

ASSESSMENT OF ENTREPRENEURSHIP EDUCATION TRENDS IN THE FORMAL EDUCATION SYSTEM IN TANZANIA

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ABSTRACT

This article aims to assess the trend of entrepreneurial education within the formal education system through reflecting on the link between the national strategies and practice in Tanzanian formal education curricular. The article adopted the Fayolle's teaching model for entrepreneurship education, focusing on the ontological and educational levels. Methodologically, the Tanzanian framework for entrepreneurship training has been analysed along with some national policies and curricular. Theoretical and empirical literature has also been systematically reviewed. Analysis of reviewed documents indicates a variation in the terms of the extent in which entrepreneurial education has been incorporated in different levels and kinds of formal education system. While there are noticeable initiatives to promote entrepreneurial education in higher education, primary and secondary levels entrepreneurial education strategies have been minimal in practice. The article concludes that the Tanzanian framework for entrepreneurship education is a useful guide but it has not been reflected in the holistic formal education curricula. However, there are noticeable strategies in higher education, vocational education and teacher training institutions. The article is limited in terms of scope of empirical cases in different levels of education.

Keywords: Entrepreneurship education, formal education system, Tanzania

INTRODUCTION

Over decades in different countries, education has remained an important instrument for socio-economic and political development as it enhances skills, knowledge and values among people (Afe, 2014). There are different systems and structures in which education is provided in different countries. In many instances, pre-primary education starts before children reach five years; it includes knowledge provided in kindergarten or from parents. Primary education starts from 5 to 7 years followed by secondary education which is a bridge to higher education (UNESCO, 2013). In Tanzania and in the context of this article, the formal education system refers to knowledge and skills provided within premises of pre-primary school, primary school, secondary school, vocational and technical colleges, middle level colleges and universities. The current system is 1+6+4+2+3+ (URT, 2014). The basic education compulsory for every citizen is 10 years (from standard one to form four) (URT, 2016).

Entrepreneurship education is a form of education which enables human beings to be responsive to individual and national needs and aspirations (Afe, 2014). In the context of this article, entrepreneurship education and entrepreneurial education have been used interchangeably. The rationale for this assessment is based on the argument that entrepreneurial education is believed to be a solution to quality education and problems facing youth in Sub-Saharan Africa (Weiss, 2015) and that development of entrepreneurial skills and attitude in Tanzania and Africa as a whole is associated to socio-economic development through different forms of employment including business creation (Johnson *et al*, 2015). Having many interpretations, policy initiatives in different countries have been strategising the benefits of entrepreneurship to various avenues due to studies which have shown that entrepreneurship can be taught (Kuratko, 2005), and the teaching of entrepreneurship within institutions can be traced back three decades (Gibb & Hannon, 2006), where some initial business programmes were introduced at Harvard Business School (Katz, 2003).

However, it should be noted that some other perspectives of entrepreneurship than the argument that "it cannot be taught" are not ignored because the concept of entrepreneurship means many things to different people

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(Sexton, 1982). Based on the opinion that entrepreneurship can be taught, the purpose of entrepreneurial education is to develop individuals with entrepreneurial capacities and attitudes (Gibb, 2011). This article therefore assumes that these entrepreneurial tendencies can be instilled from pre-primary to higher education through relevant pedagogical and learning contexts (Arminda *et al.*, 2011).

In Tanzania, entrepreneurial education ideas are believed to have a long history in the education system since the times of “*Education for Self-Reliance Philosophy*” way back in 1967, where different levels of the education system were expected to produce young people who were ready to venture into productive activities (Nyerere, 1973). The philosophy was extended to the 1995 Education and Training Policy which gave the roadmap on how education should be conceived as a process which should enable a human being to utilise his or her full potentials using available resources and being able to cope with dynamic needs in the society and contribute to socio-economic development (URT, 1995). Entrepreneurial education has also been emphasised in the Technical Education Policy (URT, 1996), Higher Education Policy (URT, 1999), University of Dar es Salaam Entrepreneurship Development Policy (UDSM, 2001) and the current Education and Training Policy (URT, 2014). Apart from the national educational policies, there have been other sector policies such as the first National Small and Medium Enterprises Development Policy (URT, 2002), the National Youth Development Policy (1996), the National Employment Policy (URT, 2008) and the National Economic Empowerment Policy (URT, 2004). All these policies have been in line with the Tanzania Development Vision 2025 and had supportive goals and strategies relevant for entrepreneurial education development in Tanzania. To harmonise the strategies and contents of entrepreneurial education, the Tanzanian National Economic Empowerment Council in collaboration with the Tanzania Commission for Universities (TCU), International Labour Organisation (ILO), Tanzania Institute of Education (TIE), National Council for Technical Education (NACTE) and Vocational Education and Training Authority (VETA), prepared a National Entrepreneurship Training Framework to provide didactic guidelines for entrepreneurship training in Tanzania (URT, 2013). However the implementation of policy directives and of the framework within educational institutions is not well documented.

