

**ENTREPRENEURSHIP TRAINING AND PERFORMANCE OF SMALL AND  
MICRO ENTERPRISES IN INFORMATION COMMUNICATION TECHNOLOGY  
SECTOR IN NAIROBI CITY COUNTY, KENYA**

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## DECLARATION

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## **DEDICATION**

This work is dedicated to my late mum Theresia Nганu, my late husband Anthony Kaloki and my children Lawrence Musau, Annastacia Mbula, Bonface Nzomo and Rosemary Mumbi for the support and encouragement they have given me throughout the study.

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## OPERATIONAL DEFINITION OF TERMS

- Content of training:** Constituted the scope of the area of training. For this study, the content of training included, managerial skills, technical skills and entrepreneurial skills.
- Entrepreneurship:** Entrepreneurship is a dynamic process of innovation and new venture creation, and includes the assumptions of risks and rewards of the new venture.
- Entrepreneurship training:** This is a training designed to impact skills and attitude to enable entrepreneurs start new business or expand an existing one.
- ICT Enterprises:** These are enterprises active in fields such as software customization, web design, computer and mobile application development, hardware sales of computer, phones and accessories, systems development and maintenance, and IT consultancy.
- Method of training:** The technique employed/used in the training process. For this study the methods of training included, in house training, on the job training, lecture method, discussions, and field trips.
- Small and Micro Enterprises:** The Kenyan definition of SMEs in terms of employment, micro enterprises are those firms with employees between 1 to 9; small enterprises with 10 -49 employees; This study used firms with less than 50 workers referred to as Small and Micro Enterprises.

**Training needs Assessment:** The process of identifying the requirements for training in any organization.

**Organizational Performance:** The results of activities of an organization or investments of a given period of time, that is the accomplishment of a given task measured against present known standards of accuracy, completeness and costs. This study used financial and non-financial measures of performance.

**Financial Performance:** Quantitative measures expressed in monetary units used by an organization to determine how best resources are utilized. For this study, sales turnover and profit margins were used as financial measures.

**Non-Financial Performance:** Quantitative and qualitative measures of performance that are not expressed in monetary units. For this study, non-financial performance was measured by, the number of new products introduced and customer satisfaction.

## **ABBREVIATIONS AND ACRONYMS**

<b>BDS</b>	Business Development Services
<b>BSC</b>	Balanced Score Card
<b>ECDVT</b>	European Centre for Development of Vocational Training
<b>EPTF</b>	Economic Project Transformation Facility (A Ministry of the Navigators – Kenya)
<b>ESE</b>	Entrepreneurial Self - Efficacy
<b>ERS</b>	Economic Recovery Strategy
<b>EU</b>	European Union
<b>FKE</b>	Federation of Kenya Employers
<b>GDP</b>	Gross Domestic Product
<b>GEM</b>	Global Entrepreneurship Monitor
<b>GOK</b>	Government of Kenya
<b>ICPAK</b>	Institute of Certified Public Accountants of Kenya
<b>ICT</b>	Information Communication Technology
<b>ILO</b>	International Labour Organization
<b>IT</b>	Information Technology
<b>KIE</b>	Kenya Industrial Estates
<b>KIM</b>	Kenya Institute of Management
<b>KIPPRA</b>	Kenya Institute for Public Policy Research and Analysis
<b>NCOSTI</b>	National Commission for Science, Technology and Innovation
<b>NGO</b>	Non-Governmental Organization
<b>OECD</b>	Organization for Economic Development
<b>SBC</b>	Small Business Center
<b>SCT</b>	Social Cognitive Theory

<b>SED</b>	Small Enterprise Development
<b>SMEs</b>	Small and Micro Enterprises
<b>TNA</b>	Training Needs Assessment
<b>TVET</b>	Technical and Vocational Education and Training
<b>UNDP</b>	United Nations Development Programme
<b>UNIDO</b>	United Nations Industrial Development Organizations
<b>WEF</b>	Women Enterprise Fund
<b>VIF</b>	Variance Inflation Factors
<b>YEDF</b>	Youth Enterprise Development Fund

## ABSTRACT

Entrepreneurship training has been identified as a major contributor to small and micro enterprises' skills development and performance. Several studies have been carried out in Kenya to establish the relationship between entrepreneurship training and performance. However, these studies are general and do not distinguish the nature of the relationships. Moreover, there lacks sufficient evidence on the specific roles played by training needs assessment, content of training and method of training as factors of entrepreneurship training on performance. The general objective of this study was to investigate the influence of entrepreneurship training on performance of small and micro enterprises in Information Communication Technology sector in Nairobi City County. The specific objectives were; to establish the extent to which training needs assessment; content of training; and training methods influence performance of small and micro enterprises in the Information Communication Technology sector and the extent to which business characteristics moderate the relationship between entrepreneurship training and performance of small and micro enterprises in the Information Communication Technology sector. The study was based on economic development theory; entrepreneurial self-efficacy and intentions theory; social cognitive theory; training needs assessment theory; and balanced scorecard model. The study adopted a positivist research philosophy. Mixed method research design was used to collect qualitative and quantitative data. The target population for this study was 273 small and micro enterprises in the Information Communication Technology sector that successfully received entrepreneurship training prior to the year 2012 under the Information Communication Technology Authority. Systematic random sampling technique was used to select 73 respondents. Two sets of semi-structured questionnaires were used to collect primary data. Document analysis was done to collect secondary data. Content validity of the instrument was evaluated using literature and experts opinions, while construct validity was assessed through factor analysis. The instrument's reliability was measured by Cronbach's Alpha. Prior to analysis, diagnostic tests were carried out. Normal probability plots and Shapiro –Wilk test were used for normality test. Variance inflation factor was used to test multicollinearity. Quantitative data was analyzed using descriptive and inferential statistics. Descriptive statistics incorporated absolute percentages, frequencies, measures of central tendency (mean, mode, median) and measures of dispersion (standard deviation); while inferential statistics was analyzed through correlation and regression analysis to establish the nature and magnitude of the relationships between the variables and tested the hypothesized relationships. Qualitative data collected from the open-ended questions was analyzed through content analysis. The study established positive influence of training needs assessments and content of training on small and micro enterprises in Information Communication Technology sector in Nairobi City County, Kenya. The method of training had an insignificant relationship with business performance. The study revealed that lecture method was mostly used during trainings and trainees preferred discussions or participatory methods. This study indicated that business characteristics statistically significantly moderate the relationship between entrepreneurship training and firm performance. That is, as age of the business, size of the business and education level of the owner of the business increases, the more positive impact the entrepreneurship training has on firm performance. The study recommends that trainers should conduct training needs assessments before conducting entrepreneurship trainings. Trainers should give equitable emphasis on entrepreneurial skills, managerial skills, and technical skills training. Still, trainers need to review their training methods in line with the training needs and the trainees' expectations. Finally, the government needs to regulate and broaden the curriculum of entrepreneurship training.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

Success or failure of any organization largely depends on the human resource capability of the firm to combine resources in a manner that takes advantage of the opportunities and minimize threats towards achieving organizational objectives. Global Entrepreneurship Monitor (GEM) identified strategic human resource development as one of the strategies to enhance organizational capability for successful performance (GEM, 2010). According to Government of Kenya (GoK), for Small and Micro Enterprises (SMEs), human resource development through entrepreneurship training is one of the key ingredients for enhancing performance (GoK, 2005). Entrepreneurship training has been cited to promote innovativeness, risk taking, opportunity identification, business management, and technical skills development (Lewrick, 2011).

The realization of the critical role played by entrepreneurship training on the success of SMEs, has necessitated the Government of Kenya (GoK) and Non-Governmental Organizations (NGO) to conduct numerous entrepreneurship trainings. Despite this, there lacks sufficient empirical evidence to show how these trainings have helped SMEs improve their performance. This study focused on establishing the influence of entrepreneurship training on SMEs in Information Communication Technology (ICT) sector by establishing the extent to which training needs assessments, content of training and methods of training influence performance of SMEs in ICT sector.

In Kenya Small and Micro Enterprises (SMEs) are defined as firms with 1 to 49 employees. Where, micro enterprise are firms employing 1 to 9 employees; and small enterprises employing 10 -49 employees (GoK, 2005). According to the United Nations Industrial Development

Organizations (UNIDO), worldwide, the SMEs sector forms the backbone of private sector contributing up to 90 percent of enterprises (UNIDO, 2000). The Organization for Economic Development (OECD, 1996) points out that SMEs provide the largest proportion of jobs, over two thirds in European Union (EU) to 50 percent in the United States.

In Kenya, Small and Micro Enterprises (SMEs) cuts across all sectors of the country's economy and provide one of the most prolific sources of employment, not to mention the breeding ground for medium and large industries which are critical for industrialization (GOK, 2005). SME sector comprises of 75% of all businesses (Kiveu & Ofafa, 2013) and contributes 82.7 percent of the total employment (GOK, 2015). Further, the SMEs sector contributed 18 percent of gross domestic product (GDP) (Kiveu & Ofafa, 2013). Despite the important role played by SMEs, irrespective of the country in which the SMEs exist, they face common obstacles that weaken both their performance and survival rate (Arasti, Zandi, & Bahmani, 2014). The common challenges include, limited market access, limited access to information, limited technical knowledge and skills, limited access to resources, unfavorable policy and regulatory environment (Kiveu & Ofafa, 2013).

### **1.1.1 Organizational Performance**

The concept of organizational performance has evolved over time. In the 50s, organizational performance was considered as the extent to which organizations fulfilled their objectives (Georgopoulos & Tannenbaum, 1957). At this time, performance evaluation was focused on work, people, and organizational structure. Later, in the 60s and 70s, organizations began to explore new ways to evaluate their performance. Performance shifted to an organization's ability to exploit its environment for accessing and using the limited resources (Yuchtman & Seashore, 1967).

The 80s and 90s, were marked by the realization that the identification of organizational objectives is more complex than initially considered. Managers began to understand that an organization is successful if it accomplishes its goals (effectiveness) using minimum resources (efficiency). Thus, organizational theories that followed supported the idea of achieving organizational performance objectives based on the constraints imposed by the limited resource (Lusthaus & Adrien, 1998). During this period, profits became the main indicator of performance. In the 2000s, performance evolved to encompass a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results (Lebans & Euske, 2006).

The financial indicators include; profitability, revenue (sales volumes), return on investments and cash flows, whereas, the non financial measures include; the management of human resources (staff turnover, absentee rates, competence surveys); product and service quality; brand awareness and company profile (brand loyalty, name awareness, perceived quality, patents or trademarks, customer satisfaction, number of new products) (Kaplan, 2015). This study evaluated how entrepreneurship training has influenced the financial performance measures (sales turnover and profit margins) and non-financial performance measures (number of new products introduced and customer satisfaction) performance of SMEs in ICT sector.

SMEs measure their performance using both financial and non-financial performance measures, although financial performance measures are used more frequently than the non-financial ones (Maduekwe & Kamala, 2016). A study by Ahmad (2014) in Malaysia to investigate SMEs performance measures, established that both financial and non-financial measures were used. However, financial measures that were mostly used included sales growth, operating income, cash flow, and return on investment being the most preferred. On the other hand, the most popular non-financial measures were on-time delivery, number of customer



complaints, employee turnover, defect rate, employee absenteeism, manufacturing lead-time, customer satisfaction, and warranty claims. The study outlined the importance of using both financial and non-financial performance measures to evaluate the firm performance. A case study in Limpopo South Africa by Naude (2007) indicated that the sampled SMEs relied mostly on financial measures such as cash flow, gross profit, and turn over/revenue for performance measurement. The non-financial measures used by few SMEs included customer satisfaction ratings, client service, number of orders and new businesses. The study recommended the use of both the financial and non-financial SMEs performance measures to enable SMEs measure performance progress towards achieving goals and to make important decisions (Naude, 2007).

In Kenya, a study by Chimwani, Nyamwange and Robert (2013) to determine the application of Balanced Scorecard in measuring performance in small and medium manufacturing enterprises, established a gap between the knowledge of customer, innovation, and growth perspective. The study showed that the most common performance measures in manufacturing SMEs in Nairobi were financial in nature. However, non-financial measures were not being used to measure performance. The study recommended importance of use of internal business process, innovation, learning, and growth perspectives in measuring performance. Considering that use of both financial and non-financial measures give a holistic and sustainable view of the organization, this study measured performance from these two perspectives. Financial performance was measured by sales turnover and profit margins while non-financial performance was measured by new product development and customer satisfaction. The selected non-financial measures (new product development and customer satisfaction) were preferred since they measure long-term entrepreneurial behavior stimulated by entrepreneurship training. While sales turnover and profit margins measure short-term benefits of entrepreneurial behavior stimulated by entrepreneurship training.

### **1.1.2 Entrepreneurship Training**

Entrepreneurship training as one of the key ingredients for SMEs performance has been recognized worldwide (GOK, 2005). Recent entrepreneurship scholars emphasizes the critical role of entrepreneurship training in advocating entrepreneurship, enhancing capacities for sustainable growth, economic activity and stakeholders' involvement (O'Connor, 2012; Lewrick, 2011). Dana (2001) notes that countries as diverse as Brazil, India, Malaysia, Singapore and the UK introduced entrepreneurship training since 1990. Entrepreneurship training has also been introduced to other several parts of the world including US, Latin America and in countries like Poland, India, and Iran (GEM, 2010).

In Africa, in recognition of the importance of entrepreneurship training for SMEs development, many countries have also introduced entrepreneurship training. Smith and Perks (2006), notes that training of young entrepreneurs is key to Africa's economic future, which can create wealth, businesses and jobs for others. In Kenya, the Government recognized the potential of small and micro enterprises to support the job growth requirements for the country. In achieving the goal, the Kenyan government introduced Sessional Paper No.1 of 1988 to deal with this key issue. The paper recommended that entrepreneurship training be introduced in all technical institutions and university levels. Entrepreneurship trainings were earlier introduced by various non-governmental organizations, private organizations, voluntary organizations, World Bank and private trainings by consultancy firms in addition to Government institutions such as Kenya Industrial Estate (KIE) (GOK, 2005).

According to Sessional Paper Number 1 of 2005 on Economic Management for Renewed Growth, it emphasized the need for small enterprises to be natured as beacons for future growth (GOK, 2005). These enterprises are looked upon to provide the bulk of 400,000 new jobs the country aspires to generate annually. The government has also continued to support

entrepreneurship trainings through government funding such as Uwezo Fund, Youth Enterprise Fund, Women Enterprise Fund and has encouraged the Non-governmental organizations to support entrepreneurship trainings. To develop entrepreneurial culture to all groups of the society, entrepreneurship training in Kenya cuts across post-secondary training colleges/institutions and private trainings carried out by the private sector. Mwangi (2011) notes that success in business greatly depends on entrepreneurial management skills gained in college through entrepreneurship subjects. This study established the relationship between entrepreneurship training offered by ICT Authority and SMEs ICT performance in Nairobi City County.

### **1.1.3 Business Characteristics**

Demographic factors have a significant and fundamental role in the growth and performance of micro, small and medium enterprises. These factors have been shown to have either direct or indirect influence on strategy execution in the SME sector (Islam, Khan, Obaidullah, & Alam, 2011). Mothibi (2015) identified age of business, educational qualification of the owner, size of the firm, sector of the firm, location of the firm, experience of the owner and managerial competence as the major demographic factors that influence SMEs performance. A study by Blackburn, Hart and Wainwright (2013) concludes that size and age of small business enterprises dominate performance and are more important than strategy and the entrepreneurial characteristics of the owner.

The effect of these demographic factors are varied as the factors themselves. For instance, empirical evidence shows that formal education helps in the development of an individual's cognitive and analytical skills, which are critical in managing businesses towards specific goals (Zannah, Mahat, Ariffin, & Ali, 2017). That is, basic education enhances numeric and literacy skills, thus increasing the chances of business survival. A study by Mwhaki (2015) indicated

that business owners with higher levels of education stimulate the growth and better performance of SMEs, thus having a positive impact on survival, growth and performance.

Larger enterprises tend to have more access to resources compared to their smaller counterparts. Thus, implementation of acquired skills is comparatively easier as larger firms can afford to invest in new ideas (Islam, Khan, Obaidullah, & Alam, 2011). Further, there are two perspectives, which define how age influences the performance of SMEs. On one hand, comparatively young entrepreneurs are less risk averse compared to older entrepreneurs. Younger entrepreneurs have the necessary motivation, energy, and commitment to work and are more inclined to take risks as the older entrepreneurs are likely to have reached their initial aspiration and tend to be more cautious and risk averse (Zannah, Mahat, Ariffin, & Ali, 2017). On the other side, age has a direct link to experience. Accumulated experience over a period develops skills for resource allocation, management and corporate governance (Li-Jen, Chen-Jung & Chiang, 2015).

#### **1.1.4 Small and Micro Enterprises in Kenya**

The term Small and Micro Enterprise is defined in the context of the number of employees, size of capital, turnover, degree of formality, degree of skilled man-power, listing at the stock market or trading of debt and equity instruments in the public market (ICPAK, 2013). Sessional Paper Number 1 of 2005 on Small and Micro enterprises in Kenya, Micro Enterprises are those firms with employees between 1 and 9 while small Enterprises have 10 to 49 employees (GOK, 2005).

SMEs play a major role at all levels of economic development in different countries. They generate much employment and are widely considered to be vital for competitiveness and economic growth (Caniels & Romjin, 2005). In Kenya, SMEs comprises about 75 % of all

businesses, employing 4.6 million people. They account for 87% of new jobs created and contribute 18.4 % of the GDP (GOK, 2009). The Kenyan government considers the sector as the center of industrial development and has hinged several development strategies to improve performance of SMEs (Kiveu & Ofafa, 2013). The Economic strategy for wealth and employment creation 2003 – 2007 (GOK, 2007), indicates that about 25% of all households engage in some form of small business activity with the majority depending on their business for all household income.

Globally, research findings suggest that the failure rate of small businesses within the first five years is more than 50%. Over 20% of new ventures fail within one year, and 66% fail within the first six years (Arasti , 2014). Brick (2003) estimated the failure rate of SMEs in developing countries to be between 70 percent and 80 percent. As a result, many SME's do not reach their potential and fail to grow, resulting in loss of jobs and wealth in the economy. Mortality rate of SMEs in Kenya remains high within the first few months after establishment (Bowen, Morara & Mureithi, 2010).

Past statistics indicate that three out of five businesses in Kenya fail within the first few months of operation (GOK, 2007). Due to their small size, a simple management mistake is likely to lead to sure death of a small enterprise. Other challenges that make it impractical for SMEs to realize their full potential and deliver to the government expectations, include lack of planning, improper financing, poor management, lack of entrepreneurial skills, limited market access, limited access to information, finances and technology, unfavorable policy and regulatory environment (Bowen, Morara & Mureithi, 2010). Accordingly, Sha (2006) posits that given this high failure rate, it becomes vital to research on the factors that influence the SME performance and survival. This study focused on the contributions of entrepreneurship training on performance of SMEs in ICT sector in Nairobi City County.

### **1.1.5 Information Communication Technology in Kenya**

The Information Communication Technology (ICT) sector in Kenya is modest, and the sector is mainly comprised of small enterprises active in fields such as software customization, web design, computer and mobile application development, hardware sales, systems development and maintenance, and IT consultancy. Hardware assembly is relatively capital intensive, thus, its activity is quite low despite the government lifting import duty on parts (Ikua & Namusonge, 2013).

The ICT sector has brought huge economic benefits to Kenya. Since 2000, Kenya's ICT sector has outperformed all other segments of the economy in the services industry, growing by 23% in 2011 (Peake, 2013). ICT sector is dominated by the success of mobile phone penetration and innovative new services driven by mobile money and mobile applications, for which Kenya has a strong reputation. The impact of mobile money services in particular has been enormous. Over the last nine years, the majority of the Kenyan population money has gone from being unbanked with no access to financial services, to having the opportunity to conduct financial transactions, access credit and save through ICT platforms. From the year 2006, mobile penetration in Kenya moved from 20% to 79.2% in 2014 (GoK, 2014).

Despite the positive contributions of the ICT sector, SMEs in the ICT sector have been facing the challenge of qualified IT talent (Peake, 2013); stiff competition that inhibits growth in the sector; limited access to adequate capital required for expansion; poor management skills; and high labour turnover (Ikua & Namusonge, 2013). The competition in the sector has mainly been driven by the liberalization of the sector and the extension of services by multinational conglomerates, which stifles growth in the small and micro enterprises (Arasa & Gathinji, 2014).

