



Innovative Programmes On Entrepreneurship Education, (EED) And Student Industrial Work Experience Scheme (SIWES) For Qualitative Skills Acquisition, Employability And Lifelong Learning In Polytechnics In Edo State, Nigeria.

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Abstract

Despite the fact that programmes such as Entrepreneurship Education (EED) introduced in 2007 and Student Industrial Work Experience Scheme (SIWES) introduced in 1973, exist in some tertiary institutions in Nigeria, graduates still roam the streets because of lack of relevant skills for the industry/ workplace or self-employment. The lack of relevant skills by graduates have led to unemployment, increase in crimes and poverty. This study investigates students' perception from Polytechnics in Edo State Nigeria, on training with innovative training programmes such as EED and SIWES. These innovative programmes are designed and compulsory for all the students in Polytechnics in Nigeria for certification, as well as to have quality acquisition of relevant skills needed in the industry/ workplace, employability, competences, lifelong learning (LLL) and ultimately economic sustainable development of the nation. Survey research was conducted. One thousand eight hundred and thirty-two (1,832) respondents were randomly selected from six Polytechnics in Edo State, Nigeria. A structured questionnaire constructed on a four-point Likert scale was used in data collection. Percentages, mean score, Pearson Correlation, were used to analyse the research items and test of hypotheses at 0.05 level of significance. The result shows that the students perceive the impact of these Innovative programmes such as entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) as having positive and significant effect on qualitative skills acquisition, employability and lifelong learning in polytechnics in Nigeria. They however perceive these schemes as needing improvement in funding and implementation. This study concludes that these schemes are relevant for acquiring employability and self-reliant skills by students and may lead to sustainable economic development in Nigeria. It recommends adequate funding and implementation of these schemes. Also, the adoption of global and acceptable learning standard for Entrepreneurship Education and SIWES innovative programmes. In addition, synergy of practicable SIWES programmes in the polytechnic system in Nigeria with industries is necessary.

Keywords: Entrepreneurship Education(EED); Student Industrial Work Experience Scheme(SIWES); Lifelong Learning; Sustainable Economic National Development.

INTRODUCTION

Currently, many youths in Nigeria still lack basic skills for employability. Employers of labour are concerned that graduates from Nigerian Universities lack the necessary practical skills and trainings required for employment in industry and other organizations. Also, the lack of skills by graduates has led to unemployment and poverty in Nigeria (Aifuwa, Uwameyi and Uwaifo, 2016). Thus, Poverty in developing countries example, Nigeria is due to unemployment caused by lack of the right skills and training needed by the employers, illiteracy, and shortage of training facilities. Development of qualitative human capital for industries and the workplace can be achieved through proper training of students to acquire quality relevant skills in school. Therefore, to solve the unemployment crisis, schemes were initiated by the Nigerian Government and implemented by all tertiary institutions in Nigeria, including Polytechnics in Edo State, Nigeria. These programmes were aimed at the students acquiring relevant quality skills for industry/workplace, for self-employment, quality education and lifelong learning (LLL). This paper therefore explores the perception of students on the relevance, practice, future of some training programmes introduced into Nigerian tertiary institutions namely: Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) in Polytechnics in Edo State, Nigeria. The relationship between the two programmes, investigated in this study, is that they are both geared towards encouraging youth to learn qualitative skills for self-reliant, employability and sustainable national development.

Siwan and Rowley (2010) studied the concept of entrepreneurial competencies usage widely by government agencies and others in their drive for national economic development and business success. They discovered that the core concept of entrepreneurial competencies, its measurement and its relationship to entrepreneurial performance and business success is in need of further rigorous research and development in practice. Therefore, their paper suggested that proper training of students to acquire quality skills in school is necessary. Entrepreneurship education is a programme in the curriculum of institutions that seek to provide students with the requisite knowledge, attitude, skills, interest and motivation to pursue self-reliance and become job creators rather than job seekers (Matthew et al., 2020). Therefore, the most important factor in human capital formation is the development of skills and competences which at long last helps in sustainable economic development (Njoku, 2017). These skills and competences are necessary for lifelong learning.

The Student Industrial Work Experience Scheme (SIWES), also known as Industrial Training is a compulsory skill training programme designed to expose and prepare students of Nigerian Universities, Polytechnics, Colleges of Education, Colleges of Technology and Colleges of Agriculture, for the industrial work situation they are likely to meet after graduation. Before the establishment of the scheme, there was a growing concern among organisations and industrialists, that institutions of higher learning lacked adequate practical background studies preparatory for employment in industries. The Federal Government, noting the significance of the skills training programme (SIWES), handed the management of this scheme to both the National Universities Commission (N.U.C) and the National Board for Technical Education (NBTE) in 1979.

