

# Entrepreneurship Training and Innovative Pedagogies of Mitigating Perceived Challenges of Business Start-Up Capital to University Graduates

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## Abstract

*This article presents findings from an experimental research design about entrepreneurship training and innovative pedagogies of mitigating the challenges of university graduates to acquire business start-up capital. The study was motivated by observations that although entrepreneurship training has gained potency in many universities, still many university graduates are not becoming job creators. The experiment involved 800 undergraduate students at the University of Dar es Salaam, from 2016 to 2018, using both quantitative and qualitative data. Findings demonstrate that at the end of the experiment, the innovative pedagogy had positively leveraged the students' motives to go for self-employment. The findings imply that the use of innovative pedagogies in teaching entrepreneurship can minimise students' fear of going for self-employment upon graduating. The article contributes in enhancing the theory of innovation, practice of entrepreneurship, jobs creation and informs on policy regarding entrepreneurship training.*

**Keywords:** *business start-up capital, entrepreneurship training, innovative pedagogies, self-employment, university graduates*

## Introduction

Creating jobs that can absorb a reasonable proportion of the ever-growing number of university graduates is one of the recent global challenges. The situation is even more challenging in developing economies, in which the capacity of most private sectors has not grown sufficiently to contribute to creating decent jobs (Mandel & Noyes, 2014; World Bank [WB], 2016, 2018, 2019). Evidence from a report of the 2018 Review of Goal Number 8 of the Sustainable Development Goals (SDG) indicates that more effort is needed to increase employment opportunities,

especially for young people (WB, 2018). Moreover, it shows that in order to ensure sustained and inclusive economic growth, there is a great need to, among other issues, reduce informal employment and labour market inequalities, promote safe and secure working environment as well as improve access to financial services. The situation is worse for youths because the global youth unemployment rate was 13% in 2017, making them three times more likely to be unemployed than adults. Evidence further reveals that globally, 61% of all workers were engaged in informal employment in 2016 (WB, 2018).

In line with the above background, estimates of the World Bank (2012) showed that while globally there are some 200 million people, including 75 million under the age of 25 who are unemployed, there are 10 million entrants into the labour force per year in Sub-Saharan Africa alone. It further observed that almost half of the working population in developing economies is engaged in small farm-based jobs or small enterprises in which earnings are unstable. Supporting this trend, evidence from a study on jobs, which was conducted by the International Finance Corporation (IFC) shows that joblessness, especially among the poor, is now a global crisis (IFC, 2013). The World Bank (2019) shows that high-skilled university graduates currently make up almost 30 percent of the unemployed pool of labour in the Middle East and North Africa. Without jobs, people cannot care for themselves or their families and as a result poverty, social and economic unrests may increase, especially in developing economies where most of the world's 200 million unemployed people live.

The IFC study further estimated that by the year 2020 the world would need 600 million additional new jobs in order to keep up with the globe's surging population. The report warned that generating such jobs is not going to be easy and will be impossible without support of the private sectors. However, in order to generate the needed jobs, the private sectors have to be well supported. This is because studies on employment and jobs provide a caveat that not all jobs contribute positively to human development. For instance, there are many jobs which do not pay enough to meet even the basic needs of the employees (Gross, 2010). These observations imply that in order to eliminate the multi-dimensional aspects of poverty and enhance human dignity, there has to be decent jobs, which are described by Mundlak (2007) as jobs that respect the human rights of the workers.

Drawing from the observation given above, it is evident that the challenges of unemployment and underemployment have become more severe in some regions of the world and most specifically in least developed countries (LDCs), calling for

immediate attention by policymakers, training institutions, the civil society and other relevant stakeholders. Apparently, some countries have been severely hit to the extent that a situation of too many university graduates chasing very few jobs has become common. For example, while exploring graduates' unemployment problems, Biney (2015) reported that in Ghana there were about 700,000 unemployed graduates and the number was increasing at a rate of approximately 300,000 annually. In Kenya, Mkala and Wanjau (2018) noted that many graduates remain unemployed for long periods, and others are underemployed. They point out that the cumulative impact of unemployed and underemployed university graduates breeds economic frustration and undermines the socio-economic well-being of their communities.

Evidence from Tanzania, which is the context of this article, also shows that the situation is becoming worse. For instance, in June 2014 more than 20,000 graduates submitted job applications for 70 job vacancies which were advertised by the Immigration Department in Dar es Salaam (Erick, 2014). Moreover, Kimelemeta (2017) reported that in August 2017 more than 56,000 graduates availed themselves to compete for 400 job vacancies advertised by the Tanzania Revenue Authority (TRA).

