

TRANSFORMING TANZANIAN FARMERS' ECONOMY THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) DELIVERED ENTREPRENEURSHIP TRAINING

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ABSTRACT

There is growing interest in roles played by entrepreneurship as a catalyst to achieve economic and social development objectives, including growth, innovation, employment and equity. The main objective of the paper is to establish how Tanzanian farmers' economy can be transformed through ICT delivered entrepreneurship training. Specifically, the paper first identifies the economic contributions of entrepreneurship training to Tanzanian farmers' development. Second, it examines the current situation of entrepreneurship training provision to farmers. Lastly, it analyses how ICT can transform entrepreneurship training delivery and speed up economic development. The study employed an exploratory design using a survey approach. Qualitative data were collected from 50 farmers and 5 trainers at Kibaha in Coast region Tanzania through interviews and Focus Group Discussions. The data were analysed using thematic data analysis. The findings show that entrepreneurship training has contributed to increased knowledge and skills which led to creation of an entrepreneurial and innovative culture, which could stimulate productivity and economic growth. The study also found that the current contents of entrepreneurship training provided are based on farm business management skills and not on entrepreneurship skills. In tandem with that, the most applied pedagogical approach used is traditional teaching method which is perceived not fit for farmers. ICT delivered entrepreneurship training assists to increase access to skills saves cost and time which are used in other economic activities and transforms farmers' economy. The paper concludes that, to accelerate and transform farmers' economy, it is necessary to promote ICT delivered entrepreneurship training. The study recommends that the Tanzanian government should harness and enable the entrepreneurial spirit and skills of farmers by ensuring that entrepreneurship training policy and good infrastructure are in place.

Key words: Farmers' economy, entrepreneurship, entrepreneurship training, ICT

INTRODUCTION

In recent years, it has become trendy to view entrepreneurship education/training as the solution for stagnating or declining economic activities in both developed and developing countries (Matlay& Carey 2006). This dominant paradigm is based firmly upon the premise that, in any economy, more and better entrepreneurship education/training will invariably result in a comparable growth in the quantity and quality of entrepreneurship activity (*ibid*.).Entrepreneurship and innovation are increasingly recognized as important drivers of economic growth, productivity and employment, and as a key aspect of economic dynamism. Thus, over a relatively short period of time, entrepreneurship education/training has pushed itself to the top of socio-economic and political agenda, where it currently represents a high priority imperative for government policy throughout the industrially developed and developing world (Matlay&Westhead 2004).

Since independence in 1961, Tanzania has been largely dependent on agriculture as its main economic activity. It contributes about 23% to the country's GDP (The Second Five-Year Development Plan, 2016/17 - 2020/21). However, the sector provides 85% of the country's export earnings, employs 75% of the country's work force, and generates 95% of the food consumed in Tanzania (The Second Five-Year Development Plan, 2016/17 - 2020/21 p. 8). Due to this reason, Tanzania needs a special focus on rural economies where improved

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agricultural production and market access will lead to better income levels and enhanced country's economic development.

Despite the importance and recognition of farmers in the economic development of many countries in the world and the high rate of unemployment, access to training is a major constraint among rural people in developing countries. For instance, nearly 90% of agricultural workers in India have no formal training, and a study among small scale entrepreneurs in Kenya indicated that over 85% of rural informal sector operators have no business or technical training at all (Montpellier Panel Report, 2014). Rural people's access to education and training is often limited by financial barriers (e.g. training and transportation costs) and non-financial barriers (e.g. scarce education and training infrastructure, and inflexible training schedules). Education and training is often of inadequate quality. Teachers and trainers may be unqualified, equipment and technology out-dated, and teaching and training methods ill-suited to rural contexts (ILO 2011).

The author of this study observed that, provision of entrepreneurship training through ICT tools will assist in alleviating the above-mentioned constraints about cost, flexibility, reach, and quality. Currently, farmers have access to ICT tools like mobile phones/smart phones which have the capacity for Internet, televisions, radios and even computers. To have a healthy farming sector, training facilities and support must be easily available to farmers. Kahan (2013) found that effective institutions need to be developed to provide education and training at the right time, in the right place, and with the right balance of technical knowledge and practical skills. This can be made possible through ICT.

