
STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES): A TOOL FOR EFFECTIVE AND SUSTAINABLE TECHNICAL EDUCATION

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Abstract

The Industrial Training Fund established the Student Industrial Work Experience Scheme (SIWES) in 1973 in Nigeria. The scheme aimed at exposing the students to the industrial environment and enables them to develop occupational competencies, so that they can readily contribute their quota to national economic and technological development of the country. SIWES was introduced to enhance the acquisition of marketable skills by students and graduates of Science and Technology in Nigeria. Meanwhile, securing SIWES placement in organizations proves difficult for most students which make them settle for organizations not relevant to their course of study. A survey was conducted on the views of student in the School of Engineering of Moshood Abiola Polytechnic, Abeokuta in Ogun State, Nigeria. Three hundred and Sixty questionnaires were used for the survey. The paper identified some of the shortcomings of the scheme i.e. the militating factors against the primary objectives of SIWES. The likes of inadequate supervision by Industrial Training Fund (ITF) and the institution, short duration of program, poor funding, SIWES placement challenges (personnel and facility) among others. It concluded that the choice of SIWES placement should be based on interest, career development and future plans for entrepreneurial development. It further stressed the need for proper monitoring of the program and inclusion of additional incentives for the students.

Keyword: *Siwes, Technology, Trainings and Skills*

Background to the Study

The Students' Industrial Work Experience Scheme (SIWES) is a system imbued with the ability to provide tertiary-level students with the opportunity of gaining practical-based work experience in relation and addition to what they have learnt in school within the time framework of their undergraduate academic tutelage. It is designed to prepare students for the industrial working situation they will likely face after graduation by bridging the gap between theory and practice.

According to Akerejola (2004), in an effort to bridge this identified gap between theory and practical in our tertiary institutions, the ITF initiated the Students' Industrial Work Experience Scheme (SIWES) in 1974. The scheme was designed to provide the much needed on the job practical experience for students undergoing all courses that required exposure in industrial activities during the school program. It was planned as a cooperation industrial inter-relationship between institutions of higher learning and industry/commerce in the country.

The student industrial work scheme is an integral part of the curriculum for students of engineering, applied sciences and environmental studies. The student Industrial work experience scheme exposes them to real life work environment which cannot be obtained in the classroom. SIWES will also enable students to learn how to apply theories learnt in classroom to real life situation. It also allows students to be familiar with modern equipments and state of the art practice in the industry.

The Students Industrial Work Experience Scheme (SIWES) Aims at:

1. Enhancing the industrial skill acquisition and work experience of students thus augmenting their theoretical knowledge to make them efficient at solving the practical problems of the work environment.
2. Ensuring the involvement of the related industries and organizations in the training, education, exposure and development process of the students which they will in turn recruit as their staffers after their academic experience.
3. Exposing students to different categories and classes of people to improve their people skills, interactional abilities and team spirit and enhance their abilities to build positive working relationships with a wide range of individuals and organizations.
4. Increasing the marketability and entrepreneurial skills of students by exposing them to the odds of fieldwork and the challenges of meeting personal and organizational expectations by preparing students for the industrial situation they will likely meet after graduation.
5. Affording students the additional opportunity of learning how to write field reports.
6. Contributing to the quality and size of the nation's manpower, technological development and overall skill levels.

Statement of Problem

Securing a placement in an organization that has modern equipment and facilities is very difficult therefore most students settled for organizations that are not well equipped for the training. There is no proper supervision from both the industrial and institution based supervisor. The period of the training is not adequate to acquire enough skills.

Objectives of the Study

1. To find out whether the duration of SIWES is considered adequate to acquire enough training
2. To find out if students are give unrestricted access to facilities at the place of SIWES or not
3. To justify the competence of the cooperating organization in the provision of adequate training to students on SIWES, in terms of modern facilities and qualified personnel availability.
4. To find out the major consideration by students in the choice of their placement.
5. To find out if the supervision by both the ITF and institution is thorough.

Research Questions

1. How competent are most of the organizations where students had their training in term of facilities and personnel.
2. Why is it difficult for student to secure placement in well-equipped (personnel and facilities) organization?

3. Is the duration of training enough to acquire enough skills?
4. How often are the students visited during the training by the ITF and Institution supervisor?

Methodology

A self-designed questionnaire containing 18 items in 7 sections was administered for data collection for this study. The total population used in this study are: 360 students in the School of Engineering of Moshood Abiola Polytechnic, Abeokuta. The breakdown of students per department in the school of engineering is shown below, Civil Engineering 132, Computer Engineering 68, Electrical Engineering- 100 and Mechanical Engineering 60. The students were randomly selected among those who have completed their industrial training in the various departments.