A synthesis of all the issues raised above points to an urgent need of putting in place mechanisms that would stimulate a critical mass of educated people in Tanzania (and elsewhere) to create jobs which are decent and sustainable. The argument in this article is that university graduates are well-positioned to spearhead the process if they can be adequately empowered to take entrepreneurial careers. For example, many countries, including Kenya through its Vision 2030 and Tanzania through its Vision 2025 (United Republic of Tanzania [URT], 1999), have proclaimed in the past few years that the private sectors are the engines for their economic development. However, for such sectors to do well, quality personnel is needed, which means university graduates should be adequately prepared to supply the prerequisite manpower in the private sectors. Towards that end, in some of the universities students have been trained on entrepreneurship and management of small businesses (URT, 2017). Nevertheless, despite these good intentions most university graduates still fear to go for self-employment in the private sectors (through establishing their small and medium enterprises), citing lack of business start-up capital as one of the major hindrances. Instead of becoming job creators, they remain to be job seekers. This implies there is a knowledge gap between how entrepreneurship is taught and what the learners acquire and require. This situation may infer that there is a problem of low entrepreneurial tendencies amongst university graduates because of non-innovative pedagogies.

Thus, this article further argues that in order to enable university graduates to change their mindsets and develop practical entrepreneurial capacities, there is a need for entrepreneurship trainers to adopt innovative pedagogical approaches (WB, 2019) which will make the learners competent and desirous to join the private sectors. The World Bank's (2019) conceptualization of innovative pedagogies, which this study also adopts, is that contrary to traditional ways of teaching entrepreneurship and management of small businesses, among other things, innovative pedagogies aim at enhancing learners' high order cognitive skills as well as socio-behavioural skills. They inform and inspire learners to take an active role in learning, such that upon graduating they may choose an entrepreneurial career with confidence.

### **Purpose and objectives of the study**

In the light of the observations made in the introduction, the purpose of the study is to assess Tanzanian university students' perceptions about business start-up challenges and explain innovative mitigations on entrepreneurship training which can help in addressing them. The specific objectives were to:

- i) assess students' perceptions about the various challenges which prevent university graduates from going for self-employment through starting-up small businesses;
- ii) examine the extent to which business start-up capital is perceived as a major hindrance by university graduates who want to go for self-employment; and
- iii) describe results of an innovative mitigation on entrepreneurship training that has indicated that it is possible to overcome the challenges associated with business start-up capital for university graduates.

In the subsequent sections, the article is organised in four parts. First, a review of literature is presented, whose focus is on the debates about factors that trigger entrepreneurial behaviours and the innovation theory. The research methodology comes next, entailing the rationale of adopting an experimental research design and how the study was generally conducted. After that the findings are presented and discussed. Finally, the conclusions and implications are articulated.

## **Literature Review**

How to go about creating an enterprising society is one of the ongoing debates in the literature of entrepreneurship (Mandel & Noyes, 2014). The debate becomes even more intriguing in the current situation where many countries are facing a challenge of too many unemployed youths, including university graduates. The world's unemployment rate is escalating year after year, suggesting that more entrepreneurs are needed in alleviating the situation.

The debate arises from historical perspectives on entrepreneurship. On the one hand there are scholarly views which hold that entrepreneurship is an inborn trait (McClelland, 1985; Schumpeter, 1934; URT, 2017), which can hardly be transferred from one person to another through conventional entrepreneurship teaching and learning programmes. What can be drawn from this perspective includes the view that human beings are a unique resource, each with their own origin in nature. This perspective in its totality discourages training initiatives and indeed it does not provide an alternative solution to societal challenges regarding unemployment matters.

However, on the other hand there are other scholarly views which hold that entrepreneurs are contextually groomed and shaped by the societies in which they grow (Gibb, 2002; Henry, Hill & Leitch, 2005; URT, 2017). Scholars taking this perspective agree to a large extent that entrepreneurs are made. They believe that like any other academic discipline, entrepreneurship is teachable, such that entrepreneurship trainings play an important role in enhancing individuals' entrepreneurial behaviours. Nevertheless, a caveat provided by those who criticise this view is that implementation of entrepreneurship training processes is challenging, even in the very advanced training institutions (Wu & Li, 2011). This suggests that despite the potentials and promises of bringing-up an enterprising society, which are intrinsically held in this view, its holistic dimensions disregard the vital concern that entrepreneurship is behaviour-oriented and hence unique.