Although there are many initiatives taken by the Tanzanian government and other departments (public, private sector initiatives, education, business and industry sector) to support and stimulate the culture and spirit of entrepreneurship to farmers, there is no national policy for entrepreneurship and coherent entrepreneurship education strategy for farmers. The available National Entrepreneurship Training Framework (NETF, 2013) has not considered farmers as an important economic group. This lead to the entrepreneurship education available to be perceived as not fit for the purpose with respect to the needs of Tanzanian farmers. Too many teaching tools, pedagogies and resources used are perceived to be based on western models and delivered through traditional approaches without considering contextual learning of the Tanzanian farmers (Kaijage & Wheeler 2013). Furthermore, there is a marked scarcity of research that focuses upon entrepreneurship education/training designed to be delivered outside schools/universities. The main objective of the study was to establish how the economy of Tanzanian farmers can be transformed through ICT delivered entrepreneurship training. Specifically, the paper first identifies the economic contributions of entrepreneurship education/training to Tanzanian farmers' development. Second, it examines the current situation of entrepreneurship education provision to farmers in Tanzania in terms of contents and pedagogy used, and lastly analyses how ICT can transform the way entrepreneurship education/training was delivered to farmers and speed up economic development.

Understanding Entrepreneurship Education/Training

Entrepreneurship education/training includes all activities aiming to foster entrepreneurial mindsets, attitudes and skills and covering a range of aspects such as idea generation, start-up, growth and innovation (Fayolle2006). Some people still argue that it is not possible to teach entrepreneurship. Many argue that there is enough evidence that entrepreneurship can be taught (Kuratko, 2005; Gorman *et al.*, 1997; Pittaway & Cope 2007). Others argue that entrepreneurs are primarily born, not made (Nicolaou & Shane 2009). Some opt for a middle way, claiming that certain aspects of entrepreneurship cannot be taught, such as self-confidence, persistence and energy levels (De Faoite *et al.*, 2003). Others connect the question to assessment in education, stating that the difficulty lies primarily in measuring the effects of entrepreneurship is both a science and an art whereby the former relates to the functional skills required for business start-up (an area which appears to be teachable) while the latter refers to the creative aspects of entrepreneurship, which are not explicitly teachable. The author's view is that entrepreneurship can be taught and it can be improved through training; hence there is

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a need to put more efforts in training farmers so that they can acquire different knowledge and skills to improve their farming business.

Models and Theories about Entrepreneurship Education

Many models and theories have been developed and put forward so that research into entrepreneurship education can grow. Such models can be argued to form the framework to many studies as they support the development of hypotheses and ultimately give rise to new findings, which enlarge a particular field (Zacharias 2009). A well-known model/theory is one, which has been developed by Ronstadt (1990). Ronstadt (1990) put forward a theory based upon programme offerings and how entrepreneurship courses are taught. Another important model used has been the "Teaching-Learning Process Model" devised by Gage and Berliner (1984), which looks at how to develop a teaching method that will complement the unique characteristics of learners (as quoted in Zacharias 2009). This study will base on the "Teaching-Learning Process Model" because the aim of the study is to examine how ICT can be used to transform the entrepreneurship teaching and learning process of farmers.

Entrepreneurship Education/Training and ICT

It is no surprise that traditional methods are still the main form of delivery when teaching entrepreneurship. With the growth of the Internet and other technologies, more innovative ways of teaching entrepreneurship should be considered and utilized (Zacharias 2009). Internet and new technologies like podcasts have simply opened up new channels of communication for people in entrepreneurship education/training to take advantage of long distance learning, and e-education initiatives made possible by ICTs are making it easier for farmers to access vital education, skills and entrepreneurship training (UNCTAD 2014)

