AFRICAN SOCIAL AND EDUCATIONAL JOURNAL
FACULTY OF BUSINESS ADMINISTRATION
IMO STATE UNIVERSITY
NIGERIA
VOL. 9 NO. 1 MARCH 2020

EVALUATION OF TECHNICAL AND VOCATIONAL EDUCATION STUDENTS PERFORMANCE ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES) IN RIVERS STATE.

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Abstract

The main purpose of this study is to investigate the factors responsible for the poor performance of Technical and vocational Education students Industrial Work Experience Scheme (SIWES) in Ignatius Ajuru University of Education, Rivers State. The research work identified Students' attitude, man-power, status of machineries and motivational incentives as factors affecting the performance of Technical and vocational students on SIWES. Descriptive survey design was used for this study. 470 persons comprising 409 Technical and Vocational Students and 61 Industrial Instructors were used as research population. A target population of 200 sample size was derived using Yarrow Yamens Formula for sample size determination. A structured questionnaire of 16 items and five point likert scale format was used. The study was conducted using 4 research questions and data were used to analyze 4 null hypotheses, using t-test statistical tools at 0.05 alpha level of significance. The findings revealed a dearth of poor students' attitude to work; poor skilled man-power; inadequate equipment in industries and insufficient motivational incentives on students during SIWES programme. Recommendations were made such as; Industrial Training Fund should ensure the visitation of the ITF officers to supervising agencies, institutions, employers and students on attachment. To improve on the scheme, students should be placed in industries relevant to their field of study. The school workshops should be well-equipped with similar industrial outfits to provide good background for successful industrial experience.

Introduction

Evaluation is a comprehensive term which takes into consideration judgments, examination, appraisal attitudes, safety habits, and manipulation of skills, acquisition of knowledge, appreciation, understanding and the like. To evaluate means to ascertain or fix the value or worth of something. In this case of educational evaluation, it would consider the students' knowledge, understanding, skills or feelings. Evaluative judgments in occupational programmes should be based on data and information obtained through the use of sound measurements, procedures and techniques which will be used to obtain the data and

information necessary for sound evaluative judgment. Evaluation plays several rules in technical and vocational education. It is useful to the learners, teachers, schools administrators, donors, agencies, parents, counselor and other stake holders.

- It provides a feed back to the learners and other stakeholders on the student's performance.
- It determines the progress a student is making toward achieving the goals of the programme.
- It helps the individual student maintain strengths and eliminate weakness.

Hornby (2005) postulates that to perform means to carry out or complete an action. It also means to do something, such as a piece of work, task *or* duty. Performance means the action or function. Furthermore, some students still hold divergent views on their performance in the students Industrial Work Experience Scheme (SIWES), which motivates them towards the studying of Technical and Vocational Education (TVE) in tertiary institutions.

According to Akerele (2007), the present state of technological development in Nigeria calls for appropriate orientations towards technological and vocational education as a spring board for skill acquisition. The Federal Republic of Nigeria (FRN, 2004), in her national policy on education defined technical and vocational education as the acquisition of demonstrable skills that could be transformed into economic benefits. It also refers to those aspects of education process involving general education, the study of technologies, science and acquisition of practical knowledge and skills.

- SIWES (2002) defined Students Industrial Work Experience Scheme (SIWES) as a skill training programme that is designed to expose and prepare students of Education, Agriculture, Engineering, Technology, Environmental Sciences, Natural Science, Medical Science and Pure Applied Science for the industrial work situation. In the work of SIWES (2002), it further stated that, the objectives of Students Industrial Work Experience Scheme among others includes to: Provide students with an opportunity to apply their knowledge in real work situation, thereby bridging the gap between theory and practices.
- Provide an avenue for students in institutions of higher learning to acquire industrial skills and experience in their approved courses of study.
- Prepare students for the industrial work situation which they are likely to meet after graduation.
- Expose students to work methods and techniques in handling equipment and machinery
- not available in the institution. From the above objectives, suffice it to say there are
- ample opportunities for students who undergo the Students Industrial Work Experience Scheme (SIWES).