A structured questionnaire was developed to express response from the students. It was made up of seven sections (1 - 7). Sections I- 3 were meant to collect background information about the respondents. Sections 4-6 contain general question on the organizations. Section 7 contains questions in a four-point Like scale, with mean scores to determine the general remark. The data was analyzed with SPSS 17 version.

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Department	No of respondents	% of respondent
Civil Engineering	132	36.67
Computer Engineering	68	18.89
Electrical Engineering	100	27.78
Mechanical Engineering	60	16.67
Total	360	100.00

Table i: Respondents by department

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Sex Distribution	No of Respondent	% of Respondent
MALE	288	80
FEMALE	72	20
TOTAL	360	100

Table ii: Respondents by Sex Distribution

3

Distribution Of Respondents Per Level	No of Respondent	% of Respondent
HND I	108	30
ND II	252	70
Total	360	100

Table iii: Respondents by Educational level

4

Ownership of respondents SIWES Placement	No of Respondents	% of Respondents
Government	88	24.44
Private	272	75.56
Total	360	100.00

Table IV: SIWES Placement

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How did you secure your SIWES placement?	No of Respondent	% of Respondent
Self	80	22.22
Through Friend	64	17.78
through Relative	200	55.56
SIWES office	16	4.44
TOTAL	360	100.00

Table V: Securing SIWES Placement

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No of Staff in the Establishment	No of Respondent	% of Respondent
1	18	20.00
2 – 10	37	41.11
10 – 20	22	24.45
Above 20	13	14.44

Table VI: Information on Establishments staff strength

7 S/N	QUESTIONS	SA	A	D	SD	MEAN	REMARKS
1	SIWES equips students with adequate technical skill	44	36	8	2	3.35	Agreed
2	The place of my SIWES is relevant to my course	38	27	15	10	2.73	Agreed
3	The SIWES placement was secured easily	10	15	23	37	1.47	Disagreed
4	The place of attachment was chosen because, I find it difficult to secure placement in well; established organization	47	26	8	9	3.23	Agreed
5	Placement was chosen because of personal benefit such as monthly stipends	56	16	10	8	3.33	Agreed
6	SIWES placement had adequate and experienced personnel who are involved in the training	27	18	33	12	2.67	Agreed
7	The place of my experience had adequate modern facilities that are relevant to my training	25	16	38	11	2.61	Agreed
8	Siwes placement had modern Information Technology facilities	20	16	25	29	2.3	Disagreed
9	I was adequately supervised my industrial and institution based supervisor	20	35	22	13	2.69	Agreed
10	I was given access to most of the facilities and equipment	15	25	40	10	2.5	Agreed
11	I was posted to all department in my place of SIWES	20	12	23	35	2.19	Disagreed
12	I acquired enough experience at my place of Siwes	25	12	33	20	2.47	Disagreed
13	Siwes is very important to the development of my technical skills	47	22	21	-	3.29	Disagreed
14	Is the duration of siwes adequate to acquiring Knowledge	6	10	44	30	1.91	Disagreed
15	You have been paid your siwes allowance	22	25	38	5	2.71	Disagreed

Table vii: Analysis of Research Questions

Data Analysis

Numerical figures were awarded to each of the scale used in the questionnaires as follows;

- 1. Strongly Agree (S.A) 4
- 2. Agree (A) 3
- 3. Disagree (D) 2
- 4. Strongly Disagreed 1

The remark was deduced from the mean score calculated for each question on the questionnaire. A mean score of 2.50 and above confirmed agreement, while a score below 2.50 means "Disagree".

Descriptive Statistics

	N	Sum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
SAgreed	15	422.00	28.1333	3.83327	14.84620
Agreed	15	311.00	20.7333	2.08958	8.09291
Disagreed	15	381.00	25.4000	3.07494	11.90918
Valid N (listwise)	15				

Table viii

Model Description

Model Name	MOD_3
Series or Sequence 1	SAgreed
2	Agreed
3	Disagreed
Transformation	None
Non-Seasonal Differencing	0
Seasonal Differencing	0
Length of Seasonal Period	No periodicity
Horizontal Axis Labels	Sequence numbers
Intervention Onsets	None
For Each Observation	Values not joined