The management and implementation of the scheme was however reverted to the Industrial Training Fund (I.T.F) by the Federal Government in November, 1984 and the administration was effectively taken over by the Industrial Training Fund in July 1985, with the funding solely borne by the Federal Government (ITF, 2022; Akanji, 2022). This was because employers were of the opinion that the theoretical education in higher institutions was not responsive to the needs of the employers of labour. This scheme is therefore necessary for sustainable economic development of industries and the nation. Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Therefore, building a planned positive change towards critical thinking, acquiring creative and innovative skills (Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES)) is necessary in Nigeria. In addition, these schemes may lead to a process whereby simple trainings and low economies by entrepreneurs are transformed into viable modern industrial economies.

This paper therefore explores the perception of students' on the relevance, successful funding and implementation and future of some innovative training programmes that may lead to employability, self-reliance and economic national development, which were introduced into Nigerian tertiary institutions namely: Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES) in Polytechnics in, Edo State, Nigeria. The focus of this paper is to empirically investigate student's perception of entrepreneurship and SIWES training programmes as tools for acquisition of quality skills, competences, lifelong learning (LLL) necessary for employability and ultimately economic sustainable development of the nation. And to investigate the correlation between the two innovative programmes and their impact in achieving acquisition of quality skills, competences, lifelong learning (LLL) necessary for employability and ultimately sustainable economic development of the nation.

Statement of the Problem

Crime rate and student restiveness have increased in Edo State and Nigeria. Hence, employers of labour complain of graduates lacking the relevant skills needed in industries and the real world of work. Many graduates in Nigeria roam the streets looking for white collar jobs that are non-existence. Therefore, innovative programmes (Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES)), if properly executed, supervised and funded, may lead to decrease in crime rate, curb student restiveness, unemployment and eventually lead to lifelong learning and sustainable national development. This study evaluates student's perception on innovative programmes (Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) training programmes as tools for acquisition of quality skills, competences, lifelong learning (LLL) necessary for employability and ultimately sustainable economic development of the nation.

Objective of the study

The main objective of this study is to investigate students' perception on the relevance and successful funding and implementation of Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) as qualitative programmes leading to youth employability, self-reliance and subsequently enhance

sustainable economic national development in Nigeria. The specific objectives are to: (i) explore literature on the process and strategies of Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) as qualitative programmes leading to employability, self-reliance and sustainable economic national development. (ii). investigate students' perception on the acquisition of skills through Entrepreneurship Education and Student Industrial Work Experience Scheme (SIWES) (iii) correlate the relationship of the successful implementation of Entrepreneurship Education and Student Industrial Work Experience Scheme (SIWES) as qualitative programmes in institutions leading to employability, self-reliance and sustainable economic national development (iv) examine students' perception on the success of Entrepreneurship Education and Student Industrial Work Experience Scheme (SIWES) as leading to the development of students with innovative and creative abilities (v) evaluate students' perception on Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) as exposing students, graduates and others to continually train in evolving technologies for lifelong learning (vi) explore students' perception on the future of Entrepreneurship Education and Student Industrial Work Experience Scheme (SIWES) in Nigeria.

Research questions:

Entrepreneurship (EED)

1. Will teaching of entrepreneurship education in tertiary institutions in Nigeria enable students acquire employability skills?
2. Is Entrepreneurship Education relevant and should continue to be a criteria for certification in Polytechnics in Nigeria?
3. Can entrepreneurship skills taught in Polytechnics in Nigeria lead to employability?
4. Will successful implementation of entrepreneurship education theory and practical make a significant impact on the lives of students to acquire skills for self-development?
5. Will entrepreneurship education make students more innovative and creative?
6. For the future, should online courses which are globally accessible, especially those that are self-directed, be taught effectively in entrepreneurship education?
7. Is the EED programme adequately funded and implemented to achieve the goals stipulated by the Nigerian Government?

Student Industrial Work Experience Scheme (SIWES)

8. Will Student Industrial Work Experience Scheme (SIWES) in tertiary institutions in Nigeria enable students acquire employability skills?
9. Is Student Industrial Work Experience Scheme (SIWES) relevant and should continue to be a criteria for certification in Polytechnics in Nigeria?
10. Can Student Industrial Work Experience Scheme (SIWES) in Nigeria lead to employability and self-reliant?

11. Will successful implementation of Student Industrial Work Experience Scheme (SIWES) theory and practical make a significant impact on the lives of students to acquire skills for self-development?
12. Can SIWES training programme foster a better employability relationship between educational institutions and industries or companies
13. For the future, should online training which are globally accessible, especially those that are self-directed, be introduced effectively in training students during the Student Industrial Work Experience Scheme (SIWES)?
14. Is SIWES programme adequately funded and implemented to achieve the goals stipulated by the Nigerian Government?

Research Hypotheses

Ho: There is no significant relationship between the two innovative programmes, Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) in creating qualitative skills, employability and lifelong education in Polytechnics in Nigeria.

Ho₁: There is a significant relationship between the two innovative programmes, Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) in creating qualitative skills, employability and lifelong education in Polytechnics in Nigeria

Significance of the study:

This paper is significant because the findings will create awareness on the relevance and importance of these training programmes to the students, institutions, employers of labour and the nation. In addition, it may help institutions, policy makers and educational stakeholders to make suitable decisions to adequately fund, encourage, redesign or collaborate and plan these training programmes in synergy with employers of labour/industries to gear these programmes into relevant schemes for employability, human capital development and sustainable economic development of the nation.