According to Ikua and Namusonge, (2013), 69% of the ICT firms prefer to remain small and are apprehensive of expansion by employing more staff. Even though, this active competition inhibits growth of small firms, it has also provided an opportunity for innovation and revolution witnessed in the industry. Stiff competition drive the industry players to develop innovative ways of creating market niche and retaining customers (Oteri, Kibet, & Ndung'u, 2015). Increased competition in the ICT sector in Kenya has resulted to growth of this market segment as the services become more affordable. Kaunyangi (2014) indicates that the impact of competition on the Kenyan ICT market has greatly enhanced performance in the sector.

SMEs ICT are mainly in Nairobi City County, which is Kenya's economic headquarters and contributes to more than 60% of the country's GDP (Arasa & Gathinji, 2014). Nairobi has well-established infrastructure, improved technology, highly educated and trained work force, diverse, liberal and vibrant market, which favor the survival rate of ICT firms. This study was based in Nairobi City County.

## **1.2 Statement of the Problem**

SMEs in Kenya do significantly contribute to the country's economic growth through employment creation, poverty reduction, and they act as intermediaries in trade (GOK, 2014). However, nearly three out of five SMEs in Kenya fail within the first few months of operation (Kamunge, Njeru & Tirimba, 2014). This high failure rate is mainly attributed to lack of skilled work force and stiff competition in the market (Oteri, Kibet & Ndungu, 2015). To address these challenges, the Kenyan Government and Non-Governmental Organizations (NGOs) have established entrepreneurship trainings to provide SME with technical and business skills. These entrepreneurship trainings are intended to enable the SMEs acquire unique human resource capabilities for competitive advantage (Mungai, 2012; Sambo, Gichira, & Yusuf, 2015).

Several studies have been carried out in Kenya to establish the relationship between entrepreneurship training and performance (Kingori & Theuri, 2016; Njoroge & Gathungu, 2013; Mwangi, 2011; Osoro, 2013). However, these studies are general and do not distinguishing the nature of the relationship (Mwangi, 2011; Osoro, 2013). Moreover, performance in most studies have been measured based on financial perspective. More specifically, there also lacks sufficient evidence on the role played by training needs assessment, content of training and method of training as factors of entrepreneurship training on performance of small and micro enterprises in information communication technology sector in Nairobi City County, Kenya.

This descriptive research study investigated perceptions of SMEs ICT owners/managers and training managers of ICT Authority on how training needs assessment, content, and methods of training influence SMEs ICT performance in Nairobi City County. SMEs ICT performance was measured as a composite of financial (sales turnover and profit margins) and non-financial (new product development and customer satisfaction) measures. The study brought out theoretical, practical and policy implications. Specifically the findings provide trainers in the SMEs sector with information on what to include in the training content to broaden their syllabi.

### **1.3 Research Objectives**

#### **1.3.1 General Objectives**

The general objective of this study was to investigate the influence of entrepreneurship training on performance of small and micro enterprises in information communication technology sector Nairobi City County, Kenya.



### **1.3.2 Specific Objectives**

The study was guided by the following specific objectives;

- i. To assess the extent to which training needs assessment influence the performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.
- ii. To determine the extent to which entrepreneurship training content influences the performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.
- iii. To assess the effects of entrepreneurship training methods on performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.
- iv. To establish the moderating effects of business characteristics on the relationship between entrepreneurship training and performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.

### **1.4 Research Hypotheses**

The following hypotheses were formulated to answer the research questions.

*H<sub>01</sub>*: Training needs assessments does not influence performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.

*H<sub>02</sub>*: Content of entrepreneurship training does not influence performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.

*H<sub>03</sub>*: Method of entrepreneurship training does not influence performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.

*H04:* Business characteristics do not have a moderating effect on the relationship between entrepreneurship training and performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya.

### **1.5 Significance of the Study**

This study is of importance to various stakeholders in Kenya in a number of ways. To scholars, the study provided the needed empirical evidence to ground entrepreneurship training. To trainers and managers, the findings clearly showed the link between training needs assessment, content and method of training on performance of SMEs in ICT sector in Kenya. To the policy makers, the findings are critical in formulation and development of a framework on factors affecting the growth of small and micro enterprises in Kenya. Particularly, lack of entrepreneurial skills has been identified as a major policy issue that hinders SMEs survival and growth.

### **1.6 Scope of the Study**

The study was delimited to the relationship between training needs assessment; content of entrepreneurship training; methods of training and performance of SMEs in the ICT sector in Nairobi City County, Kenya. Geographically, the study focused on the firms registered and are operating within Nairobi City County in Kenya. The data collection was conducted between August 2016 and November 2016. The study sample frame was limited to 273 ICT SMEs trained on entrepreneurship by ICT Authority prior to 2012. The unit of observations were the business owners/managers.

### **1.7 Limitations of the Study**

The study was context based and only focused on the small and micro enterprises in the ICT sector in Nairobi City County, Kenya. This means that the findings cannot be generalized to

cover all the SMEs in Kenya because ICT firms have their special characteristics. Secondly, the independent variables were also limited to training needs assessment, content and method of training, while other variables that influence the effect of entrepreneurship training were not considered.

Thirdly, some respondents targeted were reluctant in giving information as regards to their firm's performance. This was addressed by assuring the respondents that the purpose of the study was for academic work. The findings were limited by self-reporting, as individuals tend to evaluate themselves favorably. This was addressed by use of secondary data obtained from the organizations to cross check the information provided through the questionnaires.

### **1.8 Organization of the Study**

This thesis has five chapters. Chapter one, provides the research background, research objectives, significance of the study, scope and the study limitations. Chapter two presents literature review on the theories, empirical studies, summary of empirical studies and conceptual frame on the variables under study. Chapter three deals with the methodology employed, it covers the research philosophy, research design, sampling frame among other methodology issues. Chapter four presents the findings of the study and interpretation. Finally, chapter five comprises of the summary, conclusion, contribution of the study and recommendations.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents a review of related literature under the following sub headings; the theoretical literature, empirical review, summary of the empirical review, research gaps, and conceptual framework.

### **2.2 Theoretical Literature Review**

#### **2.2.1 Training Needs Assessment Theory**

Kaufman and English (1979) developed training Needs assessment theory. The theory argues that an actual need can only be identified independent of premature selection of a solution. To conduct a quality needs assessment, first, the current results are determined, and then the desired results articulated. Hence, the distance between the results (current and desired) forms the actual need. Once a need is identified, then a solution can be selected that is targeted to closing the gap. The theory postulates that a need in the simplest sense is a measurable gap between two conditions, what currently is and what should be. The assessment process points to problem areas, issues, or difficulties that should be resolved.

In most contexts, needs assessment focuses on gaps in results rather than in wants or possible solutions. Watkins and Kaufman (2002) explain that needs assessment requires ascertaining what the circumstances are at a point in time, what is to be desired in the future, and a comparison of the two. Needs assessment also includes making judgments with regard to needs and putting them into prioritized order to guide decisions about what to do next. According to Altschuld and Kumar (2010) usually when needs are assessed, several ideas are found and since resources are limited for improvement (closure of those gaps), priorities must be set. Causal analysis, for example, may be employed to identify which gap might be most important to

enable change and for which a solution strategy has a high likelihood of success. Literature suggest that, for training to be effective and to isolate both training needs and those problems having other, non-trainable solutions, training must be preceded by a needs analysis.

Applying this theory in entrepreneurship training involves a systematic process of assessing the training needs of employees in line with the organizational objectives before choosing and implementing training programmes, which facilitate enhancing of the organizational performance. The process, may be as simple as asking questions, comparing answers, and making informed decisions about what to do next to improve human (or organizational) conditions and performance. This theory addressed the variable of training needs assessment in the study. TNA helps to identify the gaps and development of issues that focus on programmes to address specific gaps. This ensures effectiveness of the trainings.

### **2.2.2 Economic Development Theory**

Schumpeter (1943) developed the economic development theory. The theory looked at entrepreneurship as an innovation and not an imitation. Innovation in this theory is viewed as a novelty-creating economic activity which generates new sources of value-adding productive endeavor, and which disturbs the circular flow of income. In this context, performance must be understood as an inherently disruptive rather than as a smooth process, what is termed as creative destruction. The disruption relates to the circular flow and established market structures, while the creative process is likely to be cumulative and incremental. Therefore, value created by the collective operation is greater than the sum of the parts, and the individuals concerned could not get a higher return on their own particular knowledge or contribution were they to set up independently.

Focus of Schumpeter's innovator as an economic and social leader is more on the joy of being an innovator and being a server to the society. Schumpeter's entrepreneur is an innovator in an entrepreneurship era. The entrepreneur is not necessarily the one who invents a new product but one who identifies how new combinations that can be applied in production. In this line of reasoning, it implies that a business owner is to be considered an entrepreneur only if the owner is carrying out new combinations.

From the trainers' perspective, different firms have different needs; hence, they need to develop innovative ways of addressing the unique needs of different SMEs. At the same time, the competences such as managerial skills, technical skills, and personal traits required for successful entrepreneur also vary with the needs of the business. According to Drucker (1999) the ability to develop new ideas and innovation has become a priority for many organizations. Intense global competition and technological development have made innovation be a source of competitive advantage for the success of an enterprise (Hollenstein, 1996). This theory addressed the training needs assessment, the content of training and business performance. From the trainee' perspective, the study investigated how entrepreneurship training enables the entrepreneurs to come up with new combinations that can be applied in production. The study presumed that entrepreneurship training triggers behavioral change of an individual towards generating new sources of value-adding productive endeavors. This change creates a positive impact on organizational performance.

### **2.2.3 Entrepreneurial Self-efficacy and Intentions Theory**

Bandura (1982) developed the entrepreneurial self-efficacy theory. The theory proposes that success in business is driven by individual's ability to successfully launch an entrepreneurial venture (McGee & Peterson, 2009). Entrepreneurial self-efficacy is useful for increasing entrepreneurs convictions that one can execute the necessary entrepreneurial behavior to

provide the desired results; a new venture or improve the existing business. Boyd and Vozkis (1994) provided evidence of the increasing emphasis on the role of self-efficacy in the study of entrepreneurship, including areas such as entrepreneurial career preferences, intentions and performance

The measure of entrepreneurial self-efficacy has been widely adopted to identifying entrepreneurial intentions and consequently entrepreneurial conduct, and for investigating how training can be used to improve entrepreneurial action (Foleide, 2011). Perceived desirability constitutes the primary component of entrepreneurial intention (Linan, 2011). Azjen (1991) observed that three attitudinal antecedents are necessary to trigger the action of starting a business: the desire to start the business; the belief that the business contributes to well-being of the society and that success is possible.

The study suggests the use of the entrepreneurial self-efficacy in the curriculum (workshops) and extracurricular activities to provide a great influence on the learners; they will act on their thoughts, feelings and entrepreneur behavior. If the entrepreneurs visualize themselves with high personal control as entrepreneurs, may be they will choose an entrepreneurial career path. Entrepreneurship trainers can benefit from the implementation of self-efficacy construct to the learning process. A high level of entrepreneurial self – efficacy can help them produce more entrepreneurs (Bird 1988; Boyd & Vozikis 1994). ESE is a promising construct, with the potential to predict entrepreneurial performance and for improving the rate of entrepreneurial activities through training (Mueller & Goic 2003; Zhao, Seibert 2005; Florin, Karri 2007).

Personality and environmental factors are incorporated into entrepreneurial self-efficacy and are thought to be strong predictors of entrepreneurship training and ultimate action (Bird 1988; Boyd and Vozikis 1994). Forbes 2005; Kolvereid and Isaksen 2006 observed that nevertheless,

the construct remains empirically underdeveloped and many scholars have called for refinements of the construct. The development of the ESE construct can help to improve the entrepreneurial learning process and increase the rate of entrepreneurial activities. The assessment of personality and explanation of educational environment factors of entrepreneurial programs can improve the entrepreneurial self-efficacy levels and activities for learners with low entrepreneurial self-efficacy. This strategy can help to attend to the special learning and entrepreneurial needs of all entrepreneurs. This theory addressed the variable of content of entrepreneurship training and method of training. Based on this theory, trainees are expected to positively respond to the content of training by applying content learnt in their business activities. The method used in the entrepreneurship training influences this change of behavior.

#### **2.2.4 Social Cognitive Theory**

The social cognitive theory of Bandura (1982) establishes that the environment causes behavior, but behavior also causes the environment. The theory calls this concept reciprocal determinism, where the world and the behavior of persons are mutually caused. The theory proposes that human conduct must be explained in terms of the reciprocal interaction between cognitive behavior and environmental determinants.

The social cognitive theory of Bandura (SCT) centers on the concepts of reinforcement and observation, giving more importance to the mental internal processes as well as to the interaction of the subject with others. The SCT postulates that observation and imitation can be a given across models that can be parents, educators and friends and can even be heroes taken from television. The only requirement for learning can be that one person observes another individual, or models behavior to carry out a certain conduct. The observation and imitation intervene upon the cognitive factors and help the subject decide whether the observed



behavior is to be limited. The cognitive factors are the capacity of reflection and symbolization as well as the prevention of consequences based on processes of comparison, generalization, and auto-evaluation. One of the aims of the SCT is the development of the self-evaluation and the self-reinforcement constructs.

According to Bandura (1982), individuals possess an auto-system that allows them to measure the control on their own thoughts, feelings, motivations and actions. This system exercises self-regulation to enable individuals with aptitude to influence their own cognitive processes and actions and in this way to alter their environment. If the above concepts discussed are applied to entrepreneurship training programs, we can infer that the entrepreneurs learn new things during training and interaction with various entrepreneurs can reinforce entrepreneurial behavior. The observation and imitation of former entrepreneurs will, intervene upon cognitive factors of the entrepreneurs and can help the entrepreneur or alumni to decide if the observed behaviors should be imitated or not. SCT is helpful to the entrepreneurial behavior field but trainers (Career counselors) need to apply this theory to the curriculum (workshop, extracurricular activities) and to entrepreneurs' interactions. This theory addressed the variable of the content and methods of entrepreneurial training. According to SCT the environment influences behavior, hence method used in training influences the behavior of the learner in implementing the content learnt.

### **2.2.5 Balanced Scorecard Model**

Kaplan and Norton (1992) developed the balanced Scorecard (BCS) model used to measure business performance. The BSC proposes that in order to evaluate business performance, organizations should not only rely on financial aspects but also to use the non-financial indicators which include customer perspective, business processes perspective, learning and growth view (Poureisa, Ahmadgourabi, & Efteghar, 2013). According to Kaplan and Norton,

(1992), companies need to determine their goals and objectives for evaluating success in each perspective. They need to establish measures and targets; and identify quantitative goals for all of these measures for the period considered.

Hence, in order to achieve financial outputs (in financial perspective), organizations should make value for their customers (in customer perspective). This was possible because organizations can excel in their operational processes (internal processes perspective) by preparing an appropriate space for staffs and try to improve creativity, learning, and growth in the organization (Poureisa, Ahmadgourabi, & Efteghar, 2013). Since performance is a composite of financial and non-financial indicators, use of BSC broadened the view of performance for better evaluation of the SMEs ICT firms in Kenya.

## **2.3 Empirical Literature Review**

### **2.3.1 Training Needs Assessment and Performance**

According to Firdousi (2013) training needs assessment forms the most basic common forms of assessment used by human resource development professionals in the workplace. In this respect, needs assessments help to determine when training is needed and for whom. This means that assessment ensures that training programs have relevance to the people being trained. Training needs assessment therefore provides the information that is usually necessary for designing training programs. Firdousi (2013) posits that the basic purpose of a training needs assessment is twofold; one is to identify the knowledge and skills that people must possess in order to perform effectively on the job, and secondly to prescribe appropriate interventions that can close these gaps. This is in line with what Watkins and Kaufman (2002) explained that needs assessment requires ascertaining what the circumstances are at a point in time, what is to be desired in the future, and a comparison of the two. Hence, needs assessment

includes making judgments with regard to needs and putting them into prioritized order to guide decisions about what to do next.

According to Goldstein (1991), needs assessment should be wholesome in nature and is critical in avoiding misdiagnosing of non-training problem as a training problem. Hence, the process include determining specific training needs of individuals in the organization, and then selecting the most appropriate training content and delivery methods, evaluating the effectiveness of the training procedures before it is delivered. Furthermore, it can play an important role in assessing the organizational context regarding resources, management support, and other organizational environment that either hinder or facilitate the successful transfer of a training initiative.

Firdousi (2013) outlined five main strategies employed to conduct training assessment. The first technique involves conducting meetings with the management. The presumption is that most supervisors are involved with the planning of projects and the future strategic plans; hence, they would know what will be needed to fulfill the vision of the organization. Secondly, training needs assessment may involve conducting meeting with employees. The approach assumes that employees are the ones who are directly involved in the day to day operations of their activities so they should be encouraged to discuss the difficulties they may be facing during their daily routine and what type of training would make their job easier and more efficient.

Third is through conducting formal and informal surveys with employees. Fourth is by conducting focus groups discussions with selected groups considered to be special expertise in the field. Focus groups discussions may be conducted to facilitate group interaction; these discussions allow the assessors to discover details regarding their target audience. Fifth is by

evaluating organizational strategies and objectives. The review offers the valuable information for training. A comparative analysis should be made of what employees are, what the company is currently doing and what will be expected of the employees as the company continues to grow and expand.

Miller and Osinski (2002) posits that the purpose of a training needs assessment is to identify performance requirements or needs within an organization in order to help direct resources to the areas of greatest need, those that closely relate to fulfilling the organizational goals and objectives, improving productivity and providing quality products and services. In this respect, it helps to improve performance. Therefore, needs assessment is the first step in the establishment of a training and development Program. It is used as the foundation for determining instructional objectives, the selection and design of instructional programs, the implementation of the programs and the evaluation of the training provided. These processes form a continuous cycle, which always begins with a needs assessment.

Jusoh, Ziyae, Asimiran and Kadir (2011) confirmed the need for training needs assessment before conducting entrepreneurship training. The study conducted on 30 entrepreneurs in Malaysia, to investigate the business competencies needed for success in business, demonstrated that entrepreneurs surveyed were moderately skilled, and they felt that they needed entrepreneurship skills training in areas such as creativity and innovation; the skills to make a business account; creating promotions and advertising skills; skills to set the right prices and selling skills. The study showed that through training needs assessment, critical issues regarding entrepreneurship training can be highlighted and emphasis given to areas that need to be trained on for business success. However, the sample was small.

A similar study in India by Rajani (2008) emphasised that intensified effort has to be taken to assess the social attitude, mentality, needs and abilities of various entrepreneurs so as to impart effective entrepreneurship training. The training needs assessment is key since different individuals have different needs. Thus, flexible training programmes and interest based skill training are necessary to push different entrepreneurs towards specific entrepreneurial activities. The argument is that entrepreneurial talents and capabilities are different in all communities but their translation to innovative action depends on appropriate stimuli and environment.

These stimuli can be identified through training needs assessment which would enhance appropriate training programme. The study was limited in scope as it only focused on social attitude, mentality, needs and abilities. The relationship between training needs assessment and organizational performance has been demonstrated in literature. A study by Nadeem and Hafeez (2016) on significance of training needs assessment on employee training in corporate sector of Pakistan, established that training needs assessment plays an important role in organizations' training, most importantly when giving training to employees. The study focused on the employees of the corporate sector. Further, entrepreneurial skills were not evaluated.

Another study by Huka, Mbugua and Njehia (2015) to determine the effects of business training needs analysis on competencies of trainees in Marsabit, Kenya established that lack of training needs assessment has a negative effect on acquiring business competencies. The study however focused only on youth and women groups in Marsabit County, Kenya. The reviewed empirical literature did not address training needs assessment in the SMEs in ICT sector in Kenya. This study established the relationship between training needs assessment and SMEs performance in the ICT sector in Nairobi City County. It established the gaps in training that are in the ICT

sector and made recommendations on how they can be addressed through entrepreneurship training.

### **2.3.3 Content of Entrepreneurship Training and Performance**

According to The Foundation of Economic and Business Development (2006), for entrepreneurship training to be effective, it must not only be through factual knowledge and limited to skills acquired in the classroom, but also through other more practical interventions. Dewhurst and Livesey (2007) asserts that entrepreneurship training programmes mostly focus on two areas; training for business start-ups, which centers mainly on the domain of knowledge, experience and aptitudes of entrepreneurs and training those who will start-up businesses by creating entrepreneurs. GEM (2010) states that some common cited objectives of entrepreneurship training include; to acquire knowledge relevant to entrepreneurship; to acquire skills and synthesis of action plans; to identify and stimulate entrepreneurial drive, to develop empathy and support for all unique aspects of entrepreneurship; to devise attitudes towards change and to encourage new start-ups and other entrepreneurial ventures.

