

# **RELATIONSHIP BETWEEN BUSINESS STUDENTS INDUSTRIAL WORK EXPERIENCE AND CLASSWORK PERFORMANCE IN COLLEGES OF EDUCATION IN NIGERIA**

By

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## **Abstract**

*Students Industrial Work Experience Scheme (SIWES) is very essential in complementing class work of vocational Business students for cumulative performance in Colleges of Education in Nigeria. SIWES is based on some stated objectives of learning and career geared towards equipping students with occupational competencies. This paper therefore attempts to study the relationship between Students Class work and Students Industrial Work Experience Scheme (SIWES) on performance in three (3) colleges of Education. A total population of 567 business students that were admitted and participated in SIWES and class work between 2005-2009 session were used. Grade points awarded by the supervisors and lecturers based on the NCCE minimum standard conversion was used. The results of t-test at alpha level of 0.05 significance revealed that the higher the students scores in SIWES, the lower their scores in class work. It was concluded that classroom training will continue to enhance work experience. Based on the results it is suggested that the work experience be extended beyond 16weeks to enable better performance measurement.*

A business education student is expected to be literate recipient while at the end of the programme also skilled in his/her particular subject area, 'since skill comes with practice and experience'. Thus, beside the theory (literacy) acquired in the classrooms, the student is exposed to the realities of the world of work for the purpose of transferring the know-how-ability to do-how-capability. These is the need to combine theoretical knowledge with practical skills, in order to produce results and this takes place at the class room and in the industrial organization, Equally important is the academic performance of students in business education primarily because of its specialized nature and its educational goal of preparing competent and skilful citizens for self employment and self-reliance.

Therefore, an attempt was made in this study to determine the relationship between Students' class work achievement and students work achieve experience scheme (SIWES) on performance in colleges of Education. Both, class work and SIWES are important training for effective education input in the colleges.

## **Concepts in this Study**

**Business Education:** This is a vocational education programme that equips students with occupational future responsibilities variables such as knowledge, competencies, attitude and skill acquisition. It is a programme tailored towards meeting the aims of technical education as stipulated in the national policy on education.

**Industrial Attachment:** Simply known as Industrial Training (IT) or students' industrial work experience scheme (SIWES) or work experience designed to expose students to the industrial environment.

**Know-How Abilities:** classroom theoretical work exposing participants to the principles, method, attitude and techniques for future career opportunity. This description also stand for class work.

**Do-How Capabilities** is the ability to transfer the theoretical knowledge, attitude, methods, techniques into practical skills or real situation or work place. It involves using of hand-to-do occupational job or function.

**Performance:** This is the assessment taken after completion of set of number of courses done for grading purposes after the end of examination.

## **Class Work, Performance, Business Education and Students Industrial Work Experience Scheme (SIWES)**

Class work as described by Mafe (2010) is a systematic instruction given to students in a formal setting in order to acquire knowledge, skills, attitudes, abilities (KSAAAs) required for future responsibilities. Google (<http://www.sciencedaily.com> 1998. March 4) linked class work to performance in terms of grading and achievement in academic tasks. Knowledge, methods, techniques, abilities and attitude. The Google went further to say that performance is the teacher assigned grades to standardized tests such as assignments, tests, quizzes and examinations. On the other hand, Google (<http://est.psu.edu> 24<sup>th</sup> January, 2008) observed performance to be the measuring of how well students have learned courses concepts are usually tied directly into courses grades (e.g. a project, quiz or examination). Whichever way class work is viewed, it involves classroom training aimed at giving the trainee the skills, abilities and attitudes geared towards preparing an individual for future responsibilities.

A critical assessment of the description of class work and performance address the issue of business education being a formal educational programme aimed at providing vocational employable skills through the inculcation of required knowledge, skills, abilities, attitudes, competencies appropriate for improving and updating the existing methods and techniques required in the business and industrial world. Business education as defined by Aliyu (2001) and Osuala (2004) is a carver development and specialization for and about business, it is a vocational education exposing individual to the 'conceptual', 'information' and 'exploratory' occupational areas in the world of work. Since business education is to equip its recipients with skills to enable them participate in the world of work, then there is need to strengthen the practical learning of the students outside the class work.

