



## Effect of entrepreneurship education on innovation capability of technical and vocational and education training (TVET) graduates in Kenya

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### ABSTRACT

*The purpose of this study was to explore the Effect of Entrepreneurship Education on Innovation Capability of TVET Graduates in Kenya. The study used a cross-sectional survey research design. The study used the entire population as a sample since the accessible population was all TVET graduates in Kenya. The main data collection instrument was semi-structured questionnaire. The questionnaire was tested for reliability and validity. The study found out that entrepreneurship education is key to the innovation capability of TVET graduates in Kenya. The study found out that respondents were interested in pursuing entrepreneurship as a career path. However, with the absence of an adequate platform or systems at the TVET institutions, students are not engaged in entrepreneurial paths in any significant way. Further, the study determines that TVET institutions should focus on entrepreneurship education that would provide the graduates with innovation skills that offer high valued contributions to the accomplishment of quality strategy goals and organizational objectives, enabling businesses to achieve market-leading performance and thus competitive advantage. The TVET graduates need to be equipped with entrepreneurial skills that will help them improve their firms or where employed in order to capture a higher market share.*

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## Introduction

Entrepreneurship is the process of creation of value through the expansion of economic activity manifested in the development of new products or services, processes or markets (Njoroge, 2017). Successful entrepreneurial venture requires that one must have the necessary skills and innovation capability of being an entrepreneur. Innovation capability contributes to one having the motivation desired to take business risks despite the different challenges one is likely to face. Entrepreneurial action follows entrepreneurial intention (Malebana, 2014). Innovation capability is therefore the mental orientation that influences choices of entrepreneurship activities (Peng, 2012). This means that innovation capability leads to someone searching for the best ways to develop one's skills and this therefore introduces the concept of entrepreneurial education. Entrepreneurship education becomes a tool to broaden ones thinking and knowledge. Entrepreneurship is the key driver of technological improvement, investment employment, and all that is needed to become self-reliance. Kent (1990) states that education ensures knowledge is disseminated and fundamental values and norms are passed on from one generation to another.

This study is anchored on two theories. These theories include teachability and learnability theories of entrepreneurship (Njoroge, 2017). Learnability theory focuses on the learners as the main subjects of entrepreneurial education. In this theory, learner's aspirations of studying entrepreneurship education are examined. The theory is grouped into two. The first one focuses on those learners whose aim is to study entrepreneurship. This is studying entrepreneurship with the purpose of understanding the role of an entrepreneur in the society (Pinkwart, 2009). The second one focuses on the action orientated learners whose intention is to study entrepreneurship with the aim of improving their innovation capabilities and apply it in entrepreneurship venture. The intention of

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the learner is to recognize opportunities and start a business venture. Teachability is the second theory, teachability theory concentrate on the trainer and entrepreneurship training methods as the main themes. This theory is dependent on learnability theory. The main focus is on training method a trainer can use to communicate to a learner depending on the intention of the learner (Peng, 2012). Venkataraman & Shane (2007) states that, a training approach towards theory-based learner will be different from that of an action orientated learner. The main motivation for this study was to establish the importance of entrepreneurial education in TVET graduates in Kenya and its impact.

Entrepreneurship can be traced back to Joseph Schumpeter who defined it as the ability to convert an idea into a successful venture (Utbildning, 2016). It is from Schumpeter that entrepreneurship has been viewed at from a broader perspective of economics, business, and social environmental and even politics. Jean Baptiste, an economist from French, in the 19<sup>th</sup> century also described entrepreneurship as “shifts economic resources out of an area of lower and into an area of higher productivity and greater yield”. Jeane who majorly argued in favor of free trade and competition identified four factors that drive entrepreneurship. These factors are opportunity to solve an existing problem, availability of labor, availability of resources and ability to take risks (Cuervo, 2008). Mwangi & Ngugi (2014) assert that entrepreneurial skills is a key ingredient for organizational success and has been found to lead to higher performance. That is, firms are likely to benefit from pursuing and adopting entrepreneurial skills (Gem Global Report, 2012). Ndung’u, Wanjau, Gichira and Mwangi (2014) agrees with this and adds that competitive advantage will be sustained where firms adopting innovative minds frequently while taking risks will always take the lead.