Literature Review

The Nigerian government in the National Policy on education (FGN, 2012) stated that in pursuance of one of the goals of Polytechnic Education for example, is “give training and impart the necessary skills for production of technicians, technologists, and other skilled personnel, who shall be enterprising and self-reliant”. To achieve this goal, in addition to teaching and practical skills taught in laboratories in the institutions, students are expected to mandatorily undergo measures such as, Student Industrial Work Experience (SIWES), and the Entrepreneurship Education (EED) (FGN, 2012). Entrepreneurship education was introduced in 2007 to enable students acquire more employable skills from industry. Entrepreneurship training aims at boosting start-up businesses, innovations, ventures and getting new jobs. Also, entrepreneurship is creating competences in individuals that can increase the

individual's employability (Aifuwa *et al.*, 2016). EED and SIWES programmes are compulsory requirements for certification from tertiary institutions (example Polytechnics) in Nigeria. Policy makers must identify the priorities in which resources should be invested in order to stimulate growth. This requires the identification of drivers of economic growth and national development. Numerous researchers have pointed out that entrepreneurship is one of the key drivers of growth in the developed countries (Ivanovic-Dukic *et al.*, 2022; Bajal *et al.*, 2022).

The relationship between the two programmes, investigated in this study, is that they are all geared towards encouraging youth to learn qualitative skills for self-reliance and employability. However, participation in the SIWES programme is mandatory for all students in the polytechnic before being eligible for the Diploma certificate (FGN, 2012). The Federal Government of Nigeria also made it mandatory for all students who aspire to undergo the Higher National Diploma (HND) Programme in any institution to undergo one-year period of industrial experience, serving as one of the pre-requisites for entry into the HND programme. Furthermore, students' have equal access and are encouraged during the SIWES programme by provision of stipend to them by the Industrial Training Fund (ITF) who designed the programme (ITF, 2016). Furthermore, Nigeria as a nation is finding it difficult to harness its natural resources because it has not been able to appropriately utilise education as a tool for human capital development because of the following challenges in the education system: emphasis on paper qualification; poor funding of schools; poor motivation of the work force; poor infrastructural facilities; dearth of research; brain drain syndrome; inadequate curricula; poor quality teaching force and others (Njoku, 2017). Also, frequent strikes by lectures in Nigerian tertiary institutions due to poor facilities, poor remuneration and motivation in academic institutions, lack of planning of these schemes with industries, may pose a challenge to the successful actualisation of the aims of these programmes.

Theoretical Literature

To meet the numerous challenges facing the development of sustainable quality education and human capital development in Nigeria, an in-depth training, re-training and better education of the students is necessary. The cognitive theory of skill acquisition by Masson (1990) described cognitive systems which constitute forms of representation that typically are not open to modification by intentional processes such as mental practice, but are constructed and influenced instead by direct experience with a task. Thus, these programmes (EED and SIWES) expose students to tasks that can influence their skill acquisition by direct experience and participation in training and retraining. Therefore, employability skills or workplace skills are necessary for an individual to succeed in being employed or developing self-reliant qualities and ventures. Thus, all nations have to develop individuals to have skills relevant to the workforce and industries. Furthermore, some theories of entrepreneurship, example the theory of high achievement or achievement motivation by David McClelland states that the entrepreneurship behaviour of individuals develop a nation. Furthermore, Njoku (2017) stated that to ensure quality and sustainable development in the education system in Nigeria, the government in collaboration with the curriculum designers should ensure that students are trained to be more skillful and independent and have creative and innovative competences.

Human resource training and development are also considered as a continuous improving process, example lifelong learning (LLL) that should be up to date to face the dynamic changes in workplace/industry and to adopt training as a competitive advantage of the organization (Mihlen and Abdul, 2014; Mishra and Zachary, 2014). The term human capital development can be defined as those activities geared towards improving knowledge, sharpening the skills, instilling the values, and encouraging the behaviour necessary to actualise the potentials of students and staff of the institution or organization. Human capital development of an organisation or school includes the provision of learning, training and development opportunities in order to improve individual lifelong and sustainable economic development (Kakouris, 2015). Furthermore, the development of human capital is the critical determinant of long-term economic sustainability and the efforts to accelerate the evolution of human awareness and emergence of mentally self-conscious individuals will be the most effective approach for ensuring a sustainable future. Kakouris (2015) also, opined that the new approach to human capital development and entrepreneurship, combines critical thinking with experiential learning in a common framework. These innovative programmes Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) are geared towards the development of human capital.

