

**USING STM, AND RESEARCH RESOURCES TO DEVELOP
ENTREPRENEURSHIP SKILLS FOR YOUTH AND SUSTAINABLE
ENVIRONMENT IN NIGERIA**

BY

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Abstract

This paper highlighted on the use of STM and Research resources to develop entrepreneurship skills for youth and a sustainable environment. Entrepreneurship is a task with struggle providing insight for profit and risk in setting up enterprise for self-reliance job. The STM and Research resources have to do with human and material resources of STM and Research enhancing the development of the entrepreneurship skills needed by today's youths for sustainable development with a view as source of employment. The sample of the study consisted of 820 STM and Research (STMR) human resources from 150 sampled secondary schools in Owerri Educational Zone. A four point likert scale Questionnaire was developed as instrument for data collection, comprising sections. A-personal data, section B for STMR human resources and section C for STMR material resources. The results of the findings showed that the column average score of 3.50 STMR human resources are resourceful, hence they attended conferences, workshops and seminars and are high levels in qualification. Research is useful because the product has sufficient local content which must consider the interest of the scientists in the Diaspora as benefit of the training. They are also computer literate and can provide improvise teaching materials. The average score is 3.35 STMR material resources, are adequate, and available for the development of entrepreneurship skills for the youth and sustainable environment in Nigeria. Based on the findings appropriate recommendations were made for more resourceful situation.

Introduction

Entrepreneur comes from a French word, "entrepredre" which means to undertake, i.e., one who undertakes to supply goods or services to the market for profit (Oyeniyi, 2003). This reflects the trends prevailing in other spheres of economic and social activities. Entrepreneurship is a task with struggle entailing efforts, profits and risk in the setting up of enterprise. It acquires skills of identification of potential and learn designing and conducting development that motivate self-reliance. Ezenwanne, (2023). Stated that entrepreneurial intention and skills needed by today's youths for sustainable development, will create enabling environment. Bejinaru, (2018). Cited that, assessing students' entrepreneurial skills needed in the knowledge economy management and marketing will enhance and sustain the youth and environment on the need and scope of entrepreneur, would be translating ideas into design and formulation of strategies which would provide an insight in to real life situation. Therefore, (Bolarinwa, 2001). Confirmed that entrepreneurship elements are combination of motivation, vision with judgment,

communication, determination, optimism, courage endurance and the power of creating co-operation which finds market opportunities through STMR potential. Douglas, Shepherd, & Venugopal, (2021). Opined that, the above multi-motivational are general model of entrepreneurial intentions. These would aid the youths (participants) to determine whether they would be able to sustain their businesses in the future (Brindley, 2005). Thus, which is the major problem Nigeria faces today; graduate unemployment, young men and women leave the universities, polytechnics and college of education every year with little hope of securing jobs (Ojeage & Owolabi, 2011). Science, Technology, Mathematics and Research will help being in touch with the latest information in global research and contribute articles to journals with impacts of foreign training for development of the nation. Lee, Holland, &McNeill, (2022). Stated that entrepreneur is a global sustainable development in the twenty-first century. Ojukwu, (2001). Pointed that entrepreneurship development as a programme of human capital development inputs aimed at increasing the supply of adequately trained entrepreneurs through STM and Research potential who are motivated to make a success out of business. Ezeudu, (2008). Opined, that it is therefore the process of owning and managing business enterprise with the hope of making profit. Asoegwu, (2008). Viewed, that it is the youth majority of entrepreneurship respondents who have higher education, in STM and Research insight to achieve greater growth and demonstrate a higher level growth intention to the succeed in the business.

The Youth Unemployment Development Scope

The youths have the challenge of limited and poor participation in the economy. Therefore, youths should acquire the skills and work experience in STMR knowledge that they need to assist in sustaining the economy. According to Ilo publication, (2005). Nigerian youths are between 18 to 30 years of age. The youth unemployment constitutes 73% of the total unemployment in the country. Thus, the ratio of adult to youth unemployment is about 1:3 respectively. Hence, about 42% of the youths under the age of 30 are unemployed, compared to less than 17% of adults over the age of 30. In fact, employment of youths aged between 18 and 24 years old has fallen by more than 20% since December 2008 and unemployed youths to be less skilled and inexperienced in STMR talent, almost 86% do not have formal tertiary education while two-thirds have never worked, (Labour Force Survey 2011).

