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# **RECOMMENDED CHANGES IN STUDENTS' INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES) GEARED TOWARDS DECREASE IN UNEMPLOYMENT RATE OF BUSINESS EDUCATION GRADUATES IN NIGERIA**

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## **Abstract:**

The high rate of unemployment of vocational education graduates in Nigeria was one of the major reasons for the introduction of Students' Industrial Works Experience Scheme (SIWES). Based on the high rate of unemployment, this study was undertaken to recommend the needed changes to be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria. Two research questions were answered by the study, while two null hypotheses were formulated and tested. The study adopted survey research design. The population for the study was 320 respondents made up of 64 Business education lecturers, 20 staff of Industrial Training Fund (ITF) and 236 final year students. The instrument for data collection was a structured 32-item questionnaire which was validated by 3 experts. The reliability of the instrument was established using Cronbach alpha which gave a reliability coefficient of 0.87. The data collected were analyzed using mean to answer the research questions, while t-test statistic and analysis of variance (ANOVA) were used for testing the hypotheses at 0.05 level of significance. It was found among others, that re-tooling business education model offices, promulgation of a 'no rejection' of students on training policy, and ITF regulation of student's posting to industries of relevance, would facilitate decrease in unemployment rate of business education graduates in Nigeria. The study concludes that SIWES be modified to achieve business education graduates employability and, or self employment objective. It was recommended among others, that ITF should present a new order of students' placement to industries of relevance and ensuring that government policy statement regarding the establishment of SIWES is effectively implemented.

## **Keywords:**

Students' Industrial Works Experience, Unemployment, Business Education, Business Education Graduates

**JEL Classification:** I38

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## Introduction

The worthy legacy any parent would bequeath to the child is good education. Good education in this context is that class of education that will put food on the table of the beneficiary, with or without paid employment. It is based on this context that vocational education, which business education is a sub-set was introduced.

Business education according to American Vocational Association (AVA) in Osuala (2009) is a program of instruction which consist of two parts, namely: Office education; a vocational education program for office career through initial, refresher and upgrading education leading to employability and advancement in office occupation, and General business education; a program to provide students with information and competencies which are needed by all in managing personal business affairs and in using the services of the business world. It is a class of education for, and about business, that trains the child to use his head, heart and hand to earn a living either as a paid employee or in self employment.

Aina in Agboh (2008) noted that, the rapid technological advancement of American made the British government to seek Technical and Vocational Education (TVE) as a reform agenda in the 1960's, when they became handicapped in their struggle for economic survival. In China, VTE permeated its education system that over 70% of its post primary school pupils have training in skilled courses; while at the upper secondary education VTE predominates the school curriculum (Eze, 2007). We are witnesses to the exalted economic positions of these countries made possible through VTE. In Nigeria, high school enrolment into VTE courses is less than 1% of each year's total enrolment and not practiced at all in Primary and pre-primary levels of education. It is at present, precisely with the New National Policy on Education, NPE (2013), that Trade and Entrepreneurship subjects were made compulsory, having 34 VTE subject components of the curriculum for senior secondary education. Osuala (2004) posited that, Business education since its introduction in Nigerian post primary school had been an elective subject. It is non-existent at all in the primary and pre-primary level, even when the typical Nigerian student lives and thrives from the proceeds of business and the farm. This background information is necessary as a prelude to traces on why the supportive program, SIWES was still unable to achieve the objective of its introduction since 1974.

Students' Industrial Work Experience Scheme (SIWES) according to Oyeniyi (2011) is a program designed to expose and prepare students of Institutions of Higher Learning for industrial work situation which they are likely to meet after graduation. It is the Nigerian government human resources development training and development program introduced to bridge the gap between the theoretical work of our institutions of higher learning in the fields of engineering, technical, vocational, business and other related practical courses, and what obtains in practice, in the world of work. Industrial Training Fund (ITF) (2002), outlined the following as the specific objectives of SIWES:

- To provide an avenue for students in institutions of higher learning to acquire industrial skills and experience in their course of study, which are restricted to engineering and technology, including environmental studies and other courses that may be approved;
- To expose students to basic methods and techniques in handling equipment and machinery that may not be available in their learning institutions;
- To make transition from school to the world of work easier, and enhance students contacts for late job placement; and
- To strengthen employers involvement in the entire educational process and prepare students for employment in industry and commerce.

