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Entrepreneurial Culturing of Formal Education Programmes in Nigeria

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The importance of entrepreneurial competencies is widely acknowledged, but its systematic incorporation into formal education in Nigeria has been quite slow. This paper contributes to the literature on entrepreneurship, and how formal education can be transformed through entrepreneurial acculturation. More specifically, a framework for entrepreneurial culturing of undergraduate programmes of universities in Nigeria is proposed. Formal education is a core component of enterprise development because the larger proportion of the population go through it to actualize their career goals; hence the need to mainstream entrepreneurial training in tertiary education. But doing so calls for comprehensive review of the curricula to accommodate more action learning, internship, fieldwork, and running of mini-companies by students. Drawing on lessons from the experiences of the UK and other European Community countries, the paper proposes the entrepreneurial culturing programme (ECP) as a framework for mainstreaming entrepreneurial competencies in the undergraduate programmes of Nigerian universities. Workability and sustainability of ECP call for sound fiscal governance, effective partnership and collaboration with private investors and donors, and regular monitoring to reward high performing students, teachers, and institutions appropriately.

Keywords: entrepreneurial culturing, entrepreneurship, internship, mini-companies, creative knowledge, business start-ups, enterprise

Introduction

Entrepreneurship is a dynamic and social process, where individuals -solely or in cooperation with others –identify possibilities and utilise them to transform ideas into practical and goal-oriented activities in a social, cultural or economic context. It involves inculcation of a range of skills and attributes, including; the ability to think creatively, work in teams, manage risk, and handle uncertainty. This is underpinned by the recognition that changing "mindsets" is part of the entrepreneurial pipeline which starts in education, and runs through research to running enterprises. But, although the importance of education for entrepreneurship, or enterprising behaviour, has been widely acknowledged, the systematic incorporation of entrepreneurship training in formal education has been much slower globally. However, there is renewed interest in the applicability of action learning (or entrepreneurial training) in formal education. This shift has been stimulated by criticism of the static, content-oriented approach as inappropriate to the changing demand of the new knowledge societies for versatile, multi-skilled, workers who can 'learn', 'know', 'do', and 'act responsibly' at the same time. Entrepreneurship also encourages and entices individuals to take the risk of starting a business; leading to the establishment of micro and small enterprises that are the major drivers of growth in advanced and emerging economies (Leitch & Harrison, 1999). The implications of this growing need for entrepreneurs and the pressure it puts on formal education are twofold: firstly, teaching techniques must be restructured to include process-oriented approaches, because entrepreneurial education calls for more workplace interactions and action-learning, which underscores the importance of internship, fieldwork, and learning by doing. Indeed, it is widely held that 'qualified experience' and social skills are more crucial to success than formal education. But formal education is still a core component of the enterprise culture. Secondly, there is need for an expanded definition of the learning arena itself, and of the role of educational institutions particularly at the tertiary level. More specifically, culturing the curriculum of university programmes in Nigeria with entrepreneurial competencies, and socializing the students, lecturers, and institutions with the consciousness of enterprise are the main concern of this paper.

Literature Review

Universities are obligated to promote economic growth through research and development, teaching, and transfer of technology. Building entrepreneurial

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competencies is an additional responsibility that the new knowledge societies have put on them. Today's hypercompetitive society calls for employees and organizations that have the 'enterprise culture'; venturesome, wholesomely knowledgeable, and able to manage risks and uncertainties. This has put pressure on formal education generally, and tertiary education in particular, to incorporate entrepreneurial training into regular academic programmes. Universities need to meet up this growing need to remain relevant and produce graduates that readily fit into the new economy. The need for entrepreneurial culturing of university education in Nigeria cannot be over-emphasized.

Firstly, incorporation of entrepreneurship into formal education will promote self-employment and make Nigerian graduates more venturesome. As illustrated in Figure 1, many graduates of Nigeria's tertiary institutions are unable to secure productive jobs because there are few business start-ups and partnerships, the public sector is large and unproductive, and the few large firms are capital intensive (Essia, 2010). Moreover, a recent survey of students of selected tertiary institutions in Nigeria revealed that 65 percent of them on graduation would want to become businessmen and women, if they had capital, while 35 percent preferred paid jobs. However, 70 percent of those who preferred paid jobs still desired to retire to their businesses after some years. This indicated that many young Nigerians have traits of entrepreneurship, or are potential entrepreneurs. However, 70 percent of those who preferred self-employment (respondents were drawn largely from the graduating class), whether immediately after graduation or much later, could not identify clearly the type of business they hoped to take on. The 30 percent who could explain their self-employment plans were either in self-employment already, or were active participants in family businesses. This indicated that the respondents knew little or nothing about starting or running businesses as part of the school work – it is either they were no taught at all, or were taught inappropriately (Essia, 2010).