Oranu (2007) opines that the more the career option, the broader the choices or the fewer the categories of careers, the more the homogenous sort of careers existing. In this gigantic and pervasive profession, career prospect in any profession can be examined in two ways. These are: Vertical and Horizontal. In the vertical approach, various levels of academic qualification of job seekers are considered, while the horizontal approach considered the experience acquired by professionals in the study or industry. Students may undergo SIWES in the following areas: Business studies, Home Economics, Basic Technology, Agriculture, Local Craft, Computer Education, Fine and Applied Art. Jemerigbo (2003) said that the Government

decree No. 47 of 8th October 1971 as amended in 1990 highlighted the capacity building of human resources in industry, commerce and government through training and retaining of workers in order to effectively provide the needed high quality goods and services in a dynamic economy as ours.

This decree led to the establishment of Industrial Training Fund (I.T.F) in 1973/1974. Jemerigbo went further to view that the growing concern among our industrialists is that graduates of our institutions of higher learning lack adequate practical skills required for employment in industries, which led to the formation of Students/ Industrial Work Experience Scheme. Students Industrial Work Experience Scheme by I.T.F was introduced in 1993/1994 (SIWES, 2002). I.T.F has the key functions to work as a co-operative entity with industry and commerce where institutions of higher learning can undertake mid-career work experience attachment in industries which are compatible with students (Okorie, 2002 in Asikadi, 2003).

Students' education is regarded as a process of developing skills, technical personnel, to impact good and quality knowledge. In Nigeria, it is stated in clear terms by FRN (2004) in her national policy on education implementation committee blue print. It stipulates that SIWES is mandatory for students in Technical Colleges, Polytechnic, College of Education, Universities, and Government has taken a bold step in ensuring full compliance of policy statement. Technical and vocational Education is very vital in the Educational system.

Teaching according to Olaitan (1996), is a process of impacting knowledge, skills and attitude in order to bring about change in learners. The primary goal of SIWES is to improve students' skills in order to enhance meaningful learning. Student Industrial Work Experience" Scheme is one of the contents at which students performance is been improved after a period of instructions in the manner consistent with the goals of industries. Based on the above, this study x-rays factors responsible for poor performance of students to Student Industrial Work Experience Scheme in Ignatius Ajuru University of Education, Rivers State and to make meaningful recommendations to improve on the performance of students during the SIWES programme.

Statement of the Problem

Technical and vocational Education Students undergoing SIWES are a very vital part of the educational system in Nigeria. Various perceptions for evaluating these students on Industrial Training are based on some motivational factors like remuneration, relationship with employers, opportunities for practical etc. Oranu (2007) noted that "right attitude are impacted through adequate and proper orientation, whether materially or financially". To this end, certain problems have emerged amongst Technical and Vocational Education Students undergoing SIWES which calls for urgent attention from appropriate authorities. Amongst these attitudinal dispositions are:

- Irregularity and non-punctuality to work by the students undergoing SIWES programme.
- Lack of respect for constituted authorities in the industry by the students.
- Restriction of students from operating some equipment and machinery by the industry.
- Lack of motivational incentives for students undergoing SIWES programme.

These problems which have remained persistent in the Industrial Training will continue to affect the skill acquisition goals of SIWES. Technical and vocational Education have an enviable position in the society, and with their roles in the industries, we cannot afford to

relegate the objectives of the Students Industrial Work Experience Scheme (SIWES) to the background. This programme (SIWES) will be critically examined in this study especially on the basis of students' poor performance to the work environment and proffering necessary solutions.

Purpose of the Study

The purpose of the study is to investigate the factors responsible for the poor performance of Technical and Vocational Education students on SIWES in industry. Specifically, the study sought to investigate:

1. The attitude of Students towards work during SIWES.
2. The availability of skilled man-power for students during SIWES.
3. The machineries available to students during SIWES.
4. The motivational incentives received by the students from the industries during SIWES.

Research Questions

The following research questions guided the study:

1. To what extend does the attitude of students to work affect their performance during SIWES?
2. To what extend is skilled man-power adequately available to students during SIWES?
3. To what extend does the status of machineries in industries affect skills gained during SIWES?
4. To what extent does motivational incentives affects students' performance during SIWES?

Hypotheses

The following four null hypotheses were formulated and tested at 0.05 alpha level of significance:

H_{o1}: There is no significant difference in the attitude of students to work during SIWES.

H_{o2} There is no significant difference on adequate skilled man power available to the students during SIWES.

H_{o3}: There is no significant difference on the status of machineries in the skilled gained by the students during SIWES.

H_{o4}: There is no significant difference on motivational incentives received by students during SIWES.

