

Socio-Economic Empowerment of Senior Secondary Science Students in Nigeria and STEM Teachers' Preparedness

Rebecca U. Etiubon*

Department of Science Education, University of Uyo, Uyo, Nigeria

Anyanime O. Akpan

Department of Science Education, Akwa Ibom State University, Ikot Akpaden, Nigeria

Idongesit N. Udosen

Department of Educational Technology/Library Science, University of Uyo, Uyo, Nigeria

Abstract

This study investigated socioeconomic empowerment of senior secondary science students in Nigeria and STEM Teachers' Preparedness. A descriptive survey design was used. The study was conducted in Akwa Ibom State, Nigeria. The population consisted of all 1,983 STEM teachers in the 234 public secondary schools in Akwa Ibom State. Stratified and simple random sampling techniques were used to select the sample, 318 (125 males and 193 females). Three research questions and two hypotheses guided the study. The instrument for data collection was a 26-item Questionnaire on Socioeconomic Empowerment of Students and STEM teachers' preparedness developed by the researchers. The reliability of the instrument was established at .81 using Cronbach alpha coefficient. Research questions were answered using mean and standard deviation while hypotheses were analysed and tested at .05 alpha level of significance using t-test. Results showed that STEM teachers were not adequately prepared, lacked competencies and skills for socioeconomic empowerment of their students. Moreover, there is inadequate availability for practical and hands-on activities. Based on the findings, recommendations were made among which are the redesigning of the teacher education programme and training/retraining of STEM teachers to acquire necessary competencies and skills for socioeconomic empowerment of students.

Keywords: Socioeconomic empowerment; Practical activities; Skills; Preparedness; STEM teachers.



CC BY: [Creative Commons Attribution License 4.0](https://creativecommons.org/licenses/by/4.0/)

1. Introduction

Continuous technological advancement, occasioned by globalization is encouraging a knowledge-driven economy. The need to constantly update a nation's workforce for future competitiveness is growing worldwide. As nations of the world advance, STEM teachers must also brace up to the challenge and explore means and ways of being relevant in the face of knowledge explosion. Since, teachers are the driving force in the realization of academic and national goals of the society, they need to be lifelong learners themselves in order to shoulder the heavy responsibilities entrusted to them to impart learning to others and be capable of positively influencing the students in their thoughts, behaviours and lifestyles (Kolo, 2009). To achieve this, skills play a crucial role.

Skills are practical competence acquired through training to run an enterprise for self-reliance. Skills according to Iloka (2010) are the manual dexterity acquired through repetitive performance of operation. Emenyonu and Ogunsola (2012) defined skills as the ability to do something expertly well. In other words, skills are regarded as the possession of expertise needed to perform a particular job or series of jobs. In essence, skills consist of habits that ensure adaptation. Skills acquisition involves formation of relevant habits, usually preceded by relevant knowledge which facilitates correct thinking and leads to correct way of doing things (Akpomuvie, 2011). Some of these skills include carpentry, blacksmithing, soap making, web designing, poultry rearing, dress making, sewing and cultivation of crops. Invariably, this calls for teachers to be adequately prepared socioeconomically for effective classroom delivery and students' empowerment.

Partnership for 21st Century Skills (2008) identifies the following as indicators of teachers' readiness and preparedness to be able to impart socio-economic skills to its learners.

1. A blend of content knowledge, specific skills, expertise and literacy.
2. Critical thinking, problem solving, creativity, flexibility, effective communication and collaboration.
3. Self-directed learning as a base for core academic knowledge.
4. Skills needed to make the best use of rapidly changing technologies vital to working and living in an increasing complex and rapidly changing global society.

1.1. Socioeconomic Empowerment and Teachers' Preparedness

To a large extent the educational enterprise depends on the quality of its STEM teachers. This quality is influenced by the training the teachers receive. The training empowers the teacher to dispense effectively, content and method ingrained in the value system the teacher is equipped with. Teachers' preparation then should be the

*Corresponding Author

pivot on which entrepreneurship and socioeconomic activities revolve (Agomuo, 2015). A well prepared teacher makes proper and adequate use of activities to inculcate students' knowledge. This gives room for him to engage practices that enable students develop indigenous businesses that can help them live sustainably.