Apart from the above two dominant views, there is also a third perspective which attempts to reconcile the two, arguing that entrepreneurship embodies behaviours, which are both inborn and contextually acquired (Miller, 1987). This perspective concedes that there are individuals who are born with an entrepreneurial mindset and inclination, but still, entrepreneurship trainings can add value to such people through exposing them to knowledge, skills and attitudes that can make them do the best in their lives (Martin, Rodriguez, Barahona & Leitao, 2009; URT, 2017).

Embracing the role of training, this perspective further argues that there are also individuals who may not have entrepreneurial traits at the onset, but through appropriate entrepreneurship trainings they can be moulded into enterprising individuals (Kajjage, 2013; Politis, 2005; URT, 2017).

The consensus is, therefore, that consideration of both factors (inborn and contextual) is important. Gibb (2011) and Politis (2005) further underscore the fact that entrepreneurship knowledge and skills can be adequately imparted through appropriately designed teaching and learning environments, which provide room for learning by doing. To support this approach there are many ways which have been advocated, including the use of simulations, case studies and discussions, field attachments, and real life involvement. For instance, Neck, Green, and Brush (2014) suggest that entrepreneurship should be taught as a portfolio of practices, including acquisition of skills, knowledge, and mindset through deliberate hands-on, action-based activities that enhance development of entrepreneurial competencies and performance.

Conducting entrepreneurship trainings as proposed above appears more compelling and impactful. Apparently, attaining such ideal conditions is both difficult and challenging. Dhliwayo (2008) observes that, relatively, few learning institutions have created entrepreneurship curricula along these lines. Few cited examples include top schools in business education such as Babson College, Stanford School of Business, MIT Sloan School of Management, London Business School, and National University of Singapore. In these institutions, entrepreneurship learning entails a strong *learning-by-doing* element through outside-the-classroom activities such as internship with start-ups, creating and running small ventures on campus and working on small consulting jobs. In its consideration of the current demands for graduates who have multiple skills, the World Bank (2019) shows that another way of achieving the above is through the use of innovative pedagogies. These are conceptualized as a combination of teaching and learning strategies aimed at enhancing the learners' high order cognitive and socio-behavioural skills. They include enhancing learners' problem solving skills, critical thinking, interpersonal skills, opportunity recognition and seizing, team work, negotiation skills and self-confidence in pursuit of their entrepreneurial initiatives.

It is on these grounds that innovativeness is highly needed in entrepreneurship teaching in order to bring up the desired impact on the society. Thus, in line with Schumpeter (1934) and the World Bank (2019), this study conceptualizes innovation in terms of processes of combining resources in newer ways in order

to achieve better outcomes. With innovative pedagogies, we mean combinations of traditional methods of teaching and learning entrepreneurship such as lectures and seminars with those which are mediated by information and communication technologies such as case study-based videos, simulations and discussions, which are based on carefully selected entrepreneurs who are within the learners' context.

The quality of trainers is also another important element for consideration. In line with this view, in their survey of experiential entrepreneurship education offerings among 25 top undergraduate entrepreneurship programmes in the USA, Mandel and Noyes (2014) are of the opinion that entrepreneurship education, by its nature, deviates from a customary academic approach of classroom-based learning. In order to achieve better outcomes the trainers involved must show comfort and competence in guiding highly unstructured and unpredictable learners' experiences, given the nature of innovation and the entrepreneurial processes.

Observations that entrepreneurship teaching is challenging even in the topmost business schools in the world imply that in developing economies the situation is more challenging. Empirical studies from countries like Ghana (Biney, 2015), Kenya (Mkala & Wanjau, 2018) and Tanzania (Allan, 2018; Melyoki, Gielnik & Lex, 2018) support this concern. Among other things, these scholars observed that classic doctoral training, whose focus is on research outputs and peer-reviewed publications, does little to equip entrepreneurship training facilitators, particularly those without entrepreneurship experience. This implies that if a non-practising trainer is put in front of university students who want to go and use what is conventionally taught in the classroom, the learners often struggle to find insights that they can immediately apply in their ventures. Moreover, there are concerns regarding the pressure for large classes, which make teaching and evaluation of entrepreneurship students' work trickier when using the learning-by-doing pedagogical approach.

Hence, this study argues for mitigation on pedagogical approaches used in teaching and learning entrepreneurship in Tanzania. The proposed mitigation combines conventional entrepreneurship teaching with practical, real-life experiences from the local business environment. However, instead of conducting field visits to real entrepreneurs for the purpose of enabling the students to personally see, interact and actually experience what happens in establishing and managing a small business, videos of such real entrepreneurs are shown to students during lecture sessions. In this way, though still in the lecture room, students are electronically taken to the field. The approach makes it possible even for a large class (of for example 500

and above) to be exposed to practical experiences at a low cost. The innovative approach removes barriers associated with travel costs, time, logistical and other expenses. However, in order to facilitate this process a number of facilities would need to be put in place, such as a good sound system, a clear PowerPoint projector and a classroom of which light can be controlled to enhance picture visibility.

