of the development of entrepreneurial attitudes and skills.

Apart from the much attention given to theoretical content, a lack of a clear demarcation in the content that addresses varied entrepreneurial competencies (*know-what; know-how; know-who; know-why; know-when*) was noted. However, according to Syed (2015), the content of EE should stress the practical nature of business-related themes. Other studies (Fayolle & Gailly, 2008; Azim & Al-Kahtani, 2014) have said that the material of the EE topic should be balanced in breadth and that learners should be exposed to both theoretical and practical knowledge, entrepreneurial competencies, and entrepreneurial actions.

Trainers also stressed that the six-month timeframe of the subject's coverage is extremely limited. This problem jeopardizes the quality of the syllabus coverage. In some instances, trainers were forced to merge certain topics, skip some or cover them hurriedly to complete the syllabus within the recommended duration. The challenge of inadequate time might be attributed to the scarcity of qualified entrepreneurship trainers. In some cases, it was noted that there was only one trainer to teach EE across all the departments within the institution. This challenge may result in inbreeding and monotony which can eventually curtail innovation and creativity among students. Besides, there is a possibility of trainers being overwhelmed by the heavy workload of teaching, supervision, and assessment of students. This overload might ultimately lead to poor coverage of the content, thus stifling the acquisition of entrepreneurial skills.

According to the regression results of this study, the content offered to F&B students in Kenyan TVCs has no significant influence on their level of entrepreneurial skill acquisition. These results were predicted, given the theoretical topics and the short

time it took to cover the content. Inadequate exposure to entrepreneurship content may hinder the development of a repertoire of skills and knowledge, such as communication, networking, and management skills, which are essential for navigating the hurdles of entrepreneurship. These findings support Syed's (2015) hypothesis that a well-structured entrepreneurship curriculum is capable of developing entrepreneurial talents and stimulating entrepreneurial behaviors such as startups.

## **5.2 The influence of learning techniques adopted in EE on the level of acquisition of entrepreneurial skills**

The descriptive findings revealed that active learning approaches were rarely used. The utilization of lecturers, business plans, and research projects were among the most prevalent passive learning techniques adopted. Besides, the use of assignments, group discussions, and case studies. Entrepreneurship seminars and videos were never used. These results concur with Syed's (2015) findings that asserted that traditional activities (class lectures, assignments, business plan preparation, and projects) are the most commonly used pedagogy methods for the entrepreneurship subject. Besides, the findings collaborated with Mkala and Wanjau's (2013) study which found that trainers seem resigned to using ineffective traditional methods of teaching.

The usage of lecture notes is considered a typical passive learning technique. This technique of learning entails circumstances in which students are given learning materials such as manuals in a lecture-style format. Passive techniques of learning have a limited potential to instill desirable attitudes and skills in learners (Bwisa, 2017). Rengiah, (2013) posits that teaching of EE should not be undertaken in mere classroom settings, but rather as a process that involves start-up businesses,

entrepreneurial activities, design-based learning, and reflective practices. Rengiah underscores starting businesses as part of coursework by the students is a way of inspiring them to the entrepreneurial process.

Conversely, the use of guest speakers and visits to the workplaces of prominent entrepreneurs were rarely used in the teaching strategies. This, however, goes against the advice of curriculum experts, who stressed the need of using a variety of hands-on techniques while teaching EE. Scholars (Syed, 2015; Lackeus, 2015) advocate for more focus on more active learning methods of EE than passive, to impart entrepreneurial skills among students.

According to the regression results, the learning approaches used in the delivery of the EE topic to F&B students in Kenyan TVCs had no significant impact on the development of entrepreneurial skills. Based on the works of Syed (2015) and Lackeus (2015), who advocated for practical-based methods of learning entrepreneurship. The outcomes of this study on the usage of traditional learning techniques were expected to be less significant in impacting entrepreneurial skill acquisition. Syed observed that teaching of entrepreneurship should be less dominated by lecture-style but more oriented towards pedagogies such as simulations and the use of real, practicing tourism entrepreneurs who can talk about their business and entrepreneurship experiences. Similarly, Lackeus (2015) suggests that teaching entrepreneurial skills should be based on real work situations, which encourage students to implement what they have learned. This is because entrepreneurs tend to be task-oriented, therefore the teaching methods should be task-focused, as compared to conventional methods that focus on specific skills for small business management such as finance and marketing.

However, the results of this study indicate that the active learning techniques of EE advocated for by Syed (2015) and Lackeus (2015) were rarely used in Kenyan TVCs. Entrepreneurship trainers underscored that teaching of entrepreneurship was done 'like any other subject' using similar traditional methods used to teach other subjects. In some situations, learners were sent notes through their email accounts. Little influence in so far as acquisition of entrepreneurial skills can be expected from the reliance on traditional passive activities of learning such as the use of lectures, business plans, and research projects.

### **5.3 The influence of learning resources employed in EE on the level of acquisition of entrepreneurial skills**

Resources are central in the discourse of entrepreneurship. "Even potentially skilled entrepreneurs would have difficulty succeeding without access to basic infrastructure and financial resources" (Robb *et al.*, 2014 pg.18). The findings of this study indicated that TVCs in Kenya are constrained by inadequate reference materials such as EE journals, magazines, and EE articles in newspapers. Besides, information technology resources such as audiovisual and internet connectivity were scarcely provided. Furthermore, TVCs in Kenya have not set up information resource centers and business incubation laboratories. Lastly, critical personnel such as entrepreneurship mentors and EE guest speakers are few.

The only resources adequately provided include samples of business plans and entrepreneurship textbooks. The findings of this study validate the findings of the policy framework for education report, (Republic of Kenya, 2012) that underscored that TVETs face challenges of limited customized teaching and learning materials and inadequate research support services. Besides, the report posits that there is an

insufficient number of qualified trainers in TVETs. Most trainers lack adequate pedagogical skills hence compromising the quality of delivery.

Despite the shortage of resources witnessed in Kenyan TVCs, results of regression suggested a positive significant influence of learning resources of EE on the acquisition of entrepreneurial skills among F&B students. This implies that the provision of learning resources of EE subject plays enhances the acquisition of entrepreneurial skills. These findings corroborate Mkala and Wanjau (2013) which assert that the provision of adequate learning resources translates into effective teaching of EE, which eventually boosts students' self-efficacy. Besides, previous studies (Rengiah, 2013; Mkala & Wanjau, 2013; Fayolle & Gailly, 2008) contend that implementing EE requires the sustained provision of resources to facilitate experiential learning.

Besides, this study's findings indicated that students did not have confidence in their trainers' mastery of EE content. Students were also doubtful of the adequacy of attention given to supervision of their business plans. They felt that the learning resources -including their trainers-did not provide a comfortable learning environment and hence did not stimulate their interest to venture into entrepreneurship practice. During the interview session with trainers, some reported that most of their colleagues lacked sufficient training and practical background in entrepreneurship. They could inspire students to venture into entrepreneurial actions. These finds were supported by Mwasalwiba, (2012) who found that due to limited research on entrepreneurship, trainers are somehow less informed on the prevailing levels of entrepreneurial attributes among the students, leading to a miscalculation of the students' entrepreneurial potentials.

Trainers who lack sufficient training and practical background in entrepreneurship can hardly inspire students to become entrepreneurial. Such trainers hardly believe that entrepreneurial education can change students' minds, therefore, they are more likely to fail to promote it. They are hesitant about entrepreneurship, and therefore, cannot become entrepreneurs, nor can they influence their students to become entrepreneurs. Trainers who possess the entrepreneurship spirit, act as a motivation for students to get assistance and support for their entrepreneurial activities. (Wibowo *et al.*, 2018)

Another reason for the failure of the trainers to inspire students' entrepreneurial actions stemmed from the financial constraints witnessed in many TVCs. Trainers alleged that they were not able to use practical methods of teaching the EE such as industrial visits, guest speakers, and business projects because the allocation for such activities was hardly budgeted for. Facilities such as information resources centers, business incubation labs, and food production and service labs were hardly available. In situations where such infrastructure was available, they were poorly equipped.

The results corroborated Mwasalwiba (2012) study conducted in Tanzania, which reported that the education sector in Tanzania operates amidst limited financial resources, over-crowded classes, and poor teaching facilities. Mwasalwiba concluded that lack of financial resources has a negative effect not only on the aspirations of future entrepreneurs but also on experienced entrepreneurs' choice of types and size of business investment.

#### **5.4 The influence of evaluation methods used in EE on the level of acquisition of entrepreneurial skills**

Results of the descriptive analysis indicated that EE subject offered to F&B students in the Kenyan TVCs is mostly evaluated by the use of *learning about* methods

compared to *learning in/for* methods of EE. The *learning about* methods commonly short-term based and use of include end term sit-in exams; participation in class by answering questions and sit-in tests.