Obviously, this program in paper is faultless. The objectives of the program has not differed significantly since its introduction in the 1970's. Yet, several studies have shown that SIWES has not formed that needed bridge to close the gap between the theories studied in the classroom on one hand, and the practice as is obtained in the actual work situation. Orikpe (2013) affirms that the inability of SIWES to meet the objective of its introduction was because only little attention is paid to the training value of the scheme. The students do not take the scheme serious and only a few employers are interested in employing the students not even as 'learning workers' but as 'producing workers'. Okolocha and Ibik (2014) opined that the major problems of SIWES in Nigeria are lack of proper implementation and lack of commitment by tertiary institutions, industries, government and the coordinating agencies. In all, SIWES has failed in meeting the practical production skills, attitudes, abilities and competencies required to make Nigerian technological, engineering, business and other vocational education graduates readily employable or to be self reliant. The ripple effect of this failure is the persistent increase in the unemployment rate of graduates rolled out of school without the requisite job competencies required in the world of work.

Unemployment according to Stuart (2001) is a situation that occurs when a person who is actually searching for employment is unable to find one. Unemployment rate on the other hand is the number of unemployed persons divided by the labor force, where the labor force is the number of unemployed persons plus the number of employed persons (Eme, 2014). Unemployment rate measures the percentage of employable people, willing and qualified for employment and who have either lost their jobs or have not gotten one. It is a basic statistical tool for measuring the poverty level of a state. SIWES was basically introduced to equip the participating students with needed skills and competencies for employment and employment generation. The scheme is aimed at equipping the students with such experiences that will aid their job creation ability as well as aid them fit into the job vacancies in the offices and industries. Thus, the major objective of SIWES is the reduction of the worrisome unemployment rate among Nigerian graduates that studied specialized courses.

However, despite the continued implementation of SIWES, studies have shown that Business Education graduates still roam the street in search for job, thereby compounding the unemployment predicament of Nigerian nation. Agboh and Ugwu (2012) observed that, inspite of the job crating qualities attributable to business education as a program of studies, beneficiaries still form part of the bulk of Nigerian unemployed graduates that roam the street in search of jobs. The implication is that something is wrong somewhere, thus a change is desired.

The dynamism in the competitive business environment has proved that the only constant factor in life is change. Change according to Hornby (2001) is to make different, give a different position, course or direction to something. Any program, policy or practice that has reached the zenith and yet has not yielded the desired result ought to be changed. SIWES as a program has been in existence in Nigeria since 1974, more than 40 years, yet may be presumed not to have achieved the desired result.

### **Statement of the Problem**

The Students Industrial Work Experience Scheme (SIWES) as is undertaken by Business Education graduates is supposed to expose them to a variety of on-the-job productive skills. That is, promoting the acquisition of practicable work skills and competencies desirable of business education graduates to fit in the world of work without hindrances. SIWES is purposed at ensuring that its participants did not only acquire the needed industrial work situation skills, but are also equipped with the opportunities to develop their self potentials to face the societal future developmental and survival challenges. Alagbe (2007) stated that SIWES emerged as a stimulating factor in making students practical experience real and their education meaningful. The scheme was aimed at opening to the participants a wide range of gates to entrepreneurial training and skills development which would not only lead to their transition from the classroom to office as employees, but also to create job, thus reducing the level of unemployment in Nigeria.