Significance of the Study

The finding of this study will be of great benefit to the entire students of Ignatius Ajuru University of Education, by improving their practical skills and industrial emancipation. It will act as a guide to the attention of the educational policy makers in schools to encourage proper incentives and policy that will favour placement of students in their quest for undergoing training. Government and its agencies in-charge of SIWES through the findings of the study will discover the need to create enhanced environment for conducting practical learning through the industries. Students of Ignatius Ajuru University of Education and other tertiary institutions will benefit to a great extent when those factors influencing positive performance will be recommended, and this will objectively determine actual performance of students, parents,

school administrators and the government to be in line to their duties towards the success of practical education in this great nation and beyond.

Delimitation of the Study

This study is delimited to the Evaluation of the performance of Technical and Vocational Education Students on SIWES and it was carried out amongst students in 400 level of Ignatius Ajuru University of Education, Rivers State because only students at this level have gone out for the Students Industrial Work Experience Scheme (SIWES).

Review of Related Literature

In other to investigate and evaluate the performance of Technical and Vocational Education students on Students Industrial Work Experience Scheme, the related literature to the study is reviewed under the following sub-headings:

- Evaluation and its purpose to Education
- Nature and scope of SIWES.
- Objectives of SIWES
- Evaluate of student Industrial Work Experience Scheme
- Summary of Reviewed Literature

Evaluation and its Purpose to Education

The term evaluation is as old as life. It has been defined in different ways by different people. Some even use it interchangeably with measurement and assessment. It is because of this that evaluation is likened to the description of the elephant in the moonlight tale about the six blind men of Hindustani. In the tale, each blind man described the elephant based on the part he was able to touch. The varied definitions of evaluation serve different purposes to different people. In general parlance, evaluation is the systematic process of passing value judgment as to the worth of a thing, object or programme. It qualitatively describes the worth of a thing, based on measurement data.

Within the school setting, evaluation is the systematic process of determining the extent to which instructional objectives are achieved by the learners. This is in consonance with the definition by Bloom (1956) that evaluation is the systematic collection of evidence to determine whether certain changes are taking place in the learners as well as determine the amount or degree of change in individual learner. The essence of teaching is to achieve some stated instructional objectives. The teacher measures and assesses the students with tests and generates some data on the basis of which he passes judgment as to the extent to which the objectives have been achieved. Evaluation therefore seeks to determine the congruence between result and objectives based on certain criteria. Measurement and assessment are therefore pre-requites for evaluation.

According to Asuru (2006), evaluation deals with goodness, worth, utility and the like and provides answers to such question as: how good? How effective? How satisfactory? How adequate? Answers to such questions (evaluation) are expressed in qualitative terms as passed, failed, excellent, good, bad, satisfactory, promoted, repeat, withdraw, successful, unsuccessful etc. The qualitative statements are indicative of judgment based on certain criteria.

In the work of Goma (2015), evaluation serves the following purposes:

- Determining the progress a student is making toward achieving the goals of the programme.

- Helping the individual student maintain strengths and eliminate weaknesses.
- Helping teachers to improve their teaching.
- Determining the worth of the undertaking in general.
- Clarifying and defining educational objectives.
- Developing more reliable instruments for evaluation.
- Motivating the students.
- Providing psychological security for the students, staff and community.
- Providing certification to meet legal requirements.

For the SIWES programme to be effective there must be an adequate evaluation for decision making.

Nature and Scope of Students Industrial Work Experience Scheme

Practical knowledge relates to doing. According to Ochiagha (1995), practical knowledge is learning without which mastery of an area of knowledge may be too difficult to achieve. Practical knowledge involves developing skills through the use of tools or equipment to perform tasks that are related to a field of study.

No society can achieve meaningful progress without encouraging its youth to acquire necessary practical skills. Such skills enable them to harness available resources to meet the needs of society. It was against this background that SIWES, otherwise referred to as Industrial Training (IT), was introduced in Nigerian tertiary institutions. Akerejola (2008) views SIWES as a skill development programme designed to prepare students of Universities, Polytechnic, **Monotechnics,** and Colleges of Education for transition from the school environment to work.

Oyedele (1990) stated that work experience is an education programme in which students participate in work activities while attending school. This work experience programme gives students the opportunity to be a part of an actual work situation outside the classroom. SIWES is a cooperative industrial internship programme that involves institutions of higher learning, industries, the Federal Government, Industrial Training Fund (I.T.F), Nigerian Universities Commission (NUC), and National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE) in Nigeria. Students that participate in this Work Experience programme include those studying Engineering, Vocational, Technological and related courses in institutions of higher learning.

