



Performance Evaluation of Students' Industrial Work Experience Scheme (SIWES) in Federal Polytechnic Offa, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. Author AOO designed the study, sorted out the data, managed the literature search, discussed the results, wrote the first draft of manuscript, and manuscript review. Author NOO wrote the protocol, sorted out the data, wrote the introduction, and manuscript review. Authors ATA and MKL managed the literature search, sorted out the data, and manuscript review. Author AOA wrote the protocol, sorted out and arranged the data, analysed the data, discussed the results, wrote the methodology and supervised the study. All the authors managed the literature search. All authors read and approved the final manuscript.

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ABSTRACT

The Students Industrial Work Experience Scheme (SIWES) is skills and training preparatory program meant to expose students of higher institutions of learning to practical experiences outside their institutions. Quality of the students' exposure to industrial work experience and unemployment trend of graduates poses a serious threat to institution(s), societies and environment at large. The study examined the performance of Students Industrial Work Experience Scheme in Federal polytechnic Offa, Nigeria. The study adopted a quantitative approach and data

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were elicited from five years (2014-2018) of National Diploma Students of the seventeen (17) participating departments. Inferential statistics of Two-Way Analysis of Variance and Simple descriptive statistical models were used in the analysis of data. The study revealed the downward trend in the performance of students. The p-values of the mean scores of students in each departments was 0.002 and the mean scores of students on yearly basis of 0.016 were all less than 0.05. The study rejects the null hypothesis and accepts the alternative hypothesis that there is significant difference between the departmental and yearly SIWES scores of students. The result of the Least Significant Difference (LSD) post hoc test revealed that the difference is between all the departments. The study recommended a data pool of relevant training organizations and the development of technology for proper placement of students to improve their skill acquisition and employability.

Keywords: Academic-board; assessment; student-industrial-work-experience; performance; placement.

1. INTRODUCTION

There is a growing concern about unemployment trend of graduates in Nigeria. The argument has raised many issues on whether, it is the inability of the government to provide employment for the graduates, or is it the undergraduates that were not good enough to be employed in the labour sector after graduation. Many (researchers) have dwell on the first area of concern while there are few researches on the quality of the preliminary exposure to industrial work particularly on issues, challenges and impact of Students Industrial Work Experience relating to students' sustainable skill acquisition and graduate employability [1,2,3].

It is worthy of note that, Students Industrial Work Experience Scheme (SIWES) is skills and training preparatory programme meant to expose and prepare students of higher institutions of learning (Universities, Polytechnics, Colleges of Technology, Agriculture and Education) for the Industrial Work challenges they are to face after graduation as they join the labour market. The scheme affords students the opportunity to familiarize, expose, articulate experience in undertaking field work, handling equipment, operating machines, packaging goods, relating with public, advertising, planning budget, and safety precautions etc which are very scanty in their institution. Furthermore, SIWES is a four month practical educational programme designed for students on National Diploma course, and students are expected to pass it in order to be awarded the National Diploma certificate. It equally makes students eligible to proceed or further their course of study at Higher National Diploma level. SIWES is a core academic requirement allotted four (4) credits unit in the Nigerian Polytechnics and a pre-

requisite for the award of Diploma in specific discipline in most institutions of higher learning in Nigeria, in accordance with the educational policy of the Government [4].

As a policy, some industries, organizations and entrepreneur sites were available to general public and students of higher learning to acquire practical (technical) skills on a chosen career e.g. Science and Technology, Engineering and Environment Technology. "SIWES is a skill development programme designed to prepare students of Universities Polytechnics/Monotechnics, and Colleges of Education for transition from the College environment to work environment" [5]. SIWES are part of learning in the Polytechnic [6].

Otunola, Abdullateef, Alabi, and Lawal [7] opined that it is necessary to strengthen connection between academia and industrial sectors on technical training of students so as to improve technological skill acquisition for national development. As laudable as the programme of SIWES is, it confronted with some problems.