Apart from directives from some national policies, various donor funded projects have been promoting entrepreneurship education in Tanzania. These include United Nations National Industrial Development Organisation (UNIDO), Netherlands Initiative for Capacity Building in Higher Education (NICHE), Norwegian Agency for Development (NORAD), to mention some. There have been initiatives also from agencies such as Know About Business (KAB) by ILO to support entrepreneurship among the youth and women in Tanzania (ILO, 2009). Through these projects and initiatives in the form of training and provision of entrepreneurial education, modules have been developed for teachers, youths and instructors.

Again, following the global trend of entrepreneurial education research, some national policy directives and implementation of entrepreneurial projects in Tanzania, several studies related to entrepreneurial education in various levels of education have been done in Tanzania. These include entrepreneurial education in vocational and technical education institutions (Lyamba, 2016; Burchard, 2011; Nkirina, 2010; Jota, 2010; Olomi & Sinyamule, 2007); higher education entrepreneurial education (Mwasalwiba, 2017; Kalimasi, 2016; Fulgence, 2015; Wakee, Hoestenberghé & Mwasalwiba, 2017; Dahles & Wakee, 2012; Mwasalwiba, 2010; Kambi, 2011; Sabokwigina, 2008; Mufa, 2005) and the teaching and learning of entrepreneurial skills in some secondary schools (Semjaila, 2017; Weiss, 2016). Despite the existing studies on entrepreneurial education, there is little evidence of the holistic status of entrepreneurial education in different levels of education compared with the strategies, projects and the national framework established so far. Therefore, the main objective of this article is to assess the implementation of national and international strategies in support of entrepreneurial education in the Tanzania’s curricula. Specifically, the article is tailored to examine entrepreneurship education models and frameworks that exist in literature, identify strategies that have been employed in mainstreaming entrepreneurial education in different levels and finally finding out empirical entrepreneurship education gaps in different education levels.

THEORETICAL BACKGROUND

In this section various concepts, models and theories related to entrepreneurial education are explored and the model that has been adopted in this article is identified. Due to the ambiguity and variation in the definition of entrepreneurship as a concept, this article adopts the broad based definition which ascribes entrepreneurship to knowledge, skills, competences and mindsets that school leavers and graduates are expected to acquire to enable them unleash and exploit available opportunities around employment and self-employment avenues (Kalimasi & Herman, 2016). This broad based definition is also in line with the broad definition of entrepreneurship by the *Entrepreneurship Competence Framework* which holds different types of entrepreneurship, such as intrapreneurship, social entrepreneurship, green entrepreneurship and digital entrepreneurship which can be

applied to different individuals, and organisations (Bacigalupo *et al.*, 2016), and in this case, different education levels. Thus 'entrepreneurship education' will be used synonymously with 'entrepreneurial education' to mean engendering entrepreneurial mindset, knowledge and competences to people so as to influence career prospects at the individual level and entire economy of the community (Bratianu & Stanciu, 2010). In the context of this article, it is expected that students from Primary Schools to Universities are expected to be oriented to entrepreneurial mindset and skill relevant for their future life. Therefore examining quality teaching and learning models in different education levels and context as well as entrepreneurial intentions remain imperative.

Dunkin and Biddle's model (1974) is one among the common models for classroom teaching which explains the effects of presage and context variables such as teachers characteristics and students experiences respectively; to the actual teaching process and later the effects of the process to the output (Dunkin & Biddle, 1974). This model can be partly relevant to the implementation process of entrepreneurial education because having teaching materials alone without considering teachers characteristics may not bear the expected results. The Dunkin and Biddle's model has been adopted to explain the quality teaching in higher education in terms of a constructive alignment framework which suggests that effective learning can only occur where all important aspects of teaching and learning are taken into consideration (Biggs, 2002). This implies that for entrepreneurial education to be part of higher education institution's strategic plan there is a need for faculty members to own the process in their cross disciplinary research agenda (Gibb & Hannon, 2006). Institutional strategy can flow from top management to departments or vice versa where departments can also influence top management decisions (Biggs, 1993). To some extent, the classroom teaching models have been applied to explain higher education quality teaching more than lower levels of education.

Apart from the classroom teaching models, entrepreneurial education has been theorised using intentional theories such as the Theory of Entrepreneurial Event (Shapero & Sokol, 1982) and the Theory of Planned Behaviour (Ajzen, 1985). Shapero's model identifies factors such as propensity to act, perceived feasibility and perceived desirability influenced by peers, culture and many other education experiences (Shapero & Sokol, 1982). This particular model has been used to determine intentions of people; and in this case, learners towards entrepreneurship intentions (Krueger *et al.*, 2000; Krueger, 1993). Some studies have shown that entrepreneurship intention is high when both perceived feasibility and perceived desirability are high (Krueger, 1993; Fitzsimmons & Douglas, 2011). However, intentional models have not been used widely to describe entrepreneurial intentions at the institutional context.