Empirical literature

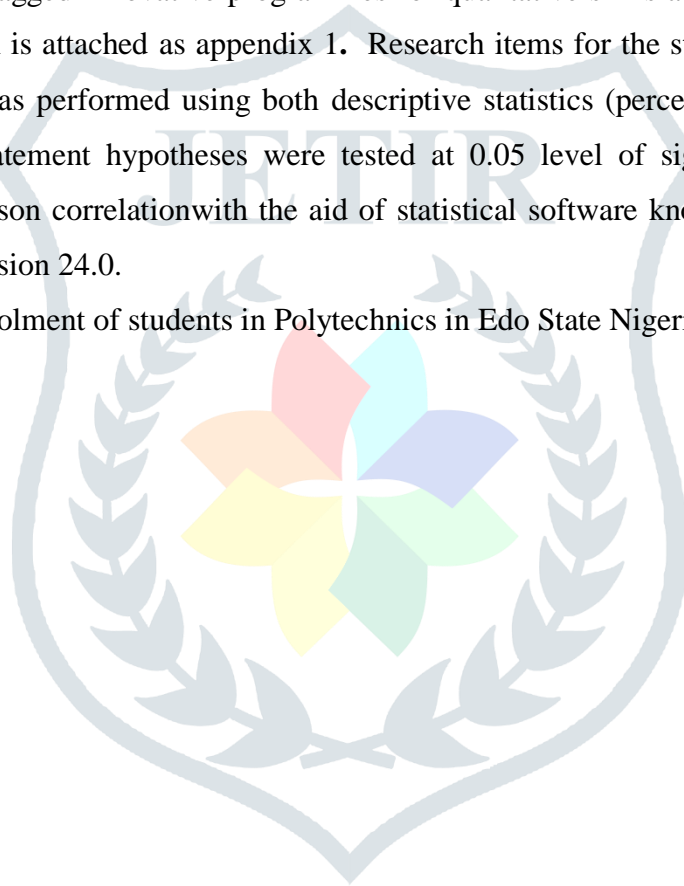
Bechman (2010), interviewed decision makers and students about their interest in arts and entrepreneurship education. He discovered that the students developed a strong, widespread, and rapidly growing interest in art and entrepreneurship education during the study. Thus, this may encourage researchers to conduct studies in entrepreneurship education in all disciplines. In addition, Teng, Ma, Pahlevanshanf and Turner (2019) analysing students perception from two universities, one in Malaysia and the other in China, of the skills they develop at university and the importance of soft skills to them and their perceptions of future employment and employability. Their research provided insight, to education providers, on the phenomena of underemployment among graduates in China, and was of practical significance to employers on the perception that graduates lack the necessary soft skills for the workplace.

In addition, Rae, (2004) developed practical theories from the life story accounts provided by interviewing entrepreneurs. The study demonstrates a framework and example for interpreting entrepreneurial learning and developing practical theory from these accounts. Thirty practicing entrepreneurs were interviewed, in a wide range of industries and at different stages of life and career experience, from first venture to experienced serial entrepreneur. The practices identified were effective. Rampersad and Zivotic-Kukuloj (2018); Zhao (2019); studied a qualitative approach in exploring the synergies between entrepreneurship and innovation and in analysing the factors that foster an interaction between the two. Case studies of six entrepreneurial and innovative organisations and in-depth interviews with senior managers were conducted to complement a comprehensive literature review of entrepreneurship and innovation. The study found that entrepreneurship and innovation are positively related to each other and is vital to organisational success and sustainability. Therefore, Entrepreneurship Education and SIWES development are all innovative programmes that can lead to development of employable skills, lifelong learning and thus sustainable economic development of a nation.

Methodology

A survey research design was adopted to collect quantitative data on the innovative programmes for qualitative skills acquisition, employability and lifelong learning (QIPSALL). The total population of students in the six approved Polytechnics in Edo State by the National Board for Technical Education (NBTE) as at 2022 is thirty-six thousand, six hundred and twenty-eight students (36, 628), as shown in Table 1. A sample size of one thousand eight hundred and thirty-two (1,832) which represents (5%) was drawn from a population of thirty-six thousand, six hundred and twenty-eight students (36,628). 1,832 questionnaires were randomly distributed to students across the six (6) approved Polytechnics in Edo State, Nigeria. The research instrument was administered personally by the researchers alongside two research assistants (trained and mentored). The instrument for the data was 61.5% reliable. Research instrument tagged innovative programmes for qualitative skills acquisition and lifelong learning (QIPSALL) for data collection is attached as appendix 1. Research items for the study was categorised into four-point Likert scale. Analysis was performed using both descriptive statistics (percentage, mean score and ranking analysis) and the research statement hypotheses were tested at 0.05 level of significance based on statistical inference approach using Pearson correlation with the aid of statistical software known as Statistical Packages for the Social Sciences (SPSS) version 24.0.