To some extent, SIWES has been able to equip participants with these employable and transitory competencies. However, studies have shown that much is still needed to be done in this area. Olabiyi, Okarfor, and Aiyelabowo (2012) in their study found out that, SIWES has not yielded the desired change in the beneficiaries work habits due to inadequate supervision of students by both teachers and the industrial based supervisors, disruption in the school academic calendar, and the disparities between the curriculum contents and the experience the students are exposed to during SIWES. There are equally reported cases of graduates lack of employable skills among different employers of labour in the country. Okorochoa and Ibik (2007) decried that, business education graduates were still being rejected by employers of labor due to non-existence of school to industry linkages to ensure facilitation of economic boom through graduate quality. The school environment is totally different in terms of equipment and

facilities from what obtains in the actual work environment, yet SIWES was not properly positioned to bridge the gap. This work determined the desired changes to be made in SIWES to check the unemployment upsurge of Business Education graduates in Nigeria.

### **Literature Review**

The definition of the concept Business education though vary from author to author, points at one major aim; the training of individuals in the area of general business for effective employment in offices and, or for self employment. Ihekwoaba (2006) defined business education as an aspect of education that comprises of vocational parts which assist individuals to live a useful and fulfilled life, and contribute to the needs of their immediate environment and the nation. Aliyu (2000) affirmed that business education is education for business or training in business skills which are required for use in business offices, clerical operations and business policy analysis. Aina (2002) defined business education as the knowledge, attitudes, skills and competencies needed by all citizens in order to effectively manage their personal business on one hand, and the economic systems to ensure continuous earning of reasonable income. However, AVA in Osuala (2009) offered a more comprehensive definition of business education. They defined it as a program of instruction which consist of two parts, namely: office education, a vocational educational program for office career through initial, refresher and upgrading education leading to employability and advancement in office occupation; and general business education, a program which provides students with information and competencies which are needed by all in managing personal and business affairs, and in using the services of the business world.

Business education from the foregoing views can be deduced to mean, a training process aimed at improving the disposition of the beneficiary in adopting and adapting to attitudinal change that will aid personal improvement on economic activities in the business environment which will generate sustainable economic development. Business education as an area of study aims at achieving two major objectives, viz.: training of the beneficiary for gainful employment (as an employee) in already established institutions, industries and offices; and the development of individual's business knowledge, attitudes and competencies to actualize the objectives of employment creation and generation (self employment). The need for smooth transfer of business education graduates and their counterparts in related work oriented disciplines, from school to the work environment either as an employee or self employed was the reason for the introduction of SIWES in Nigeria in 1974. Dokubo (2009) opined that, the problem of skill acquisition by graduates of Nigerian Technical and vocational education is a reason for the establishment of SIWES. According to Oyeniya (2011), SIWES is a program designed to expose and prepare students of institutions of higher learning for industrial work situation which they are likely to meet after graduation. The scheme was

planned to serve as a bridge between educational institutions and the industrial employers, with the later providing general and specific occupational skills and knowledge (Olawale, 2012).

Specifically, the objectives of SIWES according to Industrial Training Fund (ITF) (2002) are to:

- i. Provide an avenue for students in institutions of higher learning to acquire industrial skills and experience in their course of study;
- ii. Prepare students for the industrial work situation they are to meet after graduation;
- iii. Expose students to work methods and techniques in handling equipment and machinery that may not be available in their institutions;
- iv. Make transition from school to the world of work easier, and enhance students contacts for later job placement;
- v. Provide students with an opportunity to apply their knowledge in real work situation thereby bridging the gap between theory and practice; and
- vi. Enlist and strengthen employers' involvement in the entire educational process and prepare students for employment in industry and commerce.

However, almost all the research conducted in this area have found that the scheme has failed in achieving the above objectives. Olabiyi, Okarfor, and Aiyelabowo (2012) in their study found out that, SIWES has not yielded the desired change in the beneficiaries work habits due to inadequate supervision of students by both teachers and the industrial based supervisors, disruption in the school academic calendar, and the disparities between the curriculum contents and the experience the students are exposed to during SIWES. Okorie (2001) recounts that SIWES has not yielded the desired change in the beneficiary's work habit since its introduction due to low level quality of training students received in schools and in the industry during the period of this training. Orikpe (2013) affirms that, the inability of SIWES to meet the objective of its introduction was because only little attention is paid to the training value of the scheme. The students do not take the scheme serious and only a few employers are interested in employing the students not even as 'learning workers' but as 'producing workers'. Okolocha and Ibik (2014) opined that, the major problems of SIWES in Nigeria are lack of proper implementation, poor commitment and negative mindset among tertiary institutions, industries, government and coordinating agencies. The end result is the production of poor quality graduates. To Nwangwu (2009), the challenges of SIWES

include: inadequate training facilities, inadequate information between school authorities and the industries, lack of funds, lack of modern facilities/machineries in the students training stations, poor financing, inadequate supervision of students, and some lecturers and officials of ITF non visit of the students on program.