The debate on what should constitute the entrepreneurship training content continuous as various empirical studies continues to have different views. A study by Azim and Al-Kahtani (2014) established that depending on the duration, target audience, resource availability and perceived efficacy of the training's multiplicity objectives for different entrepreneurs, different training content can be observed. In this respect, objectives determine the contents of the training program. From secondary data, Azim and Al-Kahtani (2014) outlined the following to constitute the content of entrepreneurship training, which are preferred in different development stages. During the formation stage the focus should be on understanding the nature of entrepreneurship, characteristics of an entrepreneur, importance of entrepreneurship, creativity and innovation skills, business idea generation, opportunity identification,

entrepreneurial and ethical self-assessment. During the development stage, the focus should be on product identification, business planning, market selection, financial planning, and making financial presentations. During the implementation stage, entrepreneurship training should lay emphasis on communication skills, especially persuasion; creativity skills; critical thinking and assessment skills; leadership skills; negotiation skills; and problem-solving skills. The study was however, based on secondary data. Consequently, different scholars have put forward different objectives, contents and modalities for entrepreneurship training programs to be effective (Jayawarna, Macpherson & Wilson 2007; Kotey & Forker, 2007; Patton & Marlow, 2002).

Empirical study by Mayuran (2016) in Jaffna district in Sri Lanka on the impact of entrepreneurship training on performance of small enterprises established a positive correlation between entrepreneurship training and firm performance. The study found out that customer care, marketing, quality maintenance and financial management were being taught as the content of entrepreneurship training. The content was basically business management skills and the effect of the other entrepreneurial skills on performance were not addressed. The methodology focused only on the correlation between the independent variable and the dependent variable. This study focused on the content of training to include managerial skills, technical skills and entrepreneurial skills. The study also used descriptive and inferential statistics.

Study by Ladzani and Vuuren (2016) explored the entrepreneurship training for emerging SMEs in South Africa. The study analysed the course content to include motivation, entrepreneurship skills and business skills. Motivation content included; need for achievement, ability to inspire and ability to cope with failure. Entrepreneurship skill included; creativity, innovation, ability to take risks, idea generation and opportunity identification. Business skills included;

management, leadership, financial management ,marketing skills, human resource skills, business planning and operational skills. The study recommended the need to strengthen entrepreneurial skills for the emerging entrepreneurs to understand how to generate business ideas, screen the ideas and identify business opportunities from the generated business idea. However the study did not collect data from business entrepreneurs but from periodic employees and trainers. The data collection was through interviews and lacked quantitative data. Hence, the findings can not be generalized.

A study by Munene (2008) on the impact of entrepreneurship training on performance of micro, small and medium enterprises in Nakuru County, investigated the nature and content of entrepreneurship trainings offered by Kenya Institute of Business Training and Joint loans. The study found out that the trainers focused on management of working capital, record keeping, and marketing. The study however, recommended inclusion to the content of training; risk management, business expansion strategies and management of loan delinquency and default. These components are part of business management skills and it is clear that the curriculum used was not comprehensive. Despite this, the study used a small response rate of 37 SMEs operators. The study was also limited in scope to Nakuru County and programs offered by Kenya Institute of Business Training and Joint loans. This calls for further investigation on the content of trainings offered by other organizations on entrepreneurship training.

According to ILO (2004) the content of entrepreneurship training should include; managerial skills, technical skills, and entrepreneurial skills. Managerial Skills include competencies in, business management, marketing, record keeping, financial management, and human resource management. Technical skills include; ability to practice competences acquired such as; computing, tailoring, mechanical and motor vehicle skills, carpentry among others. Entrepreneurial skills include; abilities such as; creativity, innovativeness, risk taking,



persistence, self-drive among others. Business management skills are required to run the business on a daily basis (Botha, 2006). One of the dictionary definitions of good management is the skilful use of materials and time towards the achievement of business objectives (Sackett, Rose & Adamson, 2003). Business management skills cover all the conventional management-training areas in a business (Monk, 2000). Organizations that are well managed develop a loyal customer base, grow and prosper (Nieman, 2006; Mughan, 2004). Having inadequate business management skills is one of the most prominent reasons for failure of SMEs (Viviers et al, 2001; Monk, 2000).

Technical skills are defined as those specific skills needed to work within a specific occupation. Technical skills include expertise in;- the knowledge of the industry, its standards and practices; the ability to use the tools, procedures and techniques of the specified field, the understanding of how specific things work; product/service-specific knowledge that enable one to know what the particular product could do and what it could be used for; process knowledge or how to manufacture the relevant product and all steps that need to be taken to develop and produce the product or perform the tasks necessary to render the service (Tustin, 2003; Perks & Struwig, 2005; Gartner, 1999; Nieuwenhuizen & Kroon, 2003; Honig, 1998; LeBrasseur, Zanibbi & Zinger, 2003).

GEM (2010) identified the essential traits of successful entrepreneurs to include; ability to be innovate and creative, ability to recognize business and social opportunities, resourceful in solving problems; self-confidence- believes in his or her abilities, has positive attitude, ability to cope with failure, understands and manages risks, values independence; drive to successes- persistent, ability to take initiative, has high energy level, is able to focus intensely; curiosity- possesses a deep curiosity about how things work, has a passion for learning; strong people skill- can motivate others, is a team builder. The attributes underlying these traits include;

imagination, creativity, tolerance for risks, divergent thinking ability, analytical skills, passion, self-assurance, interpersonal skills, self-drive. Thus, empirical review outlines the importance of managerial skills, technical skills and entrepreneurial skills. This study established the content of entrepreneurship training taught to SMEs in ICT sector and how the content influenced their performance. The study gave recommendations on what the trainees felt needed to be included in the content of training.

#### **2.3.4 Entrepreneurship Training Methods and Performance**

The purpose of entrepreneurship training is very specific. That is, to start and grow businesses, whereas entrepreneurship education is defined in broad terms as the building of knowledge and skills (GEM, 2010). Study carried out by Women Enterprise Fund (WEF) identified that the earlier an individual is exposed to entrepreneurship training, the more likely that individual will become an entrepreneur at some point in his or her life (WEF, 2009). Evidence of this can be seen in the higher prevalence of entrepreneurial activity among individuals whose parents have been self-employed or running their own businesses (Henley, 2007).

It would be surmised that children of entrepreneurs develop particular perceptions and skills from observing their parents and participating in family business activities. Perhaps some education and training programs can substitute for this learning. Thus, the question of which type of entrepreneurship training method and training approaches work best. Most authors agree, however, that experiential learning, or learning by doing is more effective for developing entrepreneurial skills and attitudes than traditional methods like lecturers (European Commission, 2008; Walter & Dohse, 2009). According to Azim and Al-Kahtani (2014), entrepreneurship training method should go beyond the traditional bounds of teaching to be able to stimulate flexibility, imaginativeness, willingness to take risks, and willingness to

experiment in the behavior of trainees. The teachers/facilitators must be prepared to abandon the rigid role of information provider, lecturer, and embrace participatory learning.

In terms of distance training provision, the e-learning training method experience for SMEs is received with mixed reaction Katz (2007). This is because it is not interactive and does not engage the trainee fully. Electronic learning offers the SMEs significant advantages of anytime, anywhere learning (Birchall & Giambona, 2007). Training through electronic learning provision has held significant prominence in UK and European economies, with numerous initiatives encouraging small enterprises to use electronic learning (Blackburn & Athayde, 2000). However, Birchall and Giambona (2007) noted that it suffers from the known disadvantages of self-directed electronic learning, where lack of priority and isolation can be significant inhibitors to effective learning. Blackburn and Athayde (2000) also recognized the provision of training through government initiatives through e learning to small enterprises.

A study by Ogonnia (2016) on the comparative teaching methods in improving the entrepreneurial competencies in business education students in universities in East and South states of Nigeria, established that, the use of practical activities and demonstration method as an instructional skill could improve the entrepreneurial competencies of business education students. The study also established use of mentorship by use of successful entrepreneurs could equally improve the competencies of student entrepreneurs. The study however, focused on students who had no business experience like SMEs owners/managers.

In Kenya, a study by Matofari, Kingi and Obwogi (2015) on the effect of training practices on the performance of small and medium sized enterprises in hospitality industry in Mombasa County, Kenya found out that 75% of the of the small and medium sized enterprises preferred on the job training methods for SMEs in the hotel industry. The major training methods which

had a positive influence on performance included demonstrations, discussion and presentations used on the job training. The study used a case surveys which are specific to the firms studied. The study also used a small sample size of 24 hotels and did not show how big the population was. The study focused on, on the job training, highlighting the components of the on job training and did not explore the other methods of entrepreneurship training.

Similarly, a study by Nyachome (2012) examined the factors influencing effectiveness of entrepreneurship training programmes in Kenya. The study concluded that the choice of the training method is very significant to the effectiveness of entrepreneurship training. The study established that learner centered instructional designs such as discussion methods were preferred by the trainees. Particularly, incorporation of learner's business experiences and knowledge was important during learning. However, the trainers mostly used lecture method during training. This calls for further research on the area of methods of training.

Winfred, Winston, Edens and Bell (2003) posit that the training method used, is related to the observed effectiveness of training programs. The study states that for a specific training content domain, a given training method may be more effective than others. Because all training methods are capable of, and indeed are intended to, communicate specific skill, knowledge, attitudinal, or task information to trainees. Different training methods can be selected to deliver different content (i.e., skill, knowledge, attitudinal, or task) information. Thus, the effect of skill or task type on the effectiveness of training is a function of the match between the training delivery method and the skill or task to be trained. This study evaluated how various training methods (in house training; on the job trainings; lectures; discussions; field trips) used in entrepreneurship training influenced performance of SMEs in ICT sector.

### **2.3.5 Business Characteristics and Performance**

Business characteristics have been identified as major determinants of SME performance. Demographics are useful predictors of business outcome. Particularly, the importance of business age and business size and their influence on firm performance have been highlighted in both theoretical discussion and empirical research (Radipere & Dhliwayo, 2014). Small businesses tend to perform very well but up to a certain size where they become sluggish (Takahashi, 2009). These businesses if they are entrepreneurial tend to perform well and if not, they are more likely to fail than older businesses who are more experienced and better resource endowed (Urban, 2004).

A study by Alasadi and Abedelrahim (2007) observed that firm size as measured by the number of employees and sales growth have a significant influence on accounting, technology and purchasing performance of SMEs. Further, a study by Takahashi (2009) concluded that small firms compared to large firms fail to achieve their full potential due to lack of benefits of economies of scale. The study argues that bigger businesses can produce a larger quantity of outputs with low costs because they have the capacity to access critical resources like business finance and hence achieve competitive advantage and better performance. According to Kristiansen, Furuholt and Wahid (2003) the characteristics of the enterprise such as the length of the time the business has been in operation and size of the enterprise are of paramount importance to the survival and success of small business.

A study by Chiliya and Roberts-Lombard (2012) investigated the impact of the level of experience and education on the profitability of the small grocery shops in South Africa. The study established that previous work experiences, education levels, age of the owner and the length of business operation have a significant impact on the profitability of the business. With regard to age, the general assumption is that a particular age group tends to behave in a different

way than other age groups. For instance, older owner/managers commonly appear to be risk averse. Similarly, old entrepreneur's motivation to run a business often appears to be just a hobby or monopoly of power and such persons tend to fail to attract, apply, or secure external finance (Ogubazghi & Muturi, 2014). The study did not however, explore the moderating effect of firm characteristics on other factors that influence SME performance.

On the contrary, Machirori and Fatoki (2013) indicated that older SME owners build a stronger and wider social capital compared to younger SME owners. However, even though older SME owners network more than younger SME owners do, younger entrepreneurs actually network as much as older entrepreneurs through the "digital evolution" where information sharing is profound. However, this study was general and did not focus on any specific sector in South Africa. Further, the relationship between firm characteristics and business performance was a direct relationship. From the review it is evident that most studies have focused primarily on the direct effect of business characteristics on firm performance. Little if any are indirect relationships such as moderation and mediation is explored.

Further, literature lacks sufficient evidence showing the moderating effect of business characteristics as measured by age of the business, size of business and education level of the entrepreneur on the relationship between entrepreneurial training and SMEs performance. It is therefore imperative to develop a critical mass of evidence of factors that influence the effectiveness of entrepreneurship training. Based on the arguments in previous studies on the role of the demographic factors on SMEs performance, the study proposed that business characteristics as defined by the age of the business, size of business and education level of the owner have a moderating effect on the relationship between entrepreneurship training and performance of SMEs in the ICT sector in Nairobi City County, Kenya. The study hypothesized that business characteristics as measured by age of the business, size of the business,

educational level of the owner have a moderating effect on the relationship between entrepreneurship training and performance of Small and Micro enterprises in ICT sector in Nairobi City County.

#### **2.4 Summary of Literature and Research Gaps**

The conceptual and empirical reviews demonstrated a relationship between the training needs assessment, content of training, methods of training and SMEs performance. Further, the review highlighted that there is a relationship between training and SMEs performance. Despite this, the context of the reviewed literature was general on SMEs performance and did not explicitly refer to the ICT sector in Kenya. The Table 2.1 gives a summary of various studies gaps identified. Financial and non-financial indicators measured performance. Sales turnover and profit margins were use to measure financial indicator since they were more specific to measure and made the study remain objective. While number of new products introduced and customer satisfaction were used to measure the non-financial indicators.

**Table 2.1: Summary of Empirical Review and Research gaps**

<b>Author; Year</b>	<b>Research Topic</b>	<b>Variables Studied</b>	<b>Research Findings</b>	<b>Research Gaps</b>	<b>Focus on of current Study</b>
Ogonnia (2016)	The imperative of teaching methods in improving the entrepreneurial competencies in business education students in universities in East and South states of Nigeria	Effect of training method on improving the entrepreneurial competencies	Use of practical activities and demonstration method improve entrepreneurial competencies	The study focused on students but not practicing SMEs	The study focused on business owners/managers who were trained and were in business
Nadeem and Hafeez(2016)	Significance of training needs analysis on employee training in corporate sector of Pakistan	Level of analysis of training needs assessment process	Training needs assessment has a positive impact on employees performance	Small sample size of 18 companies; and population not defined. Study focused on employees	The study focused on SMEs need for entrepreneurship training
Mayuran (2016)	Impact of Entrepreneurial Training on Performance of Small Enterprises in Jaffna District	Effects of customer care; Marketing; Quality maintenance; Financial Management	Positive correlation between entrepreneurship training and performance	The methodology focused only on the correlation between the independent variable and the dependent variable.	This study focused on the content of training to include managerial skills, technical skills and entrepreneurial skills. The study also used descriptive and inferential statistics
Matofari, Kingi and Obwogi (2015)	Effects of training practices on the performance of small and medium	Effect of training plans; training methods and	Training plans have a positive effect on training;	Small sample size, total population not outlined, cases study survey which is context	Focused on broad methods of training (in-house training, on the job training, lecture



<b>Author; Year</b>	<b>Research Topic</b>	<b>Variables Studied</b>	<b>Research Findings</b>	<b>Research Gaps</b>	<b>Focus on of current Study</b>
	size enterprises in the hospitality industry in County, Kenya	training programs on performance	The preferred methods of training were, discussions, demonstrations and presentation	based was used and limited to on the job training method	methods, discussion and field trips)
Huka, Mbugua and Njehia(2015)	Effects of Business Training Needs Analysis on Competencies of Trainees: The Kenyan Experience	Effects of training needs assessment on competencies of business trainees	Lack of training needs assessment has a negative impact on business competencies	The findings were limited to Marsabit County and focused on youth and women groups	The study focused on SMEs ICT in Nairobi City County. Data was collected from SME owners/ managers
Okeyo (2014)	Impact of business development services on entrepreneurial orientation and performance of small and medium enterprises in Kenya, Nairobi	Establish whether business development services have an effect on performance of SMEs. Investigate the relationship between business development services and entrepreneurial orientation. Determine the role of entrepreneurial orientation in the	There was a positive relationship between business development services and performance of enterprises.	The study focused on business development services on entrepreneurial orientation on Small and Medium	This study focused on entrepreneurship training and performance on Small and Micro Enterprises

Author; Year	Research Topic	Variables Studied	Research Findings	Research Gaps	Focus on of current Study
		link between business development services and SMEs performance.			
Jones, Beynon, Pickernell, and Packham (2013)	Evaluating the impact of different training methods on SME business performance in England	Which individual training methods have positive impact on overall business performance? Are formal, informal or combination of both methods of training strongly relate business performance.	Informal training had greater influence on business performance compared to formal training.  Training outside the workplace had a strong influence on the business performance.	The study focused on the methods of training and did not focus on the content of training.	This study focused on the training needs assessment, content and methods of training.
Osoro (2013)	Effects of entrepreneurship orientation on business performance in Kenya	Contextual factors that shape innovativeness as a dimension of entrepreneurial orientation. Contextual factors that shape pro-activeness as a dimension of	There was a positive relationship between entrepreneurship orientation and SME performance.	The study focused on entrepreneurial intention after training. However, it did not establish the influence of the content of entrepreneurship training.	This study explored the organizations performance after training and established the influence of content of entrepreneurship training.

Author; Year	Research Topic	Variables Studied	Research Findings	Research Gaps	Focus on of current Study
		entrepreneurial orientation. Contextual factors that shape risk taking propensity as a dimension of entrepreneurial orientation.			
Osinde, Iravo, Munene and Omayio (2013)	Effects of business development services on the performance of small-scale entrepreneurs in Kenya	Effects of training services on business performance. Effect of technical assistant services on business performance.	There was a positive relationship between business development services and financial performance.	The study focused on business development services on the performance of small-scale entrepreneurs in Kisii, Kenya. The study was purely descriptive and did not use inferential statistics	The target population was SMEs ICT in Nairobi City County. The study used quantitative and qualitative mixed method.
Nyachome(2012)	Factors Influencing the Effectiveness of the Entrepreneurship Training Programmes: A case of "Financial Knowledge Africa" Kenya	Teaching methods; Learner characteristics; Trainer's competency	Choice of the training method is very significant to the effectiveness of entrepreneurship training	Trainees were not given time to practice skills learnt before evaluation	Effectiveness of training method evaluated after three years of implementation
Tijani (2012)	Impact of technical	Impact of technical	Technical entrepreneurial skills	The study focused on technical skills but did	This study looked at the effects of the

<b>Author; Year</b>	<b>Research Topic</b>	<b>Variables Studied</b>	<b>Research Findings</b>	<b>Research Gaps</b>	<b>Focus on of current Study</b>
	entrepreneurial skills on employment generation in small and medium scale enterprises in Lagos, Nigeria	entrepreneurial training and employment generation	generate employment in SMEs in Nigeria.	not explore managerial and entrepreneurial skills	technical, managerial and entrepreneurial skills
Mungai(2012)	The relationship between Business Management Training and SME enterprise growth in Kenya	Establish the nature and types of training offered. Relationship between the factors that influence the transfer of learning/training and SMEs growth. Establish the extent to which Business Management Training leads to SMEs growth.	Business management training had a positive effect on new product/service development.	The study measured performance with respect to non-financial (product/service development) without considering the financial measures	This study measured performance from both the financial and non-financial perspectives
Lorz (2011)	Impact of entrepreneurship education on entrepreneurial intention	Entrepreneurship education on entrepreneurial intention	Training had a positive impact on entrepreneurial intentions.	The study focused on those who had received training in formal institutions	This study looked at entrepreneurs who have received training while running their businesses