This innovative approach aims at addressing a number of challenges in entrepreneurship teaching. One of the critical constraints faced by university graduates who have undertaken an entrepreneurship course to go for self-employment is the fear induced by lack of business start-up capital (Premand, Brodmann, Almeida, Grun & Barouni, 2012; WB, 2012, 2018). Many of the graduates do not believe in *starting small*, which is, establishing micro enterprises which utilise the minimum possible resources, because they lack real-life exposure on how the majority of large enterprises we see today were started at a small level. Through effective listening and seeing how real-life entrepreneurs actually carry out their activities, as well as how such entrepreneurs face and overcome the challenges of business start-up capital by using resources from within their own families and other personal networks, students' perceptions and mindsets can be reversed.

The concern about how small a small enterprise is, has also been debatable because various definitions are used. However, in the Tanzanian context the Tanzanian Small and Medium Enterprises Development Policy (URT, 2003) categorically defines micro enterprises as firms whose capital investment in machinery go up to 5 million Tanzanian shillings and employ between one and four people. Small enterprises have capital investment in machinery of above 5 million up to 200 million Tanzanian shillings and employ between five and 49 people. However, "in the event of an enterprise falling under more than one category, then the level of investment will be the deciding factor" (UTR, 2003, p. 5). This categorisation is informative as it provides a picture of how one can start at a micro level and gradually rise through the next phases.

### **The theoretical base**

In establishing the link between jobs creation, entrepreneurship, innovation and business start-up capital, the theoretical grounding upon which this article is based is Schumpeter's (1934, 1942) Innovation Theory. Schumpeter described development as a historical process of structural changes, substantially driven by innovation and business cycles. Placing the dynamic entrepreneur in the middle of his analysis and considering the fact that the entrepreneur has to use capital for



innovations to be a reality, capital was considered to be an integral component of the innovation process. Such capital could arise from either resources that are directly owned by the entrepreneurs or having relationships with those who own them. Capital (in the form of credit and other items) contributes to development, because development results from the activities of entrepreneurs, which are supported by capital. Most importantly, Schumpeter (1934) described innovation to involve one or a combination of the following five types of events: introduction of a new product; application of new methods of production; accessing a new market for an already existing product; acquisition of new sources of supply of raw material or semi-finished goods; and introduction of new ways of organising.

Among the criticisms of the theory is its psychological orientation which ignores sociological contributions. Still, the theory appears relevant in a situation where the concern is about changing individuals' attitudes and behaviours regarding self-employment and choice of an entrepreneurial career. Moreover, grounding the current study on this theoretical position banked on Schumpeter's view that innovation is an essential driver of change, competitiveness and reforms of economic structures (Schumpeter, 1942). This implies that theoretically and conceptually, to bring up the envisaged results, entrepreneurship teaching and learning processes should be focused on enhancing the learners' capacity to spot opportunities upon which they could adapt the use of one or a combination of the five types of Schumpeterian innovations mentioned above. Thus, we argue that in considering unemployment trends and the potentials for job creation by university graduates in Tanzania, Africa and elsewhere, deploying an innovative approach is imperative.

### **Methodology**

In line with Creswell (2009), the study adopted a mixed methods research approach, in which a quantitative causal experimental research design was supported by qualitative in-depth interviews. The choice of an experimental design was informed and motivated by observations that in recent years there has been an increase in their usage (Premand et al., 2012), due to their ability to objectively study a given phenomenon in its natural setting. However, following Maxwell and Loomis (2002) the data collection instrument was designed to enable collection of both quantitative and qualitative data. This mixed methods research approach was deemed necessary in order for the research to maximise the benefits derived from the use of both quantitative and qualitative data.

The study involved third year students in the Bachelor of Commerce (B.Com) degree programme at the University of Dar es Salaam. Third years were selected because the course on entrepreneurship is taught in third year. Additionally, given that at this stage they are about to graduate, the looming challenges of getting a job are real, and their perceptions and reflections about the labour market situation are better than those in lower years of study. The experiment involved a random sample of 800 students – 400 students who had taken the course in the academic year of 2016/2017 and 400 students for the academic year 2017/2018.