Olaitan, Igbo, Nwachukwu, Onyemaechi and Ekong (1999) affirmed that, institutions spend time theorizing at the expense of developing practical skills among youths because of lack of materials and facilities needed to infuse in youths, the necessary skills likely to be required in industries. This makes the industrial work environment entirely new, and students on SIWES starting from the scratch. Olabiyi, Okarfor and Aiyelabowo (2012) observed the following as some of the challenges that hinder SIWES in developing a workforce among Nigerian youths: disparities between the curriculum contents and experience students are exposed to during the work experience; students not having opportunities to operate the modern equipment and tools even when on attachment; disruption in school academic calendar making industries reject students; time spent in industrial work experience not being adequate; lack of incentives (monetary) for both staff and their students during the work experience; and inadequate supervision of students by both teachers and industrial supervisors during the training. The industrial experience thus is expected to contend with these difficulties to engender a mutual benefit between the industries and the academia, for enhancing business education graduates job prospect and for overall promotion of Nigerian economy. However, Bond (2006) recommended that improving collaborative venture between the industry and vocational technical education, forming a committee that would oversee the implementation of technical and vocational education in schools, ensuring smooth school - industrial relationship for improved performance of SIWES, and improving the administrative practices of industrial liaison offices in the institutions, would improve on SIWES to enhance the beneficiaries productivity.

Ajibola (2011) suggested that SIWES should be redesigned in such a way as to accommodate the problems of the industry which the students must solve in stages and the inputs made used as a yardstick for scoring the students performance at the end of the program. Okebukola (2010) affirms that to improve the quality of Nigerian graduates through SIWES, the program must be redesigned to engender a mutual benefit between the industry and the academia. Ugwuanyi and Ezema (2010) observed that to effectively impart the required skills to SIWES participants, educators and practitioners need re-tooling. They also suggested a mutual cooperation between educators and practitioners for proper supervision of SIWES participants. The implication of these observations is that business education graduates unemployment is as a result of SIWES inability to achieve its objectives of introduction on the participants. Thus, the current study aim at recommending desired changes in SIWES geared towards decreasing the unemployment rate of Business Education graduates in Nigeria.



### **Theoretical Framework**

The Systems theory as propounded by Easton David in 1965, is an important rationale for this study. The System theory is based on the premise that a political system could be seen as a delimited and fluid system of steps in decision making. It thus stated that, politics should be seen as a whole, not as a collection of isolated problems to be solved; thus, a framework upon which one investigates and describes the inter-dependence and relatedness of groups or parts that work together to produce result. Taken from the perspective of Alexander and Stanley (1998), systems theory is an interdisciplinary study of the abstract organization of phenomena independent of its substance and type. The basic principle being that any system of organization, technical or task aspects are interrelated with the human or social aspects. The interaction between the industries, the institutions of learning, and the students with regards to SIWES ought to synergize to form a whole, to effect the required changes in the environment (reduction of SIWES beneficiaries' graduate unemployment). The rationale for using this theory may literally be explained as, that the unusual changes observed in the environment (graduates unemployment) resulted to the "demand" for the "action" SIWES. As such SIWES outputs should be able to produce the required changes in the environment (reduction of benefitting graduates unemployment). Hence, a review of the scheme is needed so that SIWES outcome can generate the desired changes for which the policy was introduced.

### **Research Questions**

This study is guided by the following research questions:

1. What are the factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria?
2. What are the changes to be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria?