1.1 Statement of Research Problem

Ajufo, [8] averred that, adequate and required skills are not given to undergraduates, the focus has been on theoretical knowledge for the students which hinders effective performance and have resulted to series of problems in the society. In the same vein, the Industrial Training Fund (ITF). According to ITF [4] observes some problems in the scheme which includes a yearly increase in numbers of participating students, decline in industrial capacity utilization, attachment to non-relevant industrial organizations. In other words, there is a problem in the quality of the students' exposure to

industrial work experience, industrial capacity utilization, as a result of yearly increase in numbers of participating students and attachment in non-relevant industrial organizations. Further, there are hindrances to sustainable skill acquisition for undergraduates there by giving rise to unemployment trend of graduates in Nigeria. The problems do not exclude the Federal Polytechnic Offa, Nigeria. These problems are eyesore defeating the aim and objectives of Industrial Training Scheme and status of Federal Polytechnic Offa, Nigeria.

It is to be noted that, existing studies on performance of Students' Industrial Work Experience Scheme had focused on the assessment from the view point of non-academics, and as such has not been adequately studied. The study intends to contribute to body of knowledge and bridge the gap noticed in the literatures.

1.2 Aim and Objectives

The aim of this study is to evaluate the performance of Students' Industrial Work Experience Scheme (SIWES) In Federal Polytechnic Offa in the last five years (2014-2018) with a view to ascertain the performance level and address the problem of quality and sustainable skill acquisition by students and improve graduate employability.

1.3 Research Questions

As a result of the problem statement, it is therefore imperative to ask some questions: What is the level of performance of students of various participating departments in SIWES programme of Federal Polytechnic Offa, Nigeria? What is the average performance of students in SIWES programme across all the participating departments in Federal Polytechnic Offa, Nigeria? What are the differences between the SIWES scores of various participating departments within the Federal Polytechnic Offa between 2014- 2018?

The present study measured the level of industrial experience gained by students of various participating departments in SIWES programme, average performance of students in the programme, and the differences between the SIWES scores of various participating departments within in Federal Polytechnic Offa, Nigeria. It is an academicians' explorative assessment to evaluate the performance of

Students' Industrial Work Experience Scheme (SIWES) i.e differences between the SIWES scores of various participating departments.

1.4 Research Hypothesis

Based on the aim and objectives of this research, the hypothesis considered is:

H₀: There is no significant difference between the departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria

H₁: There is significant difference between the departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria

$$\alpha = 0.05$$

The null-hypothesis was set to establish whether there is difference or not in the mean performance of departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria. The significance level (critical level) symbolized by α (alpha) is the probability (P) value that forms the boundary between rejecting and not rejecting the null-hypothesis. The precise value is taken to be 0.05.

Test Statistic: Randomized Block Design (Two-Way ANOVA)

Where: Treatment = Departmental Score

Block = Year of SIWES

1.5 Significance of the Study

Study on performance evaluation of Students' Industrial Work Experience Scheme (SIWES) from academic point of view need to be explored. Considering this, there is a need to evaluate the performance of SIWES in Federal Polytechnic Offa, Nigeria for the last five years.

Previous study related to this research includes the study of Nor' Aini and Siti nur fazillah [9] which was an academicians' evaluation of students' practical training performance in Malaysia. Data collected were analysed using descriptive analysis and it was found out that there was better performance of students during the training. The study concluded that there is the need for improvement in the training which must be constantly subjected to evaluation. Therefore, this study became very necessary

considering the fact that it will be a ground breaking research on the case study to establish the performance on the SIWES. The performance of students of various participating departments in SIWES programme of Federal Polytechnic Offa, Nigeria during the period under review will be established so as to suggest on how to improve students' sustainable skill acquisition and employability.

Equally, it will help in assessing the performance of students of higher institutions on SIWES especially for determining status of SIWES performance over a period of time.

This study will also be useful for students' enlightenment on SIWES, for policy makers in education, players and captain of industries, and also contribute to academic field of study.

Therefore, the study will recommend on how the institutions of higher learning can formulate policies that will improve the performance of students during the industrial training for adequate skill acquisition, competence and job placement.

The study will contribute to the development of Federal Polytechnic Offa Nigeria as a fastest growing polytechnic in Nigeria. It would also improve the performance of the institution in her quest to be producing skilled and knowledgeable graduate for the labor market.

Premised on the above and to give focus to the research, some literatures relevant to the study were reviewed.