### **The experimental process**

Laboratory-based, causal experimental research design was adopted. This kind of approach used an experimental group (EG) and a control group (CG); that is, the “before-after with a control group design.” For the EG, measurements/observations were taken twice, before and after the experimental treatment was introduced. Likewise, for the CG, measurements were also taken twice but no experimental treatment was introduced in between. Thus, using the experimental notations  $O_1$  for Observation 1 (first recording of data),  $O_2$  for Observation 2,  $O_3$  for Observation 3,  $O_4$  for Observation 4,  $E$  for the experimental effects,  $U$  for uncontrollable sources of variation and  $x$  for the experimental treatment provided to the EG, the experimental procedure could be summarised as follows:

1. (R)  $O_1 \quad x \quad O_2$ ; resulting into  $O_2 - O_1 = E + U$ .
2. (R)  $O_3 \quad O_4$ ; resulting into  $O_4 - O_3 = U$ .

In this regard, the total effect of the experiment, which was a result of the treatment  $x$ , could be summarised as  $[O_2 - O_1 (E+U)] - [O_4 - O_3 (U)] = E$ .

### **Description of the experimental treatment (x)**

The treatment that was given to the EG is an innovative entrepreneurship training which was specifically aimed at informing, exposing and inspiring the EG students to use easier ways of accessing start-up capital for establishing micro and small enterprises. This involved the use of videos of three carefully selected entrepreneurs in Tanzania, who had gone through the challenges of business start-up capital but eventually succeeded to grow to higher levels of business operations. These were conveniently selected, based on the nature of their businesses and richness of information (Yin, 2003). With the support of ICT, this was done in the lecture room (laboratory experiment), using high quality videos of the entrepreneurs.

Among other things, the entrepreneurs practically showed how they had conceived their business ideas, started with the minimum start-up capital they managed to get (from personal savings, family and relatives), the challenges they had gone through and how they were able to overcome them.

### **Implementation of the experiment**

The experimental group (EG) consisted of students who were pursuing the course on entrepreneurship in the academic year 2016/2017. In the fifth week of the second semester, a structured form was administered to 400 students. The students were asked to fill in various responses including their priorities for employment (public sector/private sector/self-employment), their motives for an entrepreneurial career, main hindrances in establishing their own enterprises, as well as how they perceived the challenges associated with accessing businesses start-up capital. The summaries of these results were recorded as observation 1 ( $O_1$ ). Thereafter, the innovative treatment was introduced in the subsequent two weeks, one treatment at a time. In week 11 the students were again asked to fill in the same structured form and the responses obtained were recorded as observation 2 ( $O_2$ ).

In the academic year 2017/2018, students who were pursuing this course were used as a control group (CG). In the fifth week of the second semester the same structured form was administered to 400 students. Summaries of the responses obtained were recorded as observation 3 ( $O_3$ ). Thereafter, training about entrepreneurship proceeded throughout using only conventional teaching and learning processes (lectures, seminars, quizzes and tests). In week 11 the students were again asked to fill in the same structured form. Summaries of the responses obtained were recorded as observation 4 ( $O_4$ ).

### **Validity and reliability assessment of the experiment**

In order to establish existence of causality, three important conditions in experimental designs have to be met: concomitant variation, time order of occurrences and elimination of other alternative explanations of the variation (Churchill, 2002). First, regarding concomitant variation, the requirement is that the occurrence of the independent variable must go together with the occurrence of the dependent variable. In this study this was well met because the independent variable (stimulus provided in the form of the innovative treatment) and the dependent variable (changes in the feelings, beliefs and attitudes of students about start-up capital) happened within a reasonable period of six weeks. Thus, the independent variable

was responsible for changes in the dependent variable. Secondly, the condition on time order of occurrences requires that the independent variable should come first before changes in the dependent variable. This was well adhered to because watching and discussing the videos preceded the observed changes in students' behaviours.

Lastly, elimination of other plausible explanations was taken care of, through the use of CGs to which the innovative treatment was not provided, and those CGs did not exhibit changes in the desired behaviours. This implies that most of the variations in the EGs were caused by administration of the stimulus. Moreover, with reference to Churchill (2002), designing and implementing the experiment in the form of randomised, before-after with control group, aimed at eliminating experimental effects. The data collection instrument was consistently maintained and the number of observation units was maintained at 400 in both academic years.

For the in-depth interviews, a checklist of questions about students' feelings and perceptions of entrepreneurship teaching and learning processes was used. It entailed questions about the curriculum, the impact of the conventional and innovative teaching and learning processes, conduciveness of the learning environment, their personal aspirations for jobs and situation in the labour market, critical challenges in establishing enterprises, as well as self-employment considerations. With permission from the respondents, all in-depth interviews were audio recorded in order to enable the researcher to go through them more thoroughly at a later time, synthesise the key issues and draw up the emerging patterns of themes.