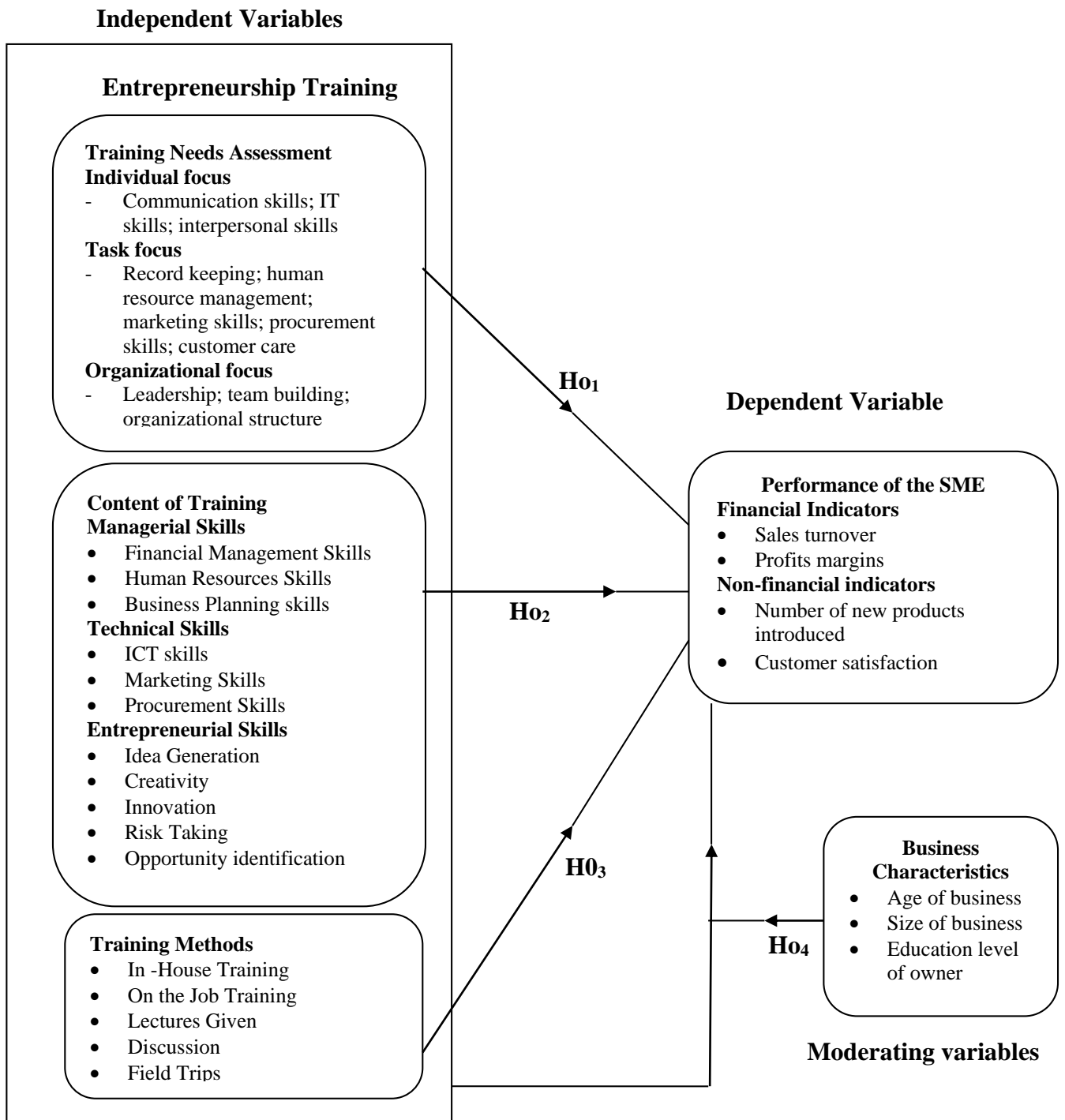
<b>Author; Year</b>	<b>Research Topic</b>	<b>Variables Studied</b>	<b>Research Findings</b>	<b>Research Gaps</b>	<b>Focus on of current Study</b>
		Effects of duration on entrepreneurial intention			
Mwangi (2011)	Contributions of entrepreneurship education courses offered in Technical Training Colleges in enhancing management skills	Contributions of entrepreneurship education on business start-up. Factors that influence entrepreneurship education	Those with entrepreneurship education seemed to have better management skills compared to those without.	The study focused on the entrepreneurial courses offered in technical training colleges. Used case study research design. The findings are thus limited to the case	This was on entrepreneurial training offered to SMEs by ICT Authority.
Kunene (2008)	Critical analysis of entrepreneurial and business skills in SMEs in textile and clothing industry in Johannesburg South Africa	Link between SME competences and training	The following key skills were found to enhance SMEs success; mobilization of resources, marketing, employee motivation, legal skills, financial skills and operational management skills.	The study focused on general entrepreneurial competences and did not focus on training methods used.	This study focused on how the training needs assessment, content and method of training influence SME performance
Munene (2008)	Impact of Entrepreneurial Training on Performance of Micro, Small and Medium Enterprises In Nakuru County	Nature and Content of entrepreneurship training programs; impact of entrepreneurial training on	Trainers focused on management of working capital, record keeping and marketing	Small sample size (37 SME operators); Limited scope (Nakuru County and programs offered by Kenya Institute of Business Training and Joint loans;	The study was more specific to SME ICT sector in Nairobi City County; Focus was on programs offered by ICT Authority

<b>Author; Year</b>	<b>Research Topic</b>	<b>Variables Studied</b>	<b>Research Findings</b>	<b>Research Gaps</b>	<b>Focus on of current Study</b>
		performance of enterprises		The study was general	
Roy and Raymond (2008)	Meeting the Training Needs of SMEs: Is e-learning a Solution?	Effect of e-learning on SMEs performance	E-learning need better management and technical support of employees with regard to e-Learning, support which was found lacking in a number of SMEs	Focused only on e-learning and used multiple case on 16 firms in Canada	Focused on broad methods of training (in-house training, on the job training, lecture methods, discussion and field trips)
Kotey and Slade (2005)	Formal Human Resource Management Practices in Small Growing Firms	Effect of formal training on performance of SMEs	O-the-job training is the predominant training method in SMEs and that other formal training methods gain prominence	The study focused only on the on-job training method	Focused on broad methods of training (in-house training, on the job training, lecture methods, discussion and field trips)
Ladzani and Vuuren (2002)	Entrepreneurship Training for Emerging SMEs in South Africa	Effect of motivation, entrepreneurship and business skills on performance	The study found out that trainees required to be trained on business management skills followed by motivation and entrepreneurial skills	The study focused on periodic employees who may not have indepth information about the firm performance and the content of training	The study focused on SMEs ICT owner/managers and trainers of the entrepreneurship programs

**Source: Author and Literature Review (2017)**

## 2.5 Conceptual Frame Work

The aim of the study was to establish the effects of entrepreneurship training on performance of SMEs in the ICT sector. Figure 2.1 explains the conceptual framework.



**Figure 2.1: Conceptual Framework**  
Source: Author (2016)

The independent variables were the training needs assessment, content, and method of training. The dependent variable was the performance of SMEs while the moderating variable was business characteristics. The training needs assessment was measured by individual focus; task focus; organizational focus. Content of training was measured by inclusion of managerial skills; technical skills and entrepreneurial skills in the training curriculum. Method of training was measured by the extent of use of in-house training; on the job training, lecture methods, discussion, and field trips. Business characteristics (age of the business, size of business and education level of the owner) were the moderating variables. Performance was measured in two components, the financial, and non-financial. Financial measures included sales turnover and profits margins while non-financial measures included number of new products introduced and customer satisfaction measured performance of the SMEs in ICT sector.



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter explores how the research was carried out. It sets out various stages and phases that were followed in completing the study. It starts by explaining the research philosophy, research design that was adopted, operationalization of the variables, the population, the type of data collected, sampling frame, sample and sampling techniques, data collection instrument, data collection procedure, pilot test, validity and reliability of the instrument, data analysis and presentation. Lastly, the analytic techniques that were used to test the hypotheses are also presented.

### **3.2 Research Philosophy**

In social sciences, research philosophies, can be classified as; positivism (scientific) and phenomenology (interpretivism) which may be viewed in terms of two perspectives, namely quantitative and qualitative approaches (Coopers & Schindler, 2004). This study adopted a positivist research philosophy. Positivist philosophy premises that knowledge is based on facts and that no abstractions or subjective status of individuals is considered. Positivism thus derives a quantitative perspective, which holds that there is an objective reality that can be expressed numerically, with explanatory and predictive power (Furrer, Thomas & Goussevkaia, 2008).

The choice of positivism was to enable the researcher to gather factual evidence based on values of reason and facts, gathered through direct observations and experience. This was measured empirically using quantitative methods and statistical analysis to enable generalization and to statistically explain cause and effects relationships (Saunders, Lewis &

Thornhill, 2007). Consequently, positivism allowed hypotheses testing using quantitative techniques.

The philosophical foundation of the study was positivism where scientific processes were followed in hypothesizing fundamental laws then deducing the observations so as to determine the truth or falsify the said hypotheses. Further, according to Beardwell and Claydon (2007) positivism underpins many organizational activities such as psychometric testing for selection and competitive advantage models. The positivist philosophy was appropriate for this study because the study sought to establish the facts as they are on the ground about the relationship between entrepreneurship training and SMEs ICT performance in Nairobi City County in Kenya.

### **3.3 Research Design**

The study adopted a mixed research design (Creswell, 2009). Both qualitative and quantitative data was used to describe the relationship between entrepreneurship training and SMEs performance. Use of descriptive approach ensured ease in understanding the insight and ideas about the problem. According to Kothari (2004), descriptive approach involves large numbers of persons, and describes population characteristics by the selection of unbiased sample. It involves using questionnaires and interview tests. Statistical information about the aspects of the research issue that may interest policy makers, SMEs entrepreneurs, and generalizing the results of the sample to the population from which it is drawn. Descriptive design is flexible enough to provide opportunity for considering different aspects of a problem under study (Kothari, 2004).

Questionnaires, interviews and document analysis were used to collect both qualitative and quantitative data (Creswell, 2009). The descriptive design aimed to answer the research

objectives and testing of hypotheses. The design was used to gather data, summarize the data, present the data, and interpret it for clarifying the relationship between entrepreneurship training and performance of Small and Micro ICT enterprises (Creswell, 2008).

### 3.4 Empirical Model

An empirical model was used to test the statistical significance of the relationship involving the independent variables and dependent variable. Single linear regression models were used to determine the relationship between individual independent variables and the dependent variable while multiple linear regression model was used to analyze the combined effect of the four independent variable on the dependent variable.

#### Evaluation of the Regression Model

The study used one multiple regression to test the effect of entrepreneurship training on SMEs ICT performance. There were also three simple linear regressions to test the effect of training needs assessment, content of training and method of training on SME ICT performance. To determine the effect of entrepreneurship training on SMEs ICT performance, the following multiple linear regression model was used;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \dots\dots\dots (3.1)$$

Where;

Y= SME ICT Performance

$\beta_0$ =Constant

$\beta_1$ =Coefficient of training needs assessment

$\beta_2$  = Coefficient of content of training

$\beta_3$  = Coefficient of method of training

$X_1$ =Training needs assessment

$X_2$ = Content of training

X<sub>3</sub>= Method of training

ε = Error term

The relationship between training needs assessment and SME ICT performance was tested using the following regression equations;

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \dots\dots\dots (3.2)$$

Where;

Y= SME ICT Performance

β<sub>0</sub>=Constant

β<sub>1</sub>=Coefficient of training needs assessment

X<sub>1</sub>=Training needs assessment

ε = Error term

The relationship between content of training and SME ICT performance was tested using the following regression equations;

$$Y = \beta_0 + \beta_2 X_2 + \varepsilon \dots\dots\dots (3.3)$$

Where;

Y= SME ICT Performance

β<sub>0</sub>=Constant

β<sub>2</sub>=Coefficient of content of training

X<sub>2</sub>=Content of training

ε = Error term

The relationship between method of training and SME ICT performance was tested using the following regression equations;

$$Y = \beta_0 + \beta_3 X_3 + \varepsilon \dots\dots\dots (3.4)$$

Where;

Y= SME ICT Performance

$\beta_0$ =Constant

$\beta_3$ =Coefficient of method of training

$X_3$ =Method of training

$\varepsilon$  = Error term

### **Evaluation of the Moderating Effect**

The moderator effect was indicated by the interaction of **M** in explaining the relationship between Y and Z (Baron & Keny, 1986).

$$Y = \beta_0 + \beta_4 Z + \beta_5 Z * M + \beta_6 M + \varepsilon \dots\dots\dots (3.5)$$

Where;

Y= is the dependent variable (SME ICT performance),

Z= is the entrepreneurship training

M= is moderating term (business characteristics),

Z\*M=is the interaction term between entrepreneurship training and business characteristics,

M= are the business characteristics

$\beta_0$ =Constant

$\beta_4$ =Coefficient of entrepreneurship training

$\beta_5$ =Coefficient of the interaction term

$\beta_6$ =Coefficient of business characteristics

$\varepsilon$  = Error term

### **3.5 Operationalization of the Variables**

The dependent variable in this study was SMEs ICT performance while entrepreneurship training was the independent variable. The study considered business characteristics to be the moderating variable. Table 3.1 presents a description of the four study variables and how they were operationalized.

**Table 3.1: Operationalization of Variables**

<b>Objective</b>	<b>Independent variable</b>	<b>Operational Indicators</b>	<b>Operational Specific Indicators</b>	<b>Data instruments</b>	<b>Measurement scales</b>
To assess the extent to which training needs assessment influence the performance of Small and Micro ICT enterprises	Training Needs assessment	Individual Focus	Communication skills	F3	Monadic Scale (1-5)
			IT skills	F5	Monadic Scale (1-5)
			Interpersonal Skills	F4;F6	Monadic Scale (1-5)
		Task Focus	Record Keeping	F7	Monadic Scale (1-5)
			Human Resource management	F9	Monadic Scale (1-5)
			Marketing skills	F10	Monadic Scale (1-5)
			Procurement skills	F11	Monadic Scale (1-5)
			Customer care skills	F4	Monadic Scale (1-5)
		Organizational focus	Leadership	F14	Monadic Scale (1-5)
			Team Building	F15	Monadic Scale (1-5)
Organizational structure	F16		Monadic Scale (1-5)		
To determine the extent which entrepreneurship training content influences the performance of Small and Micro ICT enterprises.	Content of entrepreneurship training	Management skills	Financial management skills	B1-B4; G1-G4	Monadic Scale (1-5)
			Human resource management skills	B10-B13; G10-G13	Monadic Scale (1-5)
			Leadership	B5-B9; G5-G9	Monadic Scale (1-5)
		Technical skills	ICT skills	B14-B18; G14-G18	Monadic Scale (1-5)
			Marketing skills	B19-B25; G19-G24	Monadic Scale (1-5)
			Procurement skills	B26-B28; G25-G27	Monadic Scale (1-5)
		Entrepreneurship skills	Idea generation	B29; G29	Monadic Scale (1-5)
			Creativity	B32; G28	Monadic Scale (1-5)
			Innovation	B31; G31	Monadic Scale (1-5)
			Risk taking	B33; G32	Monadic Scale (1-5)
	Opportunity identification & exploitation	B30;G30	MonadicScale (1-5)		
To assess the effects of entrepreneurship training methods on performance of	Method of entrepreneurship training	In-house training	In-house training	C1-C3; H1-H6	Monadic Scale (1-5)
		On the job training	On the job training		Monadic Scale (1-5)

<b>Objective</b>	<b>Independent variable</b>	<b>Operational Indicators</b>	<b>Operational Specific Indicators</b>	<b>Data instruments</b>	<b>Measurement scales</b>
Small and Micro ICT enterprises.		Lectures	Lectures		Monadic Scale (1-5)
		Discussions	Discussions		
		Field trips	Field trips		
<b>Objective</b>	<b>Moderating Variable</b>	<b>Operational indicators</b>	<b>Operational specific indicators</b>	<b>Data instruments</b>	<b>Measurement scales</b>
To establish the moderating effects of business characteristics on the relationship between entrepreneurship training and performance of Small and Micro ICT enterprises.	Business characteristic	Age of business	Age of business	A3	Ordinal scale
		Size of business	Size of business	A12	Ordinal scale
		Gender of the owner	Gender of the owner	A4	Nominal scale
		Education level of the owner	Education level of the owner	A6	Ordinal scale
		Experience of the owner	Experience of the owner	A13	Ordinal scale
<b>Objective</b>	<b>Dependent Variable</b>	<b>Operational indicators</b>	<b>Operational specific indicators</b>	<b>Data instruments</b>	<b>Measurement scales</b>
To establish the relationship between entrepreneurship training and performance of Small and Micro ICT enterprises. in Nairobi City County	ICT Performance	Sales volumes	Sales volumes	D4; D5; D9	Ratio
		Profit margins	Profit margins	D6; D7	Ratio
		Number of new products introduced	Number of new products introduced	D11; D12	Monadic
		Customer satisfaction	Customer satisfaction	D13-D15	Monadic Scale (1-5)

**Source: Author and Literature Review (2017)**

### **3.6 Target Population**

Target population as described by Borg and Crall (2009) is a universal set of study of all members of real or hypothetical set of people, events or objects to which an investigator generalizes the result. The target populations for this study was 273 SMEs in the ICT sector in Nairobi County, Kenya that successfully received entrepreneurship training from Kenyan ICT Authority prior to 2012. Data was also collected from three trainings managers who implemented the trainings for ICT Authority. The study sampled those who were trained prior to 2012 to give the trainee enough time to implement the skills acquired. Human theories suggest that it is not easy to implement skills learnt immediately after training, thus the need to allow time for implementation before establishing the training effects (Bandura, 1982).

The SMEs ICT firms targeted had 1 to 49 employees. To qualify to participate in the study, the respondents constituting the sample size met the following criteria. Be the owner and/or manager; must have been conducting business for at least two years prior to having received the entrepreneurship training; the owner or manager must have carried out business activities on a full time basis and the subject must be the founder of the business or bought an existing business. This enabled the researcher to gather in-depth information from the respondents.

### **3.7 Sampling Design**

A sample frame is list of population items accessible at the time of study (Kothari, 2004). A list of all the 273 SMEs ICT who had received entrepreneurship training from ICT Authority prior to 2012 formed the sample frame. Sampling defines the process of selecting a number of individuals or objects from a population such that the selected group contains elements representatives of characteristics found in the entire group (Orodho, 2001). The study used systematic random sampling to get a representative sample from the list of trained SMEs ICT



from the ICT Authority. The use of systematic random sampling was preferred because it is simple, convenient, unbiased and helps in random selection. From the list of the trained SMEs in ICT sector starting from a randomly selected point, every other fourth organization was selected to participate in the study. This gave a sample size of 73 (26.7%). Mugenda (2008) indicates that a sample size of 10% - 40% of target population is large enough so as to allow for reliable data analysis and allows testing for significance of differences between estimates. Secondary data was obtained from the ICT Authority and SMEs in ICT sector database (document analysis, brochures, curriculum analysis) as well as SMEs in ICT sector financial reports.

### **3.8 Data Collection Instrument**

A survey questionnaire was used to collect primary data while document analysis guide was used to collect secondary data from the respondents. Secondary data included records of sales volumes and profit margins from the SMEs in ICT sector. Secondary data also included brochures and training curricula from ICT Authority. Kiess and Bloomquist (1985) observed that questionnaires offer considerable advantage in administration; presents an even stimulus potentiality to large numbers of people simultaneously and provides the investigation with an easy accumulation of data. Gay (1992) maintains that questionnaires give respondents freedom to express their views or opinion and make suggestions.

Borg and Gall (2009) emphasize that whereas the open-ended type of questions give informants freedom of response, the closed ended types facilitate consistency of certain data across informants. The questionnaires contained both open and close- ended items. The trainee questionnaire contained five sections. Section A sought to obtain the demographic information of the respondents, section B sought information on training needs assessment, section C

sought information on the content of training, section D sought information on methods used in training and E on performance of the organization.

The respondents were the owner/managers of the SMEs in ICT sector who had undergone entrepreneurship training prior to 2012 by ICT Authority and three training managers from the ICT Authority. The unit of analysis was the SMEs in ICT sector in Nairobi City County, Kenya. Secondary data was from SMEs in ICT sector records and literature review from various studies.

### **3.8.1 Pilot Testing**

To ascertain the validity and reliability of questionnaire, a pilot test was conducted. Cooper and Schindler (2010) indicated that a pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample. According to Babbie (2004) a pilot study is conducted when a questionnaire is given to just a few people with an intention of pre-testing the questions. Pilot test is an activity that assists the research in determining if there are flaws, limitations, or other weaknesses within the questionnaire design and allows to make necessary revisions prior to the implementation of the study (Kvale, 2007).

A pilot test was conducted on 15 randomly selected SMEs in ICT sector owner/managers to assess the clarity, complexity and the validity of the instrument. As a rule of thumb a minimum of 1% of the sample should constitute the pilot test (Cooper & Schilder, 2011). A total of 15 of respondents (10.9% of the sample) were randomly drawn from the same population to participate in the pretest. The pilot test size was within the recommendation. The respondents pointed out grammatical errors and ambiguity in certain words. These were corrected prior to the final study.

### **3.8.2 Validity of Research Instrument**

According to Kothari (2004), validity is the degree to which a measurement scale measures what it purports to measure. A direct check on how well the measure fulfills its function. Kothari (2004) argues that a more accurate way to define validity is the extent to which we know what the test measures. The study used both face, content and construct validity to ascertain the validity of the questionnaires. The instrument was tested for content validity, which drew an inference from test scores to a large domain of items similar to those on the test. Content validity is concerned with sample-population representativeness. Content validity was checked using literature review and expert opinions.

Construct validity of each category was evaluated by using principal components factor analysis (Hair et al., 1995). Items with a factor of above 0.5 was considered to demonstrate a high level of significance (Hair et al., 1995). The aim of factor analysis was to identify the test items, which belonged together and seemed to say the same thing. The advantage of which was to ensure that the finding conclusions were focused.