SIWES form part of the approved minimum academic standards in Ignatius Ajuru University of Education. SIWES is a core academic requirement carrying six (6) credit units. This requirement must be met by all students in vocational education before graduation. The training programme is undertaken in the third year of a Bachelor Degree programme.

Eze (1998) pointed out that government has recognized the importance of SIWES through the establishment of the Industrial Training Fund (I.T.F). The I.T.F was established in 1971 and was charged with human resource development and training. Following the establishment of I.T.F, SIWES commenced in 1974 with the aim of making education more relevant and to bridge the yawning gap between the theory and practice of engineering, technology and science related disciplines in tertiary institutions in Nigeria. It is obvious that the reasons that led to the inception of the SIWES programme some decades ago are today even more relevant due to rapid technological development, especially as it concerns vocation education in Nigeria.

Objectives of Students Industrial Work Experience Scheme

According to Amadi (1996), students industrial work experience scheme (SIWES) is a programme designed to acquaint student learners with industrial experience in their course of studies, especially in Engineering Technology, Environmental Studies and Education. He further stated that it prepares students for the industrial work situation they are likely to meet after graduation. Amadi's view is in line with Ayedele's view because they both talked about the industrial work situation outside the school environment where the students are to gain experience. The SIWES programme will enable students acquire experience in handling equipment and machinery that may not be available in educational institutions.

In Amadi's work, he further explained that, SIWES enables students gather useful career information to relate positively to others in a variety of situations and to participate in activities that increase occupational competency. Hence he stated that the objectives of SIWES in a nutshell include (but not limited to) the following:

- Development of personal growth of students.
- Engendering respect for the changing work environment.
- Developing an appreciation of the contributions of occupations to social, cultural and economic growth of society.
- To encourage respect for occupational preparation and desire for continuing acquisition of practically related skills, knowledge and attitudes throughout one's life.
- To provide for exploration of occupational opportunities in specific field of interest.
- To encourage students drive toward maximization of their potential abilities in practice.
- To develop an understanding of civic, social and moral responsibilities of individuals to society.
- To foster appreciation for contributions of education to the business of living.

For the objectives of SIWES programme to be met, all bodies involved in the running of the programme must carry out their activities effectively and create better avenues to boost the scheme.

Evaluation of Student Industrial Work Experience Scheme

Evaluation is a systematic determination of a subjects merit, worth and significance, using criteria governed by a set of standard aids. Evaluation assists in organization, programme, project or any other reliable concept/proposal or any alternative to help in decision making. It also determines the significance, worth or condition of study. Ukwuoma and Akanwa (2008). observed that, effective trainings bring about increase in knowledge required in job, knowledge of the structure and business aims of the organization. This implies that the knowledge base of the practitioner increases in proportion to the training acquired. Therefore, the role that training can play in human resources development can only be achievable through evaluation.

Evaluation of SIWES depends on the efficiency of monitories, industrial training fund, institutions, employers of labour and the general public involved in attachment and management of the programme. Thus, the evaluation of SIWES in tertiary institutions in meeting up with the need for the establishment of the programme is necessary. The bodies involved in the management of SIWES should be responsible for the evaluation process to foster the desired aims and objectives.

The management bodies are:

1. The Federal Government (FG)
2. Industrial Training Fund (ITF)
3. Supervising Agencies
4. Nigeria Universities Commission (NUC)
5. National Commission for Colleges of Education (NCCE)
6. National Board for Technical Education (NBTE) etc.

The functions of the these bodies are to ensure adequate funding of the scheme, establish SIWES and accredit SIWES unit in the approved institutions as well as appoint SIWES coordinators and supporting staff, support students at their place of attachment and sign the log book and ITF forms, vet and process students' log book and student supervisors and ensure payment of allowances for the students' and supervisors.