1.6 Scope of the Study

The study was confined to the performance evaluation of Students' Industrial Work Experience Scheme (SIWES) In Federal Polytechnic Offa, Nigeria.

The study focused on students' scores of five years of National Diploma Students of the seventeen (17) participating departments out of twenty-two (22) departments.

2. LITERATURE REVIEW

2.1 Students Industrial Work Experience Scheme (SIWES)

Many authors in different fields have stressed the importance of education and training. According to Mafe [10], stated that for society to function

well, education and training which are two basic forms of learning must be uphold. Both education and training are important. For any effective education there must be some training input and vice versa. Every productive individual in this millennium must be able to combine and make use of the outcomes from the two forms of learning for effective professional development. Likewise, Ugwuanyi, Chijioke and Ezema [2], stated that SIWES plays a significant role in educational life of students and economic development of the nation. Akerejola [5] averred that the work experience is an educational initiative for students of higher institutions to embark on while still attending school. This gives students the required skills and practical experiences which may be scanty in their institution.

According to Clark [11], emphasized that it is imperative to keep learning so as to be relevant and current with the present and modern ideas and continue to learn practically from the experienced hand. According to the Industrial Trust Fund (ITF) [12], the IT was established in 1971 and was charged with human resources development and training.

A study on Macro, Medium Enterprises (MSMEs) [13] averred that, public and private sectors like manufacturing industries, Agricultural sectors, financial institutions, engineering outfits, computer and telecom outfits, medical, real estate firm, accounting firms, photography, building and architecture, survey, law and library and administrative arms of tertiary institutions, etc required skills personnel to be pooled from graduated students to augment their manpower. Therefore, technical skills training programme is very important [14].

The importance of Students Industrial Work Experience Scheme (SIWES) and commitment of the Industrial Training Fund (ITF) to achieve its set objectives cannot be over emphasized. The students are expected to get required practical training before graduation when deployed to appropriate organization [4]. Furthermore, the industrial training is like project method of teaching which helps to stimulate students' interest and motivate them in the study of technical facts and related knowledge. This knowledge provides the expertise for achieving success in a dynamic environment. Similarly, both practical and theoretical knowledge afford the technical know-how for students upon graduation.

According to Juliet [15] emphasized the pivotal roles and importance of industrial training in educational life of students and economic development of Nigeria.

2.2 Performance Evaluation of Students' Industrial Work Experience Scheme (SIWES)

Series of research have been carried out on SIWES by various researchers. Attention of the researchers has been on the challenges of SIWES. Studies like that of Effah, Boampong, Adu, Anokye and Asamoah [16], Olumese, and Kenedy [17] among others.

Olumese and Kenedy [17], evaluated the challenges and benefits of SIWES on business education in Edo and Delta states, Nigeria. The authors employed mean and standard deviation to analysed the data collected. The study found out that SIWES provided required skills to business education students and is been confronted with the challenges of funding.

According to Ikechukwu [18] appraised the challenges of SIWES in educational settings. The results of their study revealed that there are inadequate trainees' acceptance in mini, medium and macro enterprises, poor training delivery, poor office environment and assessment, poor supervision from industrial supervisors. On the part of the students: perfunctory attitude to orientation, late assumption of duty, frequent lateness to work, poor reporting on logbooks and final reports. Poor remuneration, poor industrial and ITF official contact including monitoring and evaluation as the problems inhibiting the practice and supervision of SIWES in Nigeria.

Omonijo, Anyaegbunam, Adeleke, Nnatu, Ejoh, Oluwunmi, Olowookere and Agubo [19] reviewed the SIWES in four selected countries. The study adopted review of reports and literature, findings from the study among others indicate that there is dysfunction of SIWES in Nigeria as a result of insufficient industries and in adequate equipment in the existing few industries for effective practical training. The study concluded that SIWES in Nigeria could be improved if the identified defects could be rectified. The shortcoming of this study is that it limits itself to reports and adopted only secondary data as a proxy for the performance evaluation of SIWES especially in Nigeria. It is also a purely descriptive article and not original research article. Further, the study lacked any data points

to test differences in performance of SIWES across countries and within each institution in its study. The present study empirically evaluates the performance of SIWES with the use of primary data of students'score in SIWES in Federal Polytechnic Offa Nigeria.