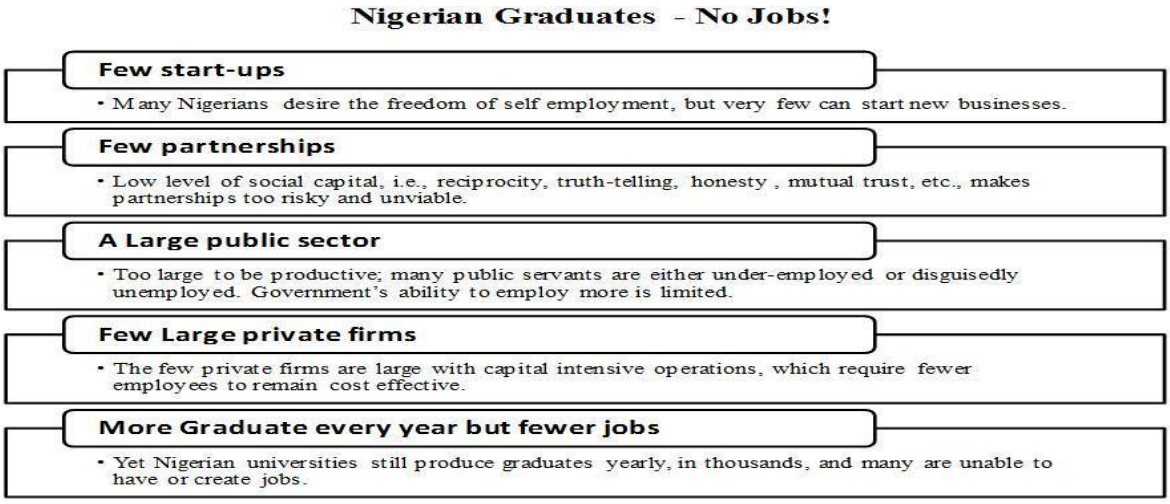

Figure 1. Why graduates of Nigerian lack jobs, Source: Adapted from Essia, 2010).

Secondly, the intensity of differentiation and fragmentation associated with new technological knowledge and skills increasingly separate 'knowing' from 'doing', and 'acting responsibly'. For instance, it is one thing to know the science of welding, it is another to be able to weld well, and yet another not to use the knowledge of welding to support armed robbery. The three kinds to competencies are related and can be located together deliberately, but one does not guarantee or simultaneously lead to acquisition of the other. The optimal mix of entrepreneurship with formal education can bring the three sets of competencies together. Thirdly, efforts to incorporate entrepreneurship into formal education at the tertiary level prompted the National Universities Commission (NUC) and regulatory agencies of other tertiary institutions to introduce Entrepreneurial Skills Development Programs (ESDP). The programmes have taken off with a number of credit units allotted for compulsory entrepreneurship courses. But the framework and processes for 'incorporating', 'engrafting' or 'culturing' entrepreneurship into formal education are yet for emerge. Discussions on entrepreneurship education either attempt to restate

the importance of entrepreneurship to development, or paint gory pictures of the problem. Few studies attempt to conceptualize entrepreneurship culturing of formal education in Nigeria.

Are entrepreneurs born or made?

The need for 'enterprise culture' or 'enterprising behaviour' in the new economy has elevated the field of entrepreneurship, but more work is required to synergize the extant concepts and content of entrepreneurial training with the needs of the new economy.

Doing so raises a number of issues, such as; whether entrepreneurs are 'born' or 'made'. The uncertainty as to whether entrepreneurs are born or are made has led to two strands of related arguments; firstly, whether entrepreneurial knowledge and skills can be transferred through formal teaching or imbibed through situation specific learning and practice, and secondly, whether the focus of entrepreneurship research should be on the behavioural traits (or persona) of the entrepreneur, or on how to impact the creative skills and knowledge through teaching.

On the first line of argument, Henry, Hill and Leitch (2005) argue that entrepreneurship has its art and science components. The science component, involving codified knowledge, may be acquired through classroom teaching, but the art component is largely tacit, and effective transfer required close interaction of learners with the trainer. Heinonen and Poikkijoki (2006) emphasize the need to adopt more pragmatic approaches to entrepreneurial training than the trait-based argument that may be difficult to test. They provide information on recent studies in entrepreneurship, emphasizing the core role of opportunity – discovering, evaluating and exploiting it – and the importance of teaching techniques.

They identify action-learning approach as well suited for entrepreneurial education, because it encourages students to broaden their horizon, and develop the skills and behaviour required to make them venturesome. Gibb (2002) argues that the trigger for growing interest in entrepreneurship in recent times is the uncertainties and changing needs of globalization.

The search for competitive edge has impacted on the state, business organizations, services delivery, and individuals creating greater uncertainties and complexities, and making entrepreneurial behaviour indispensable. People in all fields and professions are confronted with the need for entrepreneurial behaviour, for example; priests, doctors, teachers, policemen, pensioners and community workers and, indeed, potentially everyone in the society desire to standout. Entrepreneurship is therefore not solely the prerogative of business schools; it is better described as the driving force for excellence. The Global Education Initiative of the World Economic Forum (WEF) (2009) believes that 'educating' and 'learning' needs to take place simultaneously, from the early ages through a lifelong learning process: It is clear that education plays an essential role in shaping attitudes, skills and culture – from the primary level up.

Entrepreneurship education provides a mix of experiential learning, skill building and, most importantly, mindset shift. Certainly, the earlier and more widespread the exposure to entrepreneurship and innovation, the more likely students will become entrepreneurial, in one form or another, at some stage in their lives…Addressing entrepreneurship education requires working with existing education systems to incorporate the necessary changes as well as launching new initiatives outside of current structures (WEF, 2009:10).

Figure 2 depicts the four categories of entrepreneurial education as simplified by WEF (2009), as follows; entrepreneur (the outcome) - individual with entrepreneurial competencies, entrepreneurship – the process of accumulating entrepreneurial competencies and building enterprise culture, entrepreneurial – the attitudes, skills and behaviour or knowledge infrastructures of enterprise culture, and entrepreneurial ecosystem – the enabling environment for entrepreneurship.