### **Hypotheses**

The following null hypotheses are tested at 0.05 level of significance:

H0<sub>1</sub>: There is no significant difference in the mean ratings of the students and that of the business education lecturers on the factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria.

H0<sub>2</sub>: There is no significant difference in the mean ratings of the students, the institution based supervisors (lecturers) and the ITF supervisors on the changes to be made on SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria.

### **Research Method and Procedure**

The study employed a survey design. It was carried out in public tertiary institutions and ITF offices in South-East Nigeria. The choice of the area is based on the fact that there is good number of tertiary institutions in the area. The population for the study was 320 respondents, made up of 64 business education lecturers, 20 staff of ITF, and 236 final year students that have participated in SIWES from the ten public tertiary institutions that offer Business Education within the study area. The instrument for data collection is a structured questionnaire and which was validated by three experts. A five-point rating scale was used. The bench marks for acceptance value is 3.50 and above. The reliability of the instrument was established using Cronbach alpha, and which gave a reliability coefficient of 0.87. The data collected were analyzed using arithmetic mean and standard deviation to answer the research questions, while t-test statistic was used to test the null hypotheses at 0.05 level of significance.

### **RESULTS**

The results for this study were obtained based on the research questions answered and hypotheses tested. Both the research questions and the hypotheses are presented in tables 1 and 2 as follows:

#### **Research Question One**

What are the factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria?

**H<sub>01</sub>:** There is no significant difference in the mean ratings of the students and that of the business education lecturers on the factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria.

The data for answering research question one and testing hypothesis one (**H<sub>01</sub>**) are presented in Table 1 below.

**Table 1: Mean ratings and t-test statistics of the responses of Business education students and their Lecturers on factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria (N = 312).**

SN	Factors hindering SIWES from decreasing unemployment among graduates include:	$\bar{X}_S$	$\bar{X}_L$	$\bar{X}_G$	SD	p-value (Sig.)	Remarks	
							RQ	H0
1	Rejection of students by industries relevant to their training needs	4.48	4.44	<b>4.46</b>	0.44	0.17	A	NS
2	Non regulation of students' posting to industries of relevance to their training	4.70	4.54	<b>4.78</b>	0.41	0.09	A	NS
3	Refusing students on training access to information as may be regarded as official secret, which is relevant to their training needs	4.00	4.02	<b>4.00</b>	0.58	0.75	A	NS
4	Trainees lack of access to some machines / tools / equipment in the industries	3.99	4.01	<b>3.98</b>	0.57	0.53	A	NS
5	Inadequate practical testing of students by the institution / industrial based supervisors	4.65	4.32	<b>4.50</b>	0.50	0.03	A	S*
6	Inadequate supervision of students by supervisors (industrial / institution / ITF based supervisors)	4.70	4.76	<b>4.73</b>	0.33	0.27	A	NS
7	Lack of adequate complementary supervision by the ITF staff	4.50	4.55	<b>4.52</b>	0.44	0.21	A	NS
8	Inadequate training period	4.74	4.76	<b>4.75</b>	0.53	0.10	A	NS
9	Lack of modern facilities, machines, tools and office equipment in schools for students training	3.87	4.36	<b>4.12</b>	0.62	0.02	A	S*
10	Extortion and exorbitant fees charged students for acceptance/attention/training by industries	4.43	4.44	<b>4.43</b>	0.55	0.75	A	NS
11	Supervisors vague knowledge of the new ideas, facilities, tools, equipment and machines he is to supervise students on	4.01	4.35	<b>4.18</b>	0.75	0.01	A	S*