The National policy on Teacher Education (Federal Republic of Nigeria, 2013) stipulates among others that no nation grows above the quality of its teachers; and that teachers are to be equipped with training and skills that will empower them effectively to impart knowledge to their students. This is to say that STEM teachers build skills into learners and at the same time, make money to support the family and engage others to work for them. Wendy L. (2014) emphasized the crucial importance to regularly analyze the effectiveness of teacher preparation pathways. This, the author stressed, should include an objective and rigorous examination of the average learning gains of students. This critical analysis facilitates STEM teachers' assessment/performance on learning outcomes particularly in evolving skills for socioeconomic empowerment. Proper assessment on teacher preparation will improve STEM socioeconomic delivery.

STEM delivery are powerful tools for economic, social and political development of any nation, hence many developed nations of the world have continued to invest enormous resources on STEM education. The basic education and senior secondary school curricula for STEM emphasize acquisition of scientific knowledge and skills through teaching and learning of science and technology subjects. Students learn these science process skills when they are exposed to these subjects. When learners properly acquire these skills through experiments and practical work, the students can then apply them to the production of goods and for rendering useful services to themselves and the society at large.

Socioeconomic empowerment is the process where people are encouraged to take charge of their lives. This is done by addressing their situation and then taking action in order to improve their access to resources and transform their environment and lives. Ukpong and George (2012) conceive socioeconomic empowerment as the acceleration of economic growth, reduction in inequality and the eradication of poverty through the provision of basic needs as well as the fulfilment of the desires of the individuals, social groups and human capital development. According to Egbefo and Abe (2007), it is the process of developing a sense of self-reliance, self-confidence, autonomy and acting individually or collectively to change social relationships and institutions. It includes poor people and keeps them from poverty and also create wealth to make them self-reliant. For instance, exposing senior secondary school students to basic scientific skills in practical lessons enables them acquire skills in the various science subjects and being socio-economically empowered. Such situations will not only create wealth, but also make them to become self-reliant and employers of labour. Socioeconomic empowerment should therefore be the framework that synchronizes actions to stimulate eventful learning using well-articulated STEM curricula with adequate practical and accompanying experiments for self-reliance and wealth creation. There are various socioeconomic activities and ways to accomplish them.

Table-1. Some Skills for Socioeconomic Empowerment of Students in the Following Science Subjects

S/N	Chemistry	Biology/Agricultural Science
1	Skills on saponification (soap making and detergent)	Skills to set up and manage poultry farm
2	Skills to produce esters used for making perfumes	Skills for snail rearing and sales
3	Skills to produce ethanoic acid used for food preservatives and flavours	Skills to set up and manage fish farm
4	Skills to produce acids for charging battery	Skills for pig raising/piggery
5	Skills to produce body cream and hair relaxer	Skill to cultivate and nurture ornamental flowers for aesthetics and beautification
6	Skills for the production of antiseptics and disinfectants to eliminate antibacterial activities and fungal growth	Skills to cultivate local leaves like afang, water leaves and pumpkins
7	Skills to produce ethanol and assorted drinks	Cultivation of plantain, cashew, cocoa, coconut and palm fruit trees
8	Skills for margarine production	Skills for mushroom cultivation
9	skills for production of salts	
10	Skills for production of metals for different purposes	
11	Production of insecticides	
12	Production of paints and dyes from plants	

Table-2. Contd

	Physics	Home Economics
13	Skills to repair/service electrical home appliances	skills in knitting/crocheting/embroidery
14	Skills to carry out minor electrical connections	skills in dressmaking
15	Skills for wiring in the home	skills in textile designing
16	Skill for servicing and maintenance of mobile phones, electrical generating set, television, radio, pressing iron and other household electronics	skills in making tie and dye
17	Skills for photography	Skills in hat making/bead making
18	Skills to construct home utensils like pots, flasks, ovens, stoves, heaters and cookers	skills in tailoring (making industrial/practical wears like boots, laboratory coats, jackets, trousers, waistcoats, hand gloves, plastic goggles for the eye and headwears)
19	Production of simple machines like can opener and graters	Skills in baking
20	Skills for repair of tyres and vulcanization and pumping air into tyre tubes	Skills in interior decoration
21		Skills in cooking (food, nutrition, hotel management and tourism)