Farmers' Economy

Economics has been defined as the study of resource allocation under scarcity (Runge, 2006). The field of agricultural economics arose in the late 19th century and it focused on seven main topics including agricultural environment and resources; risk and uncertainty; food and consumer economics; prices and incomes; market structures, trade and development; and, technical change and human capital (Runge, 2006). This study focused on farmers' agricultural economics which is concerned with the improvement of living standards and economic performance, because it contributes largely in the economy of developing countries in terms of employment and GDP shares (Gollin *et al.*, 2002; Timmer *et al.*, 2002; Chavas *et al.*, 2010)

METHODOLOGY

This research employed an exploratory design, which is a valuable way of finding out 'what is happening; gaining new insights, asking questions and assessing phenomena in a new light". Thus, it gave new insights of transforming Tanzanian farmers' economy through ICT delivered entrepreneurship training.

The study used qualitative research methods, whereby interview and focus group discussions were done. The data were analyzed using thematic data analysis by identifying relevant themes in the data.

Data were collected in two phases; the first phase was interview whereby the respondents were asked questions which enabled the author to explore the respondents' experience and opinions on the potential contributions of entrepreneurship education/training to agricultural development and also examined the current practice of entrepreneurship education in relation to the development of the entrepreneurial capacity of farmers. Each interview lasted for 5 to 10 minutes. Phase two of data collection was Focus Group Discussion (FGD) whereby a group of five to six respondents were interviewed. Ten groups were administered in which 40% of the members were male and 60% female. The purpose of the focus group discussion was to identify the shared experience in terms of the contribution of entrepreneurship education/training to the farmers' economy and the current practice of entrepreneurship education provided looking at the contents and pedagogy. Each discussion lasted for 30 to 40 minutes, and the members were given chances to speak out their views. The interview guide

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was prepared in English and then translated into Swahili, the commonly spoken language in Tanzania, and then back into English.

The study was conducted in Kibaha semi-rural district in Coast region in Tanzania. The choice of Kibaha area was motivated by the area being among the mostly populated areas in Tanzania Mainland, and having a large number of farmers. Another reason is its proximity to Dar Es Salaam where the author resides. Due to time and financial constraints, Kibaha was the nearest semi-rural area for this research. Total of55 respondents (50 farmers and 5 trainers) were drawn from different areas of the Kibaha rural district. The study used farmers with 18 to 65 years of age, farming experience of more than three years and who had attended any entrepreneurship training.

Respondents were selected based on their convenience, accessibility and proximity to the author. We came across many farmers, but they refused to participate in this study fearing disclosing their business information to a stranger (the author). We used incentives like buying their products, and assuring them that the study is only for academic purpose.

The study used qualitative research approaches that were conducted mainly in the form of a survey. Qualitative data were collected. The qualitative data were collected from primary and secondary sources. The secondary sources included publications and statistical abstracts. The primary sources included the resource persons in the areas visited during data collection.

FINDINGS AND DISCUSSION

The findings of this study were categorized into three main themes focusing on the specific objectives. Within each theme, the author has pinpointed sub-themes as emerged from the respondents' explanations.

Theme 1: The contribution of entrepreneurship education provision to Tanzanian farmers' development The study sought to understand the contribution of entrepreneurship education/training provision to Tanzanian farmers' development. The findings show that there are various contributions made by provision of entrepreneurship education to Tanzanian farmers' development such as:

• To foster entrepreneurial mind-sets, skills and behaviours among the farmers

From the study the findings show that the provision of entrepreneurship training to farmers has contributed much on fostering entrepreneurial mind-sets, skills and behaviours among farmers as explained by one of the respondents:

"Since I have acquired entrepreneurship training, I have changed my behaviour and I started behaving entrepreneurially. If I want to do anything, I have to plan, and think about its costs and benefits".