12	Deficient training offered in schools which does not replicate actual work environment	4.45	4.49	<b>4.47</b>	0.66	0.12	<b>A</b>	<b>NS</b>
13	Disruption in school academic calendar which affects the training period	3.93	3.97	<b>3.95</b>	0.69	0.11	<b>A</b>	<b>NS</b>
14	Students lack of dedication and interest in the programme	3.84	3.76	<b>3.80</b>	0.73	0.16	<b>A</b>	<b>NS</b>
15	Inadequate relevant facilities in some industries of attachment	4.15	4.14	<b>4.15</b>	0.70	0.04	<b>A</b>	<b>S*</b>
16	Lack of incentives (tax holidays / rebate etc.) to the training industries	3.93	3.95	<b>3.97</b>	0.65	0.21	<b>A</b>	<b>NS</b>
17	Sexual harassment of trainees by their trainers	3.97	3.73	<b>3.85</b>	0.62	0.03	<b>A</b>	<b>S*</b>

**Key:**  $\bar{X}_s$  = Mean of Students,  $\bar{X}_L$  = Mean of Lecturers,  $X_G$  = Overall Grand Mean; **A** = Agreed;

**N** = Number of Respondents; **Level of Sig.** = 0.05; **S\*** = Significant; **NS** = Not Significant.

The data presented in Table 1 above showed that the grand mean ratings of the responses of the respondents on all the 17 items ranged between 3.80 and 4.78 which are all greater than the cut-off point value of 3.50 on 5-point rating scale. This finding indicated that all the 17 identified items in the table are factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria. The standard deviation values of the 17 factors ranged between 0.33 and 0.75 which implied that the responses of the respondents on the items are close to the mean and one another.

The data presented on t-test statistics for testing hypothesis one revealed that the p-values (sig.) of 12 out of the 17 items in the table ranged from 0.10 to 0.75 which were greater than 0.05 level of significance. This indicated that there are no significant differences in the mean ratings of the responses of Business education students and their lecturers on the 12 identified factors hindering SIWES from decreasing the unemployment rate of business education graduates in Nigeria. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents is accepted on the 12 factor items. The p-values on the remaining 5 items in the table, specifically items 5, 9, 11, 15 and 17 were 0.03, 0.02, 0.01, 0.04 and 0.03 respectively which are in case less than 0.05 level of significance. This finding implied that there are significant differences in the mean ratings of the responses of Business education students and their lecturers on the 5 identified factors.

Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents is rejected on the 5 factor items.

### **Research Question Two**

What are the changes to be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria?

**H0<sub>2</sub>:** There is no significant difference in the mean ratings of the students, the institution based supervisors (lecturers) and the ITF supervisors on the changes to be made on SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria.

The data for answering research question two and the testing its hypothesis (**H0<sub>2</sub>**) are presented in Table 2 below.

**Table 2: Mean ratings and analysis of variance (ANOVA) of the responses of Business education Students, their Lecturers and ITF Supervisors on the changes to be made in SIWES to facilitate the decrease in unemployment rate of business education graduates in Nigeria (N = 312)**

SN	Desired changes in SIWES to reduce unemployment of graduates include:	Total Sum of Square	Mean Square	$\bar{X}_G$	SD	p-value (Sig.)	Remarks
1	Retooling business education model office to replicate modern world of work offices	257.279	0.739	<b>4.63</b>	0.70	0.01	<b>A S*</b>
2	Assigning a staff to teach the use of the facilities in the business education model office	208.654	0.658	<b>4.52</b>	0.81	0.21	<b>A NS</b>
3	Promulgating a 'no rejection' of students on training policy as a mandate for industries (private & public) acceptance of students on training without conditions	311.372	0.984	<b>4.93</b>	0.70	0.02	<b>A S*</b>
4	Ensuring that industries hosting SIWES students enjoy tax rebate and holidays	110.000	0.346	<b>4.30</b>	0.59	0.11	<b>A NS</b>
5	ITF regulation of students posting to industries of relevance	211.795	0.685	<b>4.52</b>	0.82	0.82	<b>A NS</b>
6	Government payment of monthly stipend/allowance monthly throughout the training period	289.333	0.934	<b>4.36</b>	0.86	0.65	<b>A NS</b>
7	Generating a data pool of list of industries of relevance for students training	109.179	0.353	<b>4.28</b>	0.59	0.75	<b>A NS</b>
8	Introduction of a central industrial training exam for students after every session of training and incorporating the result in the student's final grade	143.971	0.457	<b>4.14</b>	0.68	0.25	<b>A NS</b>
9	Basing students research projects on solving a particular industrial problem identified during the training periods	282.462	0.883	<b>4.50</b>	0.85	0.01	<b>A S*</b>
10	Training of the institution based supervisors on the training needs of the	281.218	0.909	<b>4.58</b>	0.85	0.84	<b>A NS</b>