## **Data Analysis and Findings**

### **Students' perceptions of challenges that prevent graduates to go for self-employment**

In line with the first objective, in the structured form which was used in data collection students were asked to list the key factors that affect negatively their considerations to go for self-employment. In general, these are the constraints prevailing in the Tanzanian business environment, which limit graduates' decisions to establish micro and small enterprises upon graduating. The list was to start with those factors they perceived had the greatest impact. After processing and summarizing the responses obtained, it was revealed that the main challenges that graduates were facing are as presented in the Table 1.

**Table 1:** *Factors that Negatively Affect the Students to Go for Self-Employment*

| S/No. | Description of the factor  | Percentage of students |
|-------|--|------------------------|
| 1     | Lack of business start-up capital  | 92                     |
| 2     | Lack of practical experience in initiating a small business and making it a reality                          | 86                     |
| 3     | Difficulty in getting innovative ideas to start and sustain a business                                       | 79                     |
| 4     | Unconducive business environment in terms of business registration, taxation, working premises, and the like | 75                     |
| 5     | Uncertainties associated with unreliability of earnings and success as business involves a lot of risks      | 74                     |
| 6     | High competition and unreliable markets  | 67                     |
| 7     | The difficult of coming up with a product which cannot be easily imitated by others                          | 62                     |
| 8     | Laziness and carelessness of business runners (low level of commitment)                                      | 56                     |
| 9     | Lack of appropriate knowledge and skills   | 54                     |
| 10    | Influence of parents and guardians who want their children to go for prestigious jobs                        | 51                     |

*Source:* Data collected for this study

The findings in Table 1 supported those of previous studies such as Premand et al. (2012), which indicated that capital is an often mentioned constraint by those who want to establish small and medium enterprises. In the current study 92% of respondents indicated so. Next to this was lack of practical experience in initiating a small businesses and making it a reality (86%).

**Extent to which business start-up capital is perceived as a major hindrance**

The second specific objective focused on examining further the extent to which Tanzanian university students perceive business start-up capital as a major hindrance as well as how it could be mitigated. Accordingly, two statements were provided in the structured form for which students were asked to agree or disagree with, both before and after the innovative treatment. The first statement stated that “No,

I can't start a small enterprise because of start-up capital limitation." The second statement stated that "Yes, I can start a small enterprise using start-up capital from within my personal network." Summaries of data processing and analysis from observations  $O_1$  up to  $O_4$  regarding responses on the above statements were summarised as presented in Table 2.

Table 2: *Students' Responses Before and After the Innovative Treatment*

| Group | Before                                  |              | After                                   |               | Effects (E and U)          |
|-------|---|--------------|---|---------------|----------------------------|
|       | <b>Observation 1 (<math>O_1</math>)</b> |              | <b>Observation 2 (<math>O_2</math>)</b> |               |                            |
|       | No, I can't.                            | Yes, I can.  | No, I can't.                            | Yes, I can    |                            |
| EG    | 343/400 (86%)                           | 57/400 (14%) | 72/400 (18%)                            | 328/400 (82%) | $E = (82\% - 14\%) = 68\%$ |
|       | <b>Observation 3 (<math>O_3</math>)</b> |              | <b>Observation 4 (<math>O_4</math>)</b> |               |                            |
|       | No, I can't.                            | Yes, I can.  | No, I can't.                            | Yes, I can    |                            |
| CG    | 368/400 (92%)                           | 32/400 (8%)  | 354/400 (88%)                           | 46/400 (12%)  | $U = (12\% - 8\%) = 4\%$   |

Source: Data collected for this study

The findings from observation 1 of the experimental group (EG), which was used as a baseline, indicate that most of the students (86%) had no confidence that they could start their own small enterprises upon graduating because of limitations imposed by lack of business start-up capital. Only 14% admitted they could establish small businesses using start-up capital which could be acquired from their personal networks. However, after the innovative treatment was provided in the subsequent weeks and later on observation 2 recorded, it was interesting to note that the percentage of those who believed that they could start their own enterprises using start-up capital from within their networks rose from 14% to 82%, while those who did not have confidence declined from 86% to 18%. From these findings we can infer that the experimental effect (E) induced by the innovative treatment resulted into a 68% (82% - 14%) positive change in perceptions of the students. They were motivated and convinced that they could start enterprises using start-up capital from within their own networks.