2.3 Empirical Evidence

Existing literatures have examined issues in Students' Industrial Work Experience Scheme (SIWES). Ifejika, Odunze, Ayanda and Sando [20], study was on students' work experience in National Institute for Freshwater Fisheries Research(NIFFR), Nigeria. The study collected secondary data from NIFFR, Nigeria and analysed it descriptively. The study found out that training of personnel for fishery agricultural extension has not been up to appreciable level.

According to Ikechukwu [18] appraised the Students' Industrial Work Experience Scheme (SIWES) in Nigeria with special focus on business education lecturers and staff of ITF. The study was carried out to reduce the problem of an employment rate of business education graduate in Nigeria through SIWES. The study adopted survey research design, mean rankings and t-test statistics were employed to analyse the data. The findings suggest that posting of students to industries of relevance would help reduce unemployment rate of business education graduate in Nigeria.

According to Ajibola [21], reiterated the need for performance evaluation of Students Industrial Work Experience Scheme (SIWES). This is very essential in the face of unemployment, competence, job placement, etc. On performance evaluation of SIWES and as importance as it is, previous studies have either focuses on perception of students or employers, but there is dearth of study on the views of academicians after the scheme which are very crucial in SIWES performance evaluation [22]. Meanwhile, further study is needed on evaluation of students' performance after SIWES from academia point of view.

Omonijo, Anyaegbunam, Ejoh, and Ogechukwu [12] analysed the quality of SIWES in tertiary institutions in Ogun State, Nigeria. The study engaged a purposive sampling technique to select one participant from each institution and used descriptive statistic to analyse the data. The study concluded that no institution (0%) had a succession plan for SIWES. The study also helped to identify issue relating to performance of

SIWES in Nigeria. The study lacked enough data to test for time-trend difference in performance evaluation of SIWES across institutions in Ogun State, Nigeria.

The present study is not limited to measuring the level of industrial experience gained by students of various participating departments in SIWES programme in Federal Polytechnic Offa, Nigeria, but also to determine average performance of students in the programme, and the differences between the SIWES scores of various participating departments within in Federal Polytechnic Offa, Nigeria.

From all the above, there is less empirical work on performance evaluation of SIWES as being currently study. Hence there is a need for work of this nature.

2.4 Level of Performance of Students in SIWES

Onosele and Ejodamen [23], examined the performance of Student's Industrial Work Experience Scheme especially its influence on student' acquisition of entrepreneurial skills in Nigerian public Universities in Edo state, Nigeria. The authors employed mean ranking of likert scale to analysed the data. The study found out that students attached to less relevant industrial organization with little skills gained. The study has helped to define critical issue relating to performance of SIWES in Nigeria. The shortcoming of this study is that it adopted respondents' opinion to examine performance of SIWES and also from the view point of non-academics.

According to Olabiyi, Okarfor and Ayelabowo [24] sought primarily to determine the challenges of industrial work experience scheme in developing workforce among the youths in South West Nigeria. The null hypothesis was tested through t-test statistics at .05 level of significance and mean and standard deviation were used to answer the research questions. The study observed that there is inadequate participation of students in skill acquiring project and poor supervision of students. The shortcoming of this study is that it lacked enough data to test for time-trend difference in performance evaluation of SIWES across institutions in South-West Nigeria. Equally, the respondents which include teachers and students adopted by the study does not represent the true sample size as institution or department participating in SIWES in South-

West Nigeria are more than one. These can affect the overall result of it finding.

According to Ogbuanya, Njoku, Kemi and Ogunkelu [25] evaluated the effectiveness of SIWES programme to ensure quality of technical, vocational education and training in technical colleges in Lagos State. The study adopted survey research design, mean standard deviation and t-test statistics to analyse the data. The study found out there are challenges of SIWES in developing the needed skills in the industry. The study concluded that most students find it difficult to secure a relevant place of attachment for skill acquisition. The study has helped to define critical issue relating to performance of SIWES in Nigeria. The identified short coming of this study is that it adopted survey research design to evaluate the effectiveness of the SIWES. The result of the study is also not sufficient to justify a convincing result as it may involve biasness opinion. Strong and reliable result would be achieved if primary data of students'score in SIWES were used.