Innovation has been recognized as one of the most important contributors for the economic development of many countries (Lamprinopoulou & Tregear, 2006). One of the best practice in a firm is the need to become more innovative in order to survive and grow in an ever increasing rapidly changing environment. In this context, entrepreneurship is more relevant than ever, as a viable means for existing organizations to continuously explore and exploit previously unexploited opportunities, thereby to implement them in a specific environment by maintaining quality entrepreneurship education. The identification and exploitation of entrepreneurial opportunities is the essence of entrepreneurship whereas the essence of quality entrepreneurship education is in how these opportunities can be transformed into sustainable competitive advantages (Zahra & Covin, 1995). Entrepreneurial actions and strategic actions can contribute to value creation independently, but they can contribute even more when they are integrated with the right entrepreneurship education. Indeed, entrepreneurial opportunity-seeking is at the same time also strategic behaviour with the aim of value creation (Ireland, Hitt, & Simon, 2003).

Innovation capability ranges from operational efficiency to organisational effectiveness, and with internal or external orientations. ‘Linking the process of innovation capability to entrepreneurship education and to expected performance in the industry requires attention to the role of contingencies and uncertainty’. It is evident that the society needs both males and females that are proficient of instituting businesses that will counteract the adverse effects of mass unemployment and poverty as stated by (Mburiah, 2017) in their study *Moderating Role of Best Manufacturing Practices in Food Processing Firms in Kenya*. ‘Society has realistic expectations from TVET graduates to promote economic growth through innovation and entrepreneurship, as one of the economic pillars that TVET should provide’. With the ability to innovate and turning innovation into business opportunities, TVET graduates should promote industrialisation as a driver for economic growth. For this promotion to happen, innovation capability and entrepreneurship education should manifest itself at every stage of the TVET system and should be managed sustainably. Despite this recognition, entrepreneurship education is not emphasised at every stage of the vocational and technical and education training system as expected. This deficiency depletes sustainable entrepreneurship and industrialisation endeavours. There is hardly evidence on any specific relationship between entrepreneurship education and innovation capability of TVET graduates in Kenya. Thus, the relationship remains burred.

Also, there is no rich literature available that directly investigates the Effect of Entrepreneurship Education on Innovation Capability of TVET Graduates in Kenya. Specifically, the impact of innovation capability is expected to depend on entrepreneurial skills of TVET graduates. This is the rationale of conducting this research and this contributes to building an improved understanding of innovation capability on TVET graduates in the industry.

The objective of this study was to examine the effect of entrepreneurship education on innovation capability of TVET graduates in Kenya.

#### *Hypothesis of the Study*

The study tested the following hypothesis:

H<sub>01</sub>: There is no positive relationship between innovation capabilities on TVET graduates in Kenya

The study provided literature on the effect of entrepreneurship education of TVET graduates and it was expected to contribute knowledge in the area of innovation capability in relation to training institutions. The study findings are expected to be applied by the government for policy formulation and decision making, controlling, signalling in education and learning institutions. Specifically, the government will use the findings of this study in understanding the problems facing TVET graduates in relation to entrepreneurship education and will make informed decisions on how to support them through a well-informed network of operations in promoting innovations.

The stakeholders who include financial institutions, Government SAGAS and Non-Governmental Organizations (NGOs), parents, management boards of TTIs and manufacturing sector understand the operations and dynamism of TTIs in Kenya which may need improvement in such areas as innovation, operations, levels of customer satisfaction, timely delivery of service, reliable delivery of service, dependable production activities, quality of service or goods, efficient monitoring of operations and motivation among others through this study.

The findings will also provide valuable insights to academic researchers and practitioners through an additional body of knowledge to enrich future research. The managers in TTIs will also use the findings to review those factors that are most likely to have an impact upon the implementation of entrepreneurship education in TVET learning institutions in Kenya.

## **Literature Review**

This study analysed the effect of entrepreneurship education on innovation capability of TVET graduates in Kenya.

### **Entrepreneurship Education**

Entrepreneurship can create new organizations or develop a strategy to rejuvenate mature organizations in response to a perceived opportunity (Sneha, 2019). Praag & Versloot (2007), state that entrepreneurship can be thought as the skill of providing solutions and creating a responsive tool aimed at better productivity in different industrial and governmental fields. 'These basic issues stemming from entrepreneurship may be taken to be the basis for conceptually aligning entrepreneurship education with the appropriate target audience, course contents and teaching methodologies (Gichira, 2017)'.