	students							
11	Creating training units for fresh trainees in all the industries hosting SIWES students	298.038	0.846	<b>3.91</b>	0.77	0.12	<b>A</b>	<b>NS</b>
12	Allowing students on training guided access to all the needed information, facilities, equipment and machines	253.587	0.820	<b>4.21</b>	0.80	0.80	<b>A</b>	<b>NS</b>
13	Making SIWES an annual exercise (embarking on annual 3 months SIWES program in-between students' transition from one year of study to another)	215.487	0.679	<b>4.46</b>	0.83	0.02	<b>A</b>	<b>S*</b>
14	ITF standing up to their responsibility as the supervisory agency to the industries and the institution based supervisors	172.125	0.544	<b>4.07</b>	0.74	0.22	<b>A</b>	<b>NS</b>
15	Ensuring that ITF staff visits the students on training at least once every 3 months	226.872	0.726	<b>3.97</b>	0.85	0.17	<b>A</b>	<b>NS</b>

**Note:**  $\bar{XG}$  = Grand Mean; **A** = Agreed; **N** = Number of Respondents; **Level of Sig.** = 0.05; **S\*** = Significant; **NS** = Not Significant.

From the data presented in Table 2 above, it was revealed that that the grand mean ratings of the responses of the respondents on all the 15 items ranged between 3.91 and 4.93 which are all greater than the cut-off point value of 3.50 on 5-point rating scale. This finding suggested that all the 15 identified items in the table are changes to be made in SIWES to facilitate the decrease in unemployment rate of business education graduates in Nigeria. The standard deviation values of the 15 items in the table ranged between 0.59 and 0.86 which implied that the responses of the respondents on the items are close to the mean and one another.

The data presented on analysis of variance (ANOVA) for testing hypothesis two showed that the p-values (sig.) of 11 out of the 15 items in the table ranged from 0.11 to 0.84 which were greater than 0.05 level of significance. This finding indicated that there are no significant differences in the mean ratings of the responses of Business education students, their lecturers and ITF supervisors on the 11 identified changes that could be made in SIWES to facilitate the decrease in unemployment rate of business education graduates in Nigeria. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the three groups of respondents is accepted on the 11 items. However, the p-values on the remaining 4 items in the table, specifically items 1, 3, 9 and 13 were 0.01, 0.02, 0.01 and 0.02 respectively which are in case less than 0.05 level of significance. This finding indicated that there are significant

differences in the mean ratings of the responses of Business education students, their lecturers and ITF supervisors on the changes that could be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria. Therefore, the hypothesis of no significant difference in the mean ratings of the responses of the three groups of respondents is rejected on the 4 items.

### **Discussion of Findings**

The findings of the present study on research question one identified factors hindering SIWES from decreasing unemployment rate among business education graduates to include: rejection of students by industries relevant to their training needs; non regulation of students' posting to industries of relevance to their training; lack of adequate complementary supervision by the ITF staff; inadequate training period; lack of modern facilities, machines, tools and office equipment in schools for students training; supervisors vague knowledge of the new ideas, facilities, tools, equipment and machines he is to supervise students on; and deficient training offered in schools which does not replicate actual work environment. Others include: disruption in school academic calendar which affects the training period; students lack of dedication and interest in the program and inadequate relevant facilities in some industries of attachment among others. The findings of this study supported that of Olabiyi, Okarfor and Ayailabowo (2012), in a study where the authors identified the challenges of SIWES in meeting the needs of Nigerian graduates to include: disparities between the curriculum contents and experience exposed to during work experience, students not having opportunities to operate modern tools and equipment, inadequate training period, disruption in school academic calendar make industries to reject students, lack of modern facilities, time students spent in industrial work experience are not adequate to acquire necessary skills, available equipment, tools and materials are not relevant to students needs and industries rejecting students for placement. In addition, the findings of the study supported the report of Nwangwu (2009) who highlighted the challenges of SIWES as inadequate training facilities, inadequate information between school authorities and the training industries, lack of funds, lack of modern facilities/machineries in training stations, poor financing, inadequate supervision of students by some lecturers and officials of ITF who hardly visit the students during the program.