The present study focused on the performance of SIWES with the use of primary data of students'score in SIWES in Federal Polytechnic Offa Nigeria. This study focused on performance evaluation of SIWES after the scheme especially in Federal Polytechnic Offa, Nigeria from academic point of view.

2.5 Difference between the Students' Scores in SIWES

The study by Omar, Kofli, Mat, Darus, Osman, and Rahman [26], examined the difference in students' performance of Engineering and Architectural departments in University Malaysia before and after participation in the industrial training. The authors utilized data collated from employers' evaluation of students. The study found out that students of engineering department perform better than that of Architecture.

In our opinion, findings from this study may not give the true performance of students in SIWES since the evaluation is from employers' point view which may be subject to bias judgment. The present study established the difference between the departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria Further, it test for time-trend difference in performance evaluation of SIWES across the departments.

2.6 SIWES Evaluation Performance Criteria and Scores

To assess the performance of students after the scheme usually contains assessment of log books, technical reports (end of training reports), oral presentation (defense), Industrial Training Fund (ITF) form 08 and interim report of supervisors which gives 100 marks [27,28].

3. MATERIALS AND METHODS

The authors visited the directorate of industrial liaising and placement office of Federal Polytechnic Offa, Nigeria for data collection for the period under review. Therefore, students' scores of five years (2014-2018) of National Diploma Students of seventeen (17) participating departments out of twenty-two (22) departments were obtained for evaluation. Meanwhile, inferential statistics of measure of central tendency, Two-Way ANOVA and simple descriptive statistical models such as bar charts and time plot were employed in the analysis and interpretation of data.

The criteria (scores) that was used for "after the scheme evaluation" as collated comprise of: log books, technical reports (end of training reports), oral presentation (defense), Industrial Training Fund (ITF) form 08 and interim report of supervisors totaling 100 marks.

4. RESULTS AND DISCUSSION

This section contains the presentation and analysis of data on the research questions posed and discussions that follows.

4.1 Level of Performance and Average Performance of students in SIWES

4.1.1 Decision

Since the p-values of the mean scores of students in each department (0.002) and the mean scores of students on yearly basis (0.016) are all less than 0.05, we reject the null hypothesis that there is no significant difference between the departmental and yearly SIWES scores of students and accept the alternative hypothesis that there is significant difference between the departmental and yearly SIWES scores of students. This implies that students in some departments perform better than the students in other department and year in year out students perform better in one year compare to

the other. Further, the performance of departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria indicates that there is problem in the quality of students' exposure to industrial work experience.

4.2 Difference between the Students' Scores in SIWES

4.2.1 Post Hoc Tests

Post Hoc test seeks to know where the difference lies. In other words, since the ANOVA test has established that there is significance difference between the departmental and yearly SIWES scores of students, the Post Hoc test tells us where the significant difference lies.

The result of the Least Significant Difference (LSD) post hoc test revealed that the difference is between all the departments. This implies that there is a great discrepancy in the performance of SIWES programme among the departments.

There is need to improve on the way the students are supervised by both the industrial based supervisors and the school supervisors; there should be a synergy between both supervisors to ensure that students undergo the training and acquire the practical experience to ensure improvement in their SIWES scores and performance. The practice of industrial based supervisors covering students who do not come to work regularly when the school supervisors visit the placement location should be stopped to achieve the objective in which ITF sets up the SIWES programme.

4.3 Tables and Figures

Table 1 showed the mean score of students in various departments of Federal Polytechnic, Offa who undertook SIWES program from 2014 to 2018. The table revealed that the performance of all the departments in the 5 years under study in Federal Polytechnic, Offa is above average as no department has average score of less than 50% (see the table 1). Building Technology department has the highest average SIWES score (83.75) and this average score was recorded in 2016 in the 5 years under study while the department of Architecture has the lowest average SIWES score (54.86) and this average score was recorded in 2017.