Summary of Reviewed Literature

The Students Industrial Work Experience Scheme (SIWES) is a skill training programme designed to expose and prepare students of different disciplines whose fields require skill for the industrial work situation which they will be exposed to after graduation. In the light of this, all avenues and resources should be explored and utilized to widen the industrial training base of business and technologically oriented programmes of our institutions of learning. Constant link, interaction and dialogue between the school and industry are necessary if the school has to produce an industrially relevant workforce. Such a relationship is needed as a conscious effort in a true spirit of partnership to produce labour that is responsive enough to the industrial needs of the society. In such a close link, the school and industry should be seen as playing the role of catalyst in the development of each other. By so doing, the society in general will reap the benefits of their co-operative effort in "knowing that" and knowing how" in the form of labour efficiency and high productivity which can influence market pricing and above all, technological revolution.

Methodology

This section describes the procedure employed in the execution of the study of the evaluation of Technical and Vocational Education students' performance on Students Industrial Work Experience Scheme (SIWES) in Ignatius Ajuru University of Education. The research methodology is outlined under the following subheading:

1. Design of the study.
2. Population of the Study
3. Sample and Sampling Techniques
4. Development of the Research Instrument
5. Validation of the Instrument
6. Reliability of the Instrument
7. Administration of the Instrument
8. Method of Data Analysis

Design of the Study

The research design adopted for this study is a descriptive survey. To carry out this survey, the researchers used questionnaire to investigate or evaluate technical and vocational students' performance on Students Industrial Work Experience Scheme (SIWES) as to enable

them make further recommendation for students, teachers and organizations involved in the SIWES programme.

Population of the Study

The population of this study is constituted by 61 industrial based supervisors and 409 final year students of technical and vocational education in Ignatius Ajuru University of Education, making a total population of the student to be 470 persons. The source of the number of final year students of technical and vocational education that participated in the SIWES programme was gotten from the SIWES unit in Ignatius Ajuru University of Education.

Sample and Sampling Techniques

The Yarrow Yemen's Formula was used to determine the sample size. The formula is applied below to get the sample size.

Yarrow Yemen's formula for sample size determination.

Formula: $n = \frac{N}{1+N\,(e)}$

Where: N = population of the student = 470

N = desired sample size

e = Tolerable error = (0.05)

1 = Theoretical constant

$n = \frac{470}{1+470\,(0.5)2}$

N = 216

The sample size is 216.

Development of the Research Instrument

The instrument used for gathering the data in this study was a structured questionnaire developed by the researchers. The questionnaire comprised of 16 items based on a five (5) point likert scale viz: SA-Strongly Agree (5), A-Agree (4), U-Undecided (3), D-Disagree (2), and SD-Strongly Disagree (1). The questionnaire was grouped into two sections; section A and Section B. The section A comprises of respondent's bio-data while section B comprises of items that focus on the evaluation of Technical and Vocational Education students' performance on Students Industrial Work Experience Scheme (SIWES) and the factors responsible for the poor performance of students on the scheme.

Validation of the Instrument

In the attempt to determine the validity of the instrument of this study, content validity test was carried out and its generalization was ensured by giving the instrument some supervisors and 3 other lecturers in the Faculty of Vocational Education for overview. Their reactions, corrections and modifications helped to arrive at **a** fair instrument.

Reliability of **the Instrument**

To determine the reliability, test- re-test method was used. The second test was administered after two weeks and a coefficient of 0.78 was obtained using Pearson Product Moment Correlation (PPMC) and the instrument was certified reliable by the supervisors.

Administration of the Instrument

The questionnaire was administered by hand to the respondents during field survey by the researchers and was also collected by them. Total number of 216 questionnaires was administered, and a total number of 200 questionnaires were returned.

Method of Data Analysis

In analyzing the data collected from the field, the mean (XJ from the five point likert scale was used for answering the research questions.

STRONGLY AGREE (SA) - 5
AGREE (A) - 4
UNDECIDED (U) - 3
DISAGREE (D) - 2
STRONGLY DISAGREE (SD) - 1

$(\bar{X}) = \frac{Efx}{N} = \frac{5 + 4 + 3 + 2 + 1}{5} = \frac{15}{5} = 3.00$

The mean score of any item in the questionnaire that is above 3.00 was accepted and any mean score below 3.00 was rejected. The hypothesis was tested at 0.05 alpha level of significance using t-test statistical tool.

Presentation of Data, Analysis and Discussion of Findings

In this section, the data collected for the research work shall be presented, analyzed in tables according to the research questions and hypothesis earlier presented. The responses from the questionnaire items represent the finding of the research which shall be discussed under each table.

Research Question 1

To what extent does the attitude of students to work affect their performance during SIWES?

