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CHALLENGES AND PROSPECTS OF DEVELOPING ENTREPRENEURSHIP SKILLS IN MATHEMATICS EDUCATION

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Abstract
Unemployment is a global phenomenon but its increasing rate in Nigeria is so alarming and the only means of tackling it is through developing entrepreneurship skills. Entrepreneurship is the development of the science of innovation, capability and willingness to organize and manage enterprise along with its risks taken in order to make profit. Human life is all about investment. Nigeria has been clamoring to elevate her citizens above the poverty level by organizing programs that could make her citizens become self-reliant, self-sufficient and self- actualized in order to be recognized and be counted among the developed countries of the world. The knowledge of mathematics helps in acquiring entrepreneurial skills among secondary school students by influencing knowledge of entrepreneurial skills in mathematics. The public and Private school system has contributed immensely to the development of education and by extension manpower base of the country. This paper looks at some challenges responsible for managing public and private secondary mathematics as an entrepreneurship education in Kano State and recommends among other things that Government should make fund available for the purchase of relevant materials for teaching entrepreneurship and as well train teachers to become more acquainted with the concepts of Mathematics and entrepreneurship education which they will invariably inculcate effectively on the students through workshops, conferences, symposium, etc. regularly.

Introduction
Education can be variedly defined depending on the purpose it is meant to serve and the discipline in perspective. Education is the process of bringing desirable change into the behaviour of human beings. It can also be defined as the process of imparting or acquiring knowledge or habits through instruction. Education in the specific term is a means of making individuals understand their society and its structures. This will assist such individuals to open up for them a way of creating meaning out of their environment and relationships with other individuals in the realm of language acquisition and thought to classify and provide meaning to things, ideas and events (Saidu and Ahmodu, 2016).
Education, for any nation, whether developed or developing, is to help solve the problems that affect that nation. Acording, is to National Policy on Education (FRN, 2004),

"Government has stated that for the benefit of all citizens, the country's educational goals shall be clearly set out in terms of their relevance to the needs of the individual and those of the society, in consonance with the realities of our environment and the modern world".

Education is the instrument for social transformation of a people. It is the vehicle for transferring values, entire, knowledge and experience that make for proper moulding and adjustment of an individual to his dynamic environment. To achieved these, the educational system needs to pass through a sector either public educational sector or private educational sector. Public educational sector are educational system which are control by the government and Private schools owned by an individual, cooperating individuals, voluntary agencies or faith based organizations.

Mathematics holds a prominent place in education and the school curriculum as a result of its critical role in scientific and technical advancement, and as such, is the foundation for the development of entrepreneurial abilities (Uka, 2015). A solid understanding of Mathematics will improve one's ability to solve complex life challenges. According to Ale and Adetula (2010), the distinction between developed and developing countries is based on their level of mathematical ability and ingenuity. Mathematics is often considered an undeniable driver of economic growth and wealth creation. Mathematics is more than just the science of numbers that teach in schools and that many pupils either enjoy or fear. Mathematics plays an important role in people's lives and in the development of any society (Odumosu, 2016). Because we rely on mathematics to address our daily problems, this has become required. In today's increasingly technological culture, Mathematics is also essential for a variety of occupations and work prospects (Odumosu, 2016).

According to Udonsa (2015), the national objectives of primary and secondary education in relation to Mathematics education include laying a solid foundation for the concept of numeracy and scientific thinking; providing opportunities for the child to develop manipulative skills that will enable him to function effectively in society within his capacity; developing in the child the ability to adapt to his changing environment; and providing the basic tools for further learning. With these goals in mind, Oviawe (2010) observes that Nigeria, like most developing countries around the world, faces a slew of issues and harsh realities, including poverty, unemployment, conflict, and sickness. Poverty is one of the repercussions of unemployment. The knowledge of mathematics when incorporated into the society can solve the problem of poverty and unemployment because of the critical thinking and problem solving that is involved in mathematics education.