### **3.8.3 Reliability of Research Instrument**

Reliability refers to the consistency of scores that the same person would obtain if they were to take the same test at other times or under different conditions (Kothari, 2004). A measure would display reliability if little variation over time is found when the measure is re-administered (Zikmund, 2003). This is to ensure that the tool can be relied upon to give objective results over a period of time.

Reliability was measured by reliability co-efficient (Cronbach alpha). According to Makgosa (2006) Cronbach's Alpha of less than 0.5 indicates unreliability of the variables hence cannot be used to deduce findings. According to Field (2005), Cronbach alpha of 0.8 was appropriate

for standardized cognitive tests, such as intelligence tests but for ability tests, a cut-off point of 0.7 was suitable. Therefore, since this study focused on determining the relationship between entrepreneurship training and SMEs performance, the test was based on ability. Hence, Cronbachalpha of 0.7, for all the constructs, was considered to be adequate for this study when identifying test items to include in the constructs.

### **3.9 Data Collection Procedure**

Ten research assistants were involved to distribute questionnaires and in administration of data collection tool to the target population. The assistants were first trained on objective of the research and the procedure of data collection. The research assistants used a drop and pick strategy where the respondents were given the instrument to fill at their own convenient time to be collected after one week.

### **3.10 Diagnostic Tests**

Diagnostic tests were conducted to determine whether the data met the basic assumptions of linear regression. The following diagnostic test were carried out.

#### **3.10.1 Normality**

According to Hair (1995) both graphical analysis (normal probability plot) and a statistical tests such as Kolmogorov-Smirnov or the Shapiro –Wilk test can be used to assess the actual degree of departure from normality. The researcher tested the instrument for normality using the Shapiro –Wilk test. The significance level for this test was at 5% significance level such that  $p \geq 0.05$  indicated normal distribution while  $p < 0.05$  indicated deviation from normality.

#### **3.10.2 Multicollenearity**

According to Kothari (2004) in multiple regression analysis, regression coefficients become less reliable as the degree of correlation between the independent variables increases. To test

for multicollinearity the researcher used variance inflation factor (VIF) and Tolerance values. According to Myers (1990) a VIF for all the independent variables in a multiple regression of less than 10 ( $VIF \leq 10$ ) indicated non-multicollinearity while a  $VIF \geq 10$  indicates that multicollinearity exists. Menard (1995) indicated that Tolerance Statistics values of below 0.1 indicate a serious problem of multicollinearity.

### **3.11 Data Analysis and Presentation**

The study generated both qualitative and quantitative data. Quantitative data was coded and entered into Statistical Packages for Social Sciences (SPSS Version 24.0) for analysis. Qualitative data was analyzed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories. Descriptive statistics involved use of absolute and relative percentages, frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Regression analysis was used as the inferential statistics to establish the nature and magnitude of the relationships between the variables and to test the hypothesized relationships.

The research hypotheses were tested at 95% level of confidence in order to provide for drawing conclusions. Pearson's product moment correlation ( $r$ ) was derived to show the nature and strength of the relationship. Coefficient of determination ( $R^2$ ) was used to measure the amount of variation in the dependent variable explained by the independent variable. The significance level for this study was  $\alpha = 5\%$ , for  $p > 0.05$ .

### **3.12 Statistical Approach for Testing the Hypothesis of the Study**

Table 3.4 indicates the summary of model that was used in data analysis and to determine the significance of the model in each dependent variable.

**Table3.2: Summary of Hypothesis Test**

Research objectives	Hypotheses (H <sub>0</sub> )	Statistical model	Threshold of Interpretation
To assess the extent to which training needs assessment influence the performance of Small and Micro ICT enterprises.	There is no relationship between the training needs assessments and performance of Small and Micro ICT enterprises.	Y= b <sub>0</sub> + b <sub>1</sub> X <sub>1</sub> +e; Where: Y=SME performance b <sub>0</sub> = intercept b <sub>1</sub> = Coefficient of training needs assessment X <sub>1</sub> = training needs assessment e = Error term	H <sub>0</sub> =0 H <sub>a</sub> #0 Reject Ho if p is less than 0.05
To determine the extent which entrepreneurship training content influences the performance of Small and Micro ICT enterprises.	There is no relationship between the content of entrepreneurship training and performance of Small and Micro ICT enterprises.	Y = b <sub>0</sub> +b <sub>2</sub> X <sub>2</sub> + ε <sub>0</sub> ; Where: Y=SME performance b <sub>0</sub> = intercept b <sub>2</sub> = Coefficient of the content of training X <sub>2</sub> = content of entrepreneurship training ε <sub>0</sub> = Error term	H <sub>0</sub> =0 H <sub>ac</sub> # o Reject Ho if p is less than 0.05
To assess the effects of entrepreneurship training methods on performance of Small and Micro ICT enterprises	There is no relationship between the methods entrepreneurship training and performance of Small and Micro ICT enterprises.	Y = b <sub>0</sub> +b <sub>3</sub> X <sub>3</sub> + ε <sub>0</sub> ;Where: Y=SME performance b <sub>0</sub> = intercept b <sub>3</sub> = Coefficient of the methods of training X <sub>3</sub> = methods of entrepreneurship training ε <sub>0</sub> = Error term	H <sub>0</sub> =0 H <sub>a</sub> #0 Reject Ho if p is less than 0.05
To establish the moderating effects of business characteristics on the relationship between entrepreneurship training and performance of Small and Micro ICT enterprises	Business characteristics do not have a moderating effect on the relationship between entrepreneurship training and performance of Small and Micro ICT enterprises.	Y = β <sub>0</sub> +β <sub>1</sub> X <sub>1</sub> +β <sub>2</sub> X <sub>2</sub> +β <sub>3</sub> X <sub>3</sub> +β <sub>4</sub> M+ε Y= business characteristics b <sub>0</sub> = intercept b <sub>4</sub> = Coefficient of business characteristics M <sub>4</sub> = business characteristics ε <sub>0</sub> = Error term	H <sub>0</sub> =0 H <sub>a</sub> #0 Reject Ho if p is less than 0.05

**Source: Author and Literature Review(2017)**

### 3.13 Ethical Consideration

The study took into consideration issues of confidentiality and anonymity, informed consent, and privacy of the respondents. According to David and Sutton (2004) a respondent has the right to have his or her identity remain anonymous. In this study, indication of business name was optional. Further, confidentiality and anonymity was achieved by asking participants not to write their names on the questionnaires. Participants in this study were identified by serial

numbers rather than by name. Anonymity was also guaranteed through grouping data rather than presenting individual responses.

Informed consent is an ethical requirement, which demands that respondents be allowed to choose to participate or not to participate in the research after receiving full information about the possible risks or benefits of participating (Urombo, 2000). In this study, the selected participants were informed about the purpose of the study. The participants were given the freedom to choose to participate or not participate in the study. The study assured privacy by securing data in the computer with a password to ensure that people could not access the data without authorization.

## CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSIONS

### 4.1 Introduction

This chapter is a presentation of the study findings. The first part is the study response rate, followed by demographic characteristics of the study units; test for the assumptions underlying linear regression analysis; results of the descriptive statistics; and the results of the test hypothesis.

### 4.2 Study Response Rate

A representative sample of 73 firms was drawn from the population to participate in the study. The response rate is as tabulated in Table 4.1.

**Table 4.1: Response Rate**

<b>Category</b>	<b>Sample size</b>	<b>Percentage (%)</b>
Filled and returned	51	69.9%
Not returned	22	30.1%
<b>Total</b>	<b>73</b>	<b>100%</b>

**Source: Survey Data (2016)**

Table 4.1 shows that the study achieved 69.9% response rate. A response rate of 69.9% means that data was collected from more than half of the targeted participants. This response rate was above the 50% mark which according to Mugenda and Mugenda (2008) should be met to ensure data adequacy for analysis and reporting.

### 4.3 Descriptive Statistics

This section presents the descriptive findings on business characteristics and the effect of training needs assessment; content of training and method of training on SMEs in ICT sector performance.

#### 4.3.1 Business Characteristics

This section provides information on the business characteristics. The section captured the respondents' age, gender, marital status, and education level.



#### 4.3.1.1 Age, Gender, Marital Status and Education Level

Findings on the age of the of SME owner/Manager, gender of the of SME owner/Manager, marital status of the of SME owner/Manager and education level of SME owner/Manager are tabulated in Table 4.2.

**Table 4.2: Distribution by Age, Gender, Marital Status and Education Level**

Profile	Category	Frequency	Percentage (%)
Age	30-34 years	25	49.1%
	35-39 years	11	21.6%
	40-44 years	9	17.6%
	45-49 years	4	7.8%
	50 years and above	2	3.9%
Gender	Male	40	78.4%
	Female	11	21.6%
Highest Education Level	College	6	11.8%
	University	33	64.7%
	Post graduate/Masters	12	23.5%

**Source: Survey Data (2016)**

Table 4.2 shows that the majority of the respondents were aged between 30 and 35 years (49.2%). This was followed by those aged between 35 and 39 years (21.6%); 40 and 44 years (17.6%); 45 and 49 years (7.8%); and above 50 years (3.9%). The results demonstrated that, half of the respondents were below 35 years. This communicated that young people run most of the SMEs in ICT sector in Nairobi City County. Table 4.2 indicates that majority of the respondents were males (78.4%) and females were 21.6%. The findings also indicate that 64.7% of the respondents had bachelor's degree as their highest academic qualification; 23.5% had postgraduate qualification while 11.8% had college diplomas.

This contradicts the 2016 finding by Kenya National Bureau (KNBS) of Statistics, which indicated that in Kenya, only 8.8% of SME owners have post-secondary education while 19.1% have secondary education, 39.7% have primary education and 31.4% without any formal education (KNBS, 2016). The findings by the KNBS was more general on all types of SMEs, however, running an ICT business requires special knowledge and skill. Thus, younger

and educated entrepreneurs would mostly be found in the sector. From the results, 78.4% of the respondent were men indicating that the sector is dominated by young men who are well educated with majority (64.7%) having a bachelor’s degree. This reflects male dominance in the sector.

#### 4.3.1.2 Position, Experience and Date Trained

The study sought to determine the position of the respondents in their organization, experience level and dates in which they received entrepreneurial training. The findings are outlined in Table 4.3

**Table 4.3: Distribution of Position, Business Experience and Date Trained**

<b>Profile</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Position	Owner	44	86.3%
	Manager	7	13.7%
	Total	51	100%
Business Experience	Prior to 2000	6	11.8%
	2000-2005	3	5.9%
	2006-2012	42	82.4%
	Total	51	100%
Training date	2000-2004	6	11.8%
	2005-2008	11	21.6%
	2009-2012	34	66.7%
	Total	51	100%

**Source: Survey Data (2016)**

Table 4.3 shows that majority of the respondents were owners of their businesses (86.3%). This is reflective of the nature of the SMEs, which are mainly run by owner-managers (KNBS, 2016). Further, 82.4% started engaging in business between the year 2006 and 2012; 11.8% prior to the year 2000; and 5.9% between the year 2000 and 2005. This showed that most of these firms are young in business and they reflect the recent growth in the ICT sector in the past 10 years.

The findings also show that all of the respondents had undergone entrepreneurial training prior to the year 2012. Out of these, 66.7% were trained between the year 2009 and 2012; 22.6% between the year 2005 and 2008; and 11.8% between the year 2000 and 2004. The findings

were an indication that trainings were carried out prior to 2012 and the trainees had time to implement the content learnt. This meant that the study was post intervention to capture effects of entrepreneurship training on firm performance. Hence, the findings brought out the effects of entrepreneurship training.

#### 4.3.1.3 Number of Employees and Years of Business Operations

The firm size and experience was evaluated based on the number of employees and number of years that firm has been in business respectively. The findings are in Table 4.4.

**Table 4.4: Distribution by Number of Employees and Business Operations**

<b>Profile</b>	<b>Number of employees</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Number of Employees	<5	27	52.9%
	5-14	16	31.4%
	15-24	3	5.9%
	25-34	2	3.9%
	35-44	1	2.0%
	>45	1	2.0%
Years of business operations after training	<b>Years</b>	<b>Frequency</b>	<b>Percentage (%)</b>
	< 7 years	42	82.4%
	7-10 years	2	3.9%
	11-15 years	1	2.0%
	>15 years	5	9.8%

**Source: Survey Data (2016)**

Table 4.4 revealed that majority (52.9%) of the firms had less than five (5) employees. Thirty one point four percent had 5 to 6 employees; 5.9% had 15 to 24 employees while 3.9% had 25 to 35 employees. Since having been trained on entrepreneurship, 82.4% reported that they had been in business for less than 7 years; 9.8% for more than 15 years; 3.9% for 7 to 10 years; and 2.0% for 11 to 15 years. The results showed that majority (half) of the firms had less than five employees with majority (four fifth) of the firms being less than 7 years old. Meaning that most of the SMEs in the ICT sector can be classified as micro enterprises as defined by Sessional paper number 2 of 2005 (GOK, 2005). The study revealed that the industry is very young since only 10% had over 15 years' experience.

### 4.3.2 Training Needs Assessment

The training needs assessment was evaluated by use of the questionnaire and document analysis. The questionnaire was inform of a five Likert scale, where 5 =very large extent; 4=large extent; 3=some extent; 2=little extent; and 1=very little extent.

**Table 4.5: Descriptive Statistics for Training Needs Assessment**

	<b>Mean</b>	<b>Std. Dev.</b>	<b>Coefficient of Variation</b>
Individual focus (Trainee's interpersonal skills)	3.65	0.70	0.19
Task focus (Trainee's Technical skills)	4.20	0.85	0.20
Organizational focus (Trainee's management skills)	3.92	0.77	0.19
<b>Aggregate score for training needs assessment</b>	<b>3.92</b>	<b>0.77</b>	<b>0.19</b>

**Source: Survey Data (2016)**

Table 4.5 shows that the respondents indicated that the training organizations focused mostly on trainee's technical skills (M=4.20; SD=0.85) followed by trainee's management skills (M=3.92; SD=0.77) and trainee's interpersonal skills (M=3.65; SD=0.70). ICT is technical area and one needs to understand the basics before engaging in management issues. This is in line Firdousi (2013) assertion that the basic purpose of training needs assessment is to identify knowledge and skill that people must possess to perform effectively on the specific tasks.

The document analysis revealed that all the trainers conduct training needs assessment before engaging the trainees. This is in line with the Kaufman and English (1979) training needs assessment theory, which proposed that for a solution to be effective, the actual need to be addressed must be identified before selection of an intervention. Applying this in entrepreneurship training involves a systematic process of assessing the training needs of trainees in line with the organizational objectives before choosing and implementing training programmes, which facilitate enhancing of the organizational performance.

The document analysis revealed that training needs assessments focused on individual focus, task focus and organizational focus on highlighting entrepreneurial competences, technical

capabilities and managerial capabilities of the trainees. This was in line with the content of training offered to the trainees. Training needs assessment had a positive influence on the business performance. The document analysis also revealed that the ICT firms vary as they offer various products and services such as computer software development, mobile devices, software development, hardware assembly, web based technologies among others. Hence, addressing the specific needs for each category is not easy for the trainers, which results to some of the needs of the trainees not being adequately addressed. This is supported by Watkins and Kaufman (2002) who posit that needs assessment requires ascertaining what the circumstances are at a point in time, what is to be desired in the future, and a comparison of the two.

Further, Needs assessment also includes making judgments with regard to needs and putting them into prioritized order to guide decisions about what to do next. This might not be easy with entrepreneurship trainings as the firms are not similar and have varying objectives. The variations are also enhanced by the level of education of those operating ICT firms. The study showed that highest education level of the owner/managers of the SME ICT varies ranging from diploma certificates to master's degree. This means that addressing the specific needs at a specific training when all the levels are combined, would be challenging to the trainer and some of the trainees would be lost in the training process.

### 4.3.3 Content of Training

The content of training was analyzed with respect to management skills, technical skills and entrepreneurial skills in the SMEs ICT sector. On a five point scale, where 5=very large extent; 4=large extent; 3=some extent; 2=little extent; and 1=very little extent, the respondents were asked to indicate the extent to which the following were captured in the ICT authority entrepreneurial trainings they attended. Table 4.6 presents the finding.

**Table 4.6: Descriptive Statistics for Content of Training**

	Mean	Std. Dev.	Coefficient of Variation
<b>Management Skills</b>			
Resource management (Financial and HR)	3.78	0.90	0.24
Process management ( Business Planning)	3.90	0.71	0.18
<b>Aggregate Score for Management Skills</b>	<b>3.84</b>	<b>0.85</b>	<b>0.22</b>
<b>Technical Skills</b>			
Marketing skills (Procurement and marketing)	3.94	0.82	0.21
Production skills (ICT)	3.48	0.90	0.25
<b>Aggregate Score for Technical Skills</b>	<b>3.71</b>	<b>0.81</b>	<b>0.21</b>
<b>Entrepreneurial Skills</b>			
Opportunity Identification and Implementation	4.03	0.82	0.20
Creativity and Risk Taking	4.07	0.92	0.23
<b>Aggregate Score for Entrepreneurial Skills</b>	<b>4.05</b>	<b>0.84</b>	<b>0.21</b>
<b>Aggregate Score for Content of Training</b>	<b>3.86</b>	<b>0.86</b>	<b>0.22</b>

Source: Survey Data (2016)

First, as shown in Table 4.6 Management skill was measured using two dimensions. That is, inclusion of resource management skills (financial and human resource skills management) and process management skills (business planning) in the training content. Respondents were asked to indicate the extent to which they agreed that these items of management were acquired after attending entrepreneurship training. Table 4.6 shows that the overall mean for management skills was 3.84. Resource management skills (financial and human resource skills management) had a mean score (M=3.78). This means that the respondents agreed that entrepreneurial trainings offered to them by ICT Authority improved their resource management skills to a large extent. The trainings also improved the respondents' process

management skills (business planning skills) (M=3.90) to a large extent. This shows that the impact of the entrepreneurship trainings was more on the process management compared to resource management. Table 4.6 also shows low ( $CV < 0.25$ ) variability among the test items in all the scales.

Second, as shown in Table 4.6, inclusion of technical skills in the content of training was measured using two dimensions. These were, inclusion of production skills (ICT skills), and marketing skills (procurement and marketing skills). Table 4.6 shows that the aggregate score for technical skills was 3.71. This implies that the respondents agreed that entrepreneurial training improves technical skills to a large extent. Among the dimensions of technical skills, the one with the highest score was marketing skills (M=3.94). Entrepreneurial trainings improve ICT skills to some extent (M=3.48). This meant that the training syllabus laid more emphasis on marketing skills than production skills.

Third, entrepreneurial skills were measured using two dimensions. Opportunity identification and implementation; and innovation (creativity and risk taking). Table 4.6 shows that the aggregate score for entrepreneurial skills was 4.05. This implies that the respondents agreed that entrepreneurial training improves entrepreneurial skills to a large extent. Among the dimensions of entrepreneurial skills, the one with the highest score was creativity and risk taking (M=4.07). The entrepreneurial trainings also improve opportunity identification and innovation to a large extent (M=4.03).

In summary, Table 4.6 indicates that the overall score for content of training was M=3.86, CV=0.24. This means that the respondents agreed to a great extent that the content of entrepreneurial training offered to them by ICT authority was broad enough to include

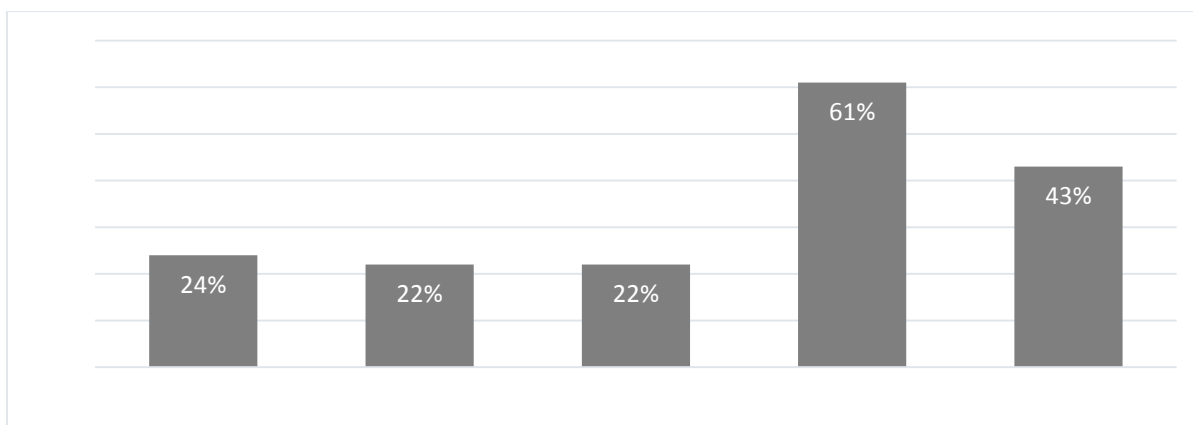
management skills, technical skills and entrepreneurial skills. A low coefficient of variation (24%) reveals that most responses had low variability and coalesced around the true mean.