Apart from the intentional models, there are more relevant models that explain entrepreneurship education teaching. This is the Teaching Model Framework for Entrepreneurship Education (Fayolle & Gailly, 2006) which has been adopted in this article. The model focuses on the ontological and educational level expected to determine the audiences, the contents, the pedagogies and assessment (Fayolle & Gailly, 2006:752). This model has been used to discuss various types of entrepreneurship teaching programmes. The assumption of the framework is that different objectives can be attained using different and relevant methods to relevant audience and that having a framework can be a solution to understand various aspects for a successful entrepreneurial education programme. In Tanzania for example, there is a National Entrepreneurship Training Framework (NETF) which has been developed as a guide to the teaching and learning of entrepreneurship in different levels of education (URT, 2013). However, its implementation in different levels is uncertain and thus it needs further research which partly has been addressed in this article.

At the ontological level, the National Entrepreneurship Training Framework (NETF) identified the roles of facilitators to develop the required competences. However, there are misconceptions of what skills embodied in various subjects mean in the context of entrepreneurship because entrepreneurship itself as a concept is not clear to some people (Fayolle & Gailly, 2008). At the educational level, the NETF identified the objectives, competences, knowledge and skills required to different levels. There are also teaching and assessment methods outlined. Therefore the teaching model is used as an assessment model to reflect the entrepreneurial contents embodied in curricula of various educational levels and the approaches used to develop the competences in line with NETF. Contrary to other entrepreneurial intention models, classroom teaching models described above, Fayolle and Gailly's model of entrepreneurship teaching is perceived to be more relevant in different education levels. In addition, some international entrepreneurial assessment models such as Global Entrepreneurship Monitor (Reynolds *et al.*, 2005) and Global Entrepreneurship Index (Acs, Szerb & Autio, 2016), have been widely used at the national level and thus may not be very relevant to assess institutional level entrepreneurship education. The entrepreneurship teaching model can be used to reflect different education levels as stated above and can be employed to assess broader perspectives of entrepreneurial education (Fayolle & Gailly, 2008).

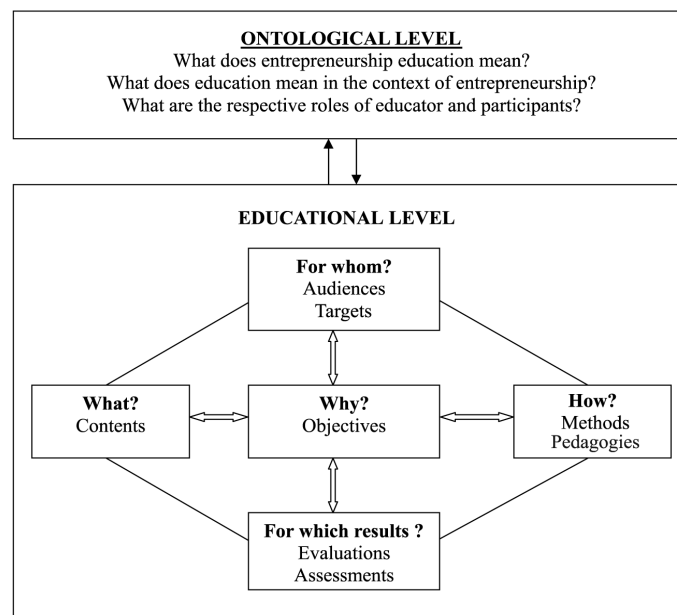


Figure 1: Teaching Model Framework for Entrepreneurship Education

Source: Fayolle & Gailly (2008:572)

METHODOLOGY

This article is based on desk research. Theoretically, the trend has been assessed through the analysis of national and international entrepreneurship training framework, regional frameworks, national policies and strategies for implementation of entrepreneurial education. The article also encompassed a review of empirical and theoretical literature based on: perceived understanding of 'entrepreneurial education, what constitutes entrepreneurial education, how entrepreneurial education is integrated into different education levels, and research gaps in different levels of education. To a great extent curriculum documents for all subjects in primary and secondary education have been reviewed and to some extent some selected tertiary education courses.

ANALYSIS OF FINDINGS FROM LITERATURE

National and International Policies, Frameworks and Strategies

This section describes and analyses the findings of the desk research that has been done through discussing the international and national framework for entrepreneurial training as well as directives of educational and other sector policies towards promoting entrepreneurial education. Some donor oriented projects which have been promoting entrepreneurship are also explained to show various initiatives that have been taken so far in various levels of Tanzania's formal education system. The analysis compares the directives of policies and frameworks and what takes place in practice in various education levels and the available literature in different countries.

To begin with, the European Union developed the Entrepreneurship Competence Framework, known as *EntreComp* in 2016 following contradiction of what should constitute entrepreneurial competences among member states. The purpose of the framework was to harmonise the understanding of entrepreneurship competences by outlining a list of 15 competences some of which are: creativity, financial literacy, learning through experience and spotting opportunities (Bacigalupo *et al.* 2016:11). These competences are explained in different initiatives including curricular reform in formal and non-formal education systems and institutions (Bacigalupo *et al.*, 2016).