The learning of entrepreneurial skills for employable individuals is critical to addressing the issue of unemployment and eradicating poverty in Nigeria. Mathematics knowledge prepares students to be actively engaged and responsible citizens, creative and imaginative, able to work cooperatively, and fully aware of and conversant with the complex difficulties that society faces (European Commission, 2015). Scientific knowledge aids in describing and comprehending the world around us. Science education is critical for promoting a culture of scientific thinking and inspiring citizens to make decisions based on evidence, ensuring citizens have the confidence, knowledge, and skills to participate actively in an increasingly complex scientific and technological world, and developing problem-solving and innovation competencies, as well as analytical and critical thinking skills, that are required to empower citizens to live personally fulfilling lives. As a result, mathematics is one of the instruments required for entrepreneurial success.

An entrepreneur is someone who takes the risk of starting and running a company. The entrepreneur looks inward into his or her environment to uncover problems that others are facing (or business possibilities) and introduces new products and services to make money (Ugwoke and Abidde,

2014). According to Moemeke (2013), an entrepreneur is a lifelong learner, a creative person, an initiate, and a potential industrialist, in addition to being an inventor. As a result, entrepreneurs control the destiny of nations because they shape, materialize, and bring any nation's developmental goals and economy to fruition. Entrepreneurial skills are business skills that an individual learns on their own in order to run a successful business and be self-sufficient (Umunadi, 2014; Nwafar, 2009). The skills entail the effective use of ideas, information, and facts to assist a learner in developing competencies, providing services, or becoming productive employees of an organization. Entrepreneurship is the process of using private initiative to transform a business concept into a new venture or to grow and diversify an existing venture or enterprise with high growth potential. It is the process of using private initiative to transform a business concept into a new venture or to grow and diversify an existing venture or enterprise with high growth potential (Mkpa, 2014; Ugwoke & Abidde, 2014). As a result, it is critical that entrepreneurial skills be incorporated into the basic science curriculum for children. The federal government of Nigeria has recently established a policy of entrepreneurship education as a compulsory field of study at all levels of education in Nigeria, notably at the secondary level of school, in response to continuing trends of youth unemployment (Obioma 2012). In light of current realities and the need to develop and empower society's youth, this change from general education to explicitly entrepreneurship education becomes vital. There appears to be agreement on the need for entrepreneurship in addressing several socioeconomic issues, particularly poverty, unemployment, and various social vices (Oviawe, 2010). Oviawe (2010) investigated the possibility of employing entrepreneurial education as a method or instrument for redirecting the necessary energy of Nigerian universities, faculties, and students away from paid work and toward self-employment, which is important for capacity building. Entrepreneurial education, where students are trained on the fundamentals of entrepreneurship and how to construct a successful company strategy, must be prioritized.

Mathematics Education and Entrepreneurship Skills

Mathematics Education according to Odo & Ugwuda (2014) is a branch of science which deals with quantities, sizes and shapes as determined by numbers and signs. It is a tool whose knowledge and skills are the bedrock of all societal transformations and transfers of ideas into reality. Mathematics has the ability to tackle abstract problems and generally all variety of problems. Having the ability to address complex life puzzles one is confronted with, depends entirely on how mathematically inclined the individual is (Tsafe, 2013). That is to say that Mathematics is all that is required for solving problems in real life situation. The daily routine of the individual in a society has to do with the acquired knowledge of Mathematics which ranges from education, trading, farming, business venture, health sector, entrepreneurship, technologies and other tropical issues.