The *learning in/for* methods are long-term based and include methods such as assessment of business activities and business projects were often substituted with the *learning about* methods. However, *learning for* methods like evaluating business projects and activities, as well as evaluating attachment field reports, was rarely used. These results coincide with findings of previous studies (Mwasalwiba, 2010; Mkala & Wanjau, 2013) which reported that most often EE is evaluated through the use of written examinations (*learning about method*).

The use of written exams and tests are short-term-based methods of evaluation. Exams and tests are less sufficient in assessing the acquisition of higher levels of entrepreneurial skills in EE. A previous study by Mwasalwiba (2010) linked the use of written exams with the acquisition of general knowledge about entrepreneurship (*learning about*) and recall of concepts in EE. Similarly, Pittaway and Edwards (2012) opine that the use of tests, examinations, case studies, and class participation are highly associated with *learning about* methods of EE. The *learning about* methods focus on assessing business knowledge and knowledge on startup processes of entrepreneurship. This implies that *learning about* methods of evaluation is effective in measuring the acquisition of novice entrepreneurial skills as opposed to lifelong skills (*learning for*) in entrepreneurship.

Despite the over-reliance on learning about evaluation methods, the regression analysis revealed that the evaluation methods used in the delivery of EE had a substantial impact on the level of entrepreneurial skill acquisition among F&B

students. These results, however, were distinctive and unexpected, especially after the interview results of EE trainers and F&B curriculum specialists were triangulated.

The trainers and F&B curriculum specialists recognized that the evaluation methods used in EE were insufficient to develop entrepreneurial abilities in students. They underlined the importance of using business plans and projects to assess a higher level of entrepreneurial skills. Similarly, Pittaway and Edwards (2012) found that the use of business plans, business reports, and presentations can be used to assess the acquisition of entrepreneurial behavior, attitudes, and skill (*learning for outcomes*).

Syed (2015) opines that the use of business plan/projects preparation can be effective in measuring *learning for outcomes*. However, as pointed out by the trainers, the use of business plans can only yield desirable outcomes if properly conducted. One trainer noted that even though the method is usually used in TVETs in Kenya, its benefit is not being fully realized. This is because, in most TVETs, EE trainers are inadequate and therefore teach EE as a common course across all the departments. Often, the trainers are overwhelmed by the large student population and the workload of teaching, supervision, assessment, and evaluation. Because of the heavy workload, most of them do not give enough attention to the supervision and assessment of the business plans. This opens an avenue for most students to cheat, by duplicating the business plans from sources such as the internet and friends. Such irregularities render the use of business plan reports quite ineffective.

### **5.5 The Moderating effect of socio-demographic factors, on the relationship between EE instructional elements and the level of acquisition of entrepreneurial skills**

In general, students of EE have a variety of pre-existing attitudes, interests, perspectives, and abilities. Variances in the learner's gender, race, parents' occupation, previous training, and job experiences amplify these differences. Such elements, it is suggested, influence students' perceptions and entrepreneurial inclinations, hence influencing EE subject expectations and outcomes (Mwasalwiba, 2012).

Several studies (Mustapha & Selvaraju, 2015; Thrikawala, 2011; Trebar, 2014) have argued that: males are more entrepreneurial than females; parents who run their businesses influence their children to become more entrepreneurial than children from employed parents (Mustapha & Selvaraju, 2015), and a prior experience in entrepreneurship makes an individual more entrepreneurial than those who do not have the experience (Nimalathasan & Achchuthan, 2013).

Accordingly, this study predicted that the learner's gender, family entrepreneurial background, and past entrepreneurial experience can influence the learning of EE and the level of acquisition of entrepreneurial skills. Hence the descriptive and mediation analysis of the student's gender, family entrepreneurial background, and students' past entrepreneurial experience was conducted. Descriptive results indicate a gender disparity in the distribution of the student population, with females dominating the food and beverage course.

This discrepancy can be explained by the perceived African gender roles. According to Bae *et.al.*, (2014) gender-based expectation leads both men and women to pursue gender-stereotype occupations. This implies that there are some types of occupations

that are generally thought to be only for men and others for women. In this case, it is thought the intentions of female students might be limited by the expectations that, women are meant to take care of the family (Mwasalwiba, 2012); by performing tasks such as cooking, serving, and cleaning. Such tasks are common in hospitality-related and are highly associated with females, hence more females in food and beverage-related studies.

Concerning students' entrepreneurial profile, the study found out that a large number of students came from families that practiced some form of entrepreneurship. Despite most students coming from a family with some form of entrepreneurial disposition (either one or both parents/guardians practicing some form of entrepreneurship), the students themselves did not portray a significant entrepreneurial outcome such as opening their ventures. In addition, the test for moderation indicated that family entrepreneurial background does not significantly influence the level of acquisition of entrepreneurial skills among F&B students.

These findings may imply that the family entrepreneurial actions did not sufficiently influence the students to practice some form of entrepreneurship. These findings can be explained by whether the family members were involved in entrepreneurship either as an opportunity-driven or as a survival or supplement activity. Involvement in entrepreneurship for survival or as a supplement activity might fail to nurture entrepreneurial interest among students, especially if a parent/guardian struggles as an entrepreneur.

Moreover, it might also imply that the EE subject did not impart a significant drive among students to engage in entrepreneurial activities such as self-employment. The inexistence of a significant correlation between family entrepreneurial background

and the level of acquisition of entrepreneurial skills explains the failure of family entrepreneurial background in mediating the relationship between EE and the level of acquisition of entrepreneurial skills.

Besides, the study found that the students' gender does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills. This implies that students' exposure to EE and the acquisition of entrepreneurial skills is neither enhanced nor stifled by their gender. These findings coincide with Bae *et al.*, (2014) which posit that student differences in gender do not significantly affect the relationship between entrepreneurship and entrepreneurial intentions.

Lastly, empirical evidence supports the fact that students' entrepreneurial experience significantly moderates the relationship between EE and the level of acquisition of entrepreneurial skills. These findings corroborate Nguyen, (2018) findings which intimated that students' prior experience increases entrepreneurship intention among students. Similarly, Desjardins and Ederer (2015) found that education is strongly linked with skill proficiency.

## **5.6 The perceptions of curriculum experts and EE trainers on the role of EE instructional elements in the acquisition of entrepreneurial skills**

Results of the content analysis were analyzed along with the four variables namely; the content of entrepreneurship, learning techniques, learning resources, and evaluation methods. To begin with, the experts and trainers perceived that the content of EE was extensively theoretical. According to Pittaway and Edward (2012), theoretical-oriented content can only teach "about" entrepreneurship to increase awareness about entrepreneurship but cannot develop entrepreneurial attitudes and skills among students. Besides, trainers felt that the content was too wide to be

covered within the recommended duration of six months. Thus, most of the trainers agree that they skip some content and cover the rest hurriedly to cover the syllabus within time.

Concerning the learning techniques adopted, it was reported that traditional passive methods especially the use of lectures was mostly adopted. The only practical methods infrequently adopted were the use of industrial visits and attendance to trade fairs and exhibitions. The main reason why practical-based learning techniques of EE were rarely adopted was attributed to a shortage of learning resources, most especially financial and personnel. The budgets were constrained and the number of qualified entrepreneurship trainers was limited. The trainers alleged that they were not able to use active methods such as industrial visits, guest speakers, and business activities because the financial allocation for such activities was hardly budgeted for. These findings work against the propositions of Mkala and Wanjau (2013) who warned that inadequate resources translate into ineffective teaching.

A shortage of qualified EE trainers was emphasized. The trainers reported that most of their colleagues lacked sufficient training and practical background in entrepreneurship. Such trainers hardly use methods that influence students' interest in entrepreneurship, they misdirect their teaching approach by using mainly lectures and group discussion methods. Extensive use of traditional lecturer-centered teaching methods, using imported training material curtails application of practical realities, especially in the local context (Mwasalwiba, 2012). Similarly, the findings of Kenya's policy framework report for education (Republic of Kenya, 2012) underlined that TVET institutions face a shortage of technical trainers. Consequently, trainers who do not have background training in certain subjects like EE convert to training the

subject through deployment. Such trainers lack adequate pedagogical skills training which compromises the quality of delivery (Republic of Kenya, 2012).

Besides access to well-equipped labs was perceived to be a major challenge. Thus, the interrogation of the quality of the learning resource materials was observed to take a central stage in the discourse of EE and the level of acquisition of entrepreneurial skills. Wibowo *et al.*, (2018) underscores that quality resources improve the creativity and quality of entrepreneurship teaching and learning and foster the acquisition of entrepreneurial skills among students.