Table-3. contd

	Information and Communication Technology
22	Skills in developing and designing of websites and blogs to market information
23	Skills in programming to use data base in daily business transactions thereby empowering young school leavers
24	Skills in selling and marketing personal computers, mobile phones, computer and phone accessories
25	Skills in word processing, data analysis, photography, drawing for commercial computer outfit, thereby helping the school leavers empower themselves and be self-employed
26	Skills in training others in the use of the computer and its maintenance

1.2. Resources for Socioeconomic Empowerment of Students

Resources refers to all persons and things capable of conveying information, values, processes, experiences and techniques that could be used to actively engage students in the learning process. Daluba (2012) defined resources as all domain and material situations capable of achieving the objectives of the concept to be taught. In developed and developing countries like China, Britain, United States of America, Japan, Ghana, Kenya and South Africa, education is an important part of school-to-work programme for all students. The programme apart from enabling students acquire appropriate skills as well as economic empowerment, also help the students to transit from their educational experience to employment (Nwafor, 2007). This gives students a focus on their future lifelong learning.

In Nigeria, the acquisition of skills that can empower students socioeconomically after school is low and is attributable to many factors such as:

- i. Non-availability of STEM curricula in secondary schools. Until now, the current revised science curricula are not available in many schools. Again the theory content of STEM subjects is taught, while the practical activities which simplify and accompany the theory, that are expected to help students acquire appropriate scientific and technological skills are neglected.
- ii. Lack of implementation of STEM Curricula that have activities that would empower students socioeconomically.
- iii. There are very few STEM teachers and most are not aware that such curricula exist.

Achufusi *et al.* (2009), Akpan (2011) identified sources hindering the acquisition of scientific and technological skills as poor state of facilities and materials which include laboratory, workshops, chemicals, classrooms, computers, reagents, teaching support, light supply and electric generating set. These facilities and materials, if available help learning. Another crucial factor that may affect socioeconomic empowerment of students is the lack of human resources made up of the teachers, laboratory and workshop attendants and skilled workers. Poor motivation of the few available STEM teachers also aggravates this malaise. Lack of finances to purchase the necessary resources are an impediment to developing students socioeconomically. Again, resources like school calendar, number of periods per week, time for practical work and projects are too few to reasonably influence the kind of changes needed to bring about meaningful and desired effects.

Another major factor inhibiting the socioeconomic empowerment of science students is the type of education provided by Nigeria education system. The system is purely academic and theoretical and prepares its recipients for white collar jobs or paid employment. This type of education is certificate-oriented and places much emphasis on knowledge-content and passing of prescribed examinations while skill acquisition is de-emphasized. The result is

that products from our school system are not equipped with appropriate skills and competences necessary for socioeconomic empowerment. Bluntly put, most school graduates cannot be self-employed and self-reliant.

1.3. Statement of the Problem

The senior secondary STEM curricula has as its philosophy the preparation of graduates for higher education; acquisition of relevant and functional skills needed for poverty eradication, job creation and wealth generation (Federal Republic of Nigeria, 2013). Many secondary leavers are unemployed because they do not possess appropriate skills needed by employers of labour to build on, neither do they possess skills that can empower them socioeconomically to establish and manage small business enterprises so as to become self-employed and become possible employers of labour. This calls for STEM teachers to be adequately prepared to develop appropriate skills to teach and transfer same to their students. This study will look at the mean responses of male and female STEM teachers' preparedness for socioeconomic empowerment of their students. It is against this background that this study investigated socioeconomic empowerment of senior secondary science students in Nigeria and the preparedness of STEM teachers. Specifically, the study sought to:

1. Ascertain the extent of STEM teachers' preparedness for socioeconomic empowerment of students.
2. Assess resources available for socioeconomic empowerment of students.
3. Ascertain skills acquired by STEM teachers for socioeconomic empowerment of students.

2. Research Questions

1. What is the extent of preparedness of STEM teachers for socioeconomic empowerment of students?
2. To what extent are resources available for socioeconomic empowerment of students?
3. What skills have STEM teachers acquired for socioeconomic empowerment of their students?

2.1. Hypotheses

1. There is no significant preparedness of male and female STEM teachers for the socioeconomic empowerment of students.
2. No significant skills have been acquired by male and female STEM teachers for socioeconomic empowerment of students.