In Tanzania, different strategies and frameworks have been developed to guide entrepreneurship education and training in different levels of formal education and non-formal education. The framework is known as the National Entrepreneurship Training Framework (NETF). NETF was prepared by the National Economic Empowerment Council (NEEC) in collaboration with Tanzania Institute of Education (TIE), Tanzania Commission for Universities (TCU), National Council for Technical Education (NACTE), Vocational Education Authority of Tanzania (VETA) and International Labour Organisation (ILO) (URT, 2013). NETF provides guidance on objectives and competences of entrepreneurial education in different levels of formal and non-formal education as well as the teaching and assessment strategies to be used. In formal education it guides pre-primary, primary, secondary and tertiary education up to first degree level. In the non-formal it guides business start-up, consolidation and social entrepreneurship. The framework highlights the objectives of

entrepreneurial education to be innovatively exploit opportunities, motivated to make a difference and establish business using available resources. Thus there are two groups of competences: enterprising tendencies as well as business creation and development (URT, 2013). It has been evident that NETF is a well-developed road map but there is scanty research on its integration to the formal education curriculum.

Apart from NETF, there are some national policies which have been promoting entrepreneurship development. These include the Education and Training Policy (1995) which stipulated that education should prepare learners for the world of work (URT, 1995). There is also the National Higher Education Policy of 1999 of the then Ministry of Science and Technology which obliged higher education institutions to produce graduates who could cope with the changing demands of the labour market through entrepreneurship (URT, 1999). Apart from these education policies, there is the SME Policy, 2003 which came with self-employment ideas focusing on venture creation. While the National Economic Empowerment Policy, 2004 came up with the idea of developing broad-based E-skills based on the framework (URT, 2004), the National Employment Policy, 2008 highlighted the needs of employability skills among graduates and proposed close links between the government and education institutions from time to time and the recent Education and Training policy which promotes education for self-reliance philosophy (URT, 2014).

The directives and strategies in the mentioned policies indicate commitment of the government to promote entrepreneurship education; however, its feasibility and reliability into cross disciplinary structures within schools and colleges are still minimal (Kalimasi & Herman, 2016). In some policies, self-employment is featured as the ultimate goal of entrepreneurship education and thus distances itself from subjects, courses and academic programmes which are employment-oriented such as local government administration.

In collaboration with some national policies, some donor-oriented projects have played a great role in promoting entrepreneurship education in different levels of education. The Government of Tanzania through the Ministry of Education and Tanzania Institute of Education (TIE) has implemented a project on *Enhancing Youth Employability and Entrepreneurship*. Through this project some syllabi, teaching materials and manuals were developed to be piloted into some secondary schools and diploma teachers colleges in three districts in Tanzania (TIE, 2011). Again TIE in collaboration with Netherlands Initiatives for Capacity Building in Higher Education (NICHE) developed initiatives to equip teachers and students with labour market skills (TIE, 2013). Donors through these projects have also built some capacity by training some lecturers in some universities through training of trainers and postgraduate studies (Kilasi, 2013). Apart from the two mentioned projects, there was also EUVETA², a programme that aimed at integrating entrepreneurship in the curricula of Vocational Education and Training Institutions in Tanzania. It ran from 2005 to 2008 and was financed by NUFFIC from the Netherlands, and implemented by experts from the Vocational, Education and Training Authority (VETA); Morogoro Vocational Instructors Training College (MVTTC), in collaboration with the FACET BV a Dutch consultancy firm; and the Turin-based ILO/ITC. This programme was divided into two phases: Entrepreneurship Education and Training (EET) I, where some entrepreneurship education curriculum was developed and piloted to some Vocational Education and Training (VET) colleges; and (EET) II, which was implemented in all VET colleges in Tanzania, in 2010. However studies have indicated that VET graduates still lack entrepreneurial skills (Nkirina, 2010; Namwaka, 2016). In addition, agencies such as the International Labour Organisation (ILO) have been supporting entrepreneurial education through various projects such as Know About Business (KAB) which outlined some modules and relevant teaching methods with the aim of promoting enterprising tendencies among the youth (ILO, 2009). The aim of the programme was to impart entrepreneurial knowledge and skills to young people to help them develop enterprising mind-sets and attitudes (ILO, 2009). KAB modules were utilised by Morogoro Vocational Teacher Training College in 2005 by mainstreaming it in the instructors' curricula and later about 155 vocational facilitators were trained in the year 2006 (ILO, 2009).

Entrepreneurial Education in Pre-primary, Primary and Secondary Schools

Based on the age factor, pre-primary school kids' behaviours are perceived to be easily shaped by various experiences. The objective of entrepreneurship education at pre-primary level is to develop entrepreneurial values, attitudes and orienting children towards entrepreneurial career (URT, 2013). The competences to be built include among others, reasoning, problem solving, and creativity, use of technology, active learning and interest in entrepreneurial career. To build these skills and attitude, teachers are advised to use learner-centred and problem-based activities and rewards, targeted at developing the intended competencies (*ibid*). A checklist of observable behaviours can be used for assessment. In terms of qualification of teachers, it is expected that they

² EUVETA - 'EU' stands for *Elimu ya Ujasiliamali* (in Kiswahili), which means entrepreneurship education and the acronym 'VETA' stands for Vocational Education and Training Authority.

should have training on entrepreneurship from a recognised institution (URT). Despite the argument that entrepreneurial skill can be acquired more easily earlier in life (Huber *et al.*, 2012), there is scanty research evidence on the extent in which entrepreneurship education is integrated in pre-primary schools in Tanzania.