Meanwhile, Building Technology department has the highest average SIWES score (83.75) and

this average score was recorded in 2016 in the 5 years under study while the department of Architecture has the lowest average SIWES score (54.86) and this average score was recorded in 2017.

the highest SIWES score of 75.63 in 5 years under study. However, the department of Architecture has the lowest SIWES score in the 5 years under study (2014 to 2018) (62.71). The chart (Fig. 1) depicts this clearly

Table 2 revealed the SIWES Average Mean Scores of Students in Various Departments in 5 years (2014 to 2018). The table showed that Urban and Regional Planning department has

Fig. 1 shows that on performance evaluation of SIWES statistically from 2014 to 2018, the students had a tremendous participation in the scheme in the last five years.

Table 1. SIWES mean scores of students in various departments from 2014 to 2018

Departments	Years				
	2014	2015	2016	2017	2018
Architecture	61.263	67.373	67.188	54.86	62.875
Building Technology	78.304	81.368	83.75	60.328	64.409
Estate Management and Valuation	62.323	67.364	63.667	57.531	72.667
Survey and Geo-informatics	81.8	67.906	64.286	67.409	59.333
Urban and Regional Planning	74.771	70	74.96	79.267	79.176
Quantity Surveying	73.654	67.631	72.024	61.315	57.6
Electrical and Electronic Engineering	69.977	73.563	80.08	74.333	-
Mechanical Engineering	74.678	72.974	67.61	75.192	74.75
Computer Engineering Technology	77.269	76.694	72.5	75.765	66.583
Civil Engineering	72.219	75.518	74.88	65.4	65.76
Science Laboratory Technology	73.175	72.712	74.843	74.375	80.75
Food Technology	71.364	59.705	71.122	69.638	64.082
Computer Science	73	74.69	72.895	61.628	66.758
Mathematics and Statistics	72.991	72.3	73.607	63.848	61.75
Library and Information Science	62.521	66.343	64.962	69.32	64.298
Mass Communication	76.76	65.842	67.796	71.225	72.745

Authors' work, 2020

Table 2. SIWES average mean scores of students in various departments in 5 Years (2014 to 2018)

Departments	SIWES mean score for 5 years
Architecture	62.71
Building Technology	73.63
Estate Management and Valuation	64.71
Survey and Geo-informatics	68.15
Urban and Regional Planning	75.63
Quantity Surveying	6.44
Electrical and Electronic Engineering	74.49
Mechanical Engineering	73.04
Computer Engineering Technology	73.76
Civil Engineering	70.76
Science Laboratory Technology	75.17
Food Technology	67.18
Computer Science	69.79
Mathematics and Statistics	68.90
Library and Information Science	65.49
Mass Communication	70.87

Authors' work, 2020

Table 3 shows the yearly performance of students who undertook SIWES program between 2014 and 2018. From the table it can be observed that the highest average SIWES mean Score was recorded in 2014 and the lowest score was recorded in 2018. The trend as also revealed in the time plot (Fig. 2) which really called for serious concern by all the stakeholders in this education sector. The plot showed a downward trend from 2014 to 2018 except in 2015 and 2016 where slight improvement was recorded. See the time plot (Fig. 2).

The following percentages of performance were recorded; 72.25, 70.75, 71.64, 67.59, 63.35.

The plot showed a downward trend in the performance from 2014 to 2018 except in 2015

and 2016 where slight improvement was recorded

This shows that there is a decline in the level of industrial experience gained by the students as shown from the analysis. The evaluators gave performance for each year and overall mark performance indicates that the exercise needs rectification

4.4 Computation

In order to establish whether there is difference or not in the mean performance of departmental and yearly SIWES scores of students in Federal Polytechnic Offa, Nigeria, test statistics was carried out through the use of Randomized Block Design (Two- Way ANOVA). The data obtained were computed and presented (see also Table 4).