3. Methodology

The study employed the descriptive survey design. The population of the study comprised 1,983 STEM teachers, in all the 234 public secondary schools in Akwa Ibom State Secondary Education Board (2017). Stratified sampling technique was used to select a representative sample of 330 teachers from 30 schools in the three Senatorial Districts that make up the state. Stratification was done along senatorial district level, while random sampling technique was used to select 10 schools from each Senatorial district. In each of the 30 schools eleven (11) STEM teachers at least one each from agricultural science, biology, chemistry, physics, computer studies, technology, technical drawing, mathematics, home economics and integrated science) were randomly selected for the study; thus 330 teachers (128 males and 202 females) obtained from 30 public secondary schools in the three senatorial districts of Akwa Ibom State, participated in the study.

A 26-item questionnaire on socioeconomic empowerment of students with teachers' preparedness developed by the researchers was used to collect data for the study. The instrument was of two parts. Part A consisted of six items that elicited information on name of school, Local Government Area, sex, academic qualification, area of specialization and teaching subject. Part B comprised 20-items on possible teachers' preparedness on socioeconomic empowerment of senior secondary science students constructed on four point Likert-type Scale (very large extent= 4points), (large extent = 3points), (Moderate extent =2points) and (low extent= 1 point). Two lecturers in test and measurement from the Departments of Education Foundation, University of Uyo and Science Education, Akwa Ibom State University, Ikot Akpaden perused the instrument to ensure content validity. The items were selected and restructured based on their comments, corrections, suggestions and modifications. The instrument was trial- tested on 30 teachers that were not part of the main study for reliability using Cronbach coefficient alpha. A reliability coefficient of 0.81 was obtained. Administration of the instrument was done by the researchers who went to the different schools in the three senatorial districts to give out questionnaire to the participants. 330 copies of the instrument were administered; 318 copies were retrieve which gave 96.4% return rate.

The results obtained were analyzed in line with the research questions and hypotheses formulated to guide the study. Mean and standard deviation were used to provide answers to the research questions, while independent t-test was used to test the hypotheses at .05 level of significance. A mean below 1.50 was regarded as none existent, 1.51 to 2.50 was low; 2.51 to 3.00 moderate, while above 3.01 was high.

4. Results

4.1. Research Question One

What is the extent of preparedness of STEM teachers for socioeconomic empowerment of students?

Table-4. Mean rating of Responses on the Extent of teachers' preparedness for Socioeconomic Empowerment of Their Students

S/N	Items on STEM Teachers' Preparedness for Socioeconomic Empowerment of Students	Mean	SD	Decision
1	Programmes for teachers' preparedness equip STEM teachers to effectively teach science students for socioeconomic empowerment	2.19	0.60	Low
2	I am adequately prepared to teach using activities to enhance science students' socioeconomic empowerment	2.27	0.57	Low
3	STEM teachers are well equipped/trained with socioeconomic skills to empower students socioeconomically	2.31	0.55	Low
4	I am willing to develop skills for socioeconomic empowerment of my students	2.44	0.57	Low
5	I have appropriate knowledge and skills to empower student socioeconomically	3.05	0.49	High
6	I train myself using relevant personnel on the skills needed to empower students socioeconomically	2.47	0.15	Moderate
7	I need in-service training in socioeconomic empowerment of students to update my knowledge and skill	3.16	0.79	High
	Grand Mean	2.55	0.53	Moderate

Data in Table 4 showed that STEM teachers responses were high on items 5 and 7, moderate on item 6, while items 1-4 had low responses. However, the grand mean of 2.55 showed that STEM teachers' preparedness for socioeconomic empowerment of students was moderate.

4.2. Research Question Two

To what extent are resources available for socioeconomic empowerment of students?

Table-5. Mean Rating of Responses on the Extent of Resources for Socioeconomic Empowerment of Students

S/N	Resources Available for Socio-Economic Empowerment	Mean	SD	Decision
8	Trained teachers	3.02	0.76	High
9	Science laboratories for experiments and practical activities	1.94	0.68	Low
10	Technology workshops for practical works	2.37	1.14	Low
11	Textbooks with details on empowerment	2.20	1.06	Low
12	Time to undertake practical work	2.97	0.67	Moderate
13	Curriculum that enhance socioeconomic empowerment	2.95	0.67	Moderate
14	Local business owners	2.74	0.94	Moderate
15	Improvised materials for teaching of STEM for socioeconomic empowerment	2.44	0.67	Low
16	Financial provision for acquisition of materials for practical activities	1.44	0.58	None existent
	Grand Mean	2.24	0.71	Moderate

Data in Table 5 show the mean ratings of responses on the extent of available resources for socioeconomic empowerment of students. Rating was high on item 8, low on items 9-11 and 15, while items 12-14 were moderately available. However, a grand mean of 2.24 showed that availability of resources for socioeconomic empowerment of students was low.