Just as it is the case with pre-primary schools, entrepreneurship education to primary and secondary schools aims to instil entrepreneurial culture and positive motivation towards entrepreneurial career on the one hand, and on the other to get exposed to foundations of entrepreneurial knowledge which can help students to understand and practice higher level entrepreneurial knowledge (URT, 2013). However, more skills, knowledge and attitudes are expected to be attained (URT, 2013:12). In terms of strategies and methods, the national framework stipulates that there should be topics or courses introduced to students to develop the competences outlined. Teachers are also expected to guide students through group discussions, study visits, and guest speeches (URT, 2013:13). As part of assessment, it is expected that teachers in different subjects such as Geography or English should make students conduct projects or debates and teachers are also expected to be enterprising role models. Schools are also expected to bring in successful entrepreneurs to speak to and motivate students (URT, 2013).

Contrary to the philosophy of education for self-reliance as well as objectives and strategies outlined in the national framework for entrepreneurship training, a review of Tanzanian primary education curricula indicates limited feasibility of entrepreneurship education. The primary education syllabi have identified competences required from specific subjects and entrepreneurship is only integrated as part of *stadi za kazi*³ subject and as a cross-cutting issue to be done outside the classroom. However, when it is compared to other subjects, *stadi za kazi* has fewer hours allotted to it on the syllabus, as indicated in Table 1. In addition, based on the current curriculum, the subject is not taught in pre-primary to class four; it is only taught in class V and VI (URT, 2016). Issues such as marketing skills, financial skills and readiness to innovation are introduced to students. The broad topics of the subject include photographing, hair plaiting, embroidery, music, agriculture, cookery, small business and theatre arts (URT, 2005). However, there is little evidence to prove that these trades are effectively taught and well connected to entrepreneurial attitude to unleash entrepreneurial opportunities embedded in them. This is contrary to what is happening in countries like Scotland where every primary school pupil from primary Level 1 to senior Level 6 has an entitlement to entrepreneurial activity annually in the course of their studies (Afe, 2014).

Table 1: Learning Time and Number of Periods per Week

LEARNING TIME AND NUMBER OF PERIODS PER WEEK							
		Hours	Minutes	Hours	Minutes	Number of periods	
SN	Subject	Standard III & IV		Standard V- VI		Std III-IV	Std V-VI
1	Kiswahili	3	20	3	20	5	5
2	English	4	40	4	00	7	6
3	Maths	4	00	3	20	6	5
4	Science and Technology	3	20	3	20	5	5
5	Social Studies	2	00	2	20	3	3
6	Civics and Ethics	3	20	3	00	5	5
7	Vocational Skills	-	-	1	20	-	2
8	Religion	0	40	0	40	1	1
		21:20		21:20		32	32
ACTIVITIES OUTSIDE CLASSROOM							
9	Subject clubs	1:20		1:20		2	2
10	Arts and Sports education	1:20		1:20		2	2
11	Self-Reliance activities	0:40		0:40		1	1

³ *Stadi za kazi* is Kiswahili for 'work skills'

12	Independent study/library	0:40	0:40	1	1
	Total learning time outside classroom	4:00	4:00	6	6
	Total learning time and number of periods per week	25:20	25:20	38	38

Source: URT, 2016:29

With regard to secondary education, among the aims as per the curricula is to prepare students to join the world of work (URT, 2005). This is in line with the objectives of entrepreneurship education stipulated in the national framework – to build an entrepreneurial character and motivation towards the entrepreneurial career (URT, 2013). The review of secondary education curricula indicates that entrepreneurship is embedded differently in different subjects and different levels. At ordinary level secondary education, there are some topics such as life skills and the role of private sector in the economy. There are also important skills such as leadership, confidence and teamwork in civics subject (URT, 2005). However, there are challenges in secondary education brought about by increasing enrolment which does not match with available resources. Research indicates that this mismatch of resources is the main cause of ill prepared graduates and even failure to proceed to further studies (Makombe *et al.*, 2010). Some good examples can be seen in countries such as England and Wales where entrepreneurship education is integrated at stage 4 (14-16 years) of their education system as a compulsory component of pupils curricula (Afe, 2014).