Entrepreneurship education is study of source of opportunities and process of discovery (Shane & Venkataraman, 2000; and Timmons, 2018), in which an individual endeavours ability of creativity, proactiveness, risk taking and turn their ideas into action (Communication Commission, 2006). Some researchers have pointed out that entrepreneurship education is training for uncertain future (Kratko, 1997), which provides the capabilities of venture creation (Kirby, 2004; Garavan and O'Conneide, 1994). But the focus of most of the reviewed literatures on entrepreneurship education is on: fostering entrepreneurial attitude, skill, managerial attributes (Mburiah, 2017). 'Ndung'u, Wanjau, Gichira and Mwangi (2014), cited that entrepreneurship education to some kind of educational process that is aimed at influencing individuals' attitudes, behaviours, values or intentions towards entrepreneurship skills either as a possible career or to enhance among them an appreciation of its role in the community'. 'Wanjiku (2019) equally cited that entrepreneurship education help with the acquisition of personal skills in entrepreneurship opportunity recognition and, managing of existing small firms'.

### **Innovation Capability Concept**

A firm's 'innovation capability' can be understood as the potential to innovate (Saunila & Ukko, 2014), or more specifically the "ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of the firm and its stakeholders" (Lerro, Linzalone & Schiuma, 2009). It has been suggested that innovation capabilities are so-called higher-order capabilities or "the ability to mould and manage multiple capabilities" (Lawson & Samson, 2001). Firms that possess these capabilities have "the ability to integrate key capabilities and resources of their firm to successfully stimulate innovation" (Lawson & Samson, 2001). Accordingly, attempts to define innovation capability have overlapped with the theory of dynamic capabilities. In addition, "within the conceptualization of innovation capability is the idea that capability is linked to renewal and performance of a firm over time, especially with changing markets and the idea that it is necessary for a firm to be flexible and adapt services and products offered". Moreover, innovation capability includes a combination and orchestration of resources to maintain fitness along with external changes. Again, the above definition appears to overlap with dynamic innovations; however, "innovation capability focuses more directly on the firm's ability to change its offerings, while dynamic capability emphasizes environmental fitness as an indication of performance (Helfat, 2007)".

Innovation capabilities have been divided into different categories by different researchers. For example, "Lawson and Samson (2001) suggested that innovation capabilities consist of seven elements (vision, competence base, organizational intelligence, creativity, idea management, organizational structures, culture and climate, and management of technology)". Terziowski (2007) on the other hand, "suggested just two categories: collaboration and knowledge transfer. Den Hertog et al (2010) identified six dynamic service innovation capabilities (signalling used needs and technological options, conceptualizing, unbundling, co-producing and orchestrating, scaling and stretching, and learning and adapting), arguing for innovation capability as contingent upon the context (i.e. whether the innovation is aiming at product or service improvements).

### **Theoretical Framework**

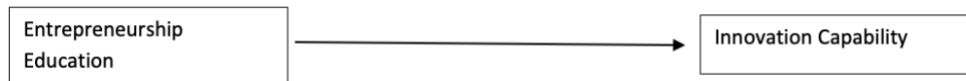
Robson (2002) states that "a theory is an explanation of what is going on in the situation, phenomenon or what is being investigated, while Bull (1991) defines it as a set of interrelated constructs, "definitions and propositions that present a systematic view of phenomena by specifying relations among variables with the purpose of explaining or predicting the phenomena". Schumpeter (1942) posits that innovation causes market dislocations, which allow the ascendance of new firms and the corresponding decline of the large incumbent firms whose leadership positions they assume. This occurs through the introduction of a new commodity, new technology, new source of supply, new type of organization, resulting into competition which commands a decisive cost or quality

advantage and which strikes not at the margins of the profits and the output of the existing firms but at their foundations and their very lives (Mburiah, 2017).

Gichira & Thinji (2017) examined the relationship between innovation capability and entrepreneurship education and performance of firm performance. The results revealed that those firms that emphasized on training employees on entrepreneurship/enterprise education are able to identify entrepreneurial opportunities better thus attain superior performance.