Table 1: Mean scores of respondents on the extent to which attitude of students to work affects their performance during SIWES

S/No	Items	Industrial Instructors, N = 40 $\bar{X}$	S.D	Students N = 160 $\bar{X}$	S.D	Grand $\bar{X}$	Decision
1.	Lack of respect for Constituted authorities in the industries is capable of affecting students performance on SIWES	3.8	1.65	4.5	1.19	4.15	Accepted
2.	Wrong placement of Students on their area of specialization affects students performance on SIWES	4.1	1.37	4.25	1.43	4.175	Accepted
3.	Absence of students	4.4	1.45	4.1	1.6	4.25	Accepted

	from their place of attachment hinders their good performance on SIWES						
4.	Poor attendance of students to SIWES orientation is a hindrance to student's performance on SIWES.	3.0	2.25	3.5	2.93	3.25	Accepted

From table 1 above, the responses give answers to the following: Students lack of respect for constituted authorities in the industries is capable of affecting their performance on SIWES with a grand mean of (4.15); the wrong placement of students on their area of specialization affects students' performance on SIWES with a grand mean of (4.175); absence of students from their place of attachment hinders their performance on SIWES with a grand mean of (4.25); poor attendance of SIWES orientation is a hindrance to student's performance with a grand mean of (3.25).

Students should take the SIWES programme serious and pay adequate attention to their work and they should have great respect for constituted authorities. Students should have a change of attitude towards their work on SIWES.

Research Question 2

To what extent is skilled man-power adequate for students during SIWES?

Table 2: Mean scores of respondents on the extent to which skilled man-power is adequate for students during SIWES

		Industrial Instructors, N = 40		**Students N = 160**			
S/No	**Items**	**$\bar{X}$**	**S.D**	**$\bar{X}$**	**S.D**	**Grand $\bar{X}$**	**Decision**
5.	Overcrowding of students affects the level of experience gained from skilled manpower in industries	4.0	1.90	4.2	1.15	4.1	Accepted
6.	Poor attitude of industrial Instructors to work does not favour the SIWES scheme	3.4	3.10	4.0	1.12	3.7	Accepted
7.	Low number of industrial instructors is a hindrance to quality	3.8	1.36	3.6	1.81	3.7	Accepted

	performance of students during SIWES						
8.	Hoarding of some vital information by the industrial instructors is a hindrance to students Performance.	3.4	2.62	4.6	0.9	4.0	Accepted

The table 2 above shows that overcrowding of students at the work station affects the level **of** experience gained from the skill with a grand mean of (4.1); poor attitude of industrial instructors to work does not favour the SIWES with a grand mean of (3.7); low number of industrial instructors is a hindrance to students performance with a grand mean of (3.7); hoarding of some vital information by the industrial instructors is a hindrance to student's performance with a grand mean of (3.975).

The industrial instructors should be willing to share their experiences with the students placed under them. Industries should not overcrowd their work stations, so that the students can gain experience in a conducive environment. Industrial instructors should avoid the displaying **of** poor attitudes like not being regular to work, being late and lazy to work etc.

Research Question 3

To what extent does the status of machineries in industries affects the skills gained by students during SIWES?

Table 3: Mean scores of respondents on the extent to which the status of machineries in industries affects the skills gained by students during SIWES

		Industrial Instructors, N = 40		Students N = 160			
S/No	**Items**	**$\bar{X}$**	**S.D**	**$\bar{X}$**	**S.D**	**Grand $\bar{X}$**	**Decision**
9.	Poor availability of equipment, tools and machinery affects students' acquisition of expected skills during SIWES.	3.75	1.63	4.06	1,63	3.905	Accepted
10.	Poor state of machineries in industries hinders the Students' acquisition of expected skills during	3.9	0.29	4.5	0.9	4.2	Accepted

	SIWES						
11.	Poor knowledge or experience of the instructors in the operation of machineries is a hindrance to achievable skills for students.	3.6	1.5	3.6	1.08	3.6	Accepted
12.	Restriction of students from the operation of certain machineries in the industry affects the skills of the students during SIWES.	3.55	1.45	3.81	1.45	3.7	Accepted

Table 3 above indicates that poor availability of equipment, tools and machineries affects students' acquisition of skills with a grand mean of (3.905); poor state of machineries in the industries hinders the students' acquisition of expected skills during SIWES with a grand mean of (4.2); poor knowledge and experience of the instructors in the operation of machineries is a hindrance to achievable skills for students with a grand mean of (3.6); restriction of students from the operation of certain machineries in the industry affects the skills of the students during SIWES with a grand mean of (3.7).