At advanced level of education, there are some components of entrepreneurship as a unit in the *factors of production* and *payment of entrepreneur* subtopics. Within these subtopics there is the concept of an ‘entrepreneur’ and within this there are roles of profit and supply of entrepreneurs (URT, 2012). However, there are other topics such as employment, unemployment, budget, marketing, financial institutions and international trade (*ibid*). These topics are essential to business oriented entrepreneurship or entrepreneurial career which is one aspect of the NETF objectives of entrepreneurship education in secondary schools. The other is ‘building an entrepreneurial character’ (URT, 2013). Apart from Economics, there are also some topics in General Studies such as ‘life skills’ with ‘self-reliance and entrepreneurship’ as a sub-topic. In this topic, students are oriented to entrepreneurial self-reliance skills and given the opportunity to discuss reasons for failure of Tanzania’s youths to develop entrepreneurial abilities (URT, 2012). There are also other topics such as trade, marketing, money and advertising taught during a Commerce class (URT, 2012) as well as financial statements and stock valuation in Accounting subject which are important skills in business-oriented entrepreneurship (URT, 2012). Having entrepreneurial-oriented subtopics notwithstanding, research indicates that there is some reluctance by some heads of school to integrate entrepreneurial education in their teaching. The main reason mentioned was that the curriculum was too tight to accommodate more subjects (Semjaila, 2017). Entrepreneurial education is therefore considered an *add-on* course or subject into the curriculum. It is also partly lack of awareness of NETF among teachers and other education offices as revealed in a recent research (Semjaila, 2017).

The proposed teaching strategies include, for example storytelling, presentation, case studies, and essay writing (URT, 2013). More research is needed to explore the feasibility of these methods in Tanzanian schools today. The same case study conducted in Kigoma Region indicated that different stakeholders including teachers, students, educational officers have different perspectives on the concept ‘entrepreneurship’. Some associated the concept with income generation activities; some perceived it as establishing business and some as production of something useful to the community (Semjaila, 2017). Different perspectives were also revealed from research done in selected schools in Njombe Region where some teachers defined entrepreneurship as risk taking and some inborn ability which, in part, implies difficulties of integrating the concept into the education system (Weiss, 2015).

Entrepreneurial Education after Secondary School

This section describes the status of entrepreneurship education in vocational teacher training, non-vocational teacher training especially diploma level, vocational training colleges and higher education. At the teacher training level, the main aim of entrepreneurial education is to produce facilitators who will then transmit their knowledge into various levels and forms of education including formal and non-formal (URT, 2013). Some of the learning outcomes for teacher trainees included to demonstrate entrepreneurial competences including business ideas, teach and assess the same and guide learners towards positive motivation towards business

creation and broad-based entrepreneurial processes (*ibid*). Some of the expected competences, teaching strategies and assessment have been outlined in the NETF (URT, 2013:16). Qualifications of teachers who can effectively deliver the expected competences have also been outlined (URT, 2013:19).

To a great extent the current integration of entrepreneurship education in Vocational Teacher Training has been facilitated by donor-funded projects mainly Netherlands University Foundations for International Cooperation (NUFFIC) in collaboration with experts available at the only Vocational Teacher Training College in Tanzania (MVTTC) and VETA as initially described in some earlier sections of this article. The donor-funded projects did support development of Entrepreneurship Education Training (EET I and II) manuals, to be taught in blocks to vocational teacher trainees. A review of EET I and II manuals indicates that vocational teacher trainees go through Block 1 which constitutes an intensive two-week programme of theory and practice of innovative business plan, then one more block for one week which includes a three-day class and 2 days of practical training (VETA, 2007). This package is different from the package taught to vocational training college students where module one is also taught in blocks for year one of study and module two is also taught in blocks in the second year of study (*ibid*). Comparing the objectives and teaching approaches of entrepreneurial education in teacher training as per NETF and the objectives of EET modules taught to vocational teacher trainees, there is coherence between the two. This indicates a clear match between NETF and EET modules in terms of broad-based entrepreneurship education which includes entrepreneurial tendencies and behaviour, as well as entrepreneurship as a career option. Table 2 shows the objectives of the Entrepreneurship Education Training Programme and its empowerment to teachers, following NETF.

Table 2: Empowering Teachers through Entrepreneurial Education

Main objectives of the EET programme	EE Empowerment of teachers through EE (URT, 2013)
<ul style="list-style-type: none"> • To unleash and develop an entrepreneurial attitude • To create awareness of entrepreneurship as an alternative career option (other than wage employment) • Unleash and develop entrepreneurial attitudes amongst VTC-trainees • Create awareness of entrepreneurship as an alternative career option • Develop and improve business skills in order to be able to start a business after graduation. 	<ul style="list-style-type: none"> • Demonstrate entrepreneurial competencies and hence become role models to learners • Effectively facilitate and assess development of enterprising tendencies • Guide learners to identify and relate with career and business opportunities in their mainstream subjects • Develop a variety of tools to facilitate and assess development of enterprising tendencies • Create and sustain a learning context that promotes enterprising behaviour in the entire school. <ul style="list-style-type: none"> - Successfully create and manage business • Effectively facilitate and assess the development of business creation and management skills.

Source: Author's construction (2017)

Based on the available entrepreneurial education strategies, approaches and the nature of vocational education itself, it seems there is potential complementarity between VET and EE which could be exploited to support employability to VET graduates. Sandirasegarame *et al.* (2016:116) demonstrates the complementarity between the two as in Table 3.