Applying the model specifications from MOD_3

Table ix

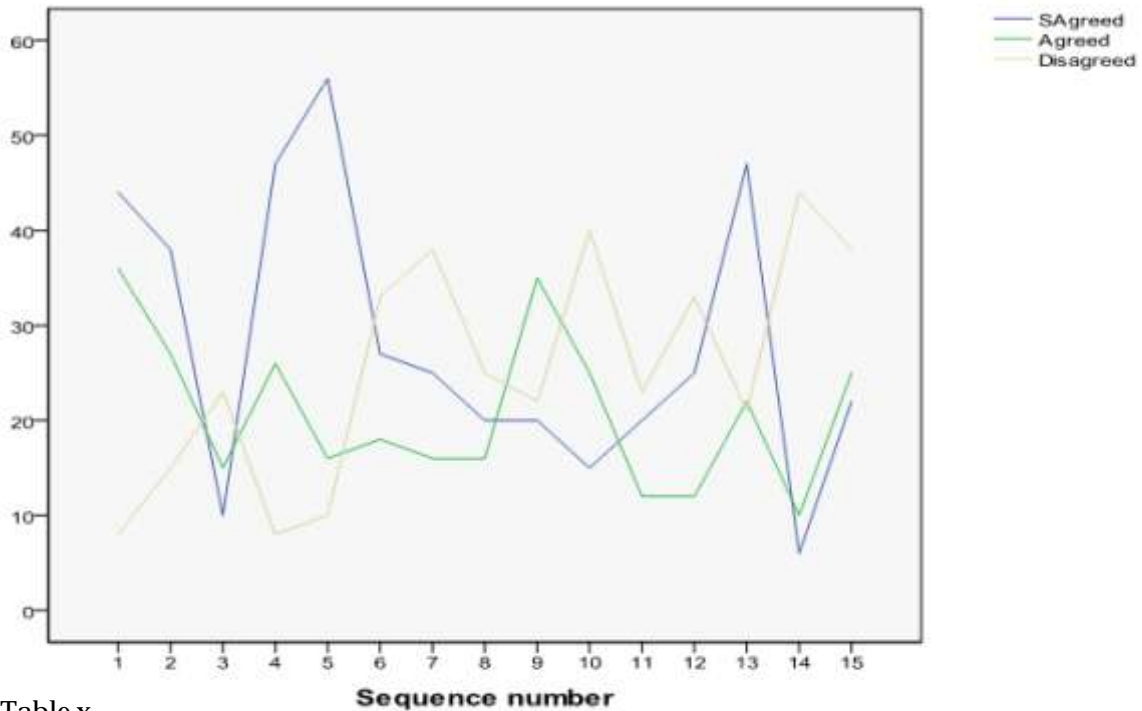


Table x

Discussion

From the analysis of data above, almost all the students agreed that SIWES helps to equip them with adequate technical skills. This justifies the fact that they know the importance of SIWES. Students stated that their choice of placement of SIWES is not based on interest for future entrepreneurship development, but their convenience such as free accommodation, monthly allowance and transportation will not help the students in building a solid foundation in their career. Some student stated that their SIWES placement lacks modern facilities and experienced personnel .This is not good enough for the development of technical education.

Most of the students who took part in the survey revealed that it was very difficult securing a SIWES placement. This is not good enough for the country's technological development. Therefore, the Federal government should enforce the provision of ITF decree, which makes it mandatory for employers of labour to accept certain number of students for industrial attachment.

From the survey all the student agreed that SIWES is relevant to development of technical education. This further emphasizes the relevance and importance of SIWES. From the data analysis some of the students claimed that there are some restrictions on the facilities they can use. This is not good enough for appropriate skills acquisition.

In addition, majority of the respondents believed that the duration of SIWES program is not enough for them to acquire skill that will enable them set up their own business ventures.

Conclusion

The technological development of a nation determines her economic, social, and political growth. The need for improved and better industrial training in our institution cannot be over emphasized because it will improve human resource development in Nigerian students whose reproductive years are still ahead of them.

This research showed that most of the students who go out in industrial training claimed that they did not receive adequate technical skills, because of their inability to secure placement in well equipped establishments. Consequently, the Federal Government of

Nigeria should enforce the law on SIWES, which make it mandatory for industrial establishments to accept students. In addition, incentives should be provided to organizations, which accept student for industrial training.

Recommendations

1. The choice of SIWES placement should be based on the interest, career development and future plans for entrepreneurial development rather than insignificant considerations such as free accommodations, monthly allowance and cheap transportation as suggested by respondents of the study.
2. The SIWES unit of various institutions should be well equipped to assist students in securing placement in their place of interest.
3. Students should note that SIWES is an integral part of their studies where marketable skill can be acquired hence they need to be more serious about the training.
4. At present, the SIWES students are paid the sum of two thousand, five hundred naira per month which is paid several months after the program. The Federal Government should look at the possibility of increasing these allowances in view of the level of inflation in the country.
5. Regular seminar and workshop should be organized where student could be exposed to the most effective method in industrial training procedures.
6. There is need for better and close monitoring of the SIWES function and activities by the NBTE in order to ensure that the scheme is properly implemented in the institution. More attention needs to be paid to SIWES during the accreditation of SIWES approved programmes in institutions to enable the scheme attains its potential in enhancing the pool of technical skills available to the economy.

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