Findings from the control group, which were recorded as observation 3 and observation 4, do not show a major change because the innovative treatment was not given to this group. In observation 3 those who did not believe in starting

businesses using start-up capital from within their own networks were 92% while in observation 4 they were still 88%. Likewise, those who thought they could start their businesses using start-up capital from within their own networks changed from 8% to 12%. The difference of 4% may be attributable to uncontrollable source of variations (U). Thus, the findings from the control group corroborated well with those of the experimental group.

### **Description of results of an innovative mitigation on entrepreneurship training**

Regarding the third specific objective, students' responses on pedagogical issues showed that traditional methods of teaching on entrepreneurship and small businesses do not prepare them sufficiently for self-employment. As shown in Table 1, 86% of them indicated that lack of practical experience in initiating a small business and making it a reality was a major problem. For instance during observation 1 of the experiment, in the open-ended questions a student wrote, "Learning entrepreneurship in a classroom, theoretically just like other subjects, doesn't prepare me well to face the business environment with confidence, especially how to start a small business." Although they used different words, many others respondents had responses of a similar pattern. Others asked, "How can a university graduate from a poor family think about starting-up and sustaining a decent business without adequate start-up capital?"

However, during observation 2 of the experiment, when asked about the innovative treatment which was used during the experiment, one of the responses was, "The video clip of the chicken farmer really opened-up my mind. It clearly demonstrated that it is possible for me to start at a small scale using the minimum resources I can get from my own family or relatives." Another student wrote, "It gave me confidence that it is possible to start small, gradually grow and finally have a large business." In a similar way another one wrote, "The use of videos of real-life entrepreneurs inspired me a lot; I will graduate with confidence to go for self-employment." Some of the responses pointed towards the concern that in Tanzania, there are still many opportunities, only that the education system does not expose the students and give them the necessary support. Students also indicated that in some situations they study very complicated materials, which they hardly apply in their lives. They study them for merely passing examinations. This suggests that learning institutions and facilitators need to review the relevance of the curriculum they use.

## Discussion

The findings of this study show a number of aspects in which entrepreneurial capacities of Tanzanian university graduates could be enhanced. The discussion is consistent with the specific objectives as presented below.

Firstly, regarding the students' perceptions of constraints that prevent graduates to go for self-employment, the list of constraints presented in Table 1 suggests that they can be categorised at three levels. The first category consists of those which are at a micro (or personal) level, such as lack of start-up capital, knowledge and skills, experience and difficulties in spotting innovative business ideas. Apparently for these constraints the World Bank (2018, 2019) indicates that adoption of innovative pedagogies can help learners to overcome them. The second category consists of constraints which are at a medium (societal and institutional) level, including influences of parents and guardians, competition and unreliability of markets. At this level the use of innovative pedagogies together with involvement of guest speakers from institutions which have responsibilities to support business development can help (URT, 2017). Such institutions include the Small Industries Development Organisation (SIDO) and Tanzania Bureau of Standard (TBS), from which entrepreneurs are provided with technical support. The third category is made of macro (national) level factors, including business registration, licensing and taxation issues. Solutions for constraints arising at macro level can also be obtained when entrepreneurship trainers and their universities can establish good linkages with institutions that deal with business regulations and tax issues. For instance, institutions and bodies such as the Business Registration and Licensing Authority (BRELA) and Tanzania Revenue Authority (TRA). Therefore, in order to overcome all such challenges universities should have strong linkages with the industry.

Secondly, the findings presented in Table 2 illustrate the extent to which business start-up capital is perceived as a major hindrance by Tanzanian university graduates as well as what can be done to alleviate the situation. The findings support the view that with innovative pedagogies for entrepreneurship training, there is a likelihood of reversing the negative perception which is held by the majority of university graduates, that lack of business start-up capital is a major constraint in going for self-employment. This observation departs from the findings of the previous studies such as IFC (2003) and Premand, et al. (2012) which have held that start-up capital is a major concern. The argument being made by this article is supported by the findings summarised in Table 2, observation 2, which were obtained after the experiment. Moreover, studies which have overemphasised on



start-up capital limitations have overlooked the fact that some entrepreneurs start with minimum resources acquired from within their personal networks. Thus, students should be informed that, it is not always possible or necessary to borrow from banks or other formal financial institutions.

Moreover, the findings in Table 2, observation 1, show that initially the students had a higher level of fear to go for self-employment, but the situation was reversed after the administration of the experimental treatment. This suggests that students' fear regarding business start-up capital is based on perceptions, not reality. Pedagogically, it further implies that through innovative use of real-life examples of small business entrepreneurs and role models in their own communities, students' imagination and motives can be directed towards developing the courage to overcome the challenges. Accordingly, university graduates who have appropriate entrepreneurial ideas can feasibly go through the transition from college to self-employment. Most importantly, graduates should be willing to start small, but with growth motivation, rather than thinking of starting with huge investment which cannot be acquired easily.