The descriptive findings showed that managerial, technical and entrepreneurial topics were included in the trainings. Though entrepreneurial topics were more emphasized followed by managerial topics with little emphasis on technical topics. This showed that most trainers focus on entrepreneurial skills. This is in line with Dewhurst and Livesey (2007) assertion that entrepreneurship-training programmes mostly focus on entrepreneurial skills, which include knowledge, experience and aptitudes of entrepreneurs. Similar studies by Mayuran (2016), Radzani and Vuuren (2016) showed that business management skills if covered on entrepreneurship training would lead to positive impact on business impact. A study by Azim and Al-Kahtani(2014) concludes that training content should include technical, business management and personal entrepreneurial skills. The findings are also supported by GEM (2010) which indicated that the common objectives of entrepreneurship training covers acquisition of knowledge relevant to entrepreneurship as well as acquisition of skills to manage the business. The findings that content of training influences performance particularly the entrepreneurial behavior (new product development and customer satisfaction) is in line with the social cognitive theory (Bandura, 1982) which emphasizes use of entrepreneurship training to influence trainee behavior and performance.

#### **4.3.4 Method of Training**

The study sought to establish the influence of training method on SMEs ICT sector performance in Kenya. The respondents were asked to indicate methods used for entrepreneurial trainings by ICT Authority that they attended. Figure 4.1 presents the findings.





**Figure 4.1: Training Methods**  
**Source: Survey Data (2016)**

Figure 4.1 indicates that the respondents were trained on entrepreneurship using multiple methods. Sixty one percent (61%) of the respondents acknowledged that they have been trained using lecture method; 43% using group discussions; 24% using in house training; 22% using field trips (22%); and 22% using on job training.

Secondly, the respondents were requested to rate the extent to which the identified training methods were used. A five point Likert scale of 1 to 5 was used, where 5=very large extent; 4=large extent; 3=some extent; 2=little extent; and 1=very little extent, the respondents were then asked to indicate the extent to which these methods were used. Table 4.7 presents the findings.

**Table 4.7: Descriptive Statistics for Method of Training**

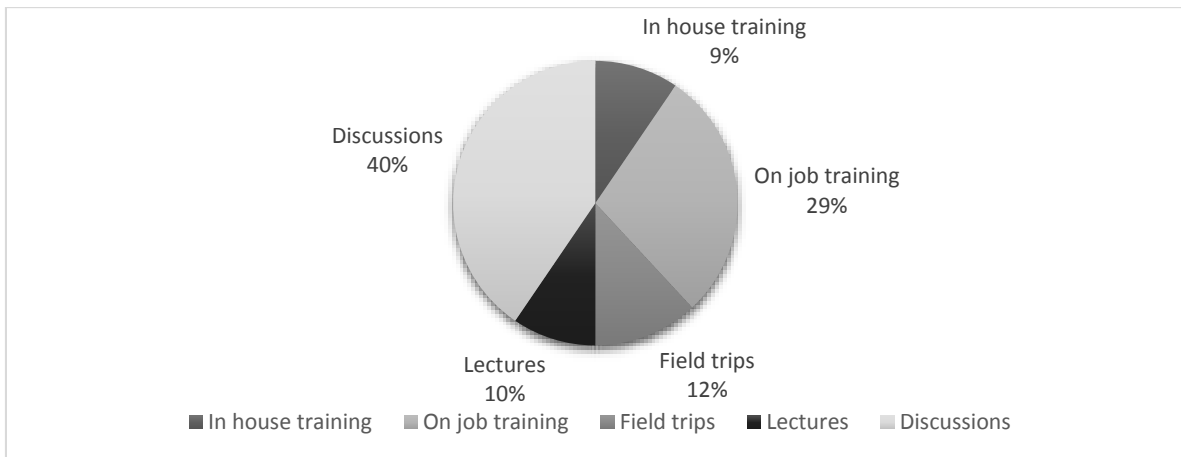
	Mean	Std. Dev.	Coefficient of Variation
In house training	3.9	0.92	0.23
On the job training	3.6	0.49	0.14
Field trips	3.0	0.88	0.29
Lecture method	4.5	0.31	0.07
Group discussions	4.1	0.44	0.11
<b>Aggregate Score for method of training</b>	<b>3.82</b>	<b>0.61</b>	<b>0.16</b>

**Source: Survey Data (2016)**

The findings in Table 4.7 reveals that a mix of training methods were adopted in conducting entrepreneurial trainings. The aggregate score of 3.82 indicate that the respondents agreed that

multiple methods are used to a great extent. Coefficient of variation of 17% indicates that the responses are clustered closely around the mean. However, when asked to choose from optional choices the most preferred training method, as shown in Figure 4.2, 40% of the respondents indicated that they preferred group discussions while 29% preferred on job training; 12% field trips; 10% lectures; and 9% in house training. The finding showed that even though lecture method is the most common training method (as indicated by 61%) followed by group discussions (43%) and in house training (24%); most respondents preferred group discussions (40%) followed by on job training (29%), field trips. This points that the trainers could be using inappropriate methods for training. An indication that trainees need to be involved in the process of planning for the training and also being involved in the training through participation. This is in line with a study by Arasti, Falavarjani and Imanipour (2012) which asserted that the appropriate teaching methods for entrepreneurship include use of group project, case study, individual project, development of a newventure creation project, and problem-solving. This shows a practical oriented approach in the training. This is also in line with the ILO's approach to entrepreneurship training, which put emphasis on participatory and learner-centered teaching methods that involve role-plays on risk taking, negotiation, teamwork, and business games intended to make the learning fun, inspiring and interactive (ILO, 2014). This supports the study finding that most of the trainees preferred interactive (discussion) method.

Third, the respondents were requested to identify their most preferred method of training. The findings are shown in Figure 4.2.



**Figure 4.2: Training Method Preferred**  
**Source: Survey Data (2016)**

The study results in Figure 4.2 showed that the most used (61%) training method was lecture method but the most preferred method was group discussions. This is in line with a study by Matofari, Kingi and Obwogi (2015) which recommended inclusion of demonstrations, discussion and presentations as methods of entrepreneurship training. However, the current findings showed that there is disconnect between the method used and preference of the trainees. This disconnect can be associated with the findings of the document analysis which indicated that lecture method is commonly used by trainers because it is cheap in terms of time and cost. Participatory approach (discussion method), field trips, on the job training require more time allocation and more finances which in most cases is constrained.

**4.3.5 Firm Performance (Dependent Variable)**

Firm performance was measured as a composite of non-financial and financial measures. Firm performance was evaluated using a five point scale where 5=very large extent; 4=large extent; 3=some extent; 2=little extent; and 1=very little extent. The findings are shown in Table 4.8.

**Table 4.8: Business Performance**

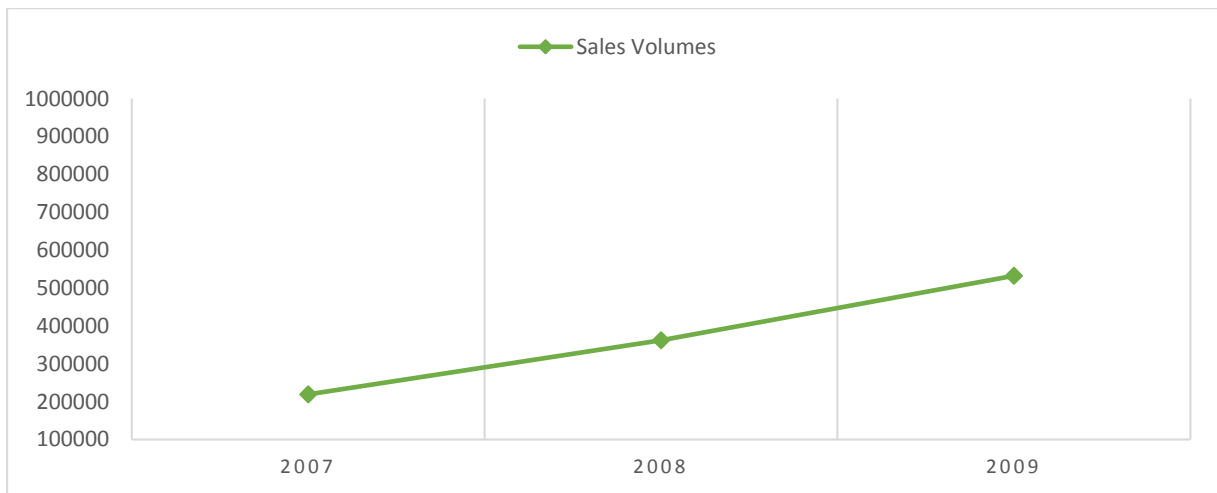
	<b>Mean</b>	<b>Std. Deviation</b>	<b>CV</b>
My business has a consistent increase in sales	3.69	0.33	0.09
We allow employees to try new ways of doing things	4.20	0.80	0.19
We often introduce new services to the market	4.06	0.57	0.14
Customers prefer my products to my competitor's	3.69	0.55	0.14
Customers are happy with our products/ services	4.18	0.21	0.05
We have had reduced customer complaints	3.78	0.14	0.04
We have had consistent increase in our yearly profits	3.69	0.21	0.06
My firm relate well with the community around us	3.92	0.21	0.05
<b>Aggregate Score</b>	<b>3.92</b>	<b>0.38</b>	<b>0.10</b>

**Source: Survey Data (2016)**

As shown in Table 4.8, the mean scores for performance was 3.92. This means that the respondents agreed to a large extent that their businesses performed well. The mean score for consistent increase in sales is 3.69 (large extent); employee empowerment, 4.20 (large extent); often introduction of new products, 4.06 (large extent); competitive products, 3.69 (large extent); customer satisfaction, 4.18 (large extent); reduced customer complaints, 3.78 (large extent); consistent increase in yearly profits, 3.69 (large extent); and good relationship with the community, 3.92 (large extent). The findings revealed that trainings positively influenced the firms' innovative capability and improve quality of the products/services. This in turn minimizes customer complaints and increase sales/profits. The study revealed that entrepreneurship training positively influence firm creativity and innovation which leads positive economic gain. This is in line with economic development theory, which views the entrepreneur as an innovator and the results of entrepreneurship training to include creativity, innovation and development of new products and services. This is also in line with Mungai (2012) that business management training has a positive effect on entrepreneurs as it influences new product and service development.

To corroborate the scale measurement above, factual data was collected to quantify the performance. First, the respondents were asked to indicate their average monthly sales volumes

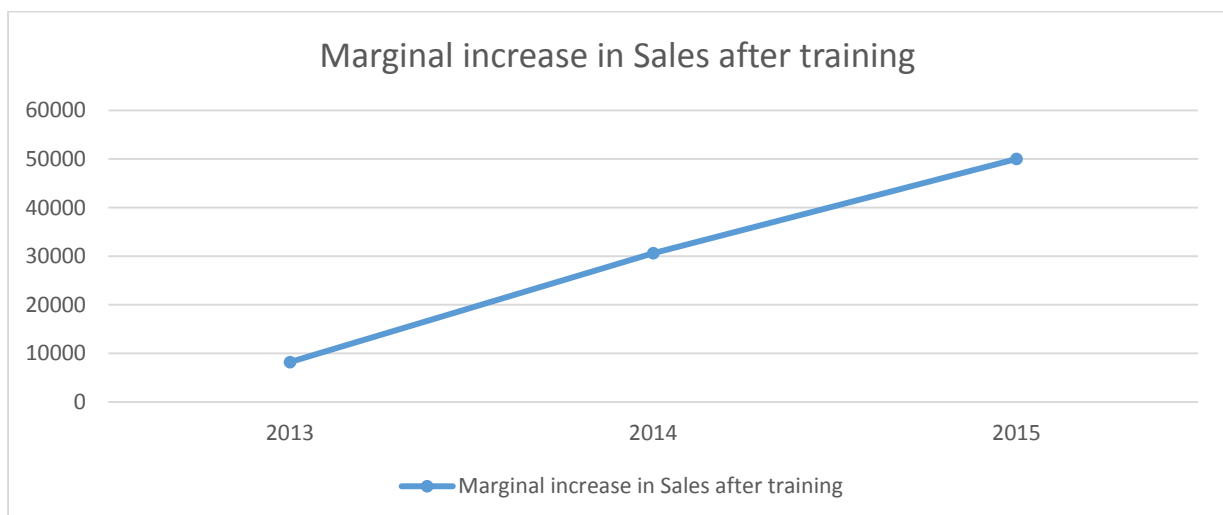
before attending the entrepreneurial trainings organized by the ICT Authority. The findings are presented in Figure 4.3.



**Figure 4.3: Average Monthly Sales before Entrepreneurship Training**  
Source: Survey Data (2016)

As shown in Figure 4.3, the average monthly sales volumes for all the firms was Ksh. 219,000 in the year 2007; Ksh. 362,000 in 2008; and Ksh 532,000. This shows a growth in the average monthly sales volumes over the years. This is attributed to the gained experience and skills imparted through training.

Second, the respondents were asked to indicate the average increase in marginal sales volume between years 2013 and 2015. Findings are shown in Figure 4.4



**Figure 4.4: Average Marginal Increase in Sales after training in Kenya Shillings**  
Source: Survey Data (2016)

Figure 4.4 shows an average increase in marginal sales volumes between the years 2013 and 2015. In 2013, the average marginal increase was Ksh. 8,200; in 2014, the marginal increase in sales volume was Ksh. 30,600; and in 2015 Ksh. 50,000. This means that the trainings had a positive impact on the average marginal revenue. This can be attributed to the experience acquired after implementing the knowledge and skills learnt.

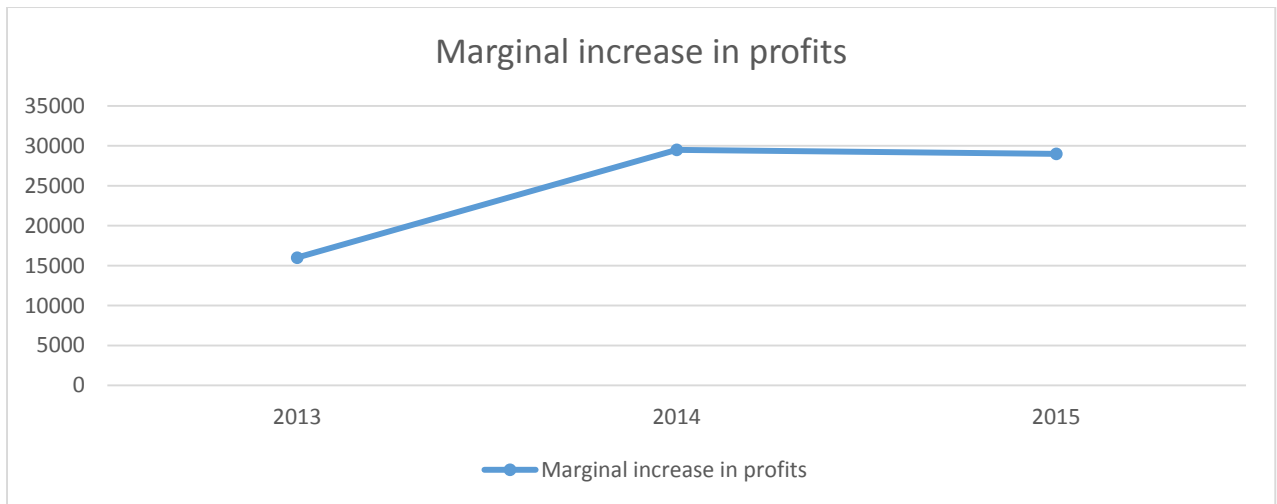
Third, the study then sought to establish the average monthly gross profits for the years 2007 and 2009. The findings are shown in Figure 4.5.



**Figure 4.5: Average Profits in Kenya Shillings**  
**Source: Survey Data (2016)**

Figure 4.5 shows that the average profit in 2013 was Ksh 72,500. The average gross profit rose to Ksh 138,500. The average profit in 2015 was Ksh 174,000. This showed that the training had a positive impact on the average gross profit since the year 2013 to 2015 there was continuous increase in the average profits.

Finally, the study sought to establish the average marginal increase in profits for the years 2013 to 2017. The findings are shown in Figure 4.6.



**Figure 4.6: Average Marginal increase in Profits after training in Kenya Shillings**  
**Source: Survey Data (2016)**

The study findings shown in Figure 4.6 established that the average marginal increase in profits in 2013 after training was Ksh 16,000. The average marginal increase in profit in 2014 was Ksh 29,500 while the average marginal increase in profit in 2015 was Ksh 29,000. An indication that the greatest impact was realized after training and as time goes, refresher trainings are needed.

#### **4.4 Regression Analysis**

Regression analysis was used to test for hypothesis. Before the running the regression diagnostic test were conducted to establish the suitability of the data for running the regression.

##### **4.4.1 Diagnostic Tests**

Tests for normality, multicollinearity, homogeneity of variance and correlation analysis were first conducted to establish the suitability of the data in conducting regression analysis. The scales for analysis were converted into unit matrices for the diagnostic tests.

#### 4.4.1.1 Test of Normality

Test for normality was conducted to check whether the sample came from a normally distributed population. Two tests were used complementarily to test for normal distribution. The Shapiro-Wilk test, skewness coefficient and coefficient of variation.

**Table 4.9: Tests for Normality**

	Shapiro-Wilk			Skewness	
	Statistic	df	Sig.	Statistic	Std. Error
Training needs assessment	.933	48	.009	-.788	.343
Content of Training	.855	48	.000	-.811	.343
Method of Training	.904	48	.001	-.668	.343
Performance	.896	48	.000	-.424	.343

**Source: Survey Data (2016)**

Table 4.9 shows that Shapiro-Wilk test results show that all values are  $<0.05$ . Considering the sensitivity and limitations of the Shapiro-Wilk test, it was recommended that there should be other tests carried out in addition for verification. To verify the results of Shapiro-Wilk test, the skewness statistic was used. Generally, a skewness greater than 1 or less than -1 indicates that the data is not normally distributed. Table 4.9 presents the normality test results. The table reveals that all values for the skewness statistic  $<1$  showing normal distribution. Hence, the study not only relied on Shapiro-Wilk test but also skewness statistic to verify normality of data.

#### 4.4.1.2 Test of Multicollinearity

Multicollinearity tests were conducted to determine the level of correlation between the independent variables. Table 4.10 shows the findings.

**Table 4.10: Tolerance and VIF Values**

Model	Collinearity Statistics		
	Tolerance	VIF	
1			
	(Constant)		
	Training needs assessment	.570	1.754
	Content of training	.390	2.562
	Method of training	.275	3.638

**Source: Survey Data (2016).**



As rule of thumb, a tolerance value of below 0.1 or a VIF of greater than 10 are considered to indicate a serious problem of multicollinearity. As the tolerance values approach zero, it indicates that the variable is highly collinear with the other predictor variables. Table 4.10 shows that the tolerance values for all variables are above 0.1 and VIF values are above 1 and below 10. This showed that the data did not have a problem of multicollinearity.

#### 4.4.1.3 Test of Autocorrelation

Autocorrelation was measured by use of Durbin-Watson test. Table 4.11 shows the findings.

**Table 4.11: Test for Autocorrelation**

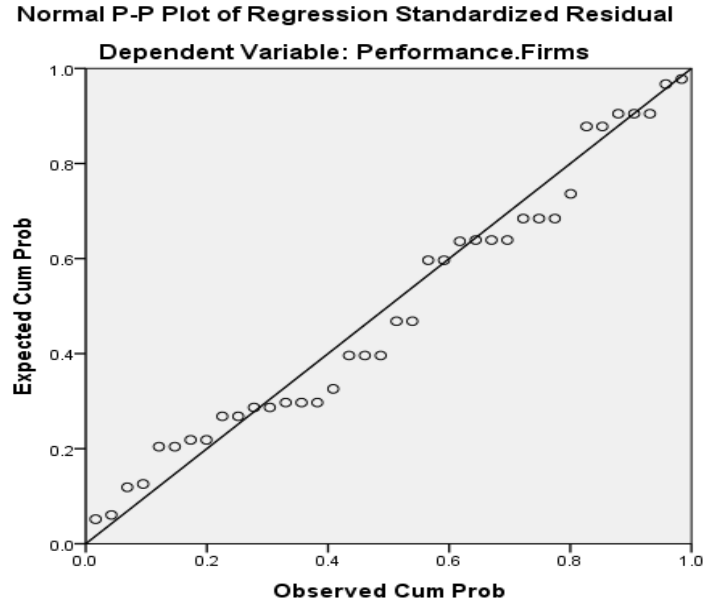
Variable	Durbin-Watson (DW)	Results
Training needs assessment	1.984	No autocorrelation
Content of training	2.185	No autocorrelation
Method of training	1.633	No autocorrelation

**Source: Survey Data (2016)**

Table 4.11 shows that Durbin-Watson (DW) for the independent variables was between the two critical values of  $1.5 < d < 2.5$ . That is, DW=1.984 for training needs assessment, 2.18 for content of training and 1.633 for method of training. Hence, the assumption that there was no auto-correlation in the model was established.