Lastly, the methods of evaluation were perceived to be more focused on the use of business plans and written examinations. The reason why the use of written examinations was commonly adopted is the ease in administering and the low costs involved (Mwasalwiba, 2010). Besides, examinations have been found to enhance the attention of students during learning.

One respondent (TO<sub>4</sub>, 2019) recollected that initially, EE was only assessed using a business plan towards the end of the syllabus coverage. According to TO<sub>4</sub>, (2019) the method did not promptly provide feedback about the strengths and weaknesses to the students during learning to necessitate corrective actions. Besides, students rarely regarded the subject with much attention as most of them would use focus their attention towards other subjects examinable by written examination. Despite the strengths of written examination, the trainers and experts perceived the method to be generally weak in assessing proficient levels of skill acquisition and thus recommended the use of presentations and projects (Syed, 2015).

Besides the issue of objectivity and integrity in the evaluation process was also revealed. It was apparent that the business plans are assessed internally by the trainer

who mostly teaches the subject. The trainer teaches, supervises the writing of the business plan report, and eventually grades the report. This practice poses a risk to the objectivity in assessment especially in situations where the trainer was not able to complete the coverage of the syllabus in time. This problem is heightened by the shortage of trainers which compel TVETs to engage supplementary trainers on temporary terms. Such staff lack adequate pedagogical skills in entrepreneurship and, could become an easy target for compromise by students, especially due to the poor compensation they are offered.

## **CHAPTER SIX**

### **SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

#### **6.0 Introduction**

This chapter summarizes the major research findings from investigations conducted on each variable and gives accounts of the implications of the findings on practice, theory, and research. Besides, conclusions, recommendations, and areas for further research grounded on the outcomes of the study have been presented in this chapter

#### **6.1 Summary of Findings**

The purpose of the study was to interrogate the influence of EE on the level of acquisition of entrepreneurial skills among F&B students drawn from selected TVCs in Kenya. The predictor variable of EE was measured using the content, learning techniques, learning resources, and evaluation methods of EE. Based on these measures, four null hypotheses were formulated. Multiple regression was conducted to test the influence of each predictor on the outcome variable. Results indicated that unlike learning resources and evaluation methods, the content and learning techniques of entrepreneurship did not yield enough statistical power to influence the acquisition of entrepreneurial skills. The summary of regression results is illustrated in Table 6.1.

**Table 6.1 Summary of Regression Results of EE (X) against the Acquisition Level of ES (Y)**

Hypotheses	Results	Decision rule
<i>H<sub>01</sub>: The content of EE does not significantly influence the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	(B= .094, P=.257)	Not rejected
<i>H<sub>02</sub>: Learning techniques adopted in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	(B= -.116, P=.190)	Not rejected
<i>H<sub>03</sub>: Learning resources employed in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	(B=.194, p=.039)	Rejected
<i>H<sub>04</sub>: Evaluation methods used in EE do not significantly influence the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	(B=.282, p=.002)	Rejected

**Source:** Survey Data (2019)

The study also sought to determine the moderation of socio-demographic characteristics (students' gender, family entrepreneurial background, and past entrepreneurial experience) on the relationship between EE and the level of acquisition of entrepreneurial skills. Therefore, three null hypotheses were formulated and tested using Hayes Macro 'Process' Model 1. The summary of moderation results is illustrated in Table 6.2

**Table 6.2: Summary of Moderation of Socio-demographic Characteristics (M) on the Relationship between EE (X) and Entrepreneurial Skills (Y)**

Hypotheses	Results	Decision rule
<i>H<sub>05a</sub>: Gender does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	( $\Delta R^2 = .0068$ , P=.3003) (Insignificant moderator)	Not rejected
<i>H<sub>05b</sub>: Family entrepreneurial background does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	( $\Delta R^2 = .0204$ , P=.0702) (Insignificant moderator)	Not rejected
<i>H<sub>05c</sub>: Entrepreneurial experience does not significantly moderate the relationship between EE and the level of acquisition of entrepreneurial skills among F&amp;B students in selected TVCs in Kenya.</i>	( $\Delta R^2 = .0294$ , P=.0294) (Significant moderator)	Rejected

**Source:** Survey Data (2019)

This study also examined the perceptions of curriculum experts and entrepreneurship trainers on the role of EE in imparting entrepreneurial skills among F&B students. Thus, a content analysis of the interviews was carried out. The findings implied that the content of EE is theoretical, and is often taught using passive learning techniques. Besides the experts and trainers perceived lack of adequate and quality learning resources as a major hindrance of acquisition of entrepreneurial skills and finally, use of business plans and written examinations in the evaluation were perceived to be overly used.

## 6.2 Conclusions

This research aimed at investigating the influence of EE (content, learning techniques, learning resources, and evaluation methods) on the level of acquisition of entrepreneurial skills by F&B students in selected TVCs in Kenya. Based on the empirical evidence and literature review, this study concluded that EE offered to F&B students in Kenyan TVCs exposes them to more of beginner (declarative) level skills,

and intermediate (procedural) level skills at the expense of proficient (automatic) level skills.

According to DeKeyser (1998), declarative level skills refer to a low level of knowledge limited to static information of facts encoded in memory. In the context of entrepreneurial skills, declarative skills may include knowledge of memorizing concepts such as the historical development of entrepreneurship, the importance of entrepreneurship, and the process of entrepreneurship. DeKeyser posits that the procedural level of skills is gradually attained from the repetitive application of declarative knowledge through meaningful practice influenced by instructional settings to a point where facts, concepts, and ideas no longer matter. DeKeyser (2007b) concluded that continued practice of procedural knowledge results in an automatic level of knowledge that is fully spontaneous, effortless, fast, and errorless use of declarative facts unconsciously.

The revelation that F&B students acquire beginner and intermediate level skills from the EE as opposed to a proficient level of skills coincide with the findings of Hahn *et al.*, (2017) which asserted that the exposure of students to EE increases students' entrepreneurial learning outcomes, such as the acquisition of knowledge and skills but only up to a certain threshold, beyond which students cannot further develop proficient skills or actively apply their entrepreneurial knowledge spontaneously and unconsciously as is the case with automatic level skills.

These findings may be used to explain one of the main limitations of EE in its inability to turn entrepreneurial knowledge and ideas into entrepreneurial actions such as opportunity recognition and assessment, risk management, creative problem

solving, value creation and, building and using networks (Morris *et al.*, 2013). Conceivably, this limitation may stem from the poor delivery of EE.

### **6.2.1 Conclusions on the influence of the content of EE on the acquisition of entrepreneurial skills**

The content of EE offered to F&B students in selected TVCs in Kenya does not influence the acquisition of entrepreneurial skills. This is due to the fact the content is overly dominated by theoretical knowledge at the expense of entrepreneurial skills and abilities.

Theoretical knowledge only teaches about entrepreneurship to increase awareness about entrepreneurship but is inadequate in nurturing entrepreneurial skills (Mwasalwiba, 2010) that can ignite entrepreneurial actions such as startups. Theoretical content is limited in its ability to impart entrepreneurial skills as it only aims to increase awareness about entrepreneurship (Piperopoulos & Dimov, 2014).

To develop entrepreneurial attitudes and competencies, students need to be exposed to practical entrepreneurship topics that allow them to undertake to role-play activities, simulations, and entrepreneurial projects during EE. Besides, from the interview sessions conducted with EE trainers and curriculum experts, it was apparent that the content is too wide to be covered within the duration of the course. The wide content exerts pressure on trainers, deviating their attention towards syllabus coverage and not content delivery. Thus, some trainers adopt unscrupulous ways of syllabus coverage such as merging and skipping some topics. Eventually, such unethical methods of learning fail to instill the requisite skills and attitudes for entrepreneurial actions.

### **6.2.2 Conclusions on the influence of the learning techniques of EE on the acquisition of entrepreneurial skills**

The findings of this study point out that learning techniques of EE adopted in EE among F&B students in selected TVCS in Kenya do not influence the acquisition of entrepreneurial skills. This study found out that the learning techniques of EE in Kenyan TVCs are dominated by traditional passive methods such as lecturers, business plans, assignments, group discussions, and case studies. A study by Kirby (2002) found that traditional learning techniques inhibit the development of entrepreneurial attitudes and skills.

The interview findings corroborated the statistical results as some trainers observed that EE was traditionally taught like any other subject. In some cases, it was noted that students were only sent notes through their email accounts for them to read on their own. Such passive learning techniques adopted in the delivery of EE did not contribute to the acquisition of entrepreneurial skills among students.