### **Conceptual Framework**

The key variable in this study were categorized as independent variable, moderator and dependent variable. Mugenda (2008) explains that the independent variables are also called predictor variables because they predict the amount of variable of variation that occurs in another variable while dependent variable, also called criterion variable, is a variable that is influenced or changed by another variable. The dependent variable is the variable that the researcher wishes to explain.



**Figure 1:** Conceptual Framework

### **Empirical Literature**

In competition, there has been increasing interest in identifying and understanding the attributes of firms that enable them to support continuous innovation (Slater, 1997). This has led to the development of the construct of ‘innovation capability’ to describe the ability of a firm to innovate by developing new products, processes, and systems (Prahalad & Hamel 1990). The Lawson and Samson (2001) definition of innovation capability is used for this research, where innovation capability is ‘the ability to continuously transform knowledge and ideas into new products, processes and systems for the benefit of the firm and its stakeholders’. Innovation capability is not just an ability to be successful at running a business new-stream, or to manage mainstream capabilities. Innovation capability is about synthesising these two operating paradigms.

The components of innovation capability in the industry that can be used to develop and implement quality products include, the competitors, customers, and the processing methods. Firms need to empower their staff, revise their quality management systems and evaluate and modify service delivery systems (Brown, 2013). Innovation capability should be self-evaluated by the industries and the same introduced in all levels of education through entrepreneurship education, to ensure the systems used are perfect and are continuously updated as this will enable to detect and solve problems beforehand (Mburiah, 2017). Regular and systematic analysis of the evaluation results may lead to a wide range of advantages, amongst them; measuring the matching degree of customers’ needs and expectations, ‘and comparing the results with perceived quality, acting as a basis for the strategic process, identifying improvement activities; and controlling competitiveness in quality through innovation capability’

Innovation capability facilitate improving quality that leads to decreased costs, fewer mistakes, fewer delays, and better use of resources, ‘which in turn leads to improved productivity, which enables a firm to capture more of the market, which enables the firm to stay in business, which results in providing more jobs (Summers, 2009)’. The promotion of innovation capability in entrepreneurship education has been recognized as part of the solution to high competition (Romania, 2015). ‘Technical skills empowerment in entrepreneurship has the potential to contribute to entrepreneurship development in an organization as it offers employees with an opportunity to increase their skills’ through innovation and risk taking, thereby raising the competitive advantage in the firm (Wanjiku, 2019). ‘In promoting managerial skills will contribute to an increase in entrepreneurship practice in an organization’

Entrepreneurial employees can ‘provide a wide range of entrepreneurial services to their firm including generating and evaluating innovative ideas related to products, technology, and administrative organization, financing of firm-level activities, and guiding the direction’ and governance of a firm’s growth. Human capital is the knowledge, skills, and abilities of employees (Hayton, 2005), while human resource management (HRM) includes all activities related to the management of employment relationships in the firm (Lin, 2008). Additionally, TVET institutions need to reinforce their capacity to improve the capabilities of graduates in order to achieve the required outcome from practising entrepreneurial skills and innovation capability.

### **Research Methodology**

This study adopted the explanatory study design and the mixed methods research philosophy. Mixed methods approach allows a researcher to combine elements of qualitative and quantitative research approaches (Johnson, Onwuegbuzie & Turner, 2007). The use of mixed methods research allows the researcher to compensate for the weakness of one single approach with the strengths of the other in order to achieve the best results (Cresswell & Clark, 2011). The target population for this study comprised of 379 TVET graduates in Kenya. Below is the summary of the target population:

### Target Population

The graduates were identified using snowballing technique. The list of graduates who formed the sample was provided by the Heads of academic departments (HODs) of 59 TTIs in Kenya which are registered with Technical and Vocational Education and Training Authority (TVETA). There are other new TTIs but graduates from these institutions were not included in this study since majority have not completed their studies. Table 1 shows the target population summary.