#### 4.4.1.4 Test of Heteroscedasticity

Homoscedasticity was checked by normality of residuals with the Normal P-P Plot. Figure 4.7 shows the findings.



**Figure 4.7: Normal P-P Plot of Regression Standardized Residue**  
**Source: Survey Data (2016)**

The P-P plot in Figure 4.7 indicates that the points were arranged along the diagonal line. This showed a linear relationship where an increase in the independent variables leads to an increase in the dependent variable. Therefore, there was no reason to suspect heteroscedasticity of the data.

#### 4.5 Hypotheses Testing

Multiple linear regression was used to test for the four hypotheses at a 95% level of confidence. Aggregate scores from each independent variable were used to run the multiple regression. The effect of training needs assessment, content of training and method of training was first jointly regressed on firm performance. The multiple regression model summary is in Table 4.12.

**Table 4.12: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.460 <sup>a</sup>	.212	.158	.821	2.195

a. Predictors: (Constant), Content of training, Method of Training, Training Needs Assessment

b. Dependent Variable: Performance

Table 4.12 shows as a positive influence of entrepreneurial training on firm performance. The  $R^2$  of 0.212 indicates that entrepreneurial training explains 21.2% variability in the firm performance of SMEs in the ICT sector in Nairobi City County.

Table 4.13 shows the findings of the analysis of variance used to establish the level of significance of the relationship identified in Table 4.12.

**Table 4.13: Analysis of Variance**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.980	3	2.660	3.944	.014 <sup>b</sup>
	Residual	29.671	44	.674		
	Total	37.651	47			

a. Dependent Variable: Performance  
b. Predictors: (Constant), Content of training, Method of Training, Training Needs Assessment

The  $F$ -ratio in Table 4.13 shows that the independent variable (Entrepreneurial Training) statistically significantly predict the dependent variable (firm performance),  $F(3, 44) = 3.944$ ,  $p < .05$ . Hence, entrepreneurial training has a positive significant influence on firm performance.

Table 4.14 shows coefficient estimates for the relationship between the independent and dependent variables.

**Table 4.14: Coefficients Estimates**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.030	.645		3.146	.003
	Training needs assessment	.497	.137	.468	3.632	.001
	Content of training	.494	.154	.427	3.201	.002
	Method of training	.431	1.183	.013	-0.364	.717

a. Dependent Variable: Performance

The coefficient estimates Table 4.14 revealed that training needs assessment ( $\beta=0.497$ ;  $t = 3.632$ ;  $p = 0.001$ ) and content of training ( $\beta=0.494$ ;  $t = 3.201$ ;  $p = 0.002$ ) are statistically significantly positively influence firm performance at 95% level of confidence. However, training method ( $\beta=0.431$ ;  $t = 0.364$ ;  $p = 0.717$ ) does not statistically significantly influence firm performance at 95% level of confidence.

The general form of the equation to predict Performance from entrepreneurial training was thus expressed as follows:

$$\text{Predicted Performance} = 2.030 + 0.497 \text{ Training Needs Assessment} \\ + 0.494 \text{ Content of Training} + 0.431 \text{ Method of Training.}$$

In summary, the results of the multiple linear regression shows that at 95% confidence level, we reject the null hypothesis that, there is no relationship between entrepreneurial training and firm performance among the SMEs in the ICT sector in Nairobi City County. The results also illustrates that 15.8% (adjusted  $R^2 = 0.158$ ) variability in the firm performance of SMEs in the ICT sector in Nairobi City County is influence by entrepreneurial training. The proposed multiple linear regression model fitted the data well as it was statistically significant ( $F(3, 44) = 3.944, p < .05$ ). The findings are in line with a report by the International Labor Organization (ILO), which identified entrepreneurship training as one of the key elements in improving the survival rate and the performance of SMEs (ILO, 2014). Entrepreneurship training assist enterprises to improve management competencies of the owners/managers. Therefore, there is need to create access to affordable entrepreneurship training and other business development services for small and micro enterprises to enhance their performance.

#### **4.5.1 Test of Hypothesis One**

The first study objective sought to establish the relationship between the training needs assessment and firm performance. This was guided by the following null hypothesis;

*H<sub>0</sub>*, Training needs assessment does not influence performance of the Small and Micro enterprises in ICT sector.

The regression model estimated in Table 4.14 revealed that training needs assessment is statistically significant ( $\beta=0.497$ ;  $t = 3.632$ ;  $p = 0.001$ ). Hence, at 95% level of confidence, training needs assessment has a positive effect on firm performance. These results also illustrates that a unit increase in training needs assessment is responsible for increasing performance by 0.497. This study concludes that there is a statistically significant relationship between training needs assessment and firm performance in SMEs in the ICT sector in Nairobi City County. This is in line with findings by Firdousi (2013) that the basic purpose of a training needs assessment is to identify the knowledge and skills that people must possess in order to perform effectively on the job. Hence, focusing on the identified needs and meeting the needs through training improves performance of the organization.

#### **4.5.2 Test of Hypothesis Two**

The second study objective sought to establish the relationship between the entrepreneurship training content and the firm performance. This was guided by the following null hypothesis;

*H<sub>0</sub>*, Content of entrepreneurship training does not influence performance of the Small and Micro enterprises in ICT sector.

The regression model estimated in Table 4.14 revealed that content of training is statistically significant ( $\beta=0.494$ ;  $t = 3.201$ ;  $p = 0.002$ ). Hence, at 95% level of confidence, content of training has a positive effect on firm performance. These results also illustrates that a unit increase in content of training is responsible for increasing performance by 0.494. This study concludes that there is a statistically significant relationship between content of training and firm performance in SMEs in the ICT sector in Nairobi City County. The finding is in line with studies done by Mungai (2012); Osinde, Iravo, Munene and Omayio (2013); and Okeyo (2014)

which established a positive relationship between entrepreneurship training and business performance among small and micro enterprises in Kenya.

#### **4.5.3 Test of Hypothesis Three**

The third study objective to establish the relationship between the method of training and firm performance. The study was guided by the following null hypothesis;

Ho; Method of entrepreneurship training does not influence performance of the Small and Micro enterprises in ICT sector.

The regression model estimated in Table 4.14 revealed that training method is not statistically significant ( $\beta=0.431$ ;  $t = 3.64$ ;  $p = 0.717$ ). Hence, at 95% level of confidence, method of training does not have an effect on firm performance. This study concludes that there is no statistically significant relationship between method of training and firm performance in SMEs in the ICT sector in Nairobi City County.

#### **4.5.4 Test of Hypothesis Four**

The fourth study objective sought to establish the moderating effect of business characteristics on the relationship between entrepreneurship training and firm performance. The study was guided by the following null hypothesis;

Ho; Business characteristics do not have moderating effect on the relationship between entrepreneurship training and business performance of the Small and Micro enterprises in ICT sector.

The combined effect of age of business, size of business and the level of education of the owner were used as moderating factors. Hierarchical multiple regression analysis was conducted to

test for the moderating effect of business characteristics on the relationship between entrepreneurial training and firm performance. The ANOVA results are shown in Table 4.15.

**Table 4.15: ANOVA for Moderating Effect**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.497	2	4.249	6.558	.003 <sup>b</sup>
	Residual	29.154	45	.648		
	Total	37.651	47			
2	Regression	15.020	3	5.007	9.734	.000 <sup>c</sup>
	Residual	22.631	44	.514		
	Total	37.651	47			

a. Dependent Variable: Performance

b. Predictors: (Constant), Bus characteristics, Entrepreneurship Training

c. Predictors: (Constant), Bus characteristics, Entrepreneurship Training, Business characteristics x Entrepreneurship Training

Table 4.15 shows that the model without the interaction term is statistically significant,  $F(2, 45) = 6.558, p < .05$ . The second model with the interaction term is also statistically significant  $F(3, 44) = 9.734, p < .05$ . This shows that business characteristics is likely to have moderation effect on the relationship between entrepreneurship training and business performance.

Table 4.16 presents the model summary for the interaction effect. The table shows the effect of business characteristics (moderating variable) on the relationship between entrepreneurship training and performance. That is, changes in the R squared by the addition of the moderating variable (business characteristics).

**Table 4.16: Model Summary for the Moderation Effect**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.475 <sup>a</sup>	.226	.191	.805	.226	6.558	2	45	.003
2	.632 <sup>b</sup>	.399	.358	.717	.173	12.682	1	44	.001

a. Predictors: (Constant), Business characteristics, Entrepreneurship Training

b. Predictors: (Constant), Business characteristics, Entrepreneurship Training, Business characteristics x Entrepreneurship Training

c. Dependent Variable: Performance

The model summary in Table 4.16 shows a statistically significant ( $p=0.001$ ) increase in the variation explained by the addition of the interaction term (change in  $R^2=.173$ ), which indicates

17.3% increase in the variation explained by the addition of the interaction term. Thus, we can conclude that business characteristics do moderate the relationship between entrepreneurship training and firm performance. That is, the model with the interaction term between the entrepreneurship training and firm performance significantly account for more variance than just the entrepreneurship training,  $R^2$  change = .173,  $p < 0.05$ .

Table 4.17 shows the coefficients of the independent variables and the moderating variables on their effect on the dependent variable. That is the degree to which the dependent variable changes with a unit change in the entrepreneurship training and the business characteristics.

**Table 4.17: Coefficients for the Moderation Effect**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.848	.611		3.026	.004
	Entrepreneurship Training	.807	.228	.470	3.547	.001
	Business characteristics	.665	.201	.160	3.308	.002
2	(Constant)	2.493	.574		4.346	.000
	Entrepreneurship Training	.606	.211	.352	2.876	.006
	Business characteristics	.155	.043	10.797	3.612	.001
	Bus characteristics x Entrepreneurship Training	.051	.014	10.662	3.561	.001

a. Dependent Variable: Performance

From Table 4.17, the regression equation is as follows:

$$\text{Performance} = 2.493 + (0.606 \times \text{Entrepreneurship Training}) + (0.155 \times \text{Business Characteristics}) + (0.051 \times \text{Business Characteristics} \times \text{Entrepreneurship Training})$$

In summary, to test the hypothesis that business characteristics moderate the relationship between entrepreneurship training and firm performance, hierarchical multiple regression analysis was conducted. In the first step, two variables were included: entrepreneurship training and business characteristics. These variables accounted for a significant amount of variance in firm performance,  $R^2 = .226$ ,  $F(2, 45) = 6.558$ ,  $p < .05$ .



Next, the interaction term between entrepreneurship training and business characteristics was added to the regression model, which accounted for a significant proportion of the variance in firm performance,  $\Delta R^2 = .173$ ,  $\Delta F(1, 44) = 12.682$ ,  $p < .05$ . This indicated that business characteristics statistically significantly moderate the relationship between entrepreneurship training and firm performance. That is, business characteristics have a positive impact on the relationship between the entrepreneurship training and firm performance. The findings are in line with Abbasi and Malik (2015) assertion that firm size has moderating effect on financial performance.

#### **4.6 Qualitative Data Analysis**

The open-ended questions were analyzed by categorizing the responses in terms of the common themes. The respondents were asked to indicate variables they considered missing in the entrepreneurial trainings and they felt important for inclusion in the trainings. The study found out that the following needs to be included in the entrepreneurship training content. Project management; life skills; business regulations and policies; company policy formulation and implementation; international trade relations; partnership and collaborations. These suggestions seek for inclusion of more managerial skills and technical skills training. This is in line with ILO (2004) which called for entrepreneurship trainings to include; Managerial Skills, Technical Skills, and Entrepreneurial traits. Managerial Skills include competencies in, Business Management, Marketing, Record keeping, Financial Management, and Human Resource Management. While technical Skills include; ability to practice competences acquired. The study also sought to identify the type of business ownership, records kept, investment, and source of investment used by the firms. Table 4.18 presents the findings.

**Table 4.18: Type of Business and Records Kept**

Variable	Category	Frequency	Percentage (%)
Type of business	Sole proprietorship	12	24%
	Partnership	3	5%
	Private limited company	36	71%
	Total	51	100%
Business Records Kept	Cash records	39	76%
	Profit and Loss Accounts	33	65%
	Balance sheet	29	57%
	Inventory	19	37%

**Source: Survey Data (2016)**

Table 4.18 indicates that 71% of the firms are registered as private limited companies while 24% are registered as sole proprietorship and 5% as partnership. Cash records are kept by 76% of business owner/managers; profit and loss accounts by 65%; balance sheet by 57% and inventory records by 37% of the respondents.

The study sought to determine the source of financing. The respondents were asked to indicate the volume of investment and source of investment. Table 4.19 presents the findings.

**Table 4.19: Investment Volume and Source of Investment**

Variable	Category	Frequency	Percentage (%)
Investment	Ksh. 50,000- Ksh. 70,000	4	7.1%
	Ksh. 71,000- Ksh. 90,000	2	4.8%
	Ksh. 91,000- Ksh. 110,000	7	14.3%
	Ksh. 110,000- Ksh. 130,000	0	0.00%
	Ksh. 131,000- Ksh. 150,000	1	2.4%
	Ksh. 151,000 and above	36	71%
Source of investment	Bank Loans	15	29%
	Savings	34	67%
	Non-profit credit institutions	4	8%
	Friends	10	20%
	Re-invested profits	10	20%
	Cooperatives	0	0%

**Source: Survey Data (2016)**

Table 4.19 showed that, 7.1% of the firms invested above Ksh. 151,000 while 14.3% invested between Ksh. 91,000 and Ksh. 110,000; 7.1% between Ksh. 50,000 and Ksh. 70,000; 4.8% between Ksh. 71,000 and Ksh. 90,000; and 2.4% between Ksh. 131,000 and Ksh. 150,000.

Table 4.19 shows that the respondents received money for investment from multiple sources. Sixty seven percent of the respondents indicated that they acquired money for business investment from their savings; 29% from bank loans; 20% from friends; 20% from re-invested profits; and 8% from nonprofit credit institutions.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter is a presentation of the study summary, conclusions, contribution of the study to knowledge and recommendations in line with the study objectives. The main objective of the study was to investigate the influence of entrepreneurial training on performance of small and micro enterprise in information communication technology sector in Nairobi City County, Kenya. The study was guided by four specific objectives. To assess the extent to which training needs assessment influences the performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya; to determine the extent which entrepreneurship training content influences the performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya; to assess the effects of entrepreneurship training methods on performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya; and to establish the moderating effects of business characteristics on the relationship between entrepreneurship training and the performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya.

### **5.2 Summary**

The first study objective sought to assess the extent to which training needs assessment influences the performance of Small and Micro enterprises in ICT sector in Nairobi City County, Kenya. Regression results indicated that training needs assessments had a positive statistically significantly influence on performance of SME ICT in Nairobi City County, Kenya. However, the specific needs of individual firms vary. Therefore, addressing the specific need for each category and each firm is not easy for the trainers, which results to some of the needs of the trainees not being adequately addressed. The study also revealed that training needs assessment focused on highlighting entrepreneurial competences, technical capabilities

and managerial capabilities of the trainees. However, trainers focused mostly on trainees' technical skills, followed by management skills and interpersonal skills.

The second study objective intended to determine the extent which entrepreneurship training content influences the performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya. The study established that content of training positively statistically significantly influence business performance of SMEs in ICT sector in Nairobi City County, Kenya. The content of training was measured by the extent of inclusion of managerial skills, entrepreneurial skills and technical skills in the training curriculum. The study established that entrepreneurial skills training have more influence on business performance followed by managerial skills training and technical skills training.

The third study objective sought to assess the effects of entrepreneurship training methods on performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya. The study established that the method of training has an insignificant relationship with performance. That is, even though different methods provide different performance levels, the difference was not statistically significant. However, the study revealed that lecture method was mostly used during trainings but trainees preferred discussions or participatory methods.

The fourth study objective sought to establish the moderating effects of business characteristics on the relationship between entrepreneurship training and the performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya. The study found out that business characteristics statistically significantly moderate the relationship between entrepreneurship training and firm performance. That is, as age of the business, size of the business and education level of the owner of the business increases, the more positive impact the entrepreneurship training has on firm performance.

### **5.3 Conclusions**

The following conclusions can be drawn from the study. First, training needs assessments positively influence business performance of Small and Micro Enterprises in ICT sector, Nairobi City County Kenya. This implies that the more trainers conduct training needs assessment, the more they will tend to understand better the needs of the trainees, hence the needs will be addressed during the training. Therefore, trainers should strive to conduct training needs assessments before conducting entrepreneurship trainings. This will enable them know the specific needs of the trainees so as to adequately address the identified needs.

Secondly, the content of training positively significantly influence business performance of Small and Micro Enterprises in ICT sector in Nairobi City County Kenya. That is, a multidisciplinary curriculum that covers technical, management and entrepreneurial skills have more positive impact on firm performance. Therefore, trainers should give equitable emphasis on entrepreneurial topics, managerial topics, and technical topics when designing entrepreneurial training program. Specifically, the study showed that the following areas should be considered in the entrepreneurship training; project management, life skills, business regulations and policies, company policy formulation and implementation, international trade relations, partnership and collaborations.

Thirdly, the method of training has an insignificant relationship with performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya. The study also established that different training methods provided different performance levels. However, the difference was not statistically significant. That is, the method of training has an insignificant effect on performance. The study revealed that lecture method was mostly used during trainings but trainees preferred discussions or participatory methods. Therefore, trainers need to review their training methods in line with the training needs and the trainees' expectations.

Fourth, the study indicated that business characteristics statistically significantly moderate the relationship between entrepreneurship training and performance of Small and Micro enterprises in ICT sector in Nairobi City County Kenya. The study showed that the relationship between the content of training is moderated by the business characteristics. Comparatively, older firms tend to gain more from entrepreneurship training as compared to younger firms. Further, larger firms tend to gain more from entrepreneurship training compared to smaller ones. Finally, firms whose owners have post-secondary education tend to gain more from entrepreneurship training than firms whose owners have below secondary education. This shows that experience is part of knowledge and additional knowledge through training would always add more value to the recipient compared to the one with less experience. Similarly, the size of the business gives the business added advantage in resource allocation to implement the new knowledge. The level of education demonstrates an added advantage to business performance after additional training.

#### **5.4 Contribution of the Study to Knowledge**

The study provided the needed empirical evidence on the influence of training needs assessment, content and method of training on performance of SMEs in ICT sector in Nairobi City County Kenya. Previous studies had focused on general impact of training without assessing the specific influence of training needs assessment, content and method of training on performance of SMEs. However, different sectors of small and micro enterprises in different economies have unique characteristics. Hence evaluating the influence of training based on a specific context provides information that can be used to tailor specific interventions for challenges facing the sector.

The study has highlighted that the content of entrepreneurship training should be broad beyond the entrepreneurial skills, which primarily focuses on inculcating entrepreneurial behavior. The

content should include technical and managerial skills. Broadening the content of training will equip the trainees with technical and managerial knowledge on how to successfully operate the business. Moreover, project management; life skills; legal; international trade; partnerships and collaborations needs to be incorporate in entrepreneurship training programs. The findings that there is no significant relationship between the commonly used training methods (lecture) shows that there is no guarantee that the methods prescribed by the trainers will work effectively for the trainees. Hence, the need to involve trainees in the training through participatory approaches such as discussions, presentations and demonstrations.

### **5.5 Recommendations for Policy and Practice**

The study highlighted that training needs assessment positively influence performance of SMEs in ICT sector in Nairobi City County Kenya. Thus trainings should be organized according to trainees' needs, which vary based on demographics and specific business activities. Further, trainers need to take into account these variations and cluster trainees where need be to ensure effectiveness of the trainings. The Ministry of trade should guide through policy on the importance of conducting training needs assessment to address a specific needs of the trainings.

The study has shown inadequacies in the content of entrepreneurship trainings offered to SMEs in ICT sector in Nairobi City County, Kenya. Hence, the trainers and Ministry of trade/education need to regulate and broaden the curriculum of training entrepreneurship to make entrepreneurship trainings have more positive influence on business performance and economic development.