Table 3: Complementarity between VET and EE

Vocational Education	Entrepreneurship Education
+ Opportunities for students to gain practical, trade-based skills within school, after or as substitute	- Lack of technical skills education
+ Depending on regions established programmes including all levels of education	- Lack of established infrastructure across various levels of education (including general education), newer programmes
- Problems with meeting and adapting to changing market demands	+ Promotes creation of new economic opportunities
- Skills may not be transferable to different job opportunities	+ Entrepreneurial skills transferable to various sectors
- Lack of social acceptance among community about programme validity	+ Entrepreneurs and business people well-received by community

Source: Adopted from Sandirasegarame, Sutermaister & Jennifer (2016:116)

Apart from the explicit match between the two groups of objectives as well as complementarity between VET and EE, existing literature indicates that there are still challenges integrating EE in vocational training institutions including improper training of tutors and lack of appropriate assessment methods (Nkirina, 2010). There is also low motivation among learners due to lack of seed money as capital for their startups after completion of the programme (Lyamba, 2016). However, research has shown that in some cases, VET graduates have interest in starting their own ventures motivated by few chances of getting a job, the need to control their lives and entrepreneurial family background. Entrepreneurial courses and modules were found to be among the insignificant factors for their intention to start their firms (Olomi & Sinyamule, 2007). This calls for more research to assess the trend and impact of entrepreneurship education. In China, vocational and technological skills are given a priority and entrepreneurship education is embedded into the vocational education curricula (Afe, 2014).

As revealed above, the objectives of entrepreneurial education in teacher training are the same to different kinds and level of teacher education. To a great extent, EE at non-vocational diploma teacher education has been integrated through donor funded projects implemented by the TIE-UNIDO partnership programme which conducted sensitisation workshops and developed manuals to be used among secondary schools and teachers colleges from the year 2010. Through TIE project (s) some teaching manuals were also developed and piloted in some schools and teachers colleges in Kinondoni District in Dar es Salaam, Korogwe District in Tanga Region and Morogoro Municipality (TIE, 2011). However, there is scanty evidence in terms of research on the effectiveness and sustainability of the EE materials and sensitisation programmes that have been run in selected schools and teacher education colleges (TIE, 2011).

Some recent research done at educational colleges in Tanzania has shown that there is an EE module in development studies which is mandatory to all students in the first year. About 31.6% of the surveyed education colleges have introduced stand-alone courses at undergraduate level and 68.4% are planning to introduce EE courses. However, the same study indicated there was lack of initial knowledge on EE due to its minimal integration in lower levels of education mainly in primary and secondary schools (Fulgence, 2015). Further research at university level teacher education indicates that the focus of many EE initiatives are business oriented. An example can be taken in the educational benchmark framework from the Inter-University Council of East Africa (IUCEA) which has directed that in any undergraduate course in education, there should be a course named 'entrepreneurship in education'. However, learning outcomes are narrowly focused on business creation (IUCEA, 2016).

Entrepreneurial Education in Tertiary Education

The institutes being referred to here include technical education institutes and universities other than university colleges of education. Directives from NETF indicate that a wide range of courses can be pursued including studies at a major subject level, in entrepreneurship. Graduates based on different levels should be able to develop a formalised enterprise and various competences are expected (URT, 2013). Facilitators are expected to integrate EE, attitudes and competences in the mainstream contents using the more learner-centred approach and problem solving. Part of continuous assessment should be allocated to mainstream entrepreneurial abilities and attitudes. To understand the labour market needs tracer studies should be conducted (URT, 2013). However EE research in higher education has shown that most initiatives have been directed to business schools mainly through establishment of entrepreneurship centres, courses, business incubators and academic programmes in different levels such as Bachelor, Master and PhD in entrepreneurship named differently in different institutions (Kalimasi & Herman, 2016). In addition, contrary to the directives of NETF, studies have shown that the main teaching approach is the lecture method (Mwasalwiba, 2010, Mwasalwiba, Groenewegen & Wakee, 2014, Kaijage & Wheeler, 2013). The main expected outcome of business focus is establishment of ventures to promote entrepreneurial careers among graduates. However, recent studies has shown that although the majority of graduates in Tanzania aspire to be entrepreneurs, their dreams are obstructed by social capital to venture through financial, legal, taxes and cultural environment (Mwasalwiba, Dahles & Wakkee, 2012; Wakee, Hoesenberghe & Mwasalwiba, 2017). Following this trend, more research is needed to find out possible ways to support graduates towards formalised business on the one hand, and on the other to orientate them towards broad-based entrepreneurial attitudes and motivation tailored to all employment options.

DISCUSSION OF FINDINGS

Analyses of existing empirical and theoretical literature indicate that there are explicit international and national strategies to promote entrepreneurship education through the formal education system. There are directives in NETF tailored to different levels of education in terms of competences, approaches and assessment (URT, 2013). However, with reference to what exists in literature and largely in the curricula, the trend of entrepreneurship education varies in different levels and it is less feasible from pre-primary to secondary

education compared to tertiary level (URT, 2012). Even at the tertiary level where most research has been done, there is a mismatch between what is expected by NETF and other national policies and what exists in practice. This is due to the fact that while NETF and other national policies direct education institutions to promote both business-oriented and broad-based entrepreneurial tendencies, the later is not noticeable in Tanzania's education system.