Table 3. SIWES average mean scores of students between 2014-2018 on yearly basis

Year	SIWES mean score
2014	72.25
2015	70.75
2016	71.64
2017	67.59
2018	63.35

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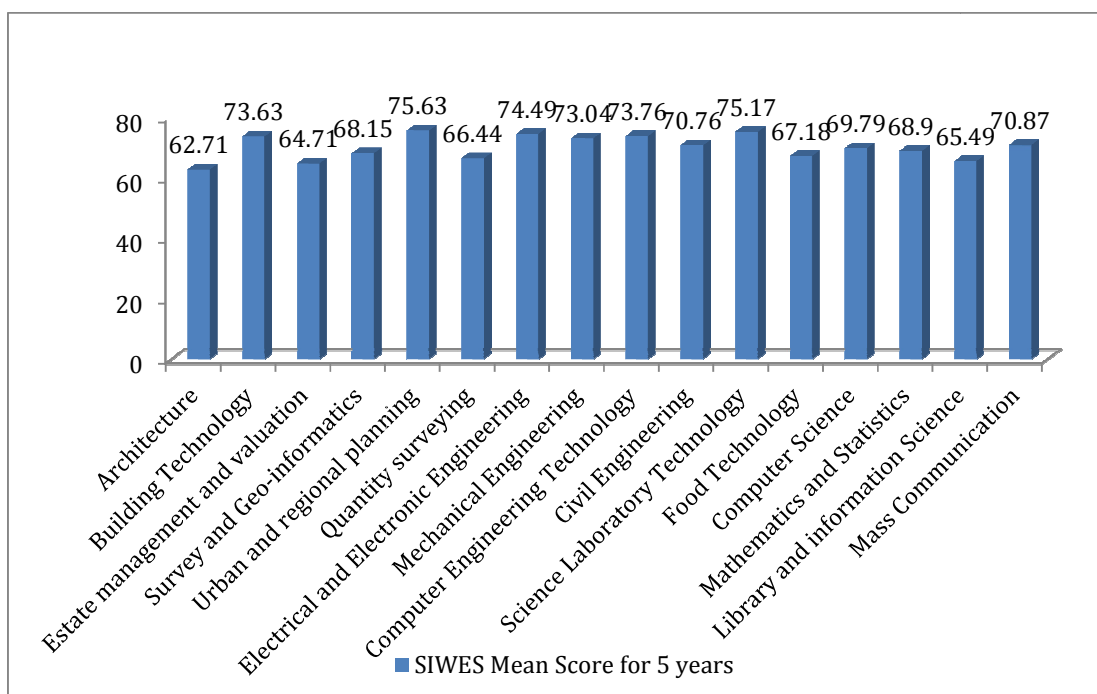


Fig. 1. SIWES mean score for 5 Years (2014 to 2018)

Authors' work, 2020

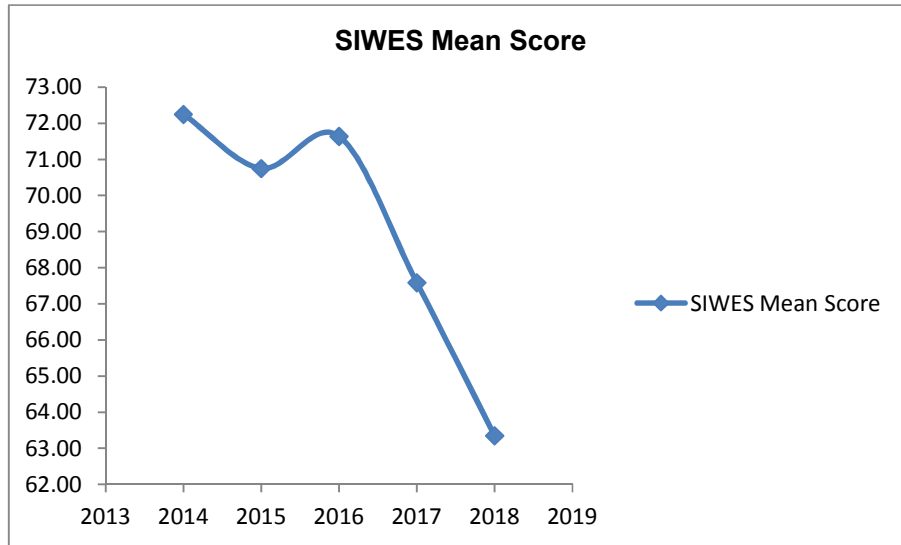


Fig. 2. Time plot showing SIWES average mean scores of students from 2014-2018
Authors' Work, 2020