The machineries in the industries should be in good working condition and students should be given adequate orientation on the operation of several machines and students should have liberty to operate any machine they so desire. The instructors should be given adequate training on how every machine is been operated, so that they will be confident when operating machines.

Research Question 4

To what extent do motivational incentives affect students' performance during S/WES?

Table 4: Mean scores of respondents on the extent to which incentives affects students' performance during SIWES

S/No	Items	Industrial Instructors, N = 40 $\bar{X}$	S.D	Students N = 160 $\bar{X}$	S.D	Grand $\bar{X}$	Decision
13.	Inadequate remuneration by the industries to the students hinders effective performance of students during S/WES	3.75	1.63	4.06	1,63	3.905	Accepted
14.	Poor intrinsic motivation on the students affects their performance on SIWES	3.9	0.29	4.5	0.9	4.2	Accepted
15.	Irregular supervision and evaluation strategy in work place is a hindrance to SIWES scheme	3.6	1.5	3.6	1.08	3.6	Accepted
12.	Delay in the payment of Students by the Industrial Training Fund (I.T.F) is a hindrance to the S/WES scheme.	3.55	1.45	3.81	1.45	3.7	Accepted

From Table 4 above, it shows that inadequate remuneration by the industries to the students hinders effective performance of students during S/WES with a grand mean of (3.95); poor intrinsic motivation on the students affects their performance on SIWES with a grand mean of (3.37); irregular supervision and evaluation strategy in work place is a hindrance to SIWES Scheme with a grand mean of (3.52); delay in the payment of students by the Industrial Training Fund (I.T.F) is a hindrance to the SIWES Scheme with a grand mean of (3.17).

Industries should try to give students some remuneration so as to motive students' performance. Students should always try to derive joy and happiness in whatever SIWES activity they are involved in. There should be regular evaluation on the SIWES programme by

the school supervisors and industrial based supervisors too, because evaluation is a means of encouraging students on their performances. The industrial Training Fund (I.T.F) should try to pay students whenever the students are on the SIWES programme. There should not be any delay in the payment at all times.

Hypothesis 1

There is no significant difference between attitude of students to work and their performances during SIWES.

Table 5: t-test on the extent to which attitude of students to work affects their Performance during SIWES

S/No	respondents	X	S.D	N	DF	t-Cal	t-Crit	P	Decision
1.	Industrial Instructors	3.8	1.68	40	198	0.99	±1.96	0.05	Accepted
2.	Students	4.1	1.8	160					

Table 5 shows that the calculated t-test value (0.99) is lesser than the critical value (1.96) at 0.05 alpha level of significance. Therefore, the null hypothesis was accepted indicating that there was no significant difference in the attitude of students to work during SIWES.

Hypothesis 2

There is no significant difference between adequate man-power availability to the students and their performances during SIWES.

Table 6: t-test on the extent to which adequate man-power available to the students Affects their performance during SIWES

S/No	respondents	X	S.D	N	DF	t-Cal	t-Crit	P	Decision
3.	Industrial Instructors	3.6	2.25	40	198	1.35	±1.96	0.05	Accepted
4.	Students	4.1	1.28	160					

Table 6 above, shows that the calculated t-test value (1.35); is lesser than the critical value (1.96) at 0.05 alpha level of significance. Therefore, the null hypothesis was accepted, indicating that there was no significant difference on adequate skilled man-power available to the students during SIWES.

Hypothesis 3

There is no significant difference between the status of machineries in industries and the skills gained by student during SIWES.

Table 7: t-test on the extent to which the status of machineries in industries affects the skills gained by student during SIWES.

S/No	respondents	X	S.D	N	DF	t-Cal	t-Crit	P	Decision
5.	Industrial Instructors	3.6	2.25	40	198	**1.35**	±1.96	0.05	Accepted
6.	**Students**	4.1	1.28	160					

Table 7 shows that the calculated t-test value (0.92); is lesser than the critical value (1.96) at 0.05 alpha level of significance. Therefore, the null hypothesis was accepted, indicating that there was no significant difference between the status of machineries and the skills gained by students during SIWES.

Hypothesis 4

There is no significant difference between the motivational incentives received by student during SIWES and their performances.