Figure 2. Categories of entrepreneurial education (Source: WEF (2009, p. 14).

Entrepreneurship thrives in ecosystems (see Figure 3) in which multiple stakeholders play key roles. Key stakeholders are academic institutions, businesses, government, and supporting individuals and other intermediaries. A supportive ecosystem generates and sustains collaboration and multi-stakeholder partnerships. There is need for continuous capability building within the entrepreneurial ecosystem. This is best done through partnerships and a "portfolio" approach, rather than through one-off initiatives (WEF, 2009).

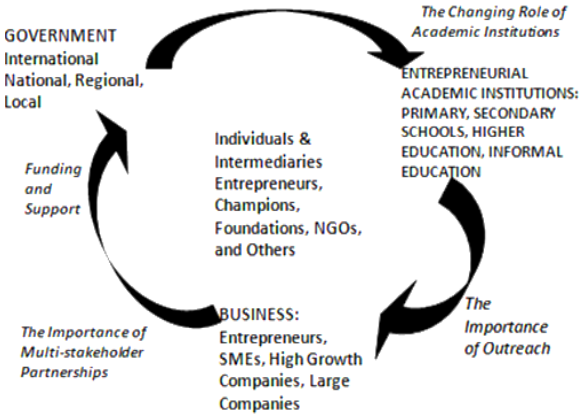

Figure 3. Entrepreneurial ecosystem; Source WEF (2009, p. 16).

WEF (2009) observes further that entrepreneurship education needs to be central to the way formal education operates. Educational institutions, at all levels (primary, secondary and higher education) need to adopt 21st century methods and tools to develop the appropriate learning environment for encouraging creativity, innovation, and the ability to "think out of the box" to solve problems. This requires a fundamental rethinking of educational systems, including training of teachers, how students are assessed, the reward system, and incentives for performing students, teachers, and institutions. There is also need for new multi-disciplinary approaches and interactive teaching methods.

Traditional to modern entrepreneurship education

Kirby (2004) examines challenges posed by the need to develop more enterprising individuals, and argues that the traditional education system stultified rather than develop the requisite attributes and skills to produce entrepreneurs. He argues that the traditional notion of the 'heroic' entrepreneur has become inadequate and dysfunctional when viewed against the needs of a wider community. Traditionally the entrepreneur in the sense of David Schumpeter is the individual with the 'achievement motive', a super ambitious persona whose capabilities were remotely linked to formal education. Typically he/she is a 'business manager' with capacity for gathering production input, and bearing the associated risk of production. The traditional perspective on entrepreneurship placed it within the domain of business studies, making it inadequate for responding to growing competitiveness in today's new knowledge societies. There is need to replace it with the wider notion of 'enterprise culture', which focuses on development of the individual and the design of enterprising organizations, and covers such issues as business norms, markets, governance and democracy, financing, and innovations, among others. He proposes considerable changes in both the content and process of learning, particularly the need to shift emphasis from educating "about" entrepreneurship to educating "for" it. Kirby (2004) stresses further that entrepreneurship should not be equated with new venture creation or small business management only, but more importantly with ongoing creativity and change. In this context he proposes that educational institutions need to change the process of learning to enable students develop their right brain entrepreneurial capabilities as well as their left-brain analytical skills, and stimulate entrepreneurial imagination. This calls for restructuring the curriculum to accommodate the pressing need for higher entrepreneurial competencies. He identified four primary areas in which successful entrepreneurs must be developed as content, skills and behavior, mentality, and personality. The first three areas - content, skills and behavior, and mentality – constitute creative knowledge that are acquired through the action learning process. Personality characteristics identified include self-motivation, propensity for risk-taking, and deep-seated ethical values. Examples of essential creative knowledge include finance/cash management, engineering, accounting, etc. in the area of content. Leadership, communication, and human relations are some of the skills and behaviors deemed essential. Creativity, opportunistic thinking, vision, and positive thinking are examples of required mentality attributes.

Gürol and Atsan (2006) explored the entrepreneurship profile of Turkish University students based on six major entrepreneurial traits, namely; need for achievement, locus of control, risk taking propensity, tolerance for ambiguity, innovativeness, and self-confidence.

The results showed that, except for tolerance for ambiguity and self-confidence, all traits are found to be higher in entrepreneurially inclined students, as compared to entrepreneurially non-inclined students. However, Smith, Collins and Hannon (2006), focusing on how entrepreneurship can be embedded in UK's higher education system, argued that it matters more to pass on the entrepreneurial skills than to be preoccupied with issues of entrepreneurship traits. They believe that studies on achievement motivation, or the ideal personality attributes of the entrepreneur, are unlikely to address the urgent need to spread entrepreneurship competencies. The focus should be on how to develop creative knowledge and skills instead of behaviour modification, because in many cases the individual's behavior is modified through entrepreneurship, and by the larger cultural contexts that shape the business environment.

Methodology

The comparative analytical approach was adopted for determining how to culture university education in Nigeria with entrepreneurial competencies. Experiences of the European Community (EC) with entrepreneurship education provided lessons for entrepreneurial culturing of undergraduate (4 year) degree programme of a typical Nigerian University.