However, the STMR knowledge in entrepreneurial activity in youths remain extremely low at 6% of the total youth population. Thus, entrepreneurship among STMR youths will have a positive impact not only on the social plane of bringing equality in the econmy, also by raising the levels of the overall economic indicators of the country. Al-Qudah, Al-Okaily, & Alqudah, (2022). Opined, that the relationship between social entrepreneurship and sustainable development from economic growth perspective of creating and managing sustainable and efficient business capable of providing attractive permanent jobs and employment growth for the country. Therefore, youth empowerment through STMR skills in entrepreneurship will reduce youth unemployment and provide the enabling and secure environment for the youth to be gainful in the employment for economic development and adequate supply of infrastructural facilities such as road, communication network, water, electricity etc. Science, Technology, Mathematics and Research wealth and public support needed to enable continued investment to the country for development of the youths for self-reliant job for the unemployed youths.

STMR Resources for Developing Entrepreneurship Skills

Science, Technology Mathematics and Research (STMR) resources have contributed significantly to the sustainable development of the nation. Ogunmade & Co. (2007). Affirmed that nevertheless, it is important to note that developing literacy in (STMR) for sustainable development cannot be achieved in a vacuum. This requires scientific materials and human resources essential for teaching-learning process. STMR required human resources should have adequate understanding on aspect of nature science that compromises awareness of the complex relationship between science, and the society that explain life experiences of the learner, lecturer, or educator through concepts, theories, principles, scientific processes and communicating the information got in research to develop skills in youths for self reliant jobs. Hence, the essential materials for learning include textbooks, laboratories, library and infrastructure. Researcher still opined that, it is also important to note that science is doing and involves regular hands-on practical and activity work for learners to develop scientific literacy for the attainment of entrepreneurship skill for the sustainable development of the youth and environment. Finally, institutionalization of science, technology, mathematics and research for national development, innovations and linkages in the industrials, organizations, private sectors are fundamental requirement to flourish human resources.

STMR Resources to Develop Entrepreneurship Skills for Youths and Sustainable Environment

Environmental education is the ultimate aim of entrepreneurial skills to aid youths (learners) in developing into citizens who possesses the knowledge, skills and attitudes which will enable and encourage them to engage in environmentally responsible behavior (Knapp, 1995). Okebukola, (1993). Defined environmental education as the process of acquiring or transmitting knowledge, attitude and skills for the sustainable use of natural and man made resources, which will enhance the learning of entrepreneurial skills. However, according to Ezeudu, (2008), our STM education has failed in its responsibilities of fostering scientific theories as the graduates roam the streets with no job and no skill to start of their own business. Thus, there is need to introduce entrepreneurship skills, using STMR resources to educate the youths for sustainable entrepreneurial skills acquisition of right science, technology, mathematics and research information to communicate habit, skills and attitude as a means to face unemployment. Eniola, (2020), viewed Entrepreneurial as self-efficacy and orientation for SME development to aid and enhance employment in the country. Maduabum, (1992). Supported, that competence as used in this context refers to combination of knowledge of skills and attitudes that can be developed in youths through training that are adequate for accomplishing some specific tasks like entrepreneurial skills.

The teaching of chemistry, biology, physic, mathematics and research information therefore, must be directed towards the use of local materials which must be from the learners environment. Cano, & Tabares, (2017). Confirmed, that determinants of university students entrepreneurial intention are bearing in mind the training, experience, research information and academic qualifications, a tremendous effect on the national man-power and capacity building, will be achieved through STMR knowledge as to again self reliant job. Ashmore, (1989). Highlighted that entrepreneurship education offers students opportunity to anticipate and respond to change.

Hence, Iloputaife (2002) quoting Uwameiyi (1994) and Iloputaife (1997). Stated, that functionality in education (entrepreneurship in STMR education) would serve to:

1. Identify' students possessing entrepreneurial traits.
2. Motivate and develop students for launching and managing their own scale business enterprises.
3. Create necessary awareness and motivation in students for promoting Self employment alternatives to wage employment, through STMR information.