"Entrepreneurship training I have attended has assisted me to have the ability to contribute and provide healthy and nutritious food to my family, and increase my confidence and ability for public speaking such that I am now providing advice and trainings to the youth". One respondent explained

This is a great contribution of entrepreneurship training to farmers who have changed their mind-sets and behaviour. It has also contributed to building confidence in farmers who are now proud of their farming business

• To empower farmers with the entrepreneurial competencies and skills

The entrepreneurship training has contributed to empower farmers with the entrepreneurial competencies and skills necessary to prepare them to respond to their life needs, including running their own farming business. From the study, it was also found that entrepreneurship education contributed to the farmers' acquisition of knowledge and skills that enhance productivity and competitiveness, something which leads to economic

development. From the focus group discussions and success stories revealed by farmers, it is proven that the entrepreneurship trainings offered have increased access to information, markets and now farmers are able to realize their full economic potential and grow their farming businesses. This was revealed by one of the respondents:

"From entrepreneurship trainings and support acquired, I have been able to improve the quality of the farming process which leads to improved productivity, increased sales and improved standard of my life. I am now proud of my products, and I can compete in the market. My improved farming has enabled me to acquire more profits and renovate my house and modernize it by fixing tiles and a gypsum board ceiling. I have the ability to pay tuition fees for my child who is now at the university level."

"Thanks to entrepreneurship training it empowered me on record keeping skills which I didn't have before. I can now keep my records well and see the profits obtained from my farming business. I can separate personal and business income". Said another respondent

• To develop innovation in farmers

The study findings reveal that, entrepreneurship training contributed to develop innovation in farmers through developing their skills to identify, create, initiate and successfully manage personal, community, and business opportunities

"Now I am able to improve the quality of my farm products. I have increased the number of my customers due to the training I attended". One respondent explained.

"Through the training, advice, support and assistance, I have registered a company. This is a big achievement in my life I have never thought of I have been able to improve my farm products and quality of my packaging materials to the extent that I am now exporting to Congo, Zambia and Kenya. I have expanded the types of products from processed vegetables to processed fruits. I have increased my knowledge and skills on my vegetables and fruits processing". Another respondent said.

These findings show that entrepreneurship training has contributed to develop farmers' innovation as it has assisted them to acquire food processing knowledge and skills as well as improving the quality of farmers' products.

• To increase the awareness and understanding of the process of managing farm business

The study findings reveal that entrepreneurship training has contributed to increase the awareness and understanding of the process involved in initiating and managing their farms as well as to enhance the public's perception on farming business as serious career option. One of the respondents explained:

"After my retirement I depend much on my farm business which is the main source of my income. The farm business takes care of me and the whole family. My farm business is everything in our family. Its contribution is great. Thanks to the entrepreneurship training I have attended, I can now manage my farm business profitably. I understand the whole process of farm management. The issues of planning, planting periods, pests control, harvesting and storing my farm product. I know where to get farming information and how to search for the markets. Before training, I was getting loss most of the time".

These statements from the respondents confirmed that entrepreneurship training has contributed to increase farmers' awareness and understanding of the process of managing farm business.

The findings from this study are in line with other researchers (Kahan, 2013)

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From the above-seen contributions of entrepreneurship education to farmers, it is evident that skills development is the intended output of education and training efforts, and it is an enabler for growth. Development of skills enhances the capability of farmers to improve their efficiencies, and thus ultimately improving their economy (UNCTAD 2011).By focusing on building the capacity of farmers, Tanzanian government will be able to increase the productivity of a large proportion of its labour forces as the majority of Tanzanian live in rural areas.

Theme 2: The current situation of the entrepreneurship education provision in terms of contents and pedagogy used

Entrepreneurship education/training can play a major role in helping farmers identify, investigate and evaluate opportunities (Montpellier Panel Report 2014). Currently, the entrepreneurship education available is perceived as not fit for the purpose with respect to the needs of Tanzanian farmers (Kaijage & Wheeler 2013). In this theme, two sub-themes emerged namely, the contents of entrepreneurship training and the pedagogy used in entrepreneurship training as explained here under:

• The contents of entrepreneurship training

The findings from the focus group discussion, it came out from most of the respondents that the contents of many entrepreneurship trainings offered to farmers include: simple accounting and business record keeping, marketing and customer care skills, leadership skills, production/processing skills such as better farming process, food processing, cross-cutting issues like HIV-AIDS, gender issues, legal issues, environment etc. as proved from one of the respondents:

"I have attended entrepreneurship training twice. I have learnt how to keep records, caring for customers, how to take care of the farm by knowing the exact time to plant, to weed, and to control pest and things like that...."