The EC experience is encapsulated in the Communication from the European Commission (EC) to the Council, the European Parliament, the European Economic and Social Committee, and the Committee of the Regions, of February 13, 2006 (COM (2006)33), "Implementing the Community Lisbon Programme: Fostering Entrepreneurial Mindsets Through Education and Learning", which also identified the country-specific experiences of some EC member-states. The EC's context is relevant to Nigeria for two main reasons: firstly, the colonially inspired education system in Nigeria has remained largely unreconstructed, and there are similarities between it and the traditional educational system of UK particularly (Nigeria's former colonial master); secondly, the Lisbon Programme provides information on global best practices in entrepreneurship education.

Implementation of the EC Lisbon programme

The Commission sees entrepreneurship as a key competency for growth, employment, and personal fulfillment; noting that around 20 percent of participants in mini-company activities in secondary schools go on to create their own companies after studies. This indicates that entrepreneurship increases the chances of start-ups and self-employment, and enhances individuals' economic reward and satisfaction.

As shown in Table 1, COM (2006)33 identifies barriers that inhibited incorporation of entrepreneurship into formal education, and recommends how the various EC countries and regions should address them.

Table 1. Entrepreneurship education in the EC: inhibiting factors and recommended actions.

Inhibiting Factors	Recommended Actions
Formal education in several EC countries was aimed at academic excellence, with little concern for entrepreneurship and self-employment.	Entrepreneurship competencies can be acquired throughout lifelong learning at all levels of formal education.
Action learning often took place through extra-curricular activities that were not mainstreamed.	Mainstream entrepreneurial knowledge, skills, and attributes as integral part of formal education.
In a few countries, entrepreneurial training was embedded into the established courses, but practical exposure outside the scope of school/university was generally inadequate.	Inter-sectoral mobility of researchers at all stages of their careers should be promoted to help develop the entrepreneurial culture and attitude within students and teachers.
Secondary school curricula did not provide sufficient motivation to teachers and schools to develop entrepreneurship education.	Support should include regular training of teachers; giving them resources to plan, run and evaluate activities, and making teaching material available.
The career system was generally based on academic merit without entrepreneurial path as credible option.	The performance evaluation system should accommodate peculiarities of entrepreneurship competencies.
Labour mobility between the academia and industry was limited.	Partnerships between schools and enterprises and NGOs should be encouraged, pilot schemes should be financed, and good practices disseminated.

Source: Adapted from COM (2006, p.33).

From Table 1, the key de-enablers of entrepreneurship education in the EC were non-incorporation of entrepreneurship as core component of formal education, limited scope for practical/workplace experiences, inadequate incentives, and weak framework for measuring and rewarding the entrepreneurial performance of students, teachers, and institutions. To deal with these shortcomings, COM (2006) 33 recommends restructuring of formal education in its totality to integrate entrepreneurial competencies, and doing so calls for strong partnerships between institutions, government, and the private sector, back and forth mobility of researchers from the academia to industry, and restructuring of students' performance evaluation system to accommodate the incremental character of entrepreneurial learning, among others.

COM (2006)33 observed further that:

- Awareness should be raised of the benefits of entrepreneurial learning at the nursery/primary schools level.
- From the secondary school level, programs that have specific focus on learning about business in practice, by means of students running mini-companies (for instance), should be introduced.
- The creation and sustainability of school-business-community networks can promote non-governmental

participation and partnerships in entrepreneurship education.

- Tertiary institutions should integrate entrepreneurship as compulsory part of the curriculum, spread across the different subjects/ courses and levels.
- At all levels of formal education, entrepreneurship education should provide specific training on how to start and run a business, and encourage and support business ideas from students.
- It is also vital to create a critical mass of entrepreneurship teachers, and step up cross-border collaboration.

Table 2 summarizes efforts by selected EC countries to integrate entrepreneurship into formal education, as highlighted in COM (2006:33), and the lessons that are drawn from such experiences for entrepreneurship culturing of formal education in Nigeria.

Table 2. Selected entrepreneurship education programmes in the EC.