Table 1: Showing the total enrolment of students in Polytechnics in Edo State Nigeria



Source: NBTEWebsite (2022); Sampling by Researchers (2022)

Table 1: Showing the total enrolment of students in Polytechnics in Edo State Nigeria**Reliability of instrument**

S/N	Polytechnics	Status	Total population	5% of population	Dept. of Bus. Admin/M ang.	Dept. of Computer Science	Dept. of Electrical Electronics	Dept. of Accounting /Survey/ EstateMan gt.	Dept. of Science Laboratory Technology/ Statistics
1	Auchi Polytechnic	Federal	34,875 M 16,448 F 18,427	1,744	349	349	349	349	348
2	National Institute of Construction Technology Uromi	Federal	101 M 91 F 10	5	1	1	1	1	1
3	Edo State Polytechnic Usen	Private	923 M 534 F 389	46	10	9	9	9	9
4	Kings Polytechnic	Private	220 M 100 F 120	11	3	2	2	2	2
5	Light House Polytechnic	Private	296 M 144 F 152	15	3	3	3	3	3
6.	Shaka Polytechnic	Private	213 M 137 F 76	11	3	2	2	2	2
	Total		36, 628	1,832					

The reliability of dimensions of Innovative Programmes on Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES) for Qualitative Skills Acquisition and Lifelong Learning in Polytechnics in Edo State, Nigeria was assessed based on Cronbach's Alpha. Cronbach's Alpha value of all individual items for each of the two dimensions of factors of the Innovative Programmes on Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES) for Qualitative Skills Acquisition and Lifelong Learning in Polytechnics in Edo State, Nigeria range between .605 and .625 as shown in Table 2

Table 2: Reliability of Items on the Innovative Programmes on Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES)

Dimensions	Composite Cronbach's Alpha	Items Cronbach's Alpha
	0.615	
Perception of Entrepreneurship Education(EED)		0.625
Student Industrial Work Experience (SIWES)		0.605

Source: SPSS Result Extracts

The composite reliability for each of the two aggregate dimensions of innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) for qualitative skills acquisition, employability and lifelong learning in Polytechnics in Edo State, Nigeria suggests that Perception of Entrepreneurship Education(PEE), ($\alpha=.625$), and Student Industrial Work Experience (SIWES), ($\alpha=.605$). This justifies that all the items for the two measures of dimensions of innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) for qualitative skills acquisition, employability and lifelong learning in Polytechnics in Edo State, Nigeria are internally consistent at 0.615 test of reliability. As the Cronbach's Alpha values are greater than 0.50, therefore, it suffices to say that the constructs satisfy the requirements of moderate internal consistency at 61.57%.

Result of Data Analysis

Percentage Item Analysis of Innovative Programmes example, Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES) for Qualitative Skills Acquisition, employability and Lifelong Learning in Polytechnics in Edo State, Nigeria.

Table 3 shows the mean score of the items that was used to gather information from respondents concerning the measures of dimensions of innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) for qualitative skills acquisition and lifelong learning in Polytechnics in Edo State, Nigeria. The survey was developed to obtain the perceptions, feedback and gather information from respondents regarding the research items measures of innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) for Qualitative skills acquisition and lifelong learning in Polytechnics in Edo State, Nigeria.

Table 3: Shows the Percentage and Mean Score Analysis of Perception of respondents on Innovative Programmes example Entrepreneurship Education

S/No.	Perception of respondents in Entrepreneurship Education	SD	D	A	SA	Mean score
1	Teaching of entrepreneurship education in tertiary institutions in Nigeria will enable students acquire	18.8	16.0	37.2	28.1	2.75

	employability skills					
2	Entrepreneurship education should continue to be a criteria for certification	16.0	17.7	38.9	27.4	2.78
3	Entrepreneurship skills taught in your institution can lead to employability	14.2	21.5	30.9	33.3	2.83
4	Successful implementation of entrepreneurship education theory and practical can make a significant impact on the lives of students to acquire skills for self-development	16.3	21.5	33.0	29.2	2.75
5	Entrepreneurship education will make students more innovative and creative	14.2	19.4	35.4	30.9	2.83
6	For the future, online courses which are globally accessible, especially those that are self-directed, can be taught effectively in entrepreneurship education	18.1	22.9	35.8	23.3	2.81
7	Is the EED programme adequately funded and implemented to achieve the goals stipulated by the Nigerian Government?	26.8%	39.2%	20.5%	11.5%	2.1

Source: SPSS Result Extracts: 4- Strongly Agree (SA), 3- Agree (A), 2- Disagree (D), 1- Strongly Disagree (SD).

The result as depicted in table 3, shows response scale of respondents categorized into four-Likert's scale namely: strongly disagree (SD), disagree(D), agree(A), and strongly agree (SA) in terms of percentage item and mean score analysis of research items measuring Innovative Programmes, example Entrepreneurship Education for Qualitative Skills Acquisition, employability and Lifelong Learning in Polytechnics in Edo State, Nigeria.

In research question 1, the analysis shows that, 37.2% and 28.1% of the respondents agreed and strongly agreed, while 16.0% and 18.8% disagree and strongly disagree with mean score of 2.75 indicating that majority of the respondents are of the opinion that teaching of entrepreneurship education in tertiary institutions in Nigeria will enable students acquire employability skills.