Mafe (2010) viewed class work as a future oriented kind of development which is not focused on bringing the desired standards of competencies for current performance but for future responsibilities. Although class work is pertinent to learning, in most cases however, it has been seen as not focusing on enabling the trainee to acquire competencies required to carry out a specific job or function in the real situation. The studies of the World Bank (2000) and National Universities Commission (NUC) (2011) observed that the class work performance (theoretical work) is equal to the best in the world but that graduates generally lack hands-on or practical skills that would make them productive.

This situation has led to science, engineering and technical (SET) students of which business education is part of 'to-be' exposed to the realities of the world about the work methods, techniques and practical realities obtained during industrial attachment or students industrial work experience scheme (SIWES).

Mafe (2010) opined that SIWES will bridge the gap between class work (theoretical) and reality situation-practice. Oyeniyi, (2011) described SIWES as a programme designed to expose and prepare students of universities, polytechnics colleges of Technology, colleges of Agriculture and College of Education for industrial work situation which are likely employable skills required for self-reliance.

### **Need For Business Student Industrial Attachment and the Objectives**

Since we are in a period of business and industrial change, our educational sector needs to experience appropriate change to contribute to economic survival. The government therefore being the custodian of educational policy in Nigeria in responses to concerns about quality of graduates of Tertiary Institutions conceived and initiated Industrial attachment or SIWES.

Business Education Students in Colleges of Education undertake the classwork and Work experience programmes during training periods. The SIWES programme was established to bridge the gap between theories and knowledge acquired by students in institutions of higher Education in Nigeria and the practical world of work (Okhawere 1996, Olugbenga 2009). Wapmuk (2011) observed that the scheme was conceived and initiated by the Industrial Training Fund (ITF) in 1973 in response to concerns expressed about the quality of graduates employable skills in the country. Against this background, the Industrial Training Fund Introduced the SIWES in 1974 designed to expose undergraduates of Engineering and Technical courses to real work experiences to help them acquire relevant skills.

Among the objectives of the scheme as listed by Wapmuk (2011. P3) are:

- Providing avenue for students of Higher Institutions in Engineering and allied field to acquire industrial skills and experience;
- Preparing students for situations they are to meet after graduation;
- Exposing students to work methods and techniques in handling equipment and machinery that may not be available in educational institutions;

## *Pristine*

- Providing students with the opportunity to apply knowledge in real work situation thereby, bridging the gap between college work and actual practice;
- Enlisting and strengthening employer's involvement in the educational process of preparing students for employment in industry;

While the objectives of Business education programme as stated in the Minimum Standard for Nigeria Certificate in Education (NCE 2008) are:

- To produce well qualified and competent NCE graduates in business subjects who will be able to teach business subjects in our Secondary schools and other related educational institutions.
- To produce NCE business teachers who will be able to inculcate the vocational aspect of business education into the society
- To produce NCE business teachers who will be involved in the much desired revolution of vocational development right from the primary and secondary schools
- To equip students with necessary competencies so as to qualify them for a post-NCE degree programme in business
- To equip graduates with the right skills that will enable them to engage in a life of work in the office as well as for self employment.

Specifically notable in the objectives of SIWES is that it fortifies classroom theoretical contents by exposing the students to practical aspects of their training. The two programmes objectives if critically assessed connote integration and maintenance of individual to be relevant as much as possible to the nations industrial development and educational pursuit. Therefore, the achievement of these stated objectives will greatly be dependent on co-Operation or inter-relationship between institutions of higher learning and industrial institutions.

This also implies that a business student before he/she is legally certificated should be exposed to the realities of the world of work to be a productive citizen. Emetarom (2011) observed that the exposure of students to SIWES afford their institutions the opportunity to relate training to the needs of industry as well as enhancing the development of the nation and improving the occupational competencies of the participating students by equipping them with relevant skills and knowledge needed to be self-reliant.

Okhawere (1996), Adeyemi (2002) and Mafe (2010) believed that the training of vocational business students is incomplete without work experience, because on-the-job experience is not acquired in the classroom teaching/learning environment but reproduced outside the real work situation. This belief relates knowledge acquired in class works with job-experience, it enables business teacher as a vocational student to develop realistic attitudes towards know-how ability and do-how-capabilities variables assessed on the job. Kazaure in wapmunk (2011) explained that work experience will serve as factory where needed career personnel are produced and that such vocational

students can become self-reliant and help transform the nation from been consumer nation to a producer nation so desired for development.