**Table 1:** Target Population Summary

Number of Organizations	Target Population	Sample Size
59	379	194

**Source:** Technical Vocational and Education Training (TVET)

A pilot study was conducted with 10% of the accessible population and the results were used to determine the suitability of the instrument for the study. Cronbach alpha statistic tested the reliability of the instrument and a figure between 0.8 and 0.9 was obtained. Mertens (2010) advises that factor analysis can be used to validate hypothetical constructs as it attempts to cluster items or characteristics that seem to correlate highly with each other in defining a particular construct. Factor analysis was used to determine the validity of the instrument where Eigen values criterion determined factor loadings for each component. The larger the Eigen value loading, the more important the associated principal component (Graham & Midgley, 2000). In this case, "Varimax with Kaiser Normalization sampling adequacy with Eigen value greater than 1 were used as rotation method because the items were uncorrelated." Montgomery, Peck and Vinning (2001) recommend that a "minimum factor loading of 0.40 should be used when factor analysis is used to redefine construct validity." All items had factor loadings ranging from 0.485 to 0.961.

Factor analysis was conducted using Principal Component Analysis (PCA) and Varimax with Kaiser Normalization method. In PCA, all the variance of a variable (total variance) is analyzed and thus PCA is assumed to be perfectly reliable and without error (Bryman & Cramer 2005). Preceding the factor analysis was the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. The KMO statistics vary between 0 and 1 (Argyrous, 2005). A value of zero indicates that the sum of partial correlation is large relative to the sum of correlations indicating diffusions in the patterns of correlations hence factor analysis is likely to be inappropriate (Costello, & Osborne, 2005). "A value close to 1 indicates that the patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors (Cooper and Schindler, 2011)." The study used the Statistical Package for the Social Sciences (SPSS) version 21 for running the Exploratory Factor Analysis (EFA). The study also used the Analysis of Moment Structures (AMOS) version 21, which is essentially analysis of mean and co-variance structures, for confirmatory factor analysis (CFA), Path Analysis and Structural Equation Modeling (SEM).

### Data Analysis and Results

There are no agreed principles of what constitute large amount of missing data. However, researchers suggested that less 10% of missing data on a particular variable or response is not large and does not constitutes a large amount of missing data (Cohen & Cohen, West & Aiken, 2013). Those respondents that had more than 10% missing responses in any of the whole questions asked were candidates for deletion. 185 responses were deleted who had more than 10% of the response missing and the overall sample was reduced from 379 to 194. "Tabachnick and Fidell (2007) suggests that cases that have less than 10% missing responses could be allowed for further analysis subject to dealing with missing responses empirically." The study examined the missing responses and concluded that they were independent and missing completely at random. "The study did impute for the missing values by replacing it using median as one element of measures of central tendency (Lynch, 2003).

The study used the two-step approach that is, for structural equation modeling (SEM) that is, the measurement model and the structural model as outlined by Anderson & Gerbing (1988). The measurement model was the first step and it involved confirmatory factor analysis (CFA) while the structural model was the second step. "Exploratory factor analysis (EFA) preceded CFA and it involved the determination of the pattern matrix, communalities and factor analysis using principal components analysis (PCA)." The Kaiser-Meyer Olkin (KMO) test of sampling adequacy and Bartlett's Test of Sphericity were carried out to determine the fitness of the data for factor analysis with the results being presented in table 4. The test yielded a KMO statistics of 0.812 exceeding the KMO threshold value of 0.50 (Hair, 1998) for factorable items. On the other hand, Bartlett's test of sphericity showed a p-value of 0.000, showing that there were sufficient relationships among the variables to investigate. "The results from the KMO and the Bartlett's test of sphericity suggest that the data in this study is suitable for factor analysis." In the second step, structural equation modeling was conducted. The relationship between entrepreneurship educations on innovation capability of TVET graduates for every respondent was specified as an exogenous, manifest variable. Innovation capability of TVET graduates was considered as a latent endogenous variable that was measured by two indicator variables. The model fitness statistics are presented in table 5. The values obtained in testing the model fit indices were within the thresholds as shown in table 5.

**Analysis for Innovation Capability**

Innovation capability was measured using the likert scale and the results were expressed in percentage as indicated in table 2. The results showed that majority (98.5%) of the respondents agreed with the opinion that entrepreneurial skills is key for continuous innovation improvement; a few (1.5 %) were neutral. On whether established systems were put in place that promotes innovation capability, majority (97%) agreed with this opinion, a few (1.5%) disagreed, while another (1.5%) were neutral. On whether idea management is considered by the firms, majority (91.1%) agreed, a few (1.5%) disagreed, and another (1.5%) of the respondents strongly disagreed while (6%) were neutral.