Statement of the Problem

Nigeria is economically depressed and could not provide the basic tools for industrialization. The country is frustrated, with unemployment due to lack of technical skills in sciences, technology, mathematics and research information in 'human resources. In addition, it is a hindrance to advancement in science education due to its economically colonized with dishonesty, embezzlement and looting of public fund. In other words, to solve these problems the researchers suggested developing entrepreneurship skills using STMR resources for the youths and a sustainable environment with the provision of self-employment .

Purpose of the Study

The study intended to develop entrepreneurship skills using STMR resources for the youths and a sustainable environment with a view to helping as a source of employment for potential growth.

The study specially sought to;

1. determine the level of youths (human resources) in STMR knowledge in developing entrepreneurship skills in the environment.
2. determine the availability of the material resources in STMR insight for developing entrepreneurship skill in the environment

Research Questions

Two research questions were posed to guide the study.

1. To what extent are human resources in STMR necessary for the development of entrepreneurship skills in the environment?
2. To what extent are the STMR material resources necessary for the development of Entrepreneurship skills in the environment?

Methodology

Research Design

The study was a descriptive survey design. Descriptive survey according to Nwogu (1991) are those studies which aimed at collecting data on and describing in a systematic manner the characteristics features or facts about a given population.

Population of the Study

The population consisted of all STMR graduate, youth teachers in the public secondary schools in Owerri Education Zone. 2450 youth graduate teachers with STMR, made up the population figure of this study.

Sample and Sampling Techniques

The sample of the study constituted 150 schools which were stratified randomly, sampled from Owerri. North, East, West and South. It comprises all the STMR doctorate degree teachers as a purposive sampled youths (human resources) in the sampled schools giving a total of 820 STMR human resources.

Instrumentation

A questionnaire was used for data collection. The developed questionnaire consisted of 2 sections.

Section 1 sought for the youth (human resources) in STMR doctorate degree teachers, necessary for the development of entrepreneurship skills in the environment. The researcher used 4 point likert scale of strongly accepted =3.50-4, Accepted 2.50-3.49, rejected 1.50-2.49, and strongly rejected 00-1.49.

Section 2 focused on the STMR material resources with 4 point likert scale of 3.50- 4 highly available, 2.50-3.49 moderately available, 1.50-2.49 available, 00-1.49 not available. The responses were collected on the spot from the respondents, thus ensuring 100% return rate. Obviously, the data obtained were analyzed using mean and the mean rating of 2.50 was accepted as a cut off point for the level of agreement.

Validation of the Instrument

The instrument was validated by three. STMR teachers and two experts from measurement and evaluation department in Imo State University, Owerri, the instrument was modified based on the validators suggestions

Reliability of the Instrument

The instrument was tested for reliability on twenty STMR doctorate degree youth teachers in Okigwe Education Zone which is outside the population of this study. The internal consistency of 0.82 using cronbach Alpha obtained from data collected

Result:

Table 1: Mean Responses of STMR Human Resources for the Development of Entrepreneurial Skills for the Youths and a Sustainable Environment in Nigeria.

S/N	STM AND RESEARCH HUMAN RESOURCES	MEAN	REMARK
1	Adequate STM and research doctorate degree youth teachers	3.50	Strongly accepted
2	STM and research doctorate degree youth teachers are highly resourceful, can provide improvise teaching materials when they are not available	3.70	Strongly accepted
3	STMR Teachers, 70 and above percent of them have B.Sc or B.Ed, M.Sc or M.Ed and Ph.D	3.50	Strongly accepted
4	STMR doctorate degree youth teachers often attend conferences, workshops and seminars	3.30	Accepted
5	STMR doctorate degree youth teachers with computer literate	3.60	Accepted
6	STMR doctorate degree youth with laboratory assistants who have computer literate	3.25	Strongly accepted
7	STMR doctorate degree youth teachers with adequate laboratory experience	3.20	Accepted
8	STMR doctorate degree youth teachers with adequate use of the teaching materials	3.60	Accepted
9	STMR doctorate degree youth teachers with adequate practical experiences	3.55	Strongly accepted
10	STMR doctorate degree youth teachers often take students to field trip	3.80	Strongly accepted
	Column Average	3.50	Strongly accepted

Table 1 showed the STM and Research doctorate degree youth, human resources are acceptable to develop entrepreneur-ship skills for sustainable environment in Nigeria with view of their qualifications. The column average score of 3.50 showed that the STMR

human resources are resourceful, since they attended workshops, conferences and seminars and are computer literate in addition. STMR laboratory assistants have adequate experience and computer literate which will aid the development of entrepreneurial skills for sustainable environment in Nigeria.