All these occurrences in the society depend largely on statistical content which is an area of Mathematics. Mathematics Education provides learners an awareness and understanding of the role that Mathematics plays in the modern world. It is a subject driven by life-related applications of Mathematics which enables learners to develop the ability and confidence to think numerically and spatially in order to interpret and critically analyze everyday situation and to solve problems (Tsafe 2013) in (Akissani, 2016). Mathematics education in modern world enables learners get acquainted with learning concepts in the development of entrepreneurship skills in solving the problem of unemployment and the evil vices associated with it. According to Akissani (2016), learners are able

to understand and acquire commercial skills, bargaining power; exchange rates and so on through Mathematics education, failure of their ability to carry out these enterprises may be delusional.
To function optimally in entrepreneurship, that individual must be knowledgeable in Mathematics. Mathematics education as the key to entrepreneurship makes the individuals become acquainted with the skills and thus acquire certain enterprise in the society and capable of making him/her self-employed. Mathematics education is a pivot through which many policies could be translated into real life situations and whose profound impact could be noticed if carefully utilized for proper policy formulation and implementation (Tsafe, 2013).

Some research studies such as that of Uka (2015), has shown that there is a positive relationship that exists between problem solving and entrepreneurship education. Problem solving itself in Mathematics has to do with creativity which invariably has bearing with entrepreneurship.

Challenges Of Developing Entrepreneurship Skills In Mathematics Education
Challenges of developing entrepreneurship skills in mathematics education among public and private secondary schools would borders on the following:

Challenges of Funding
Availability of funds to public and Private school owners is important. Most Public and Private Schools are small in size, lacking mathematics laboratory, teaching equipment/facilities and trapped in make shifts house or rented accommodation. Little Patronages, astronomical costs of accommodation retard their ability to acquire education specific environment, equipment, quality teachers, all necessary to meet set standards for the operation of schools in the state or even elsewhere (Odeleye, Oyelamin &Abike, 2012). Educational resources and the users require finance to really make use of instructional materials in teaching.

Environment Issues
School environment is a critical factor in school operations and success. Over 80% of Private schools in Kano State are sited in either private homes or make shift buildings and do not have capacity for further expansion in the nearest future. The provisions of sporting facilities, library, convenience, dispensary, etc are functions of space. In some private secondary schools, the classroom accommodation is grossly inadequate. As a result of the large enrolments in these schools, the classrooms are usually overcrowded, with up to sixty or more students receiving instructions in classroom designed for only thirty or, forty students. In most cases, the chairs and desks are not enough; you see them sharing chairs, standing up, or sitting on windows or broken desk! When students are overcrowded like this, there is a stalling of the teaching-learning process and a disruption of the children's mental activity, a situation that generally militates against effective teaching and intellectual development the children.

Inability to Retain Staff.
As for teaching staff in public and private primary and secondary school today, the problem is no longer that of unavailability, but that of inability of management to retain staff probably due to poor conditions of service. This does not help the development of the education system. Because of the comparatively poorer conditions of service of teachers in the Nigeria society, the tendency for many teaching in the nation's school today, as was the case with their predecessors in later colonial and

independent Nigeria, is to use the teaching profession as a stepping stone to other highly esteemed and more attractive jobs. In consequence, teaching is gradually becoming a profession for fresh graduates of universities and colleges of education who are ready to call it quit, without provocation, as soon as they find greener pasture elsewhere. From time to time, therefore the teaching staff in private educational institutions is usually unstable. Consequently, the teaching, learning process is stalled everywhere. Unless the conditions of service of teachers, at all levels, are improved and their status raised higher in the Nigerian society, the teaching staff of our educational institutions including the universities, shall continue to be unstable and educational progress shall continue to be retarded; but this must not be so for a country that is virtually ready to take a plunge into a world of science and technology.

Poor Preparation and Malpractices Issues.