**Table 2: Innovation Enhancement**

Innovation Enhancement	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
Idea-mgt	0	0	1.5	20.9	77.6	4.76	.464
Know-trans	0	1.5	1.5	26.9	70.1	4.66	.592
Comp-based	1.5	1.5	6	26.9	64.2	4.51	.805

This implies that idea management of employees which consists of empowerment, high morale systems and participation in innovation ideas for quality management decision-making, is perceived as a system of corporate beliefs and values pivoting around and involve, the creation of superior customer value at a profit. The promotion of idea management in entrepreneurship skills has been recognized as part of the solution to high competition (Romania, 2015). Idea management in entrepreneurship has the potential to contribute to entrepreneurship development in an organization as it offers employees with an opportunity to increase their skills through innovation and risk taking, thereby raising the competitive advantage in the firm (Wanjiku, 2019). In promoting idea management contribute to an increase in entrepreneurship practice in an organization. TVET institutions plays the leadership role in supporting technology and innovation by providing entrepreneurship education that will encourage TVET graduates to practice innovation that promotes entrepreneurship. TVET institutions should empower their students by providing a conducive environment in which entrepreneurship is practised within the colleges to give learners sufficient time to exploit their own ideas in and out of the institutions.

**Table 3: Entrepreneurial Skills**

Entrepreneurial Skills	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
Top-Mgt	0	0	1.5	20.9	77.6	4.76	.464
Top-Inno	0	1.5	1.5	26.9	70.1	4.66	.592
Entre-Evalu	1.5	1.5	6	26.9	64.2	4.51	.805

Table 3 shows the results of the entrepreneurial Skills. The results s agreed that their employers were supportive and were willing to create a room for innovativeness as a way of encouraging innovation. A few (1.5%) disagreed while (1.5%) were neutral. The study established that majority (91.1%) were not fully involved during entrepreneurial evaluation before it is reported to the board of directors, (1.5%) disagreed (1.5%) strongly disagreed while (6%) were neutral. innovation capability facilitate improving quality of work that leads to decreased costs, fewer mistakes, fewer delays, and better use of resources, which in turn leads to improved productivity, which enables a firm to capture more of the market, which enables the firm to stay in business, which results in providing more jobs (Summers, 2009). This study agrees with teachability theory that concentrate on the trainer and entrepreneurship training methods as the main themes. Entrepreneurship education help in creating an organizational system that fosters quality management practices implementation, including customer focus, continous improvement, and effective leadership that enhances performance creates systems that fosters quality management practices (Anderson, 1995; Paul, 2007).

**Table 4: Knowledge Transfer**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
Resou-Adeq	0	1.5	9	31.3	58.2	4.67	.725
Resou-Sycho	0	0	9	38.8	52.2	4.43	.657
Emp-BMP	0	0	4.5	37.3	58.2	4.54	.586

Table 4 shows that majority (89.5%) of the respondents agreed with the opinion that it is important to recognize knowledge transfer, (1.5%) disagreed while (9%) were neutral. Respondents were asked whether knowledge transfer were synchronized with innovation capability, majority (91%) of the respondents agreed while (9%) were neutral. The respondents were also asked whether they utilized entrepreneurship skills in minimizing resource wastage. Majority (95.5%) agreed while (4.5%) were neutral. Table 6 shows the model fitness indices and Table 7 demonstrates the regression weights of innovation capability.

**Table 6:** Model Fitness Indices for the Influence of Innovation Capability of TVET Graduates

Criteria	Cut off Value	Statistic	Description
Chi-square	Small	0.042	Good Fit
Probability level	$\geq 0.05$	0.837	Good Fit
CFI	Above 0.8	1	Good Fit
NFI	$0.8 \leq \leq 1$	0.999	Good Fit
RMSEA	$\leq 0.05$	0	Good Fit
<b>GFI</b>	Above 0.9	1	Good Fit

**Table 7:** Regression Weights for Innovation Capability

			Estimate	S.E.	C.R.	P
Performance	<---	Innovation Capability	89.6	43.422	2.063	0.045
Idea Mgt	<---	Performance	1			
Know-Trans	<---	Performance	0.57	0.271	2.104	0.035
Entrepreneurial Skills	<---	Innovation Capability	1			
Inno-Enhancement	<---	Innovation Capability	-1.076	0.420	-2.559	0.014

The findings shows that TVET graduates are equipped with entrepreneurship education but only at theory levels. Learnability theory is in line with the findings since it emphasizes that learners’ aspirations of studying entrepreneurship education is done with purpose of understanding the role of an entrepreneur to implement strategies that improve efficiency and effectiveness of an organization (Njoroge, 2017).