Table2: Mean Responses of STMR Teaching Material Resources for the Development of Entrepreneurial skills for the youths and a sustainable Environment in Nigeria.

S/N	STM AND RESEAQRCH TEACHING MATERIAL RESOURCES	MEAN	REMARK
1	STMR visual and audio aids		
	a) Computer	3.20	Moderately available
	b) B) Video tapes and recorder	3.00	“
	c) Audio tapes and recorder	3.40	“
	d) Film projector	3.00	“
	e) Overhead projector	3.00	“
	f) Slides and slide projector	3.10	“
	g) Television	3.60	“
2	STM and research instruments for measuring ecological factors		Highly available
	a)E.g. Thermometer, Barometer, Anemometer, Fish trap, etc,	3.80	
3	STMR Equipment		Highly available
	a) Hand lens	3.20	
	b) film strip	3.40	Moderately available
	c) posters	3.30	Moderately available
	d) flip charts	3.20	Moderately available
	e) Microscope	3.50	Moderately available
	f) Chemical reagents	3.50	Moderately available
	g)Models	3.20	Moderately available
	h) Maps		Moderately available
	i) Specimen-test tubes, funnel, filter paper, pins, etc	3.40	Highly available
	j) Charts and diagrams	3.50	Highly available
4	Adequate textbooks	3.30	Moderately available
5	Adequate laboratory	3.80	Moderately available
		3.60	Moderately available
	Column Average	3.35	Moderately available
			Highly available
			Moderately available
			Highly available
			Highly available

Table 2 required competencies of STM and Research material resources like Visual and audio aids, instrument for measuring ecological factors, equipment, adequate textbooks and K laboratory for the development of entrepreneurship skills for the youths and a sustainable environment in Nigeria. The average mean score of 3.35, signified that the

STM material resources were adequate and available for the development of entrepreneurship skills.

Discussion:

The results showed that the STM and Research human resources were qualified to develop entrepreneurship skills for youths and sustainable environment in Nigeria. Also the results revealed that the availability and adequate STMR material resources aided the development of entrepreneurship skills. More over these results were in conformity with the findings of Ojukwu (2001) that entrepreneurship development as a programme of human capital development inputs aimed at increasing the supply of adequately trained entrepreneurs who are motivated to make a success out of business. Greens et al (2003) supported by advocating the use of teaching materials that feature women entrepreneurs in a greater verity of industries and with high growth aspirations to expand the horizons and stimulate aspirations of women. In addition, Bolarinwa, (2001). Stated that, entrepreneurship education has the following advantages.

1. It will help the youth to form a base of knowledge about the function and operation of a business and develop some levels of familiarity and comfort with business environment such as technological change, the micro-enterprise, etc.
2. It will play as a complementary role in developing the occupational knowledge, job skills and work experience.
3. It offers opportunities to youths for job experience and for earning, saving and investing money at an earlier stage of life than their peers, contributing to their believe in their abilities and to a sense of self-worth.
4. There will be great reduction in the high rate of unemployment in our society, self-employment and business ownership will become viable and appealing goals for today's youths. Then there is a need to restructure our STMR education for entrepreneurship skills for the youths. That means, STMR resources are adequate to develop entrepreneurship skills which will be geared towards youth being self-reliant and self-employed

Conclusion

This research set out to determine the development of entrepreneurship skills in youths using STM and Research resources, because it is an attritional, structural ability to make decisions on important change in their lives and the lives of others. Inclusive, entrepreneurship is a call for a shared theoretical conversation about unconventional entrepreneurs. It is also a social relationship between human resources and sustainable development growth in the environment. The skills are needed in the knowledge economy by today's youths for sustainable development which will credit enabling environment. Using STM, and research resources to develop entrepreneurship skills for youths and sustainable environment is a global development in the twenty-first century.

Recommendations

Federal and State Government should fund entrepreneurship skills through STM and Research resources because the programme will require a lot of money to set up. Federal and State Government should introduce entrepreneurship education through STMR into our school curriculum for the acquisition of right skill as a means of surviving unemployment.

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