The author observed that most of the entrepreneurship contents provided to the farmers base on farm management skills and the providers did not conduct training needs assessment prior to the trainings in order to ascertain for the real needs of farmers for the training, that is, what they really need to learn.

It should be noted that there is a difference between farm business management and entrepreneurship. Farm business management is about better planning, implementation, control and managing risk. Entrepreneurship is about looking forward-identifying opportunities, creating a vision of how the business will grow, innovating and taking risks. A farmer who thinks of the farm as a business that has potential to grow and develop as an entrepreneur (Kahan 2013; Iwu & Nzeako, 2012; King'ori & Theuri, 2016). Care should be taken in adapting entrepreneurship education curricula and skills training in rural areas to particular needs of farmers. This would be an important step in supporting the farmers in becoming entrepreneurs along the agribusiness value chain. Farmers need knowledge in each of the key areas of farm management: planning, implementing and controlling. They also need information about primary production, harvesting, processing, wholesaling and retailing and about input supply, financial services, and transport, packaging, promotion and advisory services.

• The pedagogy used in entrepreneurship training

In addition to the challenges observed in the contents used to train farmers, the issue of pedagogy has to be taken into consideration. The study findings reveal that the current entrepreneurship education provided to farmers is based on business management skills as explained earlier and delivered using traditional teaching methods. When asked how entrepreneurship training was conducted, one respondent said:

"We used to meet with the trainers in the village office area, and the trainer comes to deliver the training by telling us and writing on the paper in front of us".

From the study, it was also found that farmers obtain knowledge in a number of ways. They learn through experience and observation and from written, verbal or visual information. Some of their knowledge has been

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handed down from their parents and grandparents. Many farmers also obtain their knowledge from listening to and learning from other farmers, observing how things are done and then practising them. Extension workers are another source of knowledge. Whatever sources they use farmers like most people, learn best through experience and by doing.

The findings of this study is inline with Kaijage & Wheeler(2013) who also found that the current entrepreneurship education provided to farmers is based on business management skills and delivered using traditional teaching methods. Consequently, farmers need more than business management skills; farmers must be innovative and creative to satisfy the need of entrepreneurial novelty–the art. Yet, they also need to be competent and multifunctional managers–the science (*ibid.*). This will require a decisive shift from the traditional approach and their pedagogical models.

The finding of this study is also in line with findings by Carrier (2007) and Hindle (2007) who found that, in the field of entrepreneurship education, there is a wide range of pedagogical methods, approaches and modalities which have been tested and used. Those include the use of real-life or virtual cases, role-play and problems. They can be used, for example, through elaboration or evaluation of business plans, the development of a new venture creation project or behavioural exercises and computer simulations. It might also involve traditional or interactive approaches, such as interviews with farmers or guidance. Those approaches can be supported by oral or multimedia communication tools such as videos or web sites. Indeed in entrepreneurship, as in almost all disciplines, the growing use of ICT (Information and Communication Technologies) tends to develop and offer to a certain extent more autonomous ways of learning outside of the classroom and far from the more traditional and dependent methods of learning.

Lonappan & Devaraj (2011) classify the teaching methods into the following categories: case study, group discussion, individual presentation, individual written report, group project, formal lectures, guest speakers, action learning, seminar, web-based learning, and video recorded. Teaching methods are categorized into two groups, which are termed "traditional methods" (comprising normal lectures) and "innovative methods" (which are more action-based), also known as "passive methods" and "active methods", respectively (Mwasalwiba 2010). In this study the concentration was on active teaching methods because farmers are practising entrepreneurs who need action-based learning.

Successful learning methodologies were described as "learning by doing", "an active and dynamic methodology" by farmers and trainers. These findings also reinforce the tenet in much of the entrepreneurship education literature that entrepreneurship education is particularly successful when it employs a more hands-on experiential learning approach (Solomon *et al.* 2002, Kuratko, 2005, European Commission 2003, Martins *et al.* 2013, Weaver 1999). Also in farmers' views, those methodologies were the best methodologies to motivate them to develop their own skills.