The findings of this study in respect to research question two identified the changes that could be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria to include: retooling business education model office to replicate modern world of work offices, assigning a staff to teach the use of the facilities in the business education model office, ensuring that industries hosting SIWES students enjoy tax rebate and holidays, posting students on SIWES to industries of relevance to their studies, generating a data pool of list of industries of relevance for students training, training of the institution based supervisors on the training needs of the



students, creating training units for fresh trainees in all the industries hosting SIWES students and ensuring that ITF staff visits the students on training at least once every 3 months among others. The findings of this study is in line with that of Bond (2006) who recommended that improving collaborative venture between the industry and vocational technical education, forming a committee that oversee the implementation of technical and vocational education in schools, ensuring smooth school - industrial relationship for improved performance of SIWES, and improving the administrative practices of industrial liaison offices in institutions of higher learning, would improve on SIWES to achieve its objective of introduction. In the same vein, Ugwuanyi and Ezema (2010) stated that to effectively impart the required skills to SIWES participants, the institutions, educators and practitioners needed re-tooling. Re-tooling the business education model offices and studios to replicate what obtains in the actual work environment and retraining the teachers who teaches the use of these modern tools and facilities will go a long way in improving on SIWES to reduce graduates unemployability. Okebukola (2010) in support of the present view reported that, to improve the quality of Nigerian graduates through SIWES, the program must be redesigned to engender a mutual benefit between the industry and the academics.

### **Conclusion and Recommendations**

Students' Industrial Work Experience Scheme (SIWES) plays a significant role in human resource development most especially among the Nigerian graduates of tertiary institutions. Despite the notable contributions and achievements of the scheme in human capital development in Nigeria, the operations of the scheme are still bedevilled with some challenges that undermine achievement of its major objectives. Hence, this study was necessitated to x-ray the factors that constitute challenges of SIWES in meeting the training needs of Nigerian graduates and identified the needed changes that could be made in SIWES to facilitate decrease in unemployment rate of business education graduates in Nigeria. Based on the data collected and analyzed, the study identified 17 factors hindering SIWES from decreasing the unemployment rate among Nigerian graduates and 15 changes that could be made in SIWES to facilitate the decrease in unemployment rate of graduates in Nigeria. The study therefore, recommended that:

- i. SIWES should be made an annual program to allow for students progression and achievement of the needed work habits, skills, attitudes and competencies through the training periods.
- ii. Students should be subjected to annual central SIWES examination on practical experience gained after each training period as organized by the ITF. The result of which should be forwarded to the institutions for incorporation in the final grade of each student.

- iii. Students Research Projects must henceforth be based on solving a particular industry problem as identified during the period of training.
- iv. ITF should present a new order of students' placement to facilitate appropriate supervision and postings to industries of relevance to their academic training.
- v. Funding of SIWES (students rent, transport and feeding allowances, and staff/supervisor's transport allowance) should be made an integral part of Tertiary Education Trust Fund (TETFUND) funding mandate.
- vi. Government should ensure that all the necessary tools, equipment and facilities for technical and vocational institutions/departments to equip their students as modern work force are provided.
- vii. Government should ensure that her policy statement regarding the establishment of Students' Industrial Work Experience Scheme (SIWES) is effectively implemented by the concerned staff, institutions, organizations and government parastatals.
- viii. Government should encourage industries to invest in education and training through certification for tax rebates and acceptance of students for placement.
- ix. Government through the ITF should adequately monitor the operations of corporate industries to ensure that students for SIWES are not refused opportunity for training.

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