### **Operation of SIWES at Nigeria Certificate of Education (NCE) Programme**

The National Commission for Colleges of Education regulates the NCE programmes on behalf of the Federal Government. It ensures that guidelines for the operation of SIWES are followed by the various institutions. However the colleges relate directly with industrial training fund office for induction training and payment for participants. The students of industrial work experience programme of the school of vocational education and computer department are organized by the school during the first semester long vacation.

The students are expected to engage in SIWES for the period of 16 weeks (4 months) at the end of the first year of their 3 years programme. The work experience is tagged SIWES 128 and each student is given a log book and SPE I form. The student records his/her daily activities of the task or function participated in the log book. An assessment form (Form 8) is the performance assessment sheet which contains these sections – Part A, Part B, and Part C. Part A is completed by the students themselves, the industry based supervisor completes part B, while part C is by the school SIWES supervisor(s) for onward submission to the nearest ITF office for clearance, confirmation of participation and payment. It is essential to mention that a business student teacher cannot graduate without undergoing this programme.

Students of business education must undergo 3 years minimum class work or 5 years maximum and to graduate with a total of 138 credit units as follows :-

a.	Business education courses including SIWES	78 credit units
b.	Education (including project)	36 credit units
c.	Teaching practice	06 credit units
d.	General studies	18 credit units
	<b>TOTAL</b>	<b>138 credit units</b>

Source: National commission for colleges of education minimum standards for Nigeria certificate in education (2008).

### **Statement of Problem**

Literature in this paper has shown that work experience is very essential in complementing class work of vocational business students for cumulative performance. It has also been shown that if the graduates of colleges of Education in Nigeria are to possess requisite employable skills either in a teaching industry or in an industrial sector in the changing world of work, work experience must be matched with class work as performance measurement.

### **Purpose of Study**

This study examined:

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1. The relationship (if any) between the students performance in work experience programme (SIWES) and class work
2. The difference (if any) in the performance of male students in SIWES
3. The difference (if any) in the performance of female students in class work.

### **Hypothesis**

For the purpose of this study, the following hypotheses were tested:

1. There is no significant difference between students' performance in 2005-2009 in industrial work experience scheme and class work
2. There is no significant difference in the performance of male and female students in SIWES between 2005 - 2009
3. There is no significant difference in the performance of male and female students in class work between 2005 - 2009.

### **Methodology**

A survey of students record was collected from the SIWES coordinators and departmental examination officers of school of vocational education of Federal college of education Kontagora, Federal College of Education Zuba and State college of Education Minna. The total population of 567 business students who were admitted and participated in SIWES and class work between 2005 - 2009 session were used. Only four hundred and fifty nine (459) had complete record for both SIWES and class work, while for SIWES five hundred and fourteen had record. One hundred and eighty-nine males were sampled and two hundred and ninety-seven females were selected in the 3 colleges. Grade points awarded by the supervisors and lecturers during the programmes were utilized for this study. The minimum standard (2011) was used in converting the grade points as follows

**Table 1: Conversion of Raw Scores and Grade Points for Colleges of Education**

<b>Raw Scores</b>	<b>Grade</b>	<b>Grade Points</b>
70 – 100	A	5
60 – 69	B	4
50 – 59	C	3
45 – 49	D	2
40 – 44	E	1
0 – 39	F	0

Source: NCCE minimum standard for colleges of education (2011. P.23)

The grade points of students who participated in SIWES and class work were correlated using t – test analysis to determine if there was significant relationships. In doing this the scores of each student were compared and tabulated for the hypothesis. The means were also calculated to describe how gender affects their performance in the two programmes.

**Results**

HO<sub>1</sub> : There is no significant difference between students' performance in 2005 – 2009 in industrial work experience scheme and class work.