4.3. Research Question Three

What skills have STEM teachers acquired for socioeconomic empowerment of their students?

Table-6. Mean rating of Responses on Skills Acquired by STEM Teachers for Socioeconomic Empowerment of Students

S/N	Skills Acquired for Socioeconomic Empowerment	Mean	Sd	Decision
17	I have the needed skills to teach STEM activities for students' socioeconomic empowerment	2.79	0.58	High
18	I engage students in practical work in all concepts in my subject area	1.94	0.80	Low
19	I take students to local business ventures for socioeconomic empowerment	1.75	0.58	Low
20	I acquire socioeconomic knowledge and skills through seminars, conferences, books and journals	2.42	0.77	Low
	Grand Mean	2.23	0.68	Low

Data on [Table 6](#) showed that the mean rating of teachers on skills acquired for socioeconomic empowerment was high on item 17, while items 18-20 indicated low rating. However, a grand mean of 2.23 was low and showed that teachers possess low skills required for socioeconomic empowerment of students.

4.4. Hypothesis One

There is no significant difference between the mean responses of both male and female STEM teachers on preparedness for the socioeconomic empowerment of their students.

Table-7. Independent t-test on the responses of male and female STEM teachers on preparedness for socioeconomic empowerment of their students

	Gender	N	Mean	SD	t-cal
Preparedness for socio-economic empowerment	Female	193	18.45	2.45	1.15
	Male	125	18.13	2.45	

df = 316; t-crit = 1.97

The result shown in [Table 7](#) revealed that calculated t-value of 1.15 was less than the critical t-value of 1.97 at .05 level of significance and 316 degrees of freedom; hence the null hypothesis was retained. This implies that there is no significant difference in the responses of male and female STEM teachers on their preparedness for socioeconomic empowerment of students.

4.5. Hypothesis Two

There is no significant difference between the mean responses of male and female STEM teachers on skill acquisition for socioeconomic empowerment of students.

Table-8. Independent t-test on the responses of male and female STEM teachers on skill acquisition for socioeconomic empowerment of their students

	Gender	N	Mean	SD	t-cal
Skills acquisition for socio-economic empowerment	Female	125	9.49	1.80	0.51
	Male	193	9.38	1.78	

df = 316; t-crit = 1.97

The result shown in [Table 8](#) revealed that the calculated t-value of 0.51 was less than the critical t-value of 1.97 at .05 level of significance; hence the null hypotheses was accepted. This implies that there is no significant difference in the mean scores of male and female STEM teachers on skills acquisition for socio-economic empowerment of their students.

5. Discussion of Findings

The findings of the study showed that STEM teachers were moderately prepared for socio-economic empowerment of their students. This means that teachers have the requisite qualifications and certificates, but are not empowered with the necessary skills. They lacked the competencies to teach the students to make themselves self-reliant in future. On in-service training, the response of STEM teachers was high meaning that teachers need some training to update their skills in order to impart same to their students. This finding corroborates [Ifeakor and Enemu \(2009\)](#); [Wendy \(2015\)](#) that the STEM education programmes at the colleges of education and university need redesigning to emphasize socioeconomic skills. This will equip the teachers with appropriate life skills and knowledge to empower their students for self-employment and self-reliance after school. This can only be achieved when students are exposed to skill-based teaching as against the current curriculum that focuses on content and certification.

The study further indicate the inadequacies of available resources for socioeconomic empowerment of students viz: well-equipped laboratories, workshops, time given to learn skills, curriculum and finances. This agrees with [Achufusi et al. \(2009\)](#) and [Akpan \(2011\)](#) that lack of facilities and resources hinder the acquisition of scientific and technological skills. The results also showed that STEM teachers lacked the competencies and skills to empower their students' socioeconomically. This finding is in tandem with [Partnership for 21st Century Skills \(2008\)](#) that no

teacher gives or teaches beyond the information and skills he/she possesses. This therefore, is a clarion call for teachers to be well groomed and prepared to impart socioeconomic skills on their learners.

6. Recommendations

Based on the findings of this study the following recommendations were made:

- STEM teachers education programme should be redesigned to include content- knowledge, practical skills and activities to capture students' interest in STEM courses.