Literature intimates that passive learning techniques hardly nurture entrepreneurial skills. However, experiential learning techniques such as students starting and running their ventures have been found to expose students to real-life work environments through which, they get opportunities to implement and apply the knowledge acquired in the classroom.

### **6.2.3 Conclusions on the influence of the learning resources of EE on the acquisition of entrepreneurial skills**

This study asserts a strong positive relationship between learning resources provided in the delivery of EE and the acquisition of entrepreneurial skills among F&B

students in selected TVCs in Kenya. The results implied that the learning resources of EE significantly contributed to students' acquisition of entrepreneurial skills.

Besides, the learning resources provided were inadequate and of low quality. The most commonly available learning resources in TVCs in Kenya include samples of business plans and entrepreneurship textbooks. It is noted that TVCs in Kenya do not have access to adequate technological resources, information resource centers, and business incubation laboratories. Besides, essential human resources such as qualified entrepreneurship trainers, entrepreneurship mentors, and entrepreneurship guest speakers are rare. Quality and adequate resources improve the creativity and quality of entrepreneurship teaching and learning, thus fostering entrepreneurial actions (Mwasalwiba, 2010; Wibowo *et al.*, 2018).

From an interview conducted with the EE trainers and curriculum experts, it can be concluded that most trainers who teach EE in Kenyan TVCs lack sufficient training and practical background in entrepreneurship. Besides, it was noted that TVCs are highly underfunded thus unable to access quality resources for teaching EE.

#### **6.2.4 Conclusions on the influence of the evaluation methods of EE on the acquisition of entrepreneurial skills**

The methods of evaluation adopted in the delivery of EE influence the acquisition of entrepreneurial skills among F&B students in TVCs in Kenya. This study found that the most common methods of evaluation used end-term sit-in exams; participation in class by answering questions and sit-in tests. Such methods are examination-oriented and thus inclined to the evaluation of entrepreneurship theoretical knowledge.

This study also found that the methods of evaluation of EE such as assessment of business projects and entrepreneurship attachment field reports; and assessment of

business activities were rarely used. The findings of the interview session perceived the methods of evaluation currently employed to be deficient in nurturing entrepreneurial skills and attitudes.

The use of business plans was found to be ineffective and impractical in cases where the student population is large. This is because trainers were unable to read through a huge pile of the business plans, within the perceived short duration of EE syllabus coverage. Consequently, students would easily engage in examination malpractices by duplicating the business plans from internet sources and resubmitting them for evaluation. Unfortunately, such misconducts would be rarely discovered.

#### **6.2.5 Conclusions of the moderation of socio-demographic characteristics on the relationship between EE and acquisition of entrepreneurial skills**

The findings of this study suggest that students' gender and family entrepreneurial background do not mediate the relationship between learning of EE and acquisition of entrepreneurial skills. Thus, the study concludes that both male and female students can similarly acquire entrepreneurial skills. No gender is more associated with the acquisition of entrepreneurial skills than the other despite the dominance of the female student population pursuing the F & B management diploma.

While it was anticipated that since most parents practiced some form of entrepreneurship by running a business venture, their children would have an advantage over those whose parents did not. Contrary to this expectation, this study found that family entrepreneurial background does not inspire the acquisition of entrepreneurial skills among F & B students. This implied insignificant differences in the acquisition of entrepreneurial skills among students with or without family entrepreneurial background.

Similarly, students with previous entrepreneurial experience exhibited a higher capability to acquire entrepreneurial skills than their counterparts. Conceivably, the experience in entrepreneurship among some students influenced the level of acquisition of entrepreneurial skills. This implies that past entrepreneurial experience enhances the acquisition of entrepreneurial skills among F & B students.

#### **6.2.6 Conclusions on the perceptions of curriculum experts and EE trainers on the role of EE in imparting entrepreneurial skills**

In conclusion, this study suggests that the content of EE is too wide to be effectively covered within the recommended six months period of study. Besides, the subject is dominated by theoretical knowledge, which is inadequate to nurture entrepreneurial skills capable of igniting entrepreneurial action. A lot of emphasis is put on teaching entrepreneurship to increase awareness. Little attention is seemingly given to the need to develop entrepreneurial attitudes and skills among F & B graduates in TVCs in Kenya.

This study also concluded that the teaching of EE is mostly dominated by traditional passive activities of learning which have been less significant in fostering entrepreneurial skills among F & B graduates. This factor is attributable to the shortage of learning resources, especially financial and personnel. The shortage of learning resources compromises the quality of teaching and learning of EE, thus stifling the acquisition of automatic levels of entrepreneurial skills.

Lastly, the shortage of resources compels the TVETs to overly depend on short-term examination-oriented methods by using tests, examinations, and written business plans. Such methods are inadequate in assessing proficient levels of skill acquisition. Besides, the use of written business plans was found to be impractical and ineffective

considering the few qualified entrepreneurship trainers and the bulging student population.

### **6.3 Implications of the Study to Theory, Practice, and Policy**

The findings of this study supported the hypothesis that learning resources employed in EE have a statistically significant influence on the level of acquisition of entrepreneurial skills among F&B students in selected TVCs in Kenya. These findings contribute to the teaching model for EE by introducing another critical EE element which is learning resources. The EE teaching model neglected the role of learning resources in EE by proposing five interrelated elements (objectives, audiences, evaluations, content, and pedagogies) which shape the design of EE.

The current study has found that learning resources is a major player in the architecture and implementation of EE. Implementation of experiential learning of EE implies resource mobilization. TVETs need to explore avenues of mobilizing resources through the establishment of collaboration networks and linkages with the local and global business communities and other industry players. A well-established collaboration network with the business community can provide a suitable environment for the active interaction of students with guest speakers and entrepreneurship mentors through field trips and internships. Besides, active collaborations and linkages can easily attract sponsors to fund projects such as the construction of business centers and incubation laboratories. One major player in this collaboration can be Youth Enterprise Development Fund (YEDF). It might be vital for each accredited TVET institution to partner with YEDF to establish an agency within the campus, whose main mandate can be scouting for innovative

entrepreneurial ideas and providing support such as funding, mentorship, and marketing.

Another way of managing resources is establishing income-generating enterprises that can serve as a platform for students to practice active entrepreneurship as well as a source of funding to complement government funding. The proceeds from such activities should be plowed back into the development and maintenance of learning resources. For food and beverage students, such income-generating activities can include restaurants, bakeries, conferences, and events among others.

Lastly, TVETA should strictly enforce a policy that regulates the workload allocation of trainers to address the challenge of a shortage of qualified entrepreneurship trainers. The regulations will not only cushion trainers against overload but also catalyze the process of building capacity for adequate staff. Besides, such a policy is likely to open up innovative ways of building the capacity of entrepreneurship trainers. For instance, the TVETA in liaison KNQA may explore modalities of certifying outstanding entrepreneurs with prior learning in different fields such as hospitality as mentors of EE in TVETs. Besides, the TVETA should only license one trainer to teach preferably two subject areas based on their expertise and area of training.

In addition, it is notable that TVETA is making concerted efforts to achieve quality assurance, especially in activities such as assessment. Nonetheless, there is little evidence of guidelines and standards that regulate such elements as learning techniques and resource materials. More focus in the TVETA, CBETA Standards and Guidelines (2019) is given on the evaluation and assessment component at the

expense of other crucial instructional elements such as learning techniques and resource materials.

There are no proper quality assurance structures and regulatory frameworks established within most TVETs to assess the extent to which compliance to the syllabus requirements are adhered. For instance, the EE syllabus recommends certain learning techniques to be conducted during learning of EE. However, there are no guidelines or standards that provide for a framework through which such activities can be monitored and assessed. Lack of the guidelines jeopardizes the quality assurance of the syllabus coverage. The quality control is upon individual trainers. To enhance quality control in the enforcement of the syllabus requirements, TVETA and CCDAC can explore modalities on how TVETs can establish self-regulatory practices such as the establishment of a quality assurance department to self-regulate the training process.

#### **6.4 Contribution of the Study to Theory, Practice, and Policy**

The current study expands the scant literature on EE and its impact on entrepreneurial skills. The relationships identified make contributions to research, given the paucity of similar studies that link such concepts. Besides, existing research on entrepreneurship has mostly been conducted in higher education settings. This is one of the studies that has analyzed the impact of EE instructional elements on the acquisition of entrepreneurial skills in TVETs. The questionnaire developed for this study was tested for validity and reliability the findings showed that the instrument scale items were reliable and valid. As a result, the measurement scales employed in this study to evaluate EE and the level of acquisition of entrepreneurial skills

constitute a major contribution to research that will enable other scholars to utilize the instrument in future research.