The commonly used method (lecture) to train entrepreneurship has insignificant relationship with business performance. Trainees prefer discussions and participatory methods; therefore,



trainers and the Ministry of trade/education should provide guidelines on methods of entrepreneurship training to include discussions and other participatory methods.

### **5.6 Suggestions for Further Research**

The study focused only on the ICT sector. Hence, studies in other sectors can be done to ensure generalization of the findings. Further, broadening the study to cover the entire country would be valuable since the study only focused in Nairobi City, County. A study on entrepreneurship training methods would be of importance. This is because the study established an insignificant relationship between the method of training and performance of SMEs in ICT sector in Nairobi City County, Kenya. Trainees also preferred discussions and participatory methods while trainers used mostly lecture methods.

Since the study used only business characteristics as the moderating variables, use of macro environmental factors would broaden the understanding of the influence of the entrepreneurship training on business performance. Further, the study did not explore the mediating effects of entrepreneurial personal characteristics. The study therefore recommends use of entrepreneurial personal characteristics as mediating factors on organizational performance.

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## **APPENDICES**

### **Appendix A: Letter of Introduction**

**KENYATTA UNIVERSITY  
SCHOOL OF BUSINESS**

**Dear Sir/ Madam,**

**RE: ENTREPRENEURSHIP TRAINING AND PERFORMANCE OF SMALL AND MICRO INFORMATION COMMUNICATION TECHNOLOGY ENTERPRISES IN NAIROBI CITY COUNTY, KENYA**

I am a post graduate student wishing to carry out a research on the above mentioned topic. The questionnaire attached is meant to gather information for this study. All information given will be treated with utmost confidentiality and privacy. Name or any other form of identity shall not be required by any individual when filling out questionnaire. You are kindly requested to respond to all items in the questionnaire in open honesty. Your positive response will be highly appreciated.

Thank you in advance for your cooperation.

Yours sincerely,

MARGARET NGANU



## Appendix B: Questionnaire for Trainees

### (A) Bio-data

A1. Name of the business (Optional) \_\_\_\_\_

A 2. Physical location of business \_\_\_\_\_

A 3. What is your age?

- 25-29       30-34    35-39       40-44    45-49  
 50 and above

A 4. What is your gender

- Male       Female

A 5. Marital status

- Single       Married

A 6. What is your level of education (state the highest level)

- Primary       Secondary       College  
 University    Post graduate/Masters

A 7. What is your position in the business?

- Owner       Manager

A 8. How long have you been in business

- Prior to 2000       2000-2005    2006-2012

A 10. When did you undergo entrepreneurship training?

- 2000-2004    2005-2008    2009-2012

A 11. Which organization provided the training?

- EPFT    SBSM    ILO

A 12. How many employees do you have?

- <5       5-14       15-24       25-34       35-44       >45

A13. How long have you been operating the business after training

- <7 years       7-10 years    11-15 years       > 15 years

**(B) Training Needs Assessment**

B1. Do training organizations carry out training needs assessment before engaging your firm for training?

Yes  No

B2. If yes above, indicate the extent to which the following areas are focused on by the training organizations when conducting training needs assessments.

**NB: VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent,**

**VLTE-Very Little Extent**

		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
	<b>Individual Focus</b>					
B 3	Communication skills					
B 4	Customer care					
B 5	Information Technology					
F 6	Time management					
	<b>Task Focus</b>					
B 7	Book keeping					
B 8	Record management					
B 9	Human resources management					
B 10	Marketing skills					
B 11	Procurement skills					
B 12	New idea development					
B 13	New product development					
	<b>Organizational Focus</b>					
B 14	Leadership					
B 15	Team building					
B 16	Policy and procedure development					
B 17	Mentorship					
B 18	Cultural diversity					

**(C) CONTENT OF TRAINING**

Kindly indicate your level of agreement to the following statements.

**NB VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent,**

**VLTE-Very Little Extent**

		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
	<b>Management skills-Financial</b>					
C1	I have acquired effective book keeping skills through entrepreneurship trainings					
C2	I have acquired effective accounting skills through entrepreneurship trainings					
C3	I have acquired effective financial management skills through entrepreneurship trainings					
C4	I am now able to interpret financial statements after entrepreneurship training					
	<b>Management skills-leadership</b>					
C5	I have acquired effective planning skills through entrepreneurship trainings					
C6	I can now better implement my business plans after attending entrepreneurship training					
C7	I have acquired time management skills through entrepreneurship trainings					
C8	I am able to effectively control the functions of my business after attending entrepreneurship trainings					
C9	I learnt effective communication skills through entrepreneurship training					
	<b>Management skills-Human resource</b>					
C10	I acquired effective staff recruitment skills through entrepreneurship training					
C11	Entrepreneurship training empowered me with staff induction skills					

C12	I can now motivate my staff better after the entrepreneurship training I attended					
C13	Entrepreneurship training enabled me to understand the importance of staff retention					
	<b>Technical Skills-ICT</b>					
C14	Entrepreneurship training empowered me with computer maintenance skills					
C15	My ability to operate different computer software has been enhanced after attending entrepreneurship training					
C16	I acquired data connectivity skills during entrepreneurship training					
C17	I can now better maintained my ICT systems after attending entrepreneurship training					
C18	Entrepreneurship training has empowered me to effectively maintain my business equipment/machines					
	<b>Technical Skills-Marketing</b>					
C19	Entrepreneurship training has empowered me to identify customer needs better					
C20	Entrepreneurship training has enabled me to handle customer complaints more effectively					
C21	I have been able to reduce my customer waiting time after I attended entrepreneurship training					
C22	My sales volumes have increased after attending entrepreneurship training					
C23	Entrepreneurship training empowered me to price my products better					
C24	I am able to advertise my business after attending entrepreneurship training					
C25	My skill on product distribution have been enhanced by attending entrepreneurship training					
	<b>Technical skills-Procurement</b>					

C26	I am able to effectively source for my business in put after attending entrepreneurship training					
C27	Entrepreneurship training taught how to manage business stock better					
C28	I can now organize better business logistics after attending entrepreneurship training					
	<b>Entrepreneurship skills</b>					
C29	Entrepreneurship training that I attended enhanced my creativity					
C30	Entrepreneurship trainings have enhanced my ability to identify business opportunities					
C31	I have managed to successfully introduce a new product/service after attending entrepreneurship training					
C32	I am able to diversify the way of doing things in my business after attending entrepreneurship training					
C33	My ability to take risks have been enhanced through entrepreneurship trainings					
C34	My ability to make responsible business decisions has been enhanced through entrepreneurship training					

**(C) METHODS OF TRAINING.**

D1. Tick the method used in the entrepreneurial training that you have attended

**NB:VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent, VLTE-Very Little Extent**

	VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
In house training					
On the job training					
Field trips					
Lecture method					
Discussions					

D2. Which method did you prefer?

.....

.....

D3. Kindly indicate why you prefer the method indicated in C2 above

.....

.....

**(E) PERFORMANCE OF THE ENTERPRISE**

E1. Indicate the type of your business ownership

Sole proprietor  Partnership

Private Limited company

E2. Tick the business records to maintain for your business

Cash record  Profit and loss  Balance sheet  Inventory

Others (specify).....

E3. How much have you invested in your business?

50,000 – 70,000  71,000 – 90,000  91,000- 110,000

110,000 – 130,000  130,000-150,000  151,000 and above

E4. What was the source of the money you invested in your business?

Bank loan  Savings  Non-bank credit institution

Friends  Re-invested profits  Cooperatives

E5. What was your average monthly sales in Kenya Shillings before attending entrepreneurial training.

**Before Entrepreneurship Training**

	2007	2008	2009
KSh 100,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 110,000 – 200,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 210,000 – 300,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 310,000- 400,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 410,000- 500,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 510,000- 600,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 610,000 – 700,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 710,000 – 800,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
KSh 810,000 - 900,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ksh 910,000 – 1,000,000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ksh 1000,000 and above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E6. Did you experience an increase in sales **after** attending entrepreneurial training?

( ) Yes ( ) NO

If yes in question D 5 above, what was your marginal increase?

**After Entrepreneurship Training**

	2013	2014	2015
KSh 11,000 – 20,000	[ ]	[ ]	[ ]
KSh 21,000 – 30,000	[ ]	[ ]	[ ]
KSh 31,000- 40,000	[ ]	[ ]	[ ]
KSh 41,000- 50,000	[ ]	[ ]	[ ]
KSh 51,000- 60,000	[ ]	[ ]	[ ]
KSh 61,000 – 70,000	[ ]	[ ]	[ ]
KSh 71,000 – 80,000	[ ]	[ ]	[ ]
KSh 81,000 - 90,000	[ ]	[ ]	[ ]
Ksh 91,000 – 100,000	[ ]	[ ]	[ ]
Ksh 100,000 and above	[ ]	[ ]	[ ]

E7. What was your average monthly gross profit in Kenya Shillings before attending entrepreneurial training?

**Before Entrepreneurship Training**

	2007	2008	2009
KSh 50,000	[ ]	[ ]	[ ]
KSh 60,000 – 100,000	[ ]	[ ]	[ ]
KSh 110,000 – 150,000	[ ]	[ ]	[ ]
KSh 160,000 – 200,000	[ ]	[ ]	[ ]
KSh 210,000 – 250,000	[ ]	[ ]	[ ]
KSh 260,000 - 300,000	[ ]	[ ]	[ ]
KSh 310,000 -400,000	[ ]	[ ]	[ ]
Ksh. 400,000-500,000	[ ]	[ ]	[ ]
Ksh. 500,000 above	[ ]	[ ]	[ ]

E8. Did you experience an increase in gross profit after attending entrepreneurial training?

( ) Yes

( ) No

E9. If yes in question D8 above, what was your marginal increase?

**After Entrepreneurship Training**

	2013	2014	2015
KSh 5,000	[ ]	[ ]	[ ]
KSh 6,000 – 10,000	[ ]	[ ]	[ ]
KSh 11,000 – 15,000	[ ]	[ ]	[ ]
KSh 16,000 – 20,000	[ ]	[ ]	[ ]
KSh 21,000 – 25,000	[ ]	[ ]	[ ]
KSh 26,000 - 30,000	[ ]	[ ]	[ ]
KSh 31,000- 40,000	[ ]	[ ]	[ ]
Ksh. 40,000-50,000	[ ]	[ ]	[ ]
50,000 above	[ ]	[ ]	[ ]

Kindly indicate your level of agreement to the following statements.

**NB:VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent,**

**VLTE-Very Little Extent**

		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
E10	My business has a consistent increase in sales					
E12	We allow employees to try new ways of doing things					
E13	We often introduce new products/services to the market					
E14	Customers prefer my products to my competitor's					
E15	Customers are happy with our products/ services					
E16	We have had reduced customer complaints					
E17	We have had consistent increase in our yearly profits					
E18	My organization relate well with the community around us					



## Appendix C: Questionnaire Trainers

1. Name of the organization \_\_\_\_\_

2. When did your organization start carrying out entrepreneurship training?  
\_\_\_\_\_

### (G) Training Needs Assessment

G1. In your organization, do you carry out training needs assessment before you enroll SMEs for entrepreneurship training?

Yes                       No

G2. If yes above, indicate the extent to which your organization focuses on the following areas while conducting training needs assessments.

**NB: VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent,**

**VLTE-Very Little Extent**

		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
	<b>Individual Focus</b>					
G 3	Communication skills					
G4	Customer care					
G5	Information Technology					
G6	Time management					
	<b>Task Focus</b>					
G7	Book keeping					
G8	Record management					
G9	Human resources management					
G10	Marketing skills					
G11	Procurement skills					
G12	New idea development					
G13	New product development					
	<b>Organizational Focus</b>					
G 14	Leadership					
G15	Team building					
G16	Policy and procedure development					
G17	Mentorship					
G18	Cultural diversity					

## (H) CONTENT OF TRAINING

Kindly indicate your level of agreement to which your organization focuses on the following areas when conducting entrepreneurship trainings.

**NB:VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent, VLTE-Very Little Extent**

		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
	<b>Management skills-Financial</b>					
H1	Book keeping skills					
H2	Accounting skills					
H3	Financial management skills					
H4	Interpretation of financial statements					
	<b>Management skills-leadership</b>					
H5	Planning skills					
H6	Implementation of business plans					
H7	Time management skills					
H8	Control of business functions					
H9	Communication skills					
	<b>Management skills-Human resource</b>					
H10	Staff recruitment skills					
H11	Staff induction skills					
H12	Staff motivation					
H13	Staff retention					
	<b>Technical Skills-ICT</b>					
H14	Computer maintenance skills					
H15	Operation of different computer software					
H16	Data connectivity skills					
H17	ICT systems maintenance					
H18	Business equipment/machines maintenance					
	<b>Technical Skills-Marketing</b>					
H19	Identification of customer needs					
H20	Management of customer complaints					
H21	Quality customer time management					
H22	Pricing techniques					
H23	Advertising techniques					
H24	Distribution strategies					
	<b>Technical skills-Procurement</b>					
H25	Sourcing of business inputs					
H26	Stock management					
H27	Business logistics					
	<b>Entrepreneurship skills</b>					

H28	Creativity					
H29	Idea generation					
H30	Opportunity identification					
H31	Innovation					
H32	Risk taking					

**(I) METHODS OF TRAINING**

Kindly indicate the extent to which your organization uses the following methods of training while conducting entrepreneurship trainings.

**NB:VLE-Very Large Extent, LE-Large Extent, SE- Some Extent, LTE-Little Extent, VLTE-Very Little Extent**

S/NO		VLE [5]	LE[4]	SE[3]	LTE[2]	VLTE[1]
I1	In house training					
I2	On the job training					
I3	Lecture method					
I4	Discussions					
I5	Field trips					
I6	Mentorship					

## DOCUMENT ANALYSIS GUIDE

Are the following areas covered in the curriculum used by the organization?

	Tick where applicable
<b>Management skills-Financial</b>	
Book keeping skills	
Accounting skills	
Financial management skills	
Interpretation of financial statements	
<b>Management skills-leadership</b>	
Planning skills	
Implementation of business plans	
Time management skills	
Control of business functions	
Communication skills	
<b>Management skills-Human resource</b>	
Staff recruitment skills	
Staff induction skills	
Staff motivation	
Staff retention	
<b>Technical Skills-ICT</b>	
Computer maintenance skills	
Operation of different computer software	
Data connectivity skills	
ICT systems maintenance	
Business equipment/machines maintenance	
<b>Technical Skills-Marketing</b>	
Identification of customer needs	
Management of customer complaints	
Quality customer time management	
Pricing techniques	
Advertising techniques	
Distribution strategies	
<b>Technical skills-Procurement</b>	
Sourcing of business inputs	
Stock management	
Business logistics	
<b>Entrepreneurship skills</b>	
Creativity	
Idea generation	
Opportunity identification	
Innovation	
Risk taking	

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**THIS IS TO CERTIFY THAT:**

**MS. MARGARET NTHENYA NGANU  
of KENYATTA UNIVERSITY, 136-90100  
machakos, has been permitted to  
conduct research in Nairobi County**

**on the topic: ENTREPRENEURSHIP  
TRAINING AND PERFORMANCE OF  
SMALL AND MICRO ENTERPRISES IN  
INFORMATION COMMUNICATION  
TECHNOLOGY SECTOR IN NAIROBI CITY  
COUNTY, KENYA**

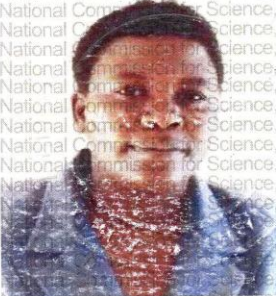
**for the period ending:  
31st August, 2017**

**Applicant's  
Signature**

**Permit No : NACOSTI/P/16/54765/13437**

**Date Of Issue : 31st August, 2016**

**Fee Recieved :Ksh 2000**

A handwritten signature in blue ink, which appears to be 'SmmmmBw'.

**Director General  
National Commission for Science,  
Technology & Innovation**

## CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice



REPUBLIC OF KENYA



National Commission for Science,  
Technology and Innovation

RESEACH CLEARANCE  
PERMIT

Serial No. **A11883**

CONDITIONS: see back page



**NATIONAL COMMISSION FOR SCIENCE,  
TECHNOLOGY AND INNOVATION**

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2241349, 3310571, 2219420  
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Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
when replying please quote

9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No.

Date:

**NACOSTI/P/16/54765/13437**

**31<sup>st</sup> August, 2016**

Margaret Nthenya Nganu  
Kenyatta University  
P.O. Box 43844-00100  
**NAIROBI.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Entrepreneurship training and performance of Small and Micro Enterprises in Information Communication Technology Sector in Nairobi City County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **31<sup>st</sup> August, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

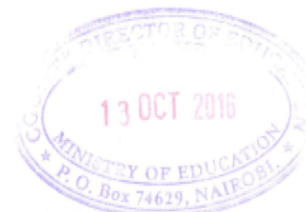
  
**BONIFACE WANYAMA**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Nairobi County.

**COUNTY COMMISSIONER**  
**NAIROBI COUNTY**  
**P. O. Box 30124-00100, NBI**  
**TEL: 341666**

The County Director of Education  
Nairobi County.





KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA  
Tel. 810901 Ext. 57530

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

Internal Memo

FROM: Dean, Graduate School

DATE: 1<sup>st</sup> July, 2016

TO: Margaret Nganu  
C/o Business Administration Dept.  
Kenyatta University

REF: D86/15268/2005

SUBJECT: APPROVAL OF RESEARCH PROPOSAL


This is to inform you that Graduate School Board at its meeting of 22<sup>nd</sup> June, 2016 approved your Research Proposal for the Ph.D. Degree. Entitled "Entrepreneurship Training and Performance of Small and Micro Enterprises in Information Communication Technology Sector in Nairobi City County, Kenya".

You may now proceed with data collection, subject to clearance with the Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking forms per semester. The form has been developed to replace the progress report forms. The supervision Tracking Forms are available at the University's website under Graduate School webpage downloads.

By copy of this letter, the registrar (Academic) hereby requested to grant you Substantive registration for your Ph.D studies.

Thank you.

  
ANN NGURU  
FOR: DEAN, GRADUATE SCHOOL



c.c. Chairman, Business Administration Dept.

Registrar (Academic)

Supervisors:

1. Dr. Hannah Bula  
C/O Business Administration Department  
KENYATTA UNIVERSITY
2. Dr. Ofafa Goretti  
Business Administration Department  
KENYATTA UNIVERSITY

AN/nn





KENYATTA UNIVERSITY  
GRADUATE SCHOOL

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke)

Website: [www.ku.ac.ke](http://www.ku.ac.ke)

P.O. Box 43844, 00100  
NAIROBI, KENYA

Tel. 8710901 Ext. 57530

Our Ref: D86/15268/05

DATE: 1<sup>st</sup> July 2016

Director General,  
National Commission for Science, Technology  
And Innovation  
P.O. Box 30623-00100,  
**NAIROBI**

Dear Sir/Madam,

**RE: RESEARCH AUTHORIZATION FOR MARGARET NGANU- REG. NO. D86/15268/05**

I write to introduce Ms. Margaret Nganu who is a Postgraduate Student of this University. She is registered for Ph.D degree programme in the Department of Business Administration.

Ms. Nganu intends to conduct research for a Ph.D Proposal entitled, "Entrepreneurship Training and Performance of Small and Micro Enterprises in Information Communication Technology Sector in Nairobi City County, Kenya".

Any assistance given will be highly appreciated.

Yours faithfully,

*for MRS. LUCY N. MBAABU*  
MRS. LUCY N. MBAABU  
FOR: DEAN, GRADUATE SCHOOL



AN/m

ICT Authority  
Telpost Towers 12<sup>th</sup> Floor, Kenyatta Ave  
PO Box 27150 - 00100 Nairobi Kenya  
Tel: +254 20 2089061/ 2211960 Fax: +254 20 2211960  
[www.icta.go.ke](http://www.icta.go.ke)  
info@icta.go.ke



Our Ref. ICTA/COMM/25/16

22<sup>nd</sup> July, 2016

TO WHOM IT MAY CONCERN

**RESEARCH AUTHORIZATION FOR PHD STUDENT**

---

The ICT Authority has authorized Ms. Margaret Ngunu, a PhD student at Kenyatta University to carry out research on innovation and entrepreneurship in information communication technology sector in Nairobi County.

Ms. Ngunu will be accorded necessary support.

Yours Sincerely,

A handwritten signature in black ink, appearing to read "Eunice Mueni Kariuki".

**Eunice Mueni Kariuki**  
Director, Partnerships, Innovation & Capacity