Country	Entrepreneurship programmes	Lessons for Nigeria
Poland	"Basics of Enterprise" is a compulsory subject in all comprehensive secondary and vocational schools. Objectives include developing entrepreneurial attitudes and learning how to start a business.	'Basic Enterprise' can be introduced as a set of practice-led compulsory subjects in primary and secondary schools in Nigeria.
Austria	Entrepreneurship is part of the curriculum of secondary level technical and vocational education, and seeks to promote students running 'fictitious' firms. Entrepreneurship competence is developed in both the formal and non-formal settings (e.g. youth work and various forms of participation in society).	In addition to 'Basic Enterprise' the practical/vocational elements of subjects/courses should be developed and included in the curricula, with appropriate performance evaluation measures.
Luxembourg	The sixth-year (11/12 year old pupils) French-language programme has a section devoted to starting up a business, based on the strip cartoon "Boule and Bill set up a business", and this is used in all primary schools. The cartoon is also used in the mathematics programme for introducing basic financial analysis.	Textbooks used by Nigerian pupils/students should include similar examples of "Boule and Bill set up a business"
Several European Countries	*Young Inventors Competition* is a programme run in primary and lower secondary schools in several EC countries, targeting children from 6 to 16 years of age. It aims to encourage students' creativity, develop their ideas and enter them into a competition. Winners receive prizes for designs and inventions.	Several competitions should be created to reward standout students, teachers, and institutions appropriately.
Ireland	Under the established curriculum, programmes like the Transition Year, the Leaving Certificate Vocational Programme and the Leaving Certificate Applied offer students the opportunity to experience entrepreneurship.	*Vocationalizing* all disciplines should be a key criterion for recognition and promotion of teachers and educational institutions.
Germany	In the German vocational training system (the so-called 'Dual System'), training takes place both in school and in a firm. In the "Master Phase" young people are taught how to set up their own company. Such training aim not only at acquisition of the necessary management competences, but also at fostering the entrepreneurial attitudes and skills of apprentices.	The framework for introducing the "Dual System" should be developed and adopted particularly for vocational/technical/engineering programmes in all tertiary institutions.
Finland	An entrepreneurship steering group was set up in 2002 to develop and coordinate entrepreneurship at different levels of education, with members representing different ministries, organizations and educational administrations.	National and sub-national institutional framework for benchmarking and accrediting entrepreneurship content of formal education should be created in Nigeria
Netherlands	Government funds pilot projects in schools. Other support includes supply of teaching materials, and regular seminars and training programmes for teachers. The goal now is to encourage take-up of these projects by private schools through good practices in public schools.	Government should provide financial leverage and direct support for standout entrepreneurship projects of public and private tertiary institutions.
Norway	Young Enterprise Norway is a partner for the Government in implementing the Strategy for Entrepreneurship Education. In 2004, 14 percent of all students leaving upper secondary school had participated in the Student Company Programme.	Special support and incentives should be provided for private enterprises, NGOs, and FBOs, that provide outlets for practical exposure to students.
UK	The aim of *Science Enterprise Challenge* is to establish within universities a network of centres funded by the government and specialized in matching entrepreneurship studies with science and technology.	Government should provide seed fund for all public and private tertiary institutions in the country to create entrepreneurship development centres.

Source: Adapted from COM (2006, p. 33).

Table 2 provides a wide ranch of country-specific experiences relevant for entrepreneurship culturing of formal education in Nigeria. Among other lessons, there is need to evenly support performing private and public institutions, provide incentives for non-governmental participation, and benchmark the entrepreneurship performance of institutions and organizations across the country. Schools should be given support and incentives to encourage take-up of entrepreneurship activities and programmes, through a range of different instruments, and special attention should be paid to the training of teachers, and raising the awareness of heads of schools and school boards. Cooperation between educational establishments and businesses and NGOs should be encouraged, so that the non-governmental operators see involvement in formal and non-formal education as investment in human resources, and an aspect of their corporate social responsibility. Equally, teacher mobility between formal educational institutions and the business world should be encouraged, along with the involvement of business people in teaching.

Nigeria's efforts at incorporating entrepreneurship

As Adejimola and Olufunmilayo (2009) rightly observe, graduates of Nigeria's tertiary institutions suffer from the *certificate frenzy*, and prepare their minds for 'white collar' jobs that have become increasingly hard to find, and while many of them remain jobless, underemployed, or *disguisedly* unemployed, a larger proportion of existing industries are owned by semi-literate entrepreneurs. Entrepreneurship education can redress such anomalies, but Adejimola and Olufunmilayo (2009) warned that success is not in sight with the current curriculum and pupils/students examination systems, which lay more emphasis on knowledge acquisition for its own sake. For them (as it is for several other commentators), Nigeria's educational system lays too much emphasis on the 'certificate' rather than on what the holder 'knows', 'can produce' and 'thinks'.

Adejimola and Olufunmilayo (2009) recall that the Presidential Committee on the Introduction and Implementation of Entrepreneurship Education in all tertiary institutions was set up and charged to promote entrepreneurship education by means of the following strategies: curriculum review; promotion of the development and sustenance of entrepreneurship centres and centres of excellence; promotion of science, technology and innovation by providing incentives for students and lecturers; sensitization, advocacy and mobilization of support for entrepreneurship education; programme focus; and funding. Accordingly, the NUC directed all Nigerian universities to establish Entrepreneurship Development Centres latest by the end of 2008 session. The directive also encouraged universities to establish enterprise resource centres, such as; well-equipped libraries, technology centres, cybercafé, among others, where entrepreneurship networking can be coordinated.

It would be an interesting inquiry to determine how far Nigerian universities have complied with that directive, but a casual look show that very little has been done. Many public universities (Federal and State owned) complain of lack of matching capital grants, and difficulties associated with accessing grants from the Educational Trust Fund (ETF). A few private universities, like Babcock University, Covenant University, Adekunje Ajasin University, Salem University, and so on, have one form of entrepreneurship initiative or the other. Many complain of lack of funds, and question the propriety of government imposing the same directive on them when private universities do not benefit from ETF facilities or direct government grants like their public counterparts. However, to meet the basic requirements for accreditation, tertiary institutions have introduced a number taught entrepreneurial courses for different levels of students.

In effect, entrepreneurship culturing of formal education is far from being achieved in Nigeria. Garba (2010) argues that past educational policies in Nigeria failed to explicitly recognize the importance of entrepreneurship to human capital development. The 1981 National Policy on Education attempted to link education to self-employment and the industrialization process, focusing principally on vocational training in primary and secondary schools mainly. Tertiary institutions were expected to train middle and higher level manpower.