Further analysis also indicates that, to a great extent, there is still conceptual conflict of the term 'entrepreneurship' to different stakeholders. This conceptual conflict of the term has affects EE implementation to the extent that there are some self-reliance activities in primary and secondary schools but not in the name of entrepreneurship. More awareness creation is needed to unleash entrepreneurial potentials in different subjects, courses and disciplines as per the competences outlined by NETF and some other global frameworks such as EntreComp as well as other national policies in Tanzania. However, in all levels of education, regardless of how minimally entrepreneurship education is integrated, the teaching and learning environment, methods and facilities are obstructive. In addition, the conceptual conflict seems to perpetuate the earlier said *add-on* pattern of the entrepreneurship subject, course or topic into the existing list of subjects, and courses in different levels than integrating it across subjects. This challenge of adding an entrepreneurship course into the existing overloaded curriculum was revealed in some sensitisation workshops during execution of EE related projects (TIE, 2011). It is the assumption in this article that it is very likely that teachers who are expected to teach entrepreneurship in different levels have not been oriented to effective entrepreneurship teaching strategies. Some recent examples of initiatives have been undertaken in public universities in Tanzania such as Mzumbe University which has started the so called *Entrepreneurship Camp* where students and the private sector are invited to show case their businesses and some presentations are made to sensitise students to develop entrepreneurial tendencies. However, the initiative is perceived to be a Business School undertaking rather than a university-wide activity. This implies that entrepreneurship as a move towards unleashing available opportunities for career options may still be seen as a language of business schools. There is also inadequate evidence of the adequacy of the EE teaching methods in relation to the contents, audience and institutional constraints in terms of facilities and learning resources (Fayolle, 2013).

CONCLUSION AND IMPLICATIONS

The article has assessed the trend of entrepreneurship education in Tanzania's formal education system by exploring the objectives, expected competences and directives from the NETF, national policies and donor funded project which have been executed in collaboration with Tanzania's government and institutions. It can thus be concluded that the varied policy strategies to promote entrepreneurship education in the Tanzania's formal education system have brought fragmented initiatives at different levels and kinds of education. There is poor policy implementation when strategies are compared with what exists in practice, in Tanzania's curricula from pre-primary to higher education. A lot of research has been done in higher education especially in exploring the objectives, contents and impact of EE towards creation of firms. Therefore, despite the importance of prior knowledge which can be secured from pre-primary and secondary schools, the curricula are not sufficiently integrated with relevant entrepreneurial content and methodology. It is also not clear how the competences stipulated in the national framework and educational policy directives can be integrated into the resource constrained teaching and learning environment in Tanzania on the one hand, and on the other, how EE can be feasible to the boundaries that exist between disciplines and subjects (Dillon, 2008). Previous research has also shown that there is a lot of rote learning within schools and colleges which limits critical thinking and innovation which are important ingredients to entrepreneurial minds (Kalimasi & Herman). This is also contrary to the needs of building entrepreneurial capacities which requires active engagement (Gibb, 2006).

In addition, this article argues that the sustainability of EE in different levels of education is assumed to be uncertain because most of strategies to promote it in Tanzania have been supported by donor funded projects. In most cases, the spill-over effects do not reach the grassroots after the end of the project. Partly, the fragmentation of entrepreneurship development programmes is caused by some frequent changes in administrative structures of educational institutions and authorities. For example, the *Youth Employment and Employability* project by UNIDO which was directed towards diploma teachers colleges and schools was initiated in collaboration with TIE and after sensitisation workshops and development of teaching materials the implementation was left to the National Council for Technical Education (NACTE). It is very likely that some EE initiatives which had been started by TIE to orient diploma teachers could not be executed as planned, by NACTE (Semjaila, 2017).

Lastly, it can also be concluded that if it is effectively implemented in schools and colleges, NETF has still the potential to guide and help the development entrepreneurial capacity in our schools and colleges. The free compulsory education policy recently announced by the government makes EE relevant and timely because

enrolment will certainly increase and expand the labour force skills and innovation which will contribute to Tanzania's vision towards industrialisation.

However, more awareness creation is still needed among teachers, students and other education stakeholders so that they can unleash the potentials of entrepreneurial ideas embodied in different subjects and courses using NETF as a guide and other individual innovations relevant to different contexts. Examples can be taken from countries such as UK, Czech Republic and China. Compared to other policy directives, donor funded projects and directives from any other stakeholders; NETF is a very useful guide for curriculum developers, teachers, students and policy makers. Nonetheless, being a product of a desk research, this article is limited in terms of empirical data that could have been collected from different stakeholders. There might be some opinions from stakeholders which are not yet documented. Therefore more research is needed to understand the situation *in situ*.

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