**Table 2: t – Test Analysis of Students Performance Based on SIWES and Class Work**

<b>Group</b>	<b>N</b>	<b>X</b>	<b>S.D</b>	<b>S.S</b>	<b>D(f)</b>	<b>t. cal</b>	<b>t. tab</b>	<b>Decision</b>
SIWES	459	28.17	28.17	377245	458	1.17	1.96	N.S
Class work	459	2.51	14.14	97409				

Significant at P < 0.05

Data in Table 2 presents the actual result of students grade points who participated in the SIWES and class work between 2005 – 2009. The students had a mean score of 4.27 in SIWES, while 2.51 was the mean grade points in class work. This implies generally that students performed better in SIWES than class work. However, the data analyzed reflected no significant relationship between SIWES and class work as the t – cal. Is lower than the t – tab of 1.17 and 1.96 respectively. This implies that the higher the students scores in SIWES the lower their scores in the class work.

HO<sub>2</sub> There is no significant difference in the performance of male and female students in class work between 2005 – 2009.

**Table 3: t – Test Analysis of Male and Female Students Performance Based on Class Work**

<b>Group</b>	<b>N</b>	<b>X</b>	<b>S.D</b>	<b>S.S</b>	<b>D(f)</b>	<b>t. cal</b>	<b>t. tab</b>	<b>Decision</b>
Males	189	2.14	10.98	22787	458	0.05	1.97	N.S
Females	270	2.21	9.54	24572				

Significant at P < 0.05

Data in Table 3 presents the t – tab comparison of male and female students mean scores in class work. It showed no higher difference in the mean scores of male and female students of 2.14 and 2.21 respectively. The data analysis of t – test at P < 0.05 also indicated a lower difference of t – cal 0.05 and t – tab 1.97 between the performance of both sexes. This implies that the male and female students performed at relatively the same level in class work

HO<sub>3</sub>: There is no significant difference in the performance of male and female students in

SIWES between 2005 – 2009.

**Table 4: t – test Analysis of Male and Female Students Performance Based on SIWES**

Group	N	X	S.D	S.S	D(f)	t. cal	t. tab	Decision
Males	219	3.82	10.54	71190	497	0.17	1.97	N.S
Females	279	3.97	15.02	120720				

Significant  $P < 0.05$

Also presented in table 4 is a t – test comparison of the mean scores of male and female students in SIWES. The mean scores of 3.82 and 3.97 respectively showed a low difference in their performance. No significant difference was indicated in the t – cal of 0.17 and t – tab of 1.97 at  $P < 0.05$  in the two sex performance

**Discussion**

Although the results of the data analyzed show lower relationship/ difference between SIWES and class work grade points; it does not simply imply that students cannot perform better in SIWES than class work. Mafe (2010) compared the benefits of SIWES and class work as follow:

SIWES is

1. Practical: hands on application of information
2. Specific: application of knowledge and information ( show, tell, do and check) to defined job
3. Short: range and tactical
4. Job: or task focused
5. Recipients acquire knowledge, skills, abilities and attitude (KSAAS) to carry out Specific tasks, jobs or functions
6. Do – how (competencies)
7. Largely informal setting
8. Literacy not essential but an advantage
9. Enhanced opportunities for practice
10. Enhanced acquisition of experience.

**While Class Work Is**

1. Conceptual: learning of ideas and information
2. Generic: acquisition of base knowledge
3. Long–range and strategic
4. Career-focused
5. Equips recipients with knowledge, capabilities and potentials to do all several or some jobs in subject area
6. Know-how (understanding)
7. Formal setting
8. Literacy essential
9. Limited opportunities for practice
10. Limited acquisition of experience



It therefore implies that both programmes complement each other but better performance in SIWES is more advantageous as it enhances acquisition of experience needed for practice outside the classroom.

The male students do not perform better than the female students in the two programmes. This implies that the two sexes tend to prefer slightly work experience than class work; because in SIWES literacy (according to Mafe 2010) is not essential but advantageous.

### **Conclusion**

It is note worthy to point out that class work and SIWES are prerequisite to graduation as a vocational business student. Therefore classroom training will continue to equip the students with literacy empowerment to understand information and execute task(s) in the real situation with skills acquired during the work experience.

### **Recommendation**

Based on the results presented, it is suggested that the work experience (SIWES) be extended beyond 16 weeks to about 6months to enable business students acquire more practical skills for better performance.

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