The National Policy on Education of 2004 extended the role of tertiary institutions to include technical education, described as the aspect of education which leads to acquisition of practical and applied skills and basic scientific knowledge. To promote science/technical education, higher admission quota and lower cut off points were set for science/technology programmes, and public institutions were required to spend a larger share of their budgets on them. But fewer and fewer applicants seek to study science/technology programmes (except for selected professional areas like medicine, computer sciences, and engineering). But as rightly observed by Onukaogu (2008) (in Garba, 2010), while it is good to promote and support science education, it is wrong to make young people think that other courses and professions are inferior to the sciences, or that Nigeria's problems will be solved when all Nigerian children obtain degrees in the

sciences. Despite the goals and expectations of the National Policy on Education (2004), the gap in the number of admitted students in the science/technology disciplines and the programmes in the humanities have remained wide, and the practical content of the science/technology programmes have remained generally weak. For instance, tales of graduate of computer science who did not do practical work with personal computers while in school (who needs to attend extra lessons in private schools to learn basic computer skills), and agricultural engineers who cannot drive tractors, are commonplace. To support vocational education in tertiary institutions, government has encouraged the establishment of Vocational Enterprise Institutions (VEIs) and Innovation Enterprise Institutions (IEIs), which are principally private institutions that offer complementary vocational/technical/technology and professional support to tertiary institutions. Again, it would be interesting to inquire into how these have worked in practice, and whether the intended outcomes have been achieved. But it is clear that vocational education programmes are components of entrepreneurship education, and there is an urgent need to speed up entrepreneurship culturing of formal education in Nigeria.

Results

The Entrepreneurship Culturing Programme (ECP) proposed here is envisaged as "whole school" design to mainstream entrepreneurial competencies in all areas of the curriculum, with "hands-on" facilities, where students set up and run "mini-companies". Broadly, three sets of related entrepreneurial competencies are proposed under ECP, namely; personal and basic business skills, ICT competencies, and vocational skills.

All three are compulsory for every student regardless of the programme of study. The content of the first two, namely; personal and basic business skills, and ICT competencies are the same for all students, but each student is required to select at least one vocational skill.

Personal and Basic Business Skills: The personal and basic business skills concern general issues of life and businesses, and are intended to make the students think wisely and responsibly. These have three elements, namely; operational literacy, personal and social skills, and skills related to business start-ups and financing:

- Operational Literacy; these relate to general literacy, numeracy, communications, etc., the fundamental requirements for operating effectively in a working environment, and for career planning and the process of identifying and accessing appropriate work opportunities.
- Personal and social skills; the raft of social skill areas and personal attributes, including; team working, self-confidence, awareness, risk taking, problem solving, creativity, and the desire to innovate.
- Skills relating to business start-up or financing**;** such as drafting business plans, marketing, financial management, sales, and human resource management. Students will have to undertake an exercise in setting up and running their own 'fictitious' companies.

ICT Competencies: ICT has become a universal knowledge infrastructure that is intimately linked to enterprise. It is no longer necessary for an entrepreneur to have all the information; what matters now is how to access the required information and resources, which is made easy with ICT competencies. These have four main training areas, namely; software usage (data processing and basic graphics), hardware development (cloning, basic repairs and maintenance), and software development (writing of simple programmes), and networking (Internet and Intranet services) and building and management of websites.

Vocational Skills: Vocational skills complete the ECP tripod with complementary skills that can provide the student additional income earning activities. These can vary in different institutions depending on resource advantage and preferences of students. Generally, vocational skills include; tailoring & fashion designing, cookery and baking, electrical works, building and fitting, plumbing and welding, carpentry, aluminium and furniture works, livestock and crop cultivation.

Proposal for curriculum review

It is proposed for a four year degree programme, that a minimum of 23 credit units should be allotted for ECP courses, as follows; 4 in the 100 level (2 per semester), 4 in the 200 level (2 per semester), 6 in the 300 level (3 per each semester), and 9 at the 400 level (3 per each semester, and 3 for final project work). Typically the compulsory credit load in a four year degree programme is 120 (at 15 credit units per semester). When 23 credit units are taken out for compulsory ECP courses, the student has 97 credits to spread between the Degree Programme Courses (DPCs) and the General Studies Courses (GSCs). ECP will make the students work on real projects, and learn to operate the projects as actual businesses, thereby speeding up 'knowing and doing'. No failures are expected, unless the student failed to attempt, as the evaluation methodology of ECP is interested in every attempt made by the student. In line with the need to support ECP with GSCs that

give the students broad exposure, it is also proposed that 64 credit units should be for the PGCs, while the remaining 33 credit units should be allotted to GSCs. There is need to broaden the scope of existing GSCs to include music, fine arts, world religions, and international relations. The tendency to over load the undergraduate programme with several specialized courses that are more appropriate in higher degree studies should be checked, to ensure the optimal mix of ECPs, GSCs and DPCs. Table 3 shows how the curriculum of a typical 4-year degree programme can be restructured to achieve a good mix of GSCs, ECPs, and DPCs. Understandably, DPCs make up 53.33 percent of the courses taught in the programme, GSCs is 27.50 percent, and ECPs 18.17 percent.

Table 3. Inclusion of ECP courses in a 4-year degree programme.