There is need for constant training/retraining of STEM teachers to acquire necessary competencies and skills for socioeconomic empowerment of students.

STEM teachers should be encouraged by school administrators through sponsorship to workshops and conferences to update their knowledge and skills in their areas of specialization to aid students' socioeconomic empowerment.

- Every aspect of the curriculum should be implemented and not focused on content alone to help students determine skill-based learning activities.
- STEM teaching/learning should be interactive with practical activities so as to provide students with necessary skills for problem-solving and self-reliance.
- Government should invest in the skills and professional development of STEM teachers to meet students' need for socioeconomic empowerment for self-reliance.
- Government and private owners of schools should adequately fund secondary education by providing facilities and materials for skills acquisition and future socioeconomic empowerment of students.

7. Conclusion

Socioeconomic empowerment of secondary school students for self-reliance, wealth creation, independence, self-sufficiency and job placement in the future is very crucial. It should by this means, focus students on their career-path towards self-reliance. STEM teachers therefore, who translate the curriculum into practice should be adequately prepared to acquire the competencies and skills required for teaching to make secondary schools leavers become wealth-creators and employers of labour. Again, the government and institutions should assist to equip science laboratories, technology workshops and studios to enable STEM teachers function optimally for quality service delivery.

References

- Achufusi, J. N., Umeh, M. O. and Okoye, E., 2009. "Assessment of resources for developing entrepreneurial skills through science technology and mathematics education in secondary school biology." In *50th Annual conference of STAN Proceeding, Minna, 24 – 29th august*. pp. 100-05.
- Agomuo, E. E. (2015). Entrepreneurship Skills Acquisition Models for Small Scale Business for Secondary School Leavers. *Career Development International*, 9(1): 58-73.
- Akpan, E. U. U. (2011). *Strategies for teaching basic science. A handbook for teacher effectiveness*. UBR Commission: Abuja. 23-26.
- Akpomovie, O. B. (2011). The role of traditional skills and techniques in the development of modern science and technology in Africa. *International Journal of Humanities and Social Science*, 1(3): 178-87.
- Akwa Ibom State Secondary Education Board (2017). Department of planning research and statistics.
- Daluba, N. E. (2012). Evaluation of resources availability for teaching science in secondary schools: Implication for vision 20, 2020. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(3): 363-67.
- Egbefo, D. O. and Abe, M. O. (2007). Entrepreneurship education: A vital instrument for youth empowerment, industrial development and consolidation of National Integration in Nigeria. *African Research Review, an International Multidisciplinary Journal, Ethiopia*, 11(1): 45-48.
- Emenyonu, C. A. and Ogunsola, A. O. (2012). Entrepreneurship education, Realities and challenges. *International Journal of Education and Management Science*, 1(2): 86-99.
- Federal Republic of Nigeria (2013). *National policy on education*. NERDC Press: Lagos.
- Ifeakor, A. C. and Enemuo, J. O., 2009. "Evaluating the impact of teacher factors for the development of entrepreneurial skills through science, technology and mathematics education." In *50th annual conference of STAN proceeding, Minna, 24 – 29th August*. pp. 47-53.
- Iloka, A. M. C. (2010). Introduction to entrepreneurship education in Nigeria in Ogbuagu, J. O. and Nwamaradi, A. T. (Eds). *Skill development in science-technology education for MDGs*. 201-21.
- Kolo, I. (2009). A sustainable road map for the education sector in Nigeria Leadership newspaper, Nigeria.
- Nwafor, P. Z. (2007). *Practical approach to entrepreneurship, small medium scale enterprises*. Precision Publishers Ltd: Enugu.
- Partnership for 21st Century Skills (2008). 21st century skills, education and competitiveness, A resource and policy guide. Available: <http://www.21stcenturyskills.org>
- Ukpong, D. E. and George, I. N. (2012). Socioeconomic development of Nigeria and youth empowerment in the 21st century: Implication for Akwa Ibom State. *Savap International Journal of Social Science and Humanities*, 3(3): 288-95.

- Wendy (2015). Life skills and empowerment programme. Available: www.empowermentprogram.org
- Wendy, L. (2014). Youth empowerment foundation, skills training in conjunction with ty danjuma foundation, Abuja. Available: <https://www.tydanjumafoundation.org>