In addition, the constructs resulting from the Principal Component Analysis (PCA) contribute to the corpus of knowledge in EE and acquisition of entrepreneurial skills. The content of EE can be measured using two parameters namely; topics of EE and duration of coverage. The learning techniques of EE can be measured using two factors namely; active and passive techniques. Learning resources can be measured using three factors, namely; learning infrastructure, reference materials and human resource. Short-term, mid-term, and long-term approaches can be used to measure EE evaluation methods. Lastly, two parameters of novice and proficient can be used to assess the level of perceived entrepreneurial skill acquisition.

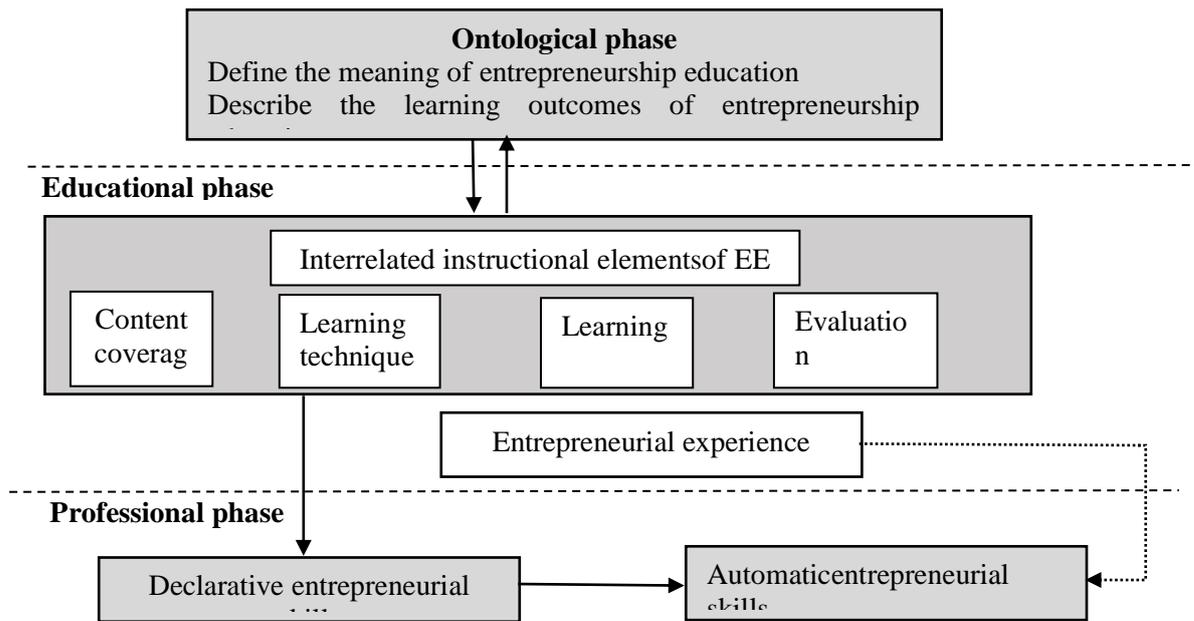
This study examined the effect of socio-demographic variables (gender, family entrepreneurial background, and past entrepreneurial experience) in mediating the relationship between EE and the acquisition of entrepreneurial abilities. Thus, providing additional evidence with respect to the significance of socio-demographic characteristics of learners in EE. EE can enhance the acquisition of entrepreneurial skills among students with prior entrepreneurial experience, gender and entrepreneurial background of family members are negligible moderators.

The current study adds to the body of evidence demonstrating the importance of learning resources in EE and the acquisition of entrepreneurial skills. The learning resources were not taken into account by the teaching model as part of EE as propounded by Fayolle and Gailly (2008). The results of this study have shown that, in order to successfully implement EE, resources must be continuously made available to support experiential learning. Students are inspired to put their

entrepreneurial ideas into action through resource professionals such certified EE trainers, business incubator facilities, and ICT.

This research suggests three phases of EE and acquisition of entrepreneurial skills: ontological, educational, and professional. The ontological level contends that there is no consensus on what constitutes entrepreneurship in the context of education. Thus, the ontological phase emphasizes that the definition of entrepreneurship education's goal and a description of its intended learning outcomes are necessary for its execution. The educational phase entails the teaching and learning process of EE, to nurture entrepreneurial skills among learners (mainly novice skills). The professional phase explains the process through which EE students acquire proficient skills. DeKeyser's automatic phase of skills applies to the professional phase of learning, unlike the educational phase. At the professional phase, other factors, beyond EE, impact the learning of proficient entrepreneurial skills.

Finally, this study contributes to DeKeyser's theory on skill acquisition by demonstrating that students can only acquire declarative-level information and skills in EE after which they are unable to advance to proficient levels or use their entrepreneurial knowledge in a spontaneous and intuitive manner. These results concur with those of Hahn *et al.*, (2017). On the other hand, prior entrepreneurial experience may have both a direct and indirect impact on the development of strong entrepreneurial skills. The ability of EE students to become skilled is improved by prior entrepreneurial experience. A practicing entrepreneur without any formal education in EE has the ability to succeed as an entrepreneur because to their exposure to experiential learning. Figure 6.0 depicts an overview of the experiential learning framework of EE and acquisition of entrepreneurial skills.



**Figure 6.0: Experiential Learning Framework of EE and Acquisition of Entrepreneurial Skills**

Source: Researcher (2021)

## 6.5 Recommendations

### 6.5.1 For Practice

- i. This study asserts that EE offered in TVCs in Kenya exposes F & B students to more procedural-level skills than automatic. The findings pointed out that most topics of entrepreneurship expose learners to entrepreneurship knowledge at the expense of entrepreneurial skills and attitudes. Research has linked entrepreneurial attitude with entrepreneurship intentions. Thus, the subject needs to incorporate topics that address entrepreneurship attitudinal change. In addition, empirical evidence supports the view that evaluation methods predict the acquisition of entrepreneurial skills.
- ii. This study recommends that when designing and implementing EE, more emphasis should be put on the use of practical methods of evaluation such as assessment of business activities, presentation of business plans, initiation of entrepreneurial projects among others. The findings of this study also point out

that EE is mostly taught using traditional and passive activities such as lectures, business plans, written research projects, assignments, group discussions, and case studies. The use of practical methods such as entrepreneurship seminars, videos, guest speakers, and visits to the workplaces of prominent entrepreneurs are highly recommended as they are perceived to nurture student entrepreneurial creativity that is highly associated with entrepreneurial actions. The use of non-interactive and less practical methods can only influence the acquisition of theoretical knowledge about entrepreneurship as opposed to entrepreneurial skills and attitudes.

- iii. Trainers and curriculum developers need to emphasize practical based methods of learning that can nurture skills. The acquisition of entrepreneurial skills and attitudes is essential for lifelong learning as opposed to the theoretical knowledge which is terminal. Besides, the content of the subject in terms of topics covered should provide a balance in terms of entrepreneurial skills, attitudes, and knowledge.
- iv. The study found out that TVCs most often use business plans in teaching EE. The business plans are usually supervised and assessed by the same trainer who teaches EE. In most cases the trainers are overwhelmed with supervision and assessment of the plans because they are few in numbers, making the quality of supervision and assessment questionable. The use of business plans can become more effective if the assessment is done by different parties. One best way of assessment could be subjecting the plans to a competition to win funds for the implementation of the projects.
- v. In addition, this study found out from the interviews conducted with entrepreneurship trainers that, EE offered is taught as a nationwide common

course to all students undertaking a diploma course in all fields of study in TVCs in Kenya. The subject is most often taught by trainers, especially from the business department. This generic approach to EE is ineffective in corresponding to the needs of specific industries, such as hospitality. This is because trainers may not relate theory with practical cases within the hospitality industry.

### **6.5.2 Areas of Further Research**

- i. The findings of the current study imply that learning techniques of EE do not influence the acquisition of entrepreneurial skills among F&B students. These findings were unexpected, perhaps due to the methodology adopted. The methodology of this study did not allow investigation of the comparison of the influence of different learning techniques on the different levels of acquisition of entrepreneurial skills. Therefore, it is difficult to conclude the effect of other learning techniques (such as interactive and practical-operational-based) on the different levels of acquisition of skills. Further research may adopt a comparative approach to validate the findings of this study.
- ii. The current study was based on the Technical Education Programmes Syllabi and Regulations for Diploma in Food and Beverage Production, Service and Sales Management (Republic of Kenya, 2006). However, in response to the Technical and Vocational Education and Training Act No. 29 of 2013 (Republic of Kenya, 2013) and the Sessional Paper No. 14 of 2012 on Reforming Education and Training in Kenya (Republic of Kenya, 2012), the education sector is undergoing major reforms towards Competency-Based Education and Training. Thus, the curriculum is undergoing a major review by TVET-CCDAC. The first edition of the review was developed in 2018. Future

research should be based on the competency-based curriculum for Food and Beverage Sales and Service Management.