Table **8: t-test on the extent to which motivational incentives received by students During SIWES affects their performance.**

S/No	respondents	X	S.D	N	DF	t-Cal	t-Crit	P	Decision
7.	Industrial	2.9	1.60	40					
	Instructors				198	4.11	±196	0.05	Rejected
8.	Students	4.1	1.07	160					

Table 8 above, shows that the calculated t-test value (4.11); is greater than the critical value (1.96) at 0.05 alpha level of significance. Therefore, the null hypothesis was rejected, indicating that there was a significant difference between motivational incentives received by students during SIWES and their performances.

Discussion of Findings

Many students attitude affect their performances on the SIWES programme in Ignatius Ajuru University of Education. Students are the main beneficiaries of the programme, so for the SIWES programme to be effective, students who are stakeholders have to be aware of such programmes and its importance. Students of vocational technical education should be more interested in practical skill oriented activities and cognitive skills at the same time. No effective skill acquisition programme can be completed without adequate facilities such as workshops, tools and equipment etc. hence for skill training to be effective, enough training facilities have *m* be provided by all institutions (Government, Industries, I.T.F, Schools etc) that have roles to play in the SIWES scheme.

According to Akerejola (2008), SIWES is a skill development programme designed to prepare students of Universities, Polytechnics, Monotechnic and College of Education for transition from the school environment to the real work situation after graduation. It will be disappointing to see a vocational technical student after the SIWES programme without a tangible skill gained. The study also shows that there was a significant difference between motivational incentives received by students during SIWES and their performances. The SIWES programme has been found to be of immense benefits to the students, the schools and the industries, so effort needs to be intensified on making it work for better outcomes.

Summary, Conclusion and Recommendations

Summary of the Major Findings

This study indicates that majority of the students taking part in the Students Industrial Work Experience Scheme (SIWES) are aware of the objectives for which it was established, primarily on issues of relating theory to practice. They are usually eager to take part in the scheme; many consider their experience and time spent in the training as rewarding. Many of -

at they learned in theory became more real when .they themselves practice it. SIWES could therefore be seen as a tool for bringing harmony in Technical and Vocational Educational.

Education. However, some factors have been found responsible for the poor performance of students towards SIWES. This study reveals that (major findings):

1. Students' poor attitude to work affects their performance negatively on SIWES.
2. Some students are wrongly placed out of their area of specialization because of the token they might receive in those areas of specialization.
3. Most industries have low number of instructors to train the students adequately.
4. Some industrial instructors choose to hoard some vital information from some students due to selfish reasons.
5. Some machinery in most industries are not functional.
6. Some industrial instructors have poor knowledge of the operation of certain equipment and this affects the students.
7. In some factories, students are totally bound from operating some machinery due to the cost of maintenance of these machineries or for safety reasons.
8. Most students are not adequately motivated on their area of specialization.
9. There was a significant difference between motivational incentives received by students during SIWES and their performances.

Conclusion

Solving the problem of skill acquisition by graduates of Nigerian Technical and Vocational Education is a reason for the establishment of Students Industrial Work Experience Scheme. It was planned to be a bridge between educational institutions and industrial employers with the latter providing general and specific occupational skills and knowledge. This research indicates that the SIWES objectives are not properly achieved due to some constraints such as inadequacy of equipment in some industries, which results in students' poor performance to the programme. However, if the scheme is not adequately effective, it becomes difficult for graduates of the system to secure employment or make smooth transition from school to work. Thus, based on the findings of this study, the researchers conclude that both the schools and employers in the industries should harmoniously enhance and motivate students' interest towards the Student Industrial Work Experience Scheme in order for them to become relevant and vital to the economic development of this great country called Nigeria.

Recommendations

The operation of SIWES lies on the proper supervision. Thus, it becomes necessary that something must be done at the operational level to enhance adequate functioning of the programme. In line with these findings, the following recommendations are made:

1. Industrial Training Fund (I.T.F) should ensure the regular visitation of the (I.T.F) officers to supervising agencies institutions, employers and students on attachment. All the institutions involved should be organizing orientation courses in collaboration with I.T.F for their students prior to their attachment with attendance made mandatory for the students accepted for SIWES and ITF Staff.
2. The training department of ITF should provide adequate information about the biennial SIWES National conference.

3. Ensure workability of tools and equipment provided for students undergoing SIWES programme.
4. SIWES should be used as a means of achieving saleable employment skills for under graduates.

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