Theme 3: How ICT can transform the way entrepreneurship education was delivered to farmers and speed up economic development

Skills are central to improve employability and livelihood opportunities, reduce poverty, enhance productivity, and promote environmentally sustainable development. Coordinated efforts are needed to develop an integrated approach that improves access to relevant, good quality education and training to all rural women and men (Kahan, 2013).

The economy is entering a world governed by a new technological paradigm. This ICT revolution makes it increasingly necessary to distinguish between information and knowledge (Wennekers, 1997). On one hand, information will become more cheaply and readily available. In some cases this will weaken existing entrepreneurial edges. On the other hand information has to be selected, upgraded and combined with other information in order to become useful for economic application.

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• The use of ICT in entrepreneurship training

The study also found that healthy and profitable businesses need a wide range of information. Information and its communication is an important aspect of knowledge creation and accumulation (Kahan, 2013). Farmers need knowledge in each of the key areas of farm management: planning, implementing and controlling. They need information about their direct functions - primary production, harvesting, processing, wholesaling and retailing. They also need information about their support functions - input supply, financial services, and transport, packaging, promoting and advisory services.

Where Information Technology is available and accessible, it is a very powerful way for trainers to educate and inform farmers about new ideas, technologies and other information. Physical distances and the lack of transportation facilities often limit the ability of trainers to share information with farmers. Mobile phones, tablets, and computer-based systems can be used to overcome these physical barriers.

Through the use of internet, farmers can use mobile phone for short messages and voice communication (Mutisya, 2016). Online social networks like whatsApp, facebook, twitter, YouTube etc. are being used by farmers for various purposes including social and business (Kamau, 2013). The use of internet and social media have multiplied information and discussion forums, hence provide the potential for acquisition of new markets, knowledge and skills, that is, entrepreneurship training as confirmed by one of the respondents:

"Thanks to the technology, I have learnt the whole process of how to plant tomatoes, starting from farm preparations, which are good seeds, how to control pests, harvesting and its markets through the internet. I use my phone to communicate and learn from the extension and other farmers".

Another respondent said that "I always listen from the radio and learn when, how and which pesticide to use in controlling pests. Also I learn the good seeds to use in order to harvest good oranges".

"I watched the television where I learnt how to take care of my farm produce in order to maintain its quality before reaching the customer. Sometimes I get help and lessons on farm management issues from the extension officer by phone". Confessed one of the respondents

"We have a whatsApp group where a trainer teaches us various production and marketing issues concerning our farm produce aammmhh.... I also use YouTube to learn most of the things concerning productive cassava farming. Thanks to the technology for entrepreneurship education being made easy to access".

The above statements confirm that farmers can acquire entrepreneurship training using ICT tools. Internet, mobile phone, television, radio, posters, leaflets and learning groups can help farmers to access the entrepreneurship training they need in order to be successful entrepreneurs (Mutisya, 2016; Kahan2013).

• How ICT delivered entrepreneurship training can be used in transforming farmers' economy

Farmers need to be skilled at finding and using opportunities to expand their farming businesses. They also need to be efficient in utilising resources, and in transporting and marketing produce. New technologies are needed in order to adapt to a changing economy and a changing market. Farmers are not only consumers and users of these technologies but should also be active participants in designing, testing, adapting and introducing them to the farming system. ICT delivered entrepreneurship education can play a major role in helping farmers identify, investigate and evaluate opportunities hence improve their economy.

Through ICT delivered entrepreneurship training farmers can acquire the right knowledge and skills at the right time, at the right place and at a minimum cost. ICT delivered entrepreneurship training can increase accessibility and affordability of entrepreneurial skills and knowledge to farmers, reduce training cost and save time.

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Increase Accessibility and Affordability of Entrepreneurial Skills and Knowledge to Farmers

Access to training is the main constraint among rural people in developing countries (Montpellier Report, 2014). ICT delivered entrepreneurship training will increase the access of the training to farmers as explained by one of the respondents:

"The access to training these days has increased for example using my mobile phone, radio and television; I can acquire the training without wasting time and money. Before the coming of the technology, we used to suffer a lot waiting for extension officers to assist in various farming problems and you know ... hehehe..their availability".