- iii. Due to the limitations of the research methodologies adopted in this study, future research should be carried out to test the applicability of the proposed experiential learning framework of EE and the acquisition of entrepreneurial skills in the Kenyan TVET context. The framework requires empirical testing to determine its relevance and conformity in the practical setting. Lastly, the current study only focused on selected public TVCs, raising generalizability limitations. Future research should investigate other categories of TVETs, such as national polytechnics, state and privately-owned, and vocational training centers, located in various parts of the country to increase the generalizability scope of findings.

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## APPENDICES

### Appendix I: Questionnaire for Students

Questionnaire No. [   ]

Dear respondent,

I am Duncan Shirandula, a Ph.D. candidate in Hospitality Management at Moi University. I am researching on *“Influence of Entrepreneurship Education Instructional Elements on Entrepreneurial Skill Acquisition Level of Food and Beverage Students in Technical and Vocational Colleges in Kenya”*. I am seeking your voluntary participation in filling in this questionnaire. The findings of this study will be used for academic purposes only. Besides, the confidentiality of information will be observed.

Kind regards

#### SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

**INSTRUCTIONS:** Please tick [√] or fill in the blank spaces as appropriate

1. Please write the name of your college \_\_\_\_\_
2. Indicate your permanent place of residence [your home place] \_\_\_\_\_
3. What is your gender? Male [   ] Female [   ]
4. Please indicate your present age 16 – 19 [   ] 20 –23 [   ] 24-27 [   ] 28 & Above [   ]
5. a. Please indicate whether you have ever opened a business Yes [   ] No [   ]  
 b. If Yes, what was/is the nature of your business? \_\_\_\_\_
6. Which of the following people has ever run their own business?  
 Father/Mother [   ] Both Parents [   ] Brother/ Sister/Both [   ] Close Friend [   ] None [   ]

**SECTION B: ENTREPRENEURSHIP EDUCATION (EE) INSTRUCTIONAL ELEMENTS**

7. Please **tick/cross** the box that best describes your response on the following statements on the content covered in the EE.

**Key: [5] Strongly Agree [4] Agree [3] Moderately Agree [2]Disagree [1]Strongly**

**Disagree**

CODE	CONTENT COVERAGE OF EESUBJECT	SA	A	MA	D	SD
<i>Duration and Attendance</i>						
BB <sub>1</sub>	The time allocated for the topics was adequate	5	4	3	2	1
BB <sub>2</sub>	The time allocated for practical learning sessions was adequate	5	4	3	2	1
BB <sub>3</sub>	Covering entrepreneurship subject once in module 1 is adequate to become an entrepreneur	5	4	3	2	1
BB <sub>4</sub>	The duration of tests and exams was adequate	5	4	3	2	1
BB <sub>5</sub>	The lecturer attended the classes adequately	5	4	3	2	1

8. Please **tick/cross** the box that best describes your response on the extent of coverage of the content of the EEsubject. **Key: [5] =Very Great Extent [4]= Great Extent [3]=Moderate Extent [2]=Little Extent[1]= Very Little Extent**

		VGE	GE	ME	LE	VLE
<i>In my opinion, most of the topics we covered focused on knowledge on:</i>						
BB <sub>6</sub>	What to do to be successful in entrepreneurship	5	4	3	2	1
BB <sub>7</sub>	Entrepreneurship activities in dealing with situations in entrepreneurship	5	4	3	2	1
BB <sub>8</sub>	Resource people to interact within entrepreneurship	5	4	3	2	1
BB <sub>9</sub>	Key partners and stakeholders to network with	5	4	3	2	1
BB <sub>10</sub>	Behaviors and psychology of entrepreneurs	5	4	3	2	1
BB <sub>11</sub>	Seizing opportunities in starting a business	5	4	3	2	1

9. Indicate whether EE inspired you to become an entrepreneur. Yes [ ] No [ ], Briefly explain [optional]\_\_\_\_\_
10. Comment on whether learning EE once in Module I exposed you to adequate knowledge in entrepreneurship \_\_\_\_\_

11. Please **tick/cross** the box that best describes your response on the frequency of use of the following learning techniques of EE.

**Key: [5] =Very Often [4]=Often [3]=50% of the time [2]=Rarely [1]=Never**

CODE	LEARNING TECHNIQUES OF EE SUBJECT	Very often	Often	50% of the time	Rarely	Never
<b><i>Direct learning techniques</i></b>						
BB <sub>12</sub>	Guest speakers/lecturers were invited to speak on entrepreneurship topics	5	4	3	2	1
BB <sub>13</sub>	We interacted with people practicing entrepreneurship for mentorship	5	4	3	2	1
BB <sub>14</sub>	Entrepreneurs were invited to talk on selected topics in entrepreneurship	5	4	3	2	1
BB <sub>15</sub>	We conducted seminars on entrepreneurship education	5	4	3	2	1
BB <sub>16</sub>	We watched videos covering entrepreneurship education	5	4	3	2	1
BB <sub>17</sub>	We went for entrepreneurship attachment to successful entrepreneurs for mentorship	5	4	3	2	1
BB <sub>18</sub>	The lecturer used the traditional lecture method to teach entrepreneurship	5	4	3	2	1
<b><i>Interactive learning techniques</i></b>						
BB <sub>19</sub>	We learned by discussing cases of businesses that failed due to mistakes	5	4	3	2	1
BB <sub>20</sub>	We interacted with successful organizations in entrepreneurship	5	4	3	2	1
BB <sub>21</sub>	We used group discussions during entrepreneurship lectures	5	4	3	2	1
BB <sub>22</sub>	The lecturer gave us assignments on entrepreneurship	5	4	3	2	1
<b><i>Practical-Operation learning techniques</i></b>						
BB <sub>23</sub>	The class performed role-plays during learning sessions	5	4	3	2	1
BB <sub>24</sub>	The class conducted seminars on entrepreneurship	5	4	3	2	1
BB <sub>25</sub>	The went for academic trips to learn entrepreneurship	5	4	3	2	1
BB <sub>26</sub>	We carried out research projects on entrepreneurship	5	4	3	2	1
BB <sub>27</sub>	We wrote a business plan during coursework	5	4	3	2	1
BB <sub>28</sub>	During coursework, we started a business activity	5	4	3	2	1

12. Please **tick/cross** the box that best describes the extent to which the following learning resources were provided for the EE subject.

**Key: [5] Very Great Extent [4] Great Extent [3] Moderate Extent [2] Little Extent [1]**

**Very Little Extent**

CODE	LEARNING RESOURCES OF EE SUBJECT	VGE	GE	ME	LE	VLE
<i>The following resources were provided during EE subject coverage</i>						
BB <sub>29</sub>	Entrepreneurship education guest speakers	5	4	3	2	1
BB <sub>30</sub>	Entrepreneurship education teachers	5	4	3	2	1
BB <sub>31</sub>	Entrepreneurship education mentors	5	4	3	2	1
BB <sub>32</sub>	Entrepreneurship education teaching manuals	5	4	3	2	1
BB <sub>33</sub>	Internet connectivity	5	4	3	2	1
BB <sub>34</sub>	Entrepreneurship education textbooks	5	4	3	2	1
BB <sub>35</sub>	Entrepreneurship education articles in newspapers	5	4	3	2	1
BB <sub>36</sub>	Entrepreneurship education journals and magazines	5	4	3	2	1
BB <sub>37</sub>	Sample of business plans	5	4	3	2	1
BB <sub>38</sub>	Audiovisual (televisions, projectors, etc.)	5	4	3	2	1
BB <sub>39</sub>	Computers	5	4	3	2	1
BB <sub>40</sub>	Business incubation laboratories	5	4	3	2	1
BB <sub>41</sub>	Information resource centers	5	4	3	2	1

13. Please tick/cross the box that best describes your response to the following statements on learning resources.

**Key: [5] Strongly Agree [4] Agree [3] Moderately Agree [2] Disagree [1] Strongly**

**Disagree**

CODE	RESOURCES OF EE SUBJECT	S A	A	M A	D	S D
BB <sub>42</sub>	The learning resources boosted my attitude towards entrepreneurship education	5	4	3	2	1
BB <sub>43</sub>	The learning resources provided a comfortable learning environment	5	4	3	2	1
BB <sub>44</sub>	The resources stimulated my interest in venturing into entrepreneurship	5	4	3	2	1
BB <sub>45</sub>	The entrepreneurship lecturer covered the subject within the required time	5	4	3	2	1
BB <sub>46</sub>	The lecturer was knowledgeable in all topics presented	5	4	3	2	1
BB <sub>47</sub>	The lecturer gave adequate attention to the supervision of the business plan	5	4	3	2	1

14. Please **tick/cross** the box that best describes your response on the frequency of use of the following evaluation methods of entrepreneurship subject.