Experts in the education sector have been able to identify examination malpractices with poor preparation of students for examination, and lack of self-confidence as a bane of the education system. Lack of interest from the students mostly hinders mathematics teachers from giving details and practical knowledge during lesson delivery or going for excursion to boost interest. In view of the rising costs of education (school fees, enrolment fees, cost of books and other materials, students and their parents will not ordinarily want to be held back by any form of deficit or failure in any of the required subjects, hence will go to any length to ensure success. In some cases, some teachers at the secondary school level are involved by way of encouraging student to contribute money (cooperation fees) in order to secure the needed assistance during such examinations because they, the teachers are left with no other alternative considering the fact that they are aware of the inadequate preparation of their students as well as the lack of facilities to get them properly prepared before examination in private schools. And some proprietors of private schools want their students to pass at all cost so that the school is considered a good one, hence they resort to the school involvement in examination malpractices.

Issues of Exploitation and Falling Educational Standard

A close assessment of activities in schools have revealed that, students are made to suffer undue amount of exploitation by school heads at both private and public schools in the name of enrolment fees and assurances of success in their examination and this they do in collaboration with the ministry officials who are supposed to inspect and monitor activities in school to ensure standard compliance. Despite the fact that most of the schools lack basic learning facilities and adequate and qualified teachers, in some cases, a school with the services of an English Language teacher, but lacks that of Mathematics teacher. This is the more reason why one may not have the gut to quarry the mass promotion syndrome being practice in schools because the system itself in not balanced (Saidu and Sandra, 2015). Most government inspection or monitoring team are not committed to visit schools for routine sections that could checkmate school activities. Most schools responsible for external examination are not qualify in terms of accreditations in facilities, personnel, environment and coverage of academic curriculum.

Poor Parenting/Guidance

Parenting entails caring, protection, guidance, provision of basic needs for a child up-keep in order for him or her to be properly equipped to meet with the challenges of life, in accordance with the

laws of the land. In desperation, many parents have decided to bring in additional innovation by way of not only involve in encouraging, but also finance activities in and around examination venues to effect malpractices in order to brighten the chance of their children or ward in qualifying examination to higher institutions and some even progress on this act through the tertiary level of education (Sule, 2012) and this negatively influences entrepreneurship development in Kano State and Nigeria at large.

Lack of Facilities/Equipment

In accomplishing teaching and learning, facilities/equipment are central to any learner centred education. Most public and Private schools especially Low Fee Payment (LFP) may not be able to afford facilities/equipment necessary for offering certain subjects in the curriculum especially in the sciences, technical and vocational areas. This also causes most of these schools to focus more on social sciences and art subjects to the detriment of a balanced curriculum as required by the educational system. The state education policy weighs in on sciences, technical and vocational education and has encouraged this over the years. Therefore, public and private schools needing to operate should have equipment and facilities likely to promote emphasis areas in Kano State Education policy (Agi, 2013).

Poorly Equipped Libraries, Laboratories and Subject Rooms

For effective teaching and learning, well equipped laboratories and subject rooms are needed; but the truth is that private schools today lack these essential facilities. Many public and private schools have buildings that the call libraries, but most of these are not equipped with essential books and current journals and magazines. Also, many public and private schools do not have science and mathematics laboratories while a good number of those that have, do not possess the basic tools or equipment as model in mathematics, microscopes, dissecting instruments and specimens.

Also, many schools do have "special rooms for teaching such basic subjects as history, geography and French. In such a situation as this, the teachers cannot put in their best; and the students, too, cannot teaching-learning process is stalled and the overall development of the children, within the school system is retarded (Ahmodu-elta, 2015).

Prospect For Developing Entrepreneurship Skills In Mathematics Education

Public and Private schools in Kano State can be improved to succeed and contribute more to realizing the goal of Education and entrepreneurship development in the State. Despite the avalanche of challenges facing the system, collaboration efforts between operators of Private School System and Government can open new vitas. Indeed Mathematics is an exciting and challenging subject which continues to develop at a rapid rate across many research areas in its' natural elegance and beauty. Taking a real world problem by creating and applying mathematical models to aid understanding is often hugely satisfying and rewarding.