For research question 2, which is should entrepreneurship education continue to be a criteria for certification? 38.9% and 27.4% of the respondents agreed and strongly agreed, while 17.7% and 16.0% disagree and strongly disagree. The mean score value of 2.78 suggests that majority of the respondents generally believe that entrepreneurship education should continue to be a criteria for certification. In research question 3, which is can Entrepreneurship skills taught in your institution lead to employability? 30.9% and 33.3% agreed and strongly agreed, while 21.5% and 14.2% disagree and strongly disagree. The mean score of 2.83 reveals that, the respondents majorly agreed that entrepreneurship skills taught in their institutions can lead to employability.

For research question 4, can successful implementation of entrepreneurship education theory and practical make a significant impact on the lives of students to acquire skills for self-development? 33.0% and 29.2% agreed and strongly agreed, while 21.5% and 16.3% disagree and strongly disagree. Therefore, the mean score of 2.75 indicates that, most of the respondents believe that successful implementation of entrepreneurship education theory and practical may make a significant impact on the lives of students to acquire skills for self-development.

In research question 5, with regard to, can Entrepreneurship education make students more innovative and creative? 35.4% and 30.9% agreed and strongly agreed, while 19.4% and 14.2% disagree and strongly disagree. The average score of 2.83 confirms that there is general agreement that entrepreneurship education will make students more innovative and creative. Research question 6, in respect of the future, can online courses which are globally accessible, especially those that are self-directed, be taught effectively in entrepreneurship education? 34.4% and 22.6% of the respondents agreed and strongly agreed, while 25.7% and 17.4% disagree and strongly disagree. The mean score of 2.68 indicates that majority of the respondents generally believe that for the future, online courses which are globally accessible, especially those that are self-directed, can be taught effectively in entrepreneurship education. The finding shows that the overall perception of students is positive concerning the realization of Innovative Programmes on Entrepreneurship Education, (EED) accounting for Qualitative Skills Acquisition, employability and Lifelong Learning in Polytechnics in Nigerian institution of learning.

However, in research question 7, which states that the EED programmes are well funded and implemented to achieve the goals stipulated by the Nigerian Government; majority of the students disagree with this statement. 39.2% and 26.8% disagree and strongly disagree. While, 20.5% and 11.5% agree and strongly agree. The mean score value of 2.1 suggests that majority of the respondents disagree that the EED programme is well funded and implemented.

Table 4: Shows the Percentage and Mean Score Analysis of Perception of respondents on Innovative Programmes example, Student Industrial Work Experience (SIWES)

S/No.	Perception of respondents in Industrial Work Experience (SIWES) training	SD	D	A	SA	Mean Score
8	Successful workplace skills education, traineeship or memberships can make a student employable	14.6	22.2	36.8	26.4	2.67
9	SIWES should continue to be a criteria for certification	17.4	25.7	34.4	22.6	2.68
10	SIWES programme are related to employers needs and can lead to employability	22.2	24.3	30.2	23.3	2.69
11	Successful implementation of the SIWES programme can make a significant impact on the lives of students to acquire employable skills for self-development	28.5	26.7	31.3	13.5	2.75
12	SIWES programme can foster a better employability relationship between educational institutions and industries or companies	18.1	22.9	35.8	23.3	2.81
13	For the future, skills can be taught effectively via online systems which are globally accessible, especially those that are self-directed	21.9	26.7	29.2	22.2	2.52
14	The SIWES programmes are adequately funded and implemented to achieve the goals stipulated by the Nigerian Government.	27.8	38.5	17.6	15.2	2.1

Source: SPSS Result Extracts 4- Strongly Agree (SA), 3- Agree (A), 2- Disagree (D), 1- Strongly Disagree (SD).

Table 4, shows the percentage item and mean score analysis of research items measuring Student Industrial Work Experience Scheme (SIWES) for Qualitative Skills Acquisition, employability and Lifelong Learning in Polytechnics in Edo State, Nigeria.

For research question 8. The responses on “Successful workplace skills education, trainee-ship or memberships can make a student employable” shows that 36.8% and 26.4% of the respondents agreed and strongly agreed, while 22.2% and 14.6% disagree and strongly disagree. The mean score of 2.67 shows that, the respondents agreed that successful workplace skills education, trainee-ship or memberships can make a student employable in Nigeria.

In respect to research question 9 that should SIWES continue to be a criteria for certification? 34.4% and 22.6% of the respondents agreed and strongly agreed, while 25.7% and 17.4% disagree and strongly disagree. The mean score of 2.68 indicates that majority of the respondents generally believe that SIWES should continue to be a criteria for certification.

For research question 10, is on the part of SIWES programme being related to employers needs and can lead to employability, 30.2% and 23.3% agreed and strongly agreed, while 24.3% and 22.2% disagree and strongly disagree. The mean score of 2.69 reveals that, the respondents majorly agreed that SIWES programme are related to employers needs and can lead to employability.