**Key: [5] =Very Often used[4]=Often used [3]= Used 50% of the time [2]=Rarely used**

**[1]=Never Used**

<b>CODE</b>	<b>EVALUATION METHODS OF EE SUBJECT</b>	<b>Very often used</b>	<b>Often used</b>	<b>Used 50% of the time</b>	<b>Rarely used</b>	<b>Never used</b>
<i>The subject adopted the use of following methods of evaluation;</i>						
BB <sub>48</sub>	Sit-in tests	5	4	3	2	1
BB <sub>49</sub>	Examinations	5	4	3	2	1
BB <sub>50</sub>	Case studies	5	4	3	2	1
BB <sub>51</sub>	Participation in class by answering questions	5	4	3	2	1
BB <sub>52</sub>	Assessment of a business plan	5	4	3	2	1
BB <sub>53</sub>	Analysis of business reports	5	4	3	2	1
BB <sub>54</sub>	Group/individual presentations	5	4	3	2	1
BB <sub>55</sub>	Interpretation of financial statements	5	4	3	2	1
BB <sub>56</sub>	Assessment of each other on the topics covered	5	4	3	2	1
BB <sub>57</sub>	Assessment of attachment and field reports	5	4	3	2	1
BB <sub>58</sub>	Writing of essays/term papers on entrepreneurship	5	4	3	2	1
BB <sub>59</sub>	Assessor observing how to conduct an EE subject activity	5	4	3	2	1
BB <sub>60</sub>	Assessment of a business project	5	4	3	2	1

## SECTION C: ACQUISITION OF ENTREPRENEURIAL SKILL

15. Please **tick/cross** the box that best describes your response on the level of acquisition of entrepreneurial skills after completion of the EE subject.

**Key:** [5] Strongly Agree [4] Agree [3] Moderately Agree [2] Disagree [1] Strongly

**Disagree**

CODE	ACQUISITION OF ENTREPRENEURIAL SKILL	SA	A	MA	D	SD
<i>Declarative entrepreneurial skills– I can explain the:</i>						
C <sub>1</sub>	Importance of entrepreneurship to society and individuals	5	4	3	2	1
C <sub>2</sub>	Factors that affect entrepreneurship	5	4	3	2	1
C <sub>3</sub>	History of entrepreneurship	5	4	3	2	1
C <sub>4</sub>	Cultural habits that promote and inhibit entrepreneurial development	5	4	3	2	1
C <sub>5</sub>	Myths associated with entrepreneurship	5	4	3	2	1
C <sub>6</sub>	Roles of an entrepreneur in an enterprise	5	4	3	2	1
C <sub>7</sub>	Role of information communication technology in entrepreneurship	5	4	3	2	1
C <sub>8</sub>	The attitudes of entrepreneurs	5	4	3	2	1
C <sub>9</sub>	Forms of business ownership	5	4	3	2	1
C <sub>10</sub>	Process of entrepreneurship	5	4	3	2	1
C <sub>11</sub>	Entrepreneurial culture, behavior, traits, and intentions	5	4	3	2	1
<i>Procedural entrepreneurial skills–I can apply entrepreneurship knowledge to:</i>						
C <sub>12</sub>	Develop a business plan	5	4	3	2	1
C <sub>13</sub>	Identify and seize business opportunities	5	4	3	2	1
C <sub>14</sub>	Prepare and interpret entrepreneurship financial information	5	4	3	2	1
C <sub>15</sub>	Deal with risks and uncertainties	5	4	3	2	1
C <sub>16</sub>	Conduct market research of entrepreneurship ventures	5	4	3	2	1
C <sub>17</sub>	Handle legal issues in entrepreneurship	5	4	3	2	1
C <sub>18</sub>	Conduct negotiations in entrepreneurship	5	4	3	2	1
C <sub>19</sub>	Use information communication technology in enterprises	5	4	3	2	1
C <sub>20</sub>	Identify needs and challenges in entrepreneurship education	5	4	3	2	1
C <sub>21</sub>	Establish new networks and connections in entrepreneurship	5	4	3	2	1
C <sub>22</sub>	Develop an entrepreneurial vision	5	4	3	2	1
C <sub>23</sub>	Recognize the potential an idea has for creating value	5	4	3	2	1
C <sub>24</sub>	Assess consequences of ideas that bring value to the	5	4	3	2	1

	society					
C <sub>25</sub>	Reflect on my needs, aspirations, and wants in the short, medium, and long term	5	4	3	2	1
C <sub>26</sub>	Identify and assess my strengths and weaknesses in entrepreneurship	5	4	3	2	1
C <sub>27</sub>	Influence the course of events despite uncertainties, setbacks, and past failures	5	4	3	2	1
C <sub>28</sub>	Exercise patience and keep trying to achieve my long-term goals	5	4	3	2	1
C <sub>29</sub>	Exercise resilience even when under pressure or when faced with failure	5	4	3	2	1
C <sub>30</sub>	Obtain and manage resources needed to turn ideas into actions	5	4	3	2	1
C <sub>31</sub>	Maximize the use of limited resources	5	4	3	2	1
<b><i>Automatic entrepreneurial skills– After completion of the subject, I can:</i></b>		<b>SA</b>	<b>A</b>	<b>MA</b>	<b>D</b>	<b>SD</b>
C <sub>32</sub>	Easily initiate entrepreneurial processes that create value	5	4	3	2	1
C <sub>33</sub>	Effortlessly run an entrepreneurship venture	5	4	3	2	1
C <sub>34</sub>	Naturally, turn ideas into action and satisfy my need to achieve goals	5	4	3	2	1
C <sub>35</sub>	Manage finances to make sure my value-creating activity lasts for a long time	5	4	3	2	1
C <sub>36</sub>	Naturally turn an idea into a value-creating activity	5	4	3	2	1
C <sub>37</sub>	Easily and effectively communicate, persuade, negotiate and lead	5	4	3	2	1
C <sub>38</sub>	Easily find the support needed to achieve valuable outcomes	5	4	3	2	1
C <sub>39</sub>	Naturally take up challenges for success in my career	5	4	3	2	1
C <sub>40</sub>	Work independently to achieve goals and carry out planned tasks	5	4	3	2	1
C <sub>41</sub>	Naturally explore and experiment with innovative approaches	5	4	3	2	1
C <sub>42</sub>	Effortlessly combine knowledge and resources to achieve valuable effects	5	4	3	2	1
C <sub>43</sub>	Automatically adapt to unforeseen changes	5	4	3	2	1
C <sub>44</sub>	Make quick decisions when the results of those decisions are uncertain, when there is limited information to make the decision, or when there is a risk of failure	5	4	3	2	1
C <sub>45</sub>	Promptly handle emergencies in business or at the workplace	5	4	3	2	1
C <sub>46</sub>	Easily work with others to develop ideas and turn them into action	5	4	3	2	1
C <sub>47</sub>	Quickly and effectively solve conflicts	5	4	3	2	1
C <sub>48</sub>	Automatically create valuable networks for my career success	5	4	3	2	1

C <sub>49</sub>	Effectively learn from both my success and failure or of other people	5	4	3	2	1
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16. Any general comment on the acquisition of entrepreneurial skills?

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**END OF QUESTIONNAIRE**

*Thank you for taking your time to fill in the questionnaire*

## **Appendix II: Interview Guide for EE Trainers and TVET Curriculum Experts**

**Dear Sir/Madam,**

I am Duncan Shirandula, a Ph.D. candidate in Hospitality Management at Moi University. I am researching "*Influence of Entrepreneurship Education Instructional Elements on Entrepreneurial Skill Acquisition Level of Food and Beverage Students in Technical and Vocational Colleges in Kenya*". I request you to participate in this interview. The findings of this study will be used for academic purposes only. Besides, the confidentiality of information will be observed.

Kind regards

### **The Interview**

1. Do you think the content of EE adequately acquaints students with entrepreneurial skills? Why or why not? \_\_\_\_\_
2. To what extent does the learning techniques of EE acquaint students with entrepreneurial skills? \_\_\_\_\_
3. Are the current methods of evaluating students on EE appropriate in assessing the level of entrepreneurial skills acquired? Why or why not? (Any suggestions?) \_\_\_\_\_
4. How critical is the component of learning resources? Do the TVCs have the adequate resources? \_\_\_\_\_

**END...Thank you**

## Appendix III: Letter of Research Authorization



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 3310571, 2219420  
Fax: +254-20-318245, 318249  
Email: dg@nacosti.go.ke  
Website : www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/92744/29365**

Date: **24<sup>th</sup> April, 2019**

Duncan Shirandula  
Moi University  
P.O. Box 3900-30100  
**ELDORET.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Influence of learning of entrepreneurship education subject on perceived acquisition of entrepreneurial skills by students in selected TVET Institutions, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for the period ending **23<sup>rd</sup> April, 2020**.