100 Level	Cr.	200 Level	Cr.	300 Level	Cr.	400 Level	Cr.	TOTAL	Percent
GSCs	12	GSCs	12	GSCs	6	GSCs	3	33	27.50
ECPs	4	ECPs	4	ECPs	6	ECPs	9	23	19.17
DPCs	14	DPCs	14	DPCs	18	DPCs	18	64	53.33
Total	30	Total	30	Total	30	Total	30	120	100.00

This mix will allow the undergraduate student wider general exposure, making the prospective graduate versatile and well rounded. This contrast with the current situation in several Nigerian universities where there is excessive fragmentation of the DPCs, unnecessary duplication of courses, and retention of courses that have become remotely connected or obsolete. This is why regular review of the academic curricula is strongly recommended. Table 4 sketches broadly the make-up of ECP course and proposes how to spread them into the programme of each level of study. The personal and basic business skills are structured into the 100 and 200 levels, while the ICT competencies and vocational skills components are for the 300 and 400 levels. Beginning from the 300 level, students are required to constitute themselves into groups that run 'fictitious' companies and their grades for the ECP courses will give higher weights to such practical aspects.

Table 4. Structure of ECP courses.

100 Level	200 Level	300 Level	400 Level
Review of basic business terms, communication techniques, fundamental requirements for operating in a working environment, selecting and appraising businesses, Personal and social skills.	Emotional competencies, basic legal drafting, development of concept notes, negotiation techniques, drafting business plans, marketing, financial management, sales, and human resource management.	Students set up and run 'fictitious' companies. Working teams are formed , and staff advisers appointed to mentor the trainees Training proceeds to respective workshops/training halls.	Internship and advanced training taken on side-by-side. Trainees finalize their project reports. Successful graduands issued professional certificates along with their respective Bachelor's degrees.

Formation of working groups

The ECP working groups for students should be formed at the beginning of the 1st Semester of the 300 level. The size of each working group should be such as would allow healthy team work. Ideally students should maintain their ECP groups till graduation, unless there are good reasons to effect changes. Each team is required to elect its leader, and at most 4 teams should have one Staff Adviser. Each student should belong to two ECP groups – one for the ICT component, and the other for the vocational skill area. The final ECP project work should relate to either or both of the group areas' work. It is envisaged that ECP will shift the focus from regular classroom schooling and arm chair, library, research to a practically oriented schooling culture. This will open a window of hope for students who may not be too good in classroom work but have strong aptitude for practical applications, as their poor classroom grades can be wedged with high scores in the ECP courses. In addition, each student on completion of the degree course will obtain a degree and certificates/diplomas in the relevant ICT and vocational skill areas.

Governance and funding of ECP

Each tertiary institution needs to create and maintain a functional centre for entrepreneurship development for the management, monitoring, and control of all component of ECP. At the national and sub-national levels, there is need for agencies that support, regulate, monitor, and benchmark the ECP programmes of institutions. It is also important to conduct periodic review of the curricula at all levels of formal and non-formal education, to ensure that what is taught and how courses are sequenced serve the goals of each level of education. The tendency to over stuff undergraduate programmes with academic content and over specialized details, should be discouraged as it leaves little time for the ECPs and GSCs, which are needed to make graduates of tertiary institutions versatile and well rounded. Three strategies are proposed for adequate and sustainable funding of ECP in tertiary institutions.

Firstly, students in both public and private tertiary institutions should buy their working tools and basic personalized instruments like lap tops, computer software, tool boxes, uniforms, boots, simply wielding machines, shovels, cutlasses, wheel barrows, and so on. Apart from reducing the weight of funding on the institutions and government, taking responsibility for their working materials would make the students more accountable and responsive to the training. Students should also pay for basic consumables that are required for their experiments and project work, including; stationeries, chemical additives, cement, sand, paints, fertilizers, seedlings, among others. The institutions can facilitate bulk purchases and transportation logistics to reduce cost, but it is vital for the trainees (or their sponsors) to share in the funding of ECP. Each student should also be charged a token to support routine maintenance and replacement of worn out facilities. While many students and sponsors would want to pay for the value added by ECP, the challenge would be for monies collected to be used judiciously, and excessive leakages through corruption reduced to the barest minimum.

Secondly, Government has to step up its commitment to reducing youth unemployment and restiveness by providing seed funds through the ETF, as grants, to all registered and accredited public and private tertiary institutions. Such targeted strategic interventions would be most appropriate for ETF than the current interventions that support projects, like building of classrooms, office blocks, etc., (in public educational institutions only) that ordinarily ought to be executed with the capital vote of such institutions. The provision in the ETF Law that excludes private educational institutions from its support is ironic, because its source of funding is largely from the private sector. Moreover, private educational institutions are actively assisting government to achieve its educational goals. Besides the compliance rate of private universities to NUC directives on entrepreneurship education and other related programmes have generally been relatively higher than those of public universities.

Thirdly, each tertiary institution should carve out niches for itself, by rendering its programmes attractive to potential investors and donors. Several firms need to establish centres of excellence or select academic faculties/departments to anchor their research programmes, train employees, and spend their social responsibility budget. Tertiary institutions can key in with well-developed academic programmes and outreaches, workshops and seminars, and consultancy services. It is also important to package special incentives for such firms, donors, NGOs, and FBOs that are willing to partner to support ECP.

Conclusion

The changing demand of the new knowledge societies for versatile, multi-skilled, workers and entrepreneurs has stimulated interest in entrepreneurial culturing of formal education globally. This has called for the restructuring of curricula and teaching techniques in formal education to promote internship, fieldwork, and learning-by-doing.