## Conclusion

Innovation capability has been recognized as an important concern and has generated a substantial amount of interest both at management levels (Landeros, 2005). ‘Therefore, when innovation capability is done well, will enhance performance. ‘This would require utilization of employees who are equipped with entrepreneurial skills which will lead to capturing new markets, develop new products, and come up with new innovations that may eventually lead to increased profitability and sales turnover.’’ These results are consistent with previous studies such as Ou, Hung and Yen (2006) on their study Entrepreneurial Orientation and Firm Performance of SMEs in Taiwan which showed that entrepreneurship knowledge has positive relationship with firm performance. Through innovation, TVET graduates will proactively look for new business opportunities for the reason of improving firm performance during downturn (Soininen, 2012). This is also consistent with Prajogo & Sohal (2003) whose research on the Relationship between TQM Practices and Firm Performance reported that ‘‘innovation capability is crucial to the growth and firm performance as it can help firms to be innovative, engage in a number of entrepreneurial activities and come up with quality products which can raise the entrepreneurial intensity levels of the firm.’’

Entrepreneurial skills is found to increase the propensity of business firms to become more entrepreneurial through increased innovativeness, proactiveness and acceptance of risky measures especially if innovation is emphasized (Khandawalla, 1977; Foxall, 1984; Covin and Slevin, 1989; Zahra and Bogner, 1999). Scholars have tested the ‘‘notion that innovation capability will lead to increased entrepreneurship among firms as a survival strategy when practiced in an entrepreneurial’’ environment (Miller, 1983; Zahra & Covin, 1995; Yusuf, 2002). The TVET graduates need to be equipped with entrepreneurial skills that will help them improve their firms or where employed in order to capture higher market share. Firms can be assessed on ‘‘entrepreneurial intensity and the assumption that underlying the notion of corporate entrepreneurship is that it is a behavioral phenomenon and all firms fall along a conceptual continuum that ranges from highly conservative to highly entrepreneurial (Barringer and Bluedorn, 1999).’’ Entrepreneurial firms (Conservative firm) are risk-taking, innovative, and proactive (Covin and Slevin, 1999). The results of this study have several business implications. By analysing an organization’s innovation capability, the study provides business an understanding of and insight into viable predisposition of positive effects. Evidence of ‘‘ idea management in relation to employee empowerment and systems efficiency; entrepreneurial management and evaluation enhanced through participative management and

finally resource management directed to adequacy, synchronization and utilization.” Technical and vocational education and training should focus on entrepreneurship education that would provide the graduates with innovation skills that offer high valued contributions to the accomplishment of quality strategy goals and organizational objectives, enabling businesses to achieve market-leading performance and thus competitive advantage.

Two possible limitations and ensuing recommendations for future research were identified in this study. First the data collection instrument was perceived as designed with focus on TVET graduates. Future use of this instrument may benefit from higher response rates if the organization performance scale is revised to better apply to other graduates of higher learning institutions. “Follow-on studies are recommended to examine the effect of entrepreneurship education on innovation capability of TVET graduates.” Second there may be a potential source of bias resulting from the technical nature of the intended population. By surveying graduates of TVET the results may have been influenced by their certainly technical perspective. For greater generalization of the results, the targeted sample should exemplify a reasonable mix of TVET and Universities graduates. In today’s business environment, entrepreneurship is seen as a business driver, whose concept reflects the need for organizations to incorporate innovation as a key strategic tool in businesses in order to be strategically entrepreneurial and a market leader.

Entrepreneurship leads to improved performance of firms as was concluded in this study. This study therefore recommends that, TVET institutions should develop training approaches that will promote particular capabilities of entrepreneurial teams, “especially those balancing creativity and are able to influence a particular attitude to risk taking, innovation and an ability to access scarce resources strategically.” The TVET institutions should collaborate with the industries and universities in instilling entrepreneurial passion, inculcate an entrepreneurial culture and increase entrepreneurial intensity in TVET graduates.

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