"I do not have the skills on farm and business management but in our village the availability of the trainers is a serious problem. Receiving training through ICT facilities helped us a lot to acquire some knowledge and skills". Said one of the respondents

"The skills and knowledge acquired through ICT delivered trainings has helped me to improve my productivity and enhance my income. To me the government should invest in ICT delivered entrepreneurship trainings so us to accelerate and transform farmers' economy. If the country wants to become industrialized nation, it has to invest much in farmers' skills". Confessed another respondent

It is evident that without skills farmers in rural areas would not be able to improve production and enhance income. Therefore increased access through ICT delivered entrepreneurship training will equip farmers with skills and knowledge which will automatically lead to improve productivity and enhance farmers' economy.

Save Time and Cost

The time saved in attending the training used traditional method will be used in other activities and enhance farmers' economy as explained by one of the respondent:

"Eeerrr... frankly, I thank God for the introduction of these technologies. Learning through ICT has helped me to transform my economy. I have saved time and money which I used to pay for transport to the training venue".

"On my side I was not able to attend any training due to my tight schedule and responsibilities. There are many challenges which impede my attendance to training including distance to the training venue and the cost for the fares to and from the training. These days, all the trainings are available in my mobile phone, radio and television".

The findings reveal that ICT delivered entrepreneurship training can be used in transforming farmers' economy through increased access, saving time and money which can be used in other economic activities yielding more farmers' income. The entrepreneurial knowledge and skills easily acquired through ICT delivered entrepreneurship training can help farmers to improve their farm business and enhance their economy.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This paper has successfully x-rayed the concept of transforming Tanzanian farmers' economy in relation to entrepreneurship education and economic development. The term entrepreneurship education/training was examined in relation with enhancing the productivity of the country, and this in turn leads to the development of the nation. The author examined the concept of entrepreneurship education including its contents and pedagogy. The contribution of entrepreneurship education in transforming the farmers and bringing about economic development in Tanzania was examined also. According to the findings, it is concludes that:

• The provision of entrepreneurship training has contributed to foster entrepreneurial mind-sets, skills and behaviours among farmers; to empower farmers with entrepreneurial competencies and skills; to develop

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innovations in farmers; and, to increase the awareness and understanding of the process of managing farm business

- The contents of entrepreneurship training are based on farm and business management without considering the training needs of farmers. The entrepreneurship training is delivered using traditional methods.
- The use of ICT tools is the solution to farmers' access to entrepreneurship training. ICT delivered entrepreneurship training enhances farmers' economy by solving the weaknesses of using traditional methods including cost, flexibility, reach and quality. Therefore to accelerate and transform Tanzania farmers' economy, it is necessary to promote ICT delivered entrepreneurship education/training.

Recommendations

It is obvious that economic development cannot take place if there is no proper implementation of entrepreneurship education programme. Based on this, the following recommendations are therefore necessary in ensuring economic development of farmers through e-entrepreneurship education:

- Due to the contribution of entrepreneurship training, the Tanzanian government should harness and enable the entrepreneurial spirit and skills of farmers through strong political leadership and appropriate enabling environments by ensuring availability of entrepreneurship education policy and good infrastructure. This must be evidenced through the development of farm business schools, business clinics and entrepreneurship training for farmers. The Tanzanian government should facilitate access to training materials, toolkits and modern equipment and technology, and invest in trainer training, as well as better remuneration for trainers.
- Outreach measures such as mobile or distance learning through information and communication technologies (ICTs) should be considered. The latter requires, in particular, expanding access to mobile phones, computers and education and training hardware and software, and investing in the ICT training of farmers and trainers. There should be adequate funding and financing of the e-entrepreneurship training programme in order for the objectives and goals of the programmes to be realized;
- Farmers should be encouraged to embrace entrepreneurship education or training in order for them to become self-reliant and wealth creators.

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