Mathematics in this 21st century is having an enormous impact on both science and society. Though it's influence is silent and appear hidden but indeed has shaped our world in many ways. Mathematical ideas have helped make possible the revolution in electronics and , which has transformed the way we think and live today. The information technology (IT) in this century has transformed the world into a global village. These advances in science and technology have been made possible by the numerous developments in mathematics education.

Mathematics is a universal part of human culture. It is the tool and language of commerce, engineering, ICT and other sciences –agriculture, chemistry, physics, computing, biology etc. It helps us recognize and understand the world around us.

Mathematics education plays vital, often unseen, role in many aspects of modern life, for example:

(1) Space travel,

(2) Safeguarding credit card (ATM) details on the internet,

(3) Steming and focasting the spread of natural disaster like flood, earth-quake, diseases/epidemics,

(4) Focasting/Predicting economic fluctuation of a country currency, bounds and stock market prices,

(5) Decision making of any business either local or international.

As our society is becoming more digital or technologically dependent, there is an increasing requirement for people with good knowledge of mathematical education. These include cognitive, analytical and quantitative skills which are in high demand by employers. A good mathematics skill provides one with a broad range of skills in critical thinking and problem solving, logical reasoning and flexible thinking in decision making. This leads to careers that are exciting, challenging and diverse in nature. Whatever the career plans of our students may be, we could plan for them even if they have none at present, the concept in mathematics education, provides them with good job prospects for the future. To this end, students need to be encouraged to see and know the importance of mathematics education in nations building and development.

In view of this fact, quality teaching personnel should be employed to teach the subject. The government policy on recruitment should be based on qualified and competent hands in mathematics education.

The prospect of mathematics education will be brighter when the teachers' mastery of the subject matter is looked upon. Mathematics teachers should re-strategize by making the subject students' centered and friendly; this will unveil the reality of mathematical concepts to the learners.

During curriculum planning and development schools, mathematics teachers should be adequately involved since they are the ones to implement the contents of the curriculum. Stakeholders of both private and public schools should regularly organize capacity building workshops, developmental/professional seminars to expose them to techniques of teaching relevant topics/concepts in mathematics.

The general maxim is "if education is expensive, try ignorance" – truly, education is expensive, this is the more reason why budgetary allocation to educational sector should be improved upon by the government, while private sector participation in mathematics education programmes should be encouraged.

Notwithstanding, government alone cannot achieve this lofty ideal of effective mathematics education without the full cooperation of the society. Perents/society should lay emphasis on hard work and dignity of labour by using positive words to encourage students in the study of the subject, and also by providing them with computers, games, toys that aid mathematics activities.

Conclusion:

This paper reviewed the challenges and prospects of mathematics education in the Nigerian educational system. It looked at the aims and values of mathematics education in the society and argued that mathematics has great prospect and could play important role in technological development, and prosperity of our country, if the teaching of Mathematics is harnessed positively.

Efforts must also be made by stake holders to put mathematics education on a sound footing in Nigeria in order to propel the nation to the acquisition of a dynamic economy in the committee of nations.

Recommendations: This paper recommends the following to achieve the best result in mathematics education.

1. An independent inspectorate committee should be put in place to regularly monitor activities in schools as the existing inspectorate unit has ceased to function effectively.
2. Educating and re-orientation of teachers, parents and students on the need to discourage examination malpractice in schools and encourage entrepreneurship skill among the students.
3. Highly qualified and competent mathematics teachers should be employed and current euphemism of "man knows man" should be discouraged as regard recruitment and appointment.
4. Teacher training institutions should put up programmes and incentives to encourage many students to read and study mathematics
5. Regular capacity-building workshops and professional development programmes for mathematics teachers should be organized.
6. Wages and salaries of mathematics teachers should be improved upon; this becomes necessary because of the tasking and demanding nature of teaching of mathematics.
7. The UNESCO declaration of twenty-six percent (26%) budgetary allocation to the education sector and invariably to mathematics education, should be given accelerated implementation by the government.

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