Table 4. Tests of Between-Subjects Effects Dependent Variable: Response

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected Model	1557.222 ^a	19	81.959	3.013	.001
Intercept	382325.121	1	382325.121	14056.130	.000
Department	1173.946	15	78.263	2.877	.002
Year	360.953	4	90.238	3.318	.016
Error	1604.793	59	27.200		
Total	390148.484	79			
Corrected Total	3162.015	78			

a. R Squared = .492 (Adjusted R Squared = .329)
Authors' Work, 2020

5. CONCLUSIONS

The study was on performance evaluation of Students' Industrial Work Experience Scheme (SIWES) In Federal Polytechnic Offa, Nigeria

The result of the analysis revealed that the performance of all the departments in the 5 years under study in Federal Polytechnic, Offa is above average as no department has average score of less than 50%. Urban and Regional Planning department has the highest SIWES score in the 5 years under study (2014 to 2018) and department of Architecture has the lowest SIWES score in the 5 years under study (2014 to 2018).

The time plot showed a downward trend in the performance of students in all departments in

Federal Polytechnic, Offa in SIWES program from 2014 to 2018 except in 2015 and 2016 where slight improvement was recorded. The highest average SIWES mean score was recorded in 2014 and the lowest score was recorded in 2018. The result of the ANOVA test led to the rejection of null hypothesis that there is no significant difference between the departmental and yearly SIWES scores of students and acceptance of the alternative hypothesis that there is significant difference between the departmental and yearly SIWES scores of students.

Summarily, there was a decline in the performance of students during the period under review. The decline in the level of industrial experience/performance of some students was as a result of attachment to non-relevant

industrial training organizations and poor attitude to learning among others which lower their performances. Furthermore, many students changed their initial place of attachment to another organization base on personal reasons like accommodation problem, financial and transportation problem there by affecting their level of skill acquisition.

The results are in line with the study by Ifejika et al. [20], Effah et al. [16], Ikechukwu [18] Adeyewa [29] and ITF [30], which claims that there are inadequate trainees' acceptance in mini, medium and macro enterprises, poor training delivery, poor office environment and assessment, poor supervision from industrial supervisors. On the part of the students: perfunctory attitude to orientation, truancy, frequent lateness to place of attachment, poor reporting on logbooks and haphazard final reports arrangement, etc.

The results are also in line with the study by Ogbuanya, Njoku, Kemi and Ogunkelu [25] which submitted that there are challenges of SIWES in developing the needed skills in the industry and that most students find it difficult to secure a relevant place of attachment for skill acquisition in Nigeria. This study further expand the findings of study by Omonijo, Anyaegbunam, Adeleke, Nnatu, Ejoh, Oluwunmi, Olowookere and Agubo [19] which claims that that there is dysfunction of SIWES in Nigeria as a result of insufficient industries and in adequate equipment in the existing few industries for effective practical training.

The implication of this study is that if drastic step is not taken, skill acquisition by students, sustainability of the SIWES, the quest to be producing skilled and knowledgeable graduate for the labor market and economic development of the country will be a mirage.

This implies that students in some departments perform better than the students in other and in some years compare to the other. The study has policy implication for sustainable skill acquisition for students and employability of graduates both in Federal Polytechnic Offa, Nigeria and other higher institutions with similar SIWES. This study has made valuable contribution to enhance skill acquisition for Nigerian students and graduates employability based on evaluation of SIWES over a period of time. This original research article though meticulously conducted but nevertheless limited to Federal Polytechnic Offa, Nigeria. However, further research could be carried out

on performance of SIWES in South- West, South- East, South- South, North- West, North - East, and North- Central Nigeria from academic evaluation point of view. This rigorous academic analysis has important role to play on SIWES in higher institutions especially where sustainable skill acquisition for students and employability of graduates need to be improved to reduce unemployment.

Therefore, the study recommends the development of a data pool of relevant industrial training organizations and the development of a technology for proper placement of students on SIWES. In addition, the visiting supervisors and SIWES coordinators are to adequately proof read the students log books and SIWES reports before final submission. Equally, well-structured SIWES orientation programme for students should be established. These in the long run will help to improve the Students' Industrial Work Experience Scheme, reduce unemployment among the graduates and thereby facilitate students' experience and exposure to the career world as well as effective supervision.

CONSENT

As per international standard or university standard, participant's written consent has been collected and preserved by the authors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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