In research question 11, In terms of can successful implementation of the SIWES programme make a significant impact on the lives of students to acquire employable skills for self-development? 31.3% and 13.5% agreed and strongly agreed, while 26.7% and 26.7% disagree and strongly disagree. The mean score of 2.75 indicates that, most of the respondent believe that successful implementation of the SIWES programme may make a significant impact on the lives of students to acquire employable skills for self-development.

With regard to research question 12, can SIWES programme foster a better employability relationship between educational institutions and industries or companies? 35.8% and 23.3% agreed and strongly agreed, while 22.9% and 18.1% disagree and strongly disagree. The average score of 2.81 confirms that the respondents believed SIWES programme can foster a better employability relationship between educational institutions and industries or companies.

With respect to research question 13, For the future, can skills be taught effectively via online systems which are globally accessible, especially those that are self-directed? 29.2% and 22.2% of the respondents agreed and strongly agreed while 26.7% and 21.9% disagree and strongly disagree. The mean score value of 2.52 suggests that majority of the respondents are satisfied. For, the future, skills can be taught effectively via online systems which are globally accessible, especially those that are self-directed.

The overall perception of students is positive concerning Innovative Programmes example, Student Industrial Work Experience (SIWES) leading to the acquisition of qualitative skills, competences, employability and Lifelong Learning in Polytechnics in Nigerian .

However, in research question 14, which states that the SIWES programmes are well funded and implemented to achieve the goals stipulated by the Nigerian Government; majority of the students disagree with this statement. 38.5% and 28.7% disagree and strongly disagree. While, 17.6% and 15.2% agree and strongly agree. The mean score value of 2.1 suggests that majority of the respondents disagree that the SIWES scheme is well funded and implemented.

Hypothesis

Hypothesis one: Examines the correlation between the two innovative programmes, Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES).

Pearson correlation investigate the relationship between the innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) with qualitative skills acquisition, employability and lifelong learning in Polytechnics in Edo State, Nigeria

Table 5. Correlations of Innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) for qualitative skills acquisition, employability and lifelong learning in Polytechnics in Edo State, Nigeria

Variables	R	P	Level
Qualitative Skills Acquisition, employability and Lifelong Learning.	--	--	--
Innovative Programmes on Entrepreneurship Education, (EED)	0.826	0.003	Excellent
Student Industrial Work Experience Scheme (SIWES)	0.604	0.001	High

* Correlation is significant at 0.05 level (2 tailed)

Source: SPSS Result Extracts

The results as shown in Table 5, reveals that the two dimensions of Innovative programmes on entrepreneurship education, (EED) and Student Industrial Work Experience Scheme (SIWES) effect of Qualitative Skills Acquisition, employability and Lifelong Learning in Polytechnics in Edo State, Nigeria were found to be:

Innovative programmes on entrepreneurship education, (EED) ($r = 0.826$; $p = 0.003$), and Student Industrial Work Experience Scheme (SIWES) ($r = 0.604$; $p = 0.001$). This suggests in terms of the strength of the association, the results have shown that innovative programme on entrepreneurship education, (EED) has excellent positive association ($r = 0.826$) and Student industrial work experience scheme (SIWES) ($r = 0.604$) has high positive association with qualitative skills acquisition, employability and lifelong learning in polytechnics in Edo State, Nigeria. Therefore, the alternate hypothesis was accepted which states that there is a significant association among the dimensions of Innovative programmes on entrepreneurship education, (EED) and Student Industrial Work Experience Scheme (SIWES) leading to qualitative skills acquisition, employability and lifelong learning in polytechnics in Edo State, Nigeria. These findings suggest that when there is any change to Innovative programmes on entrepreneurship education, (EED) and student industrial work experience scheme (SIWES) programmes positively, this will have a significant effect on qualitative skills acquisition and lifelong learning in polytechnics in Nigeria. Proper funding, planning and implementation of Innovative programmes on entrepreneurship education, (EED) may contribute positively and significantly to qualitative skills acquisition, employability and lifelong learning in polytechnics in Edo State, Nigeria by 82.6%. Similarly, improvement in the planning, funding and implementation of the Student Industrial Work Experience Scheme (SIWES) programmes may influence qualitative skills acquisition, employability and lifelong learning in polytechnics in Edo State, Nigeria significantly by 60.4%.

Discussion

This paper is on Innovative programmes for qualitative skills acquisition and lifelong learning in tertiary institutions in Nigeria based on Entrepreneurship Education and SIWES innovative programmes, geared toward acquisition of quality skills by students. The results showed that Innovative programmes on entrepreneurship education, (EED) and SIWES are perceived as relevant by the students and they contributed positively and significantly to qualitative skills acquisition and lifelong learning in polytechnics in Edo State, Nigeria by 82.6%. Similarly, improvement in the funding and implementation of EED and the Student Industrial Work Experience Scheme (SIWES) may influence qualitative skills acquisition and lifelong learning in polytechnics in Edo State, Nigeria significantly by 60.4%. Siwan and Rowley (2010) supports the positive perception of students that entrepreneurship skills, entrepreneurial competencies and usage widely by government agencies and others in their drive for national economic development and business success is necessary. This is hinged on the provision of proper planning and training students to acquire the relevant skills. In addition, the perception of student for the future of these schemes were positive on the introduction of online training skills. This was supported by Teng et al. (2019) who stated that graduates lack soft skills.