You are advised to report to **the County Commissioners and the County Directors of Education of the selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

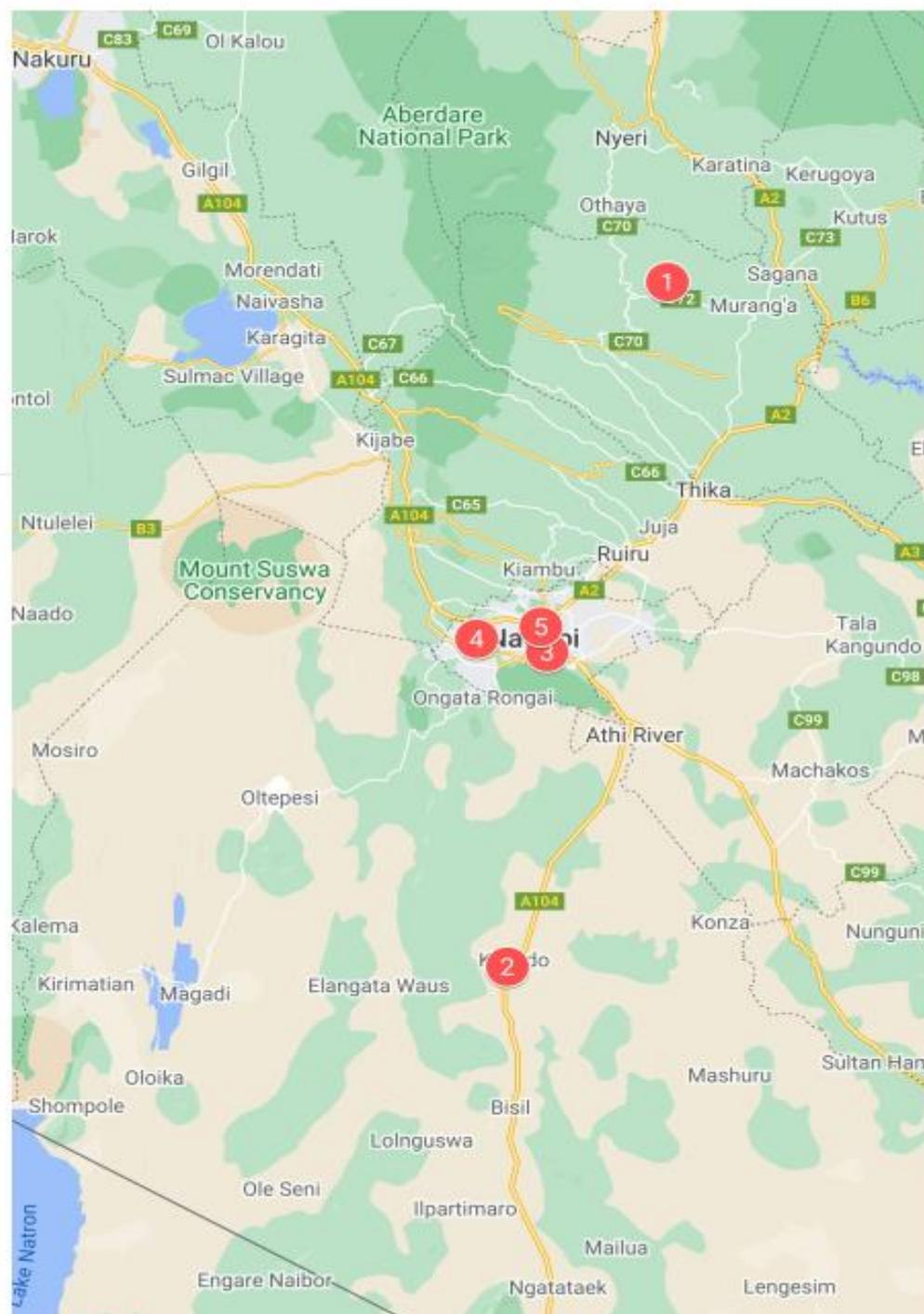
  
**GODFREY P. KALERWA MSc., MBA, MKIM**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioners  
Selected Counties.

The County Directors of Education  
Selected Counties.

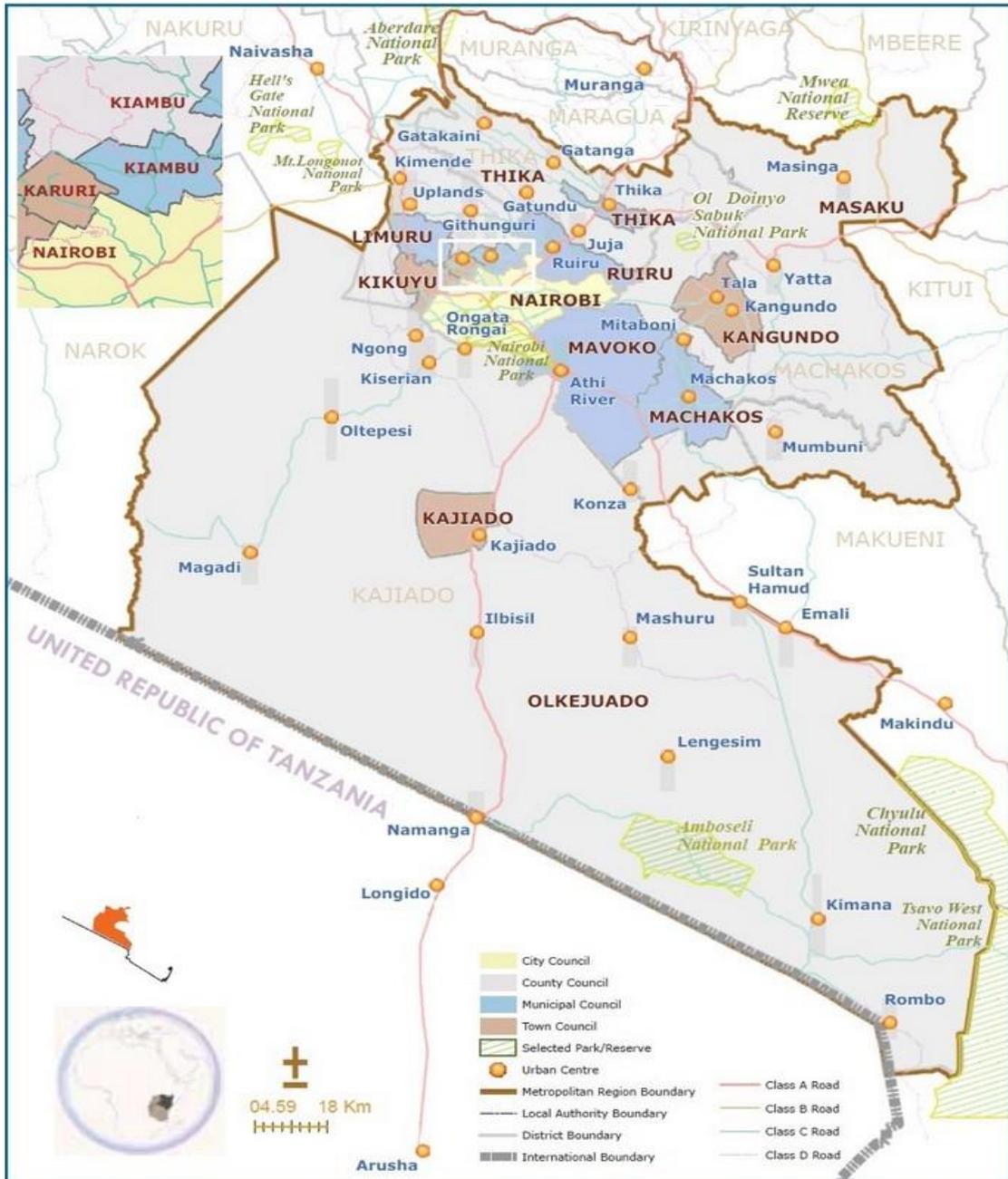
## Appendix IV: Map of Study Areas



### Legend

- 1 Michuki Technical Training I...
- 2 Masai Technical Training Ins...
- 3 Railway Training Institute
- 4 PC Kinyanjui Technical Instit...
- 5 Nairobi Technical Training In...

Source: Google maps, (2021)



**Source:** Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works, (2018)