In Nigeria, while there is broad acceptance that entrepreneurship is required for promoting self-employment and enhancing business start-ups, little has been done to incorporate entrepreneurship into formal education despite the introduction of Entrepreneurial Skills Development Programs (ESDP) for Nigeria's tertiary institutions by the Federal Government. Commentators and researchers on entrepreneurship education in Nigeria either attempt to restate the importance of entrepreneurship, or analyse different aspects of the entrepreneurial deficits and how they were created; few studies attempt to conceptualize entrepreneurship culturing of formal education in Nigeria. Inadequate focus on how to engraft entrepreneurial competencies into formal education, particularly at the tertiary level has made it difficult for regulatory agencies like the NUC to design appropriate standards and benchmarks for accessing how well universities have complied with the Federal Government's directive on compulsory entrepreneurship education. Consequently, what obtained currently are a set of taught entrepreneurship courses with one form of practical embellishment or

the other. The curriculum for most academic programmes have generally remained the same for decades, making the graduates that pour out in thousands each year entrepreneurially deficient for self –employment, and those are who are lucky to get paid jobs most often need to be re-trained.

Following the European Community's Lisbon Programme, "fostering entrepreneurial mindsets through education and learning", the paper proposed an Entrepreneurial Culturing Programme (ECP) for Nigerian universities. ECP is envisaged as "whole school" design to mainstream entrepreneurial competencies in all areas of the curriculum. ECP is composed of three sets of related entrepreneurial competencies, namely; personal and basic business skills, ICT competencies, and vocational skills. All three are compulsory for every student regardless of the programme of study. The content of the first two, namely; personal and basic business skills, and ICT competencies are the same for all students, but each student is required to select at least one vocational skill. For a four year degree programme, about 20 percent of the total credit units are recommended for ECP courses, while the remaining 80 percent should be shared between the degree programme courses and general studies courses.

It is also recommended that the scope of general studies courses be broadened to include music, fine arts, world religions, and international relations. Equally, the tendency to over load the undergraduate programme with specialized courses that are more appropriate to higher degree studies should be checked. Students should be constituted into working groups to promote team spirit and sharing of mental models. Performance assessment/examinations for ECP courses should take into consideration every effort made by students, and each student on completion of the degree course will obtain a degree and certificates/diplomas in the relevant ICT and vocational skill areas. Success of ECP however calls for effective fiscal governance and cost sharing by the institution, government, and beneficiaries of the programme. The ECP as proposed here can guide universities, and other tertiaries institutions, in Nigeria on how to make undergraduate programmes entrepreneurially oriented, and their students and teachers more focused on the action-learning approach, thereby raising the chances that more graduates would go into self-employment, and business start-ups will increase, leading to economic growth. NUC can use ECP to design generic templates for Nigerian universities to adapt. It can also provide the baseline for periodic monitoring and evaluation of the content, structure, and performance of undergraduate degree programmes in Nigeria.

References

Adejimola, A. S. & Olufunmilayo, T. (2009). Spinning-off an entrepreneurship culture among Nigerian University Students: Prospects and challenges *African Journal of Business Management* 3(3), 080-088

COM, (Communication from the European Commission) (2006). Implementing the community Lisbon programme: Fostering entrepreneurial mindsets through education and learning" COM (2006) 33, Brussels (March) Retrieved on March 8, 2011, from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do%3Furi%3DCOM:2006:0033:FIN:EN:PDF

Essia U. E. (2010). Entrepreneurship education programmes being an unpublished concept note presented to the Vice Chancellor of Salem University Lokoja on the Possibility and Viability of Creating Salem Entrepreneurship Acceleration Programme (August)

Garba, A. S. (2010). Refocusing education system towards entrepreneurship development in Nigeria: a tool for poverty eradication *European Journal of Social Sciences* 15(1), 140-165.

Gibb, A. (2002). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge, *International Journal of Management Reviews* 4, 233–269.

Gürol, Y. & Atsan N. (2006). Entrepreneurial characteristics amongst university students: Some insights for entrepreneurship education and training in Turkey *Education + Training* , 48(1), 25 – 38.

Heinonen, J. S. Poikkijoki (2006). An entrepreneurial-directed approach to entrepreneurship education: Mission Impossible? *Journal of Management Development,* 25(1), 80 – 94.

Henry, C., F. Hill & Leitch C. (2005) Entrepreneurship education and training: Can Entrepreneurship Be Taught? (Part II) *Education + Training* 47(3), 158 – 169

Kirby, D. A. (2004). Entrepreneurship education: Can Business Schools Meet the Challenge? Education + Training, 46(8/9), 510 – 519.

Leitch, C. M. & Harrison R. T. (1999). A process model for entrepreneurship education and development *International Journal of Entrepreneurial Behaviour & Research* 5(3), 83 – 109.

Smith, A.J., L.A. Collins & Hannon P. D. (2006). Embedding New Entrepreneurship programmes in UK Higher Education Institutions: Challenges and Considerations *Education + Training*, 48 (8/9), 555 – 567.

World Economic Forum (2009) Educating the next wave of entrepreneurs: unlocking entrepreneurial capabilities to meet the global challenges of the 21st Century: A Report of the Global Education Initiative, Switzerland, Retrieved, March 8, 2012 from https://members.weforum.org/pdf/GEI/2009/Entrepreneurship_Education_Report.pdf