Conclusion

This paper on Innovative Programmes on Entrepreneurship Education, (EED) accounting for qualitative skills acquisition, employability and Lifelong Learning in Polytechnics in Nigerian institution of learning concludes that students perceive the schemes as relevant for the attainment of qualitative skills acquisition, employability and Lifelong Learning which may also lead to sustainable economic development. This study also, concludes that there is a significant association among the dimensions of Innovative programmes on entrepreneurship education, (EED) and Student Industrial Work Experience Scheme (SIWES) leading to qualitative skills acquisition, employability and lifelong learning in polytechnics in Edo State, Nigeria

However, students perceive funding and implementation of Entrepreneurship Education (EED) and Student Industrial Work Experience Scheme (SIWES) as qualitative programmes leading to youth employability, self-reliance and subsequently enhance sustainable economic national development in Nigeria as needing improvement and thus, the goals not totally achieved. The improvement in the planning and implementation of Innovative programmes of Entrepreneurship Education, (EED) and Student Industrial Work Experience Scheme (SIWES) may positively and significantly have an effective impact in the acquisition of qualitative skills, competences for the industry/workplace, self-employment, lifelong learning and ultimately sustainable national economic development in Nigeria. The study concluded that acquiring employability and self-reliant skills by students through EED and SIWES may lead to lifelong learning and sustainable economic development in Nigeria.

Recommendations

The study recommends the followings: Adequate funding and implementation strategies are necessary for the schemes. Also, adoption of global and acceptable learning standard for Entrepreneurship Education and SIWES

innovative programmes capable of self-development, reliance with high tendency of employability skills. Furthermore, NBTE curriculum should be redesign with all the relevant stakeholders from industries/ workplace inculcating current methodologies and materials of teaching and learning entrepreneurship education. In addition, synergy of practicable SIWES programmes in the polytechnic system in Nigeria with industries is necessary. Furthermore, there should be creation of student support systems in the polytechnic system in Nigeria as it may assist in positioning the polytechnic education toward better and sustainable entrepreneurship program with self-reliant and employability tendency.

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APPENDIX 1

QUESTIONNAIRE ON INNOVATIVE PROGRAMMES FOR QUALITATIVE SKILLS ACQUISITION AND LIFELONG LEARNING (QIPSALL)

Title of this study is Innovative programmes for qualitative skills acquisition and lifelong learning in tertiary institutions in Nigeria. This is a study designed to collect data on the perception of students on the success of these innovative programmes.

Your participation in this study will contribute to enhancing and sustaining your ability to employability. Your participation in this study is voluntary and all information gathered will be treated as highly confidential. Thank you for your cooperation.

SECTION A

Basic information

1. Institution..... 2 level/ year
3. School /Faculty..... 4. Department
5. Name of respondent (Optional).....6. Sex of respondent.....
7. Age of respondent.....8. Email address of respondent (optional).....

SECTION B

(Perception on Entrepreneurship Education)

Instruction: Please, tick your desired response.

1. Strongly Agreed 2. Agreed 3. Neutral 4. Disagree 5. Strongly Disagree

S/No.	Perception on Entrepreneurship Education	SA	A	D	SD
1	Teaching of Entrepreneurship Education in tertiary institutions in Nigeria will enable students acquire employable skills				
2	Entrepreneurship Education should continue to be a criteria for certification				
3	Entrepreneurship skills taught in your institution can lead to employability				
4	Successful implementation of entrepreneurship education theory and practical can make a significant impact on the lives of students to acquire skills for self-development.				
5	Entrepreneurship education will make students more innovative and creative				
6	For the future, online courses which are globally accessible, especially those that are self-directed, can be taught effectively in entrepreneurship education.				
7	The Entrepreneurship Education (EED)programme is well implemented.				

SECTION C

Student Industrial Work Experience Scheme (SIWES)

Instruction: Please, tick your desired response.

1. Strongly Agreed (SA) 2. Agreed (A) 3. Neutral (N) 4. Disagree (D) 5. Strongly Disagree (SD)

S/No.	SIWES	SA	A	D	SD
1	Successful workplace skills acquisition, traineeships or internships can make a student employable				
2	SIWES should continue to be a criteria for certification				
3	SIWESprogramme are related to employers needs and can lead to employability				

4	Successful implementation of the SIWESprogramme can make a significant impact on the lives of students to acquire employable skills for self-development				
5	SIWESprogramme can foster a better employability relationship between educational institutions and industries or companies				
6	For the future, skills can be taught effectively via online systems which are globally accessible, especially those that are self-directed.				
7	Student Industrial Work Experience Scheme (SIWES) is well implemented				

Thank you.