The third objective of the study focused on describing the results of the innovative mitigation on entrepreneurship training so that they could be adopted as a way of enabling Tanzanian university graduates to overcome the challenges associated with business start-up capital. The findings obtained from the innovative treatment carried out in this study suggest that in order to attain the envisaged impact, trainers should be creative in using various pedagogical approaches. Among other things, these pedagogical approaches should motivate, inspire and expose students to real-life situations of practising entrepreneurs who can be used as role models. These findings are in line with Mkala and Wanjau (2018), who remark that teaching about entrepreneurship is unique in that it requires inculcation of knowledge and skills, which have to culminate into the development of appropriate motives, attitudes and behaviours. Additionally, findings of this study show that with appropriate use of information communication technologies (ICT), for instance in terms of skilfully interviewing and recording videos of real-life situations of small entrepreneurs and making such videos watched and discussed, students' internalisation of what is being learnt in the classroom can be enriched, hence possibilities of many graduates to go for self-employment.

Likewise, managements in universities should be willing to provide resources, both human and non-human, needed in creating a supportive environment for teaching and learning entrepreneurship and small businesses management. For instance,

the constant increase in university students' enrolment should be accompanied by proportionate increase in teaching staff. The study concurs with the views of scholars who have advised that an innovative entrepreneurship teaching approach may require a smaller class size and such teaching would also place greater demands on the human and non-human resources than the traditional teaching approaches (Mkala & Wanjau, 2018, Parsley & Weerasinghe, 2010). In this regard, the extent to which teaching institutions are willing to invest in the teaching and learning processes matters in determining the quality of entrepreneurial tendencies of their graduates.

### **Conclusions and Implications**

Following the findings and discussions as presented above, the contributions of this article can be seen from many areas including theoretical, methodological, policy and practical perspectives. Regarding the first specific objective, theoretically the article contributes to the extension and adoption of innovative pedagogies (WB, 2019) and Schumpeters' (1934) Innovation Theory in describing entrepreneurial and small business start-up processes in Tanzania. Instead of concentrating on the challenges circumventing their entrepreneurial initiatives, university graduates should be guided to think outside the box and come up with innovative solutions. The article argues that university graduates can establish their own businesses through adapting the five dimensions of the Schumpeterian innovation process. That is, through being exposed to activities of real entrepreneurs, students can be stimulated to innovatively come up with their own new products, consider introducing existing products into new markets, or come up with newer methods of production which enhance effectiveness and efficiency. They may also consider accessing newer sources of supplies of raw materials which are cost effective or think of re-designing the production process. In line with the second specific objective, on a practical perspective the article contributes to the view that there is a possibility of Tanzanian university graduates to establish micro and small enterprises by using the minimum start-up capital that they can obtain from their families, relatives and personal networks. This is supported by observations that through watching and reflecting on the videos of real entrepreneurs who operate micro and small enterprises within the students' environment, students can develop the necessary motivation and courage to venture into self-employment through establishing similar enterprises. This is most likely going to help in addressing the shortage of employment opportunities for university graduates.

With regard to the third specific objective, methodologically this article contributes to knowledge in terms of adopting an experimental research design in examining the effects of innovative approaches to teaching entrepreneurship in Tanzania. Contrary to the traditional pedagogical approaches, the innovative approach used in this study illuminates possibilities of attaining a high level of impact on the students. The experimental orientation is supported by many other studies including the World Bank (2018), which observe that experimental and quasi-experimental studies of interventions to improving learning are currently on the increase. The article has also demonstrated the possibility of bringing field-based experiences into the classroom at minimum cost. It also contributes to the view that entrepreneurship educators should utilise the local business community as an important educational resource in demonstrating the relevance of entrepreneurship to their students. Moreover, for the sake of producing entrepreneurial graduates, the findings corroborate the views of the World Bank (2018) that higher learning institutions themselves have to be entrepreneurial.

In terms of policy, contributions emerging from this work are that stakeholders involved in education policymaking, curricular design and implementation should be informed that bringing up enterprising graduates entails involvement of combined efforts of many stakeholders in the entrepreneurial ecosystem. These include micro and small business operators, who can be used as role models. The findings should not only be disseminated to management of higher learning institutions, entrepreneurship trainers and students but also to a wider spectrum of actors who together contribute in shaping the mindsets of university students towards self-employment.

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