

Effect of Students' Industrial Work Experience Scheme (SIWES) on Professional Career Development of Library and Information Science Schools in Nigerian Universities

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ABSTRACT: *The study investigated the relationship between the Students' Industrial Work Experience Scheme on the professional career development of library and information science students in Nigerian universities. Three objectives guided the study and three research questions were raised in line with the objectives along with three null hypotheses. The study adopted a survey research design of the correlation type. A self-designed questionnaire was randomly administered to fifteen (15) university students offering library and information science courses drawn from the six geopolitical zones of Nigeria giving a total of ninety (90) using the nonproportionate sampling technique as a population of the study. Data collected were analyzed using regression analysis to answer both the research questions and test the null hypotheses. The funding reveals that a positive relationship exists between the relationship between student Industrial Work Experience Scheme and the technical skills acquisition of library science students. Since the calculated $[r]$ is 0.82.; Positive high relationship exists between the Students Industrial Work Experience Scheme and personal and interpersonal skills possessed by library and information science students since the correlation coefficient $[r]$ is 0.76; Positive relationship exists between the Students Industrial Work Experience Scheme and the Nigerian University library science students carried out since the correlation coefficient $[r]$ is 73; Significant relationship exists between the Students Industrial Work Experience*

Scheme and technical skills acquisition of library science students in Nigerian Universities since the obtained F-ratio 262.542 is significant at the 0.00 level; Significant relationship exists between the Students Industrial Work Experience Scheme and personal and interpersonal skills acquisition of library science students carried out since the obtained F-ratio 156.279 is significant at the 0.00 level and, Significant relationship exists between Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development in their workplace since the obtained F-ratio 147.337 is significant at the 0.00 level. Among the recommendations made include the: Higher Institutors of learning should ensure that Students' Industrial Work Experience Scheme experience sites or work stations must meet the requirement of having technical equipment for students to use, etc.

KEYWORDS: effect; students' industrial work experience scheme; professional career development; library and information science: students; Nigerian universities.

INTRODUCTION

The history of education in any capacity cannot be complete without having a library or an information center that serves the information needs of the educational system. It is in recognition of this singular function that a library is defined as a collection of information resources cared for by individuals who are familiar with the arrangement for research, academics, information, and leisure. Certainly, the library is made up of two prominent resources, that is, human and material resources. In the event that either one is not well provided, there will be no complete information services delivery. However, most of the institutions of higher learning especially Nigeria place much emphasis on the theories leaving the students at the mercy of the Students' Industrial Work Experience Scheme (SIWES) for practical skills acquisition.

The Students' Industrial Work Experience Scheme (SIWES) being one of the Industrial Training Fund's (ITF) programmes introduced in 1974 emanated from the growing concern among Nigerian industrialists those graduates of institutions of higher learning lack adequate practical background experience necessary for employment. It is in recognition of the usefulness of the scheme that, the training scheme is not optional to students attending tertiary institutions in Nigeria because it allows students to be part of an actual work situation outside the classroom (Njoku, 2019). To encourage students to carry out their training without distractions, they are paid a certain allowance while lecturers are expected to visit the cities for supervision.

Lamenting the importance of the scheme according to Okorie (2018), it is a planned and supervised training program based on stated and specific learning and career objectives, leading to the development of occupational competencies of the participants where students are exposed to technical skills acquisition. In the same vein, Ojokuku (2019) opined that SIWES bridges the existing gap between theory and the necessary technical practice that leads grandaunts to professional

development in their study careers. He further noted that it familiarizes students with work methods and exposes them to the necessary experience to handle equipment and machinery that are not available in their institutions.

In a separate submission forwarded by Nwosu (2016), the Students' Industrial Work Experience Scheme has the potential to contribute widely to students' personal and social development. He cited an example of responsibility for their learning while the challenges provided by Students' Industrial Work Experience Scheme experience can help to build student confidence and resilience to break down barriers between students and their peers and between students and staff. The opportunity to develop soft skills such as leadership, teamwork, and communication skills further contributes to student's personal and social development.

The Students' Industrial Work Experience Scheme as explained by Okorie (2018) enhances the practical skills of students. According to him, those who lack sufficient skills live on a subsistent level, and often out of desperation and frustration, constitute a nuisance to society. One therefore, stands to reason that for education to be meaningful, functional, and relevant to the demands of the present-day industrial sector, educational institutions need to give their students a system of education that is job-oriented. That institution of higher learning spends tremendous time on theory at the expense of developing practical skills because of the lack of teaching materials and facilities needed to impart to the students the necessary skills needed in industries.

It is quite glaring as indicated by the above writers that, graduates are often found lacking in technical skills, personal and interpersonal skills and faced with the inability to relate practically to theoretical skills acquired in school. It is therefore envisaged that the students' Industrial Work Experience Scheme serves as a tool for students to develop appropriate technical skills and administrative and practical work experience that will guarantee their professional development This study therefore intends to seek and find out whether Students Industrial Work Experience Scheme has direct effects on the professional development of library and information science students in Nigerian Universities.

Objectives of the Study

The general objective of the study is to assess the impact of students' industrial work experience scheme (SIWES) on library science students' practical skills acquisition in Nigerian University Education while the specific objectives are to:

1. determine whether the Students Industrial Work Experience Scheme (SIWES) has an impact on the technical skills acquisition of library science students 'in Nigerian university Education.
2. ascertain the impacts of Students Industrial Work Experience (SIWES) on personal and interpersonal skills acquisition of library science students 'in Nigerian university Education.
3. determine whether SIWES experience influences library science students' practical skills development in their workplace in Nigeria.

Research Questions

1. What is the relationship between the Students Industrial Work Experience Scheme and the technical skills acquisition of library science students in Nigerian Universities?
2. What is the relationship between the Students Industrial Work Experience Scheme and the personal and interpersonal skills acquisition of library science students of Nigerian Universities?
3. What is the relationship between the Students Industrial Work Experience Scheme and the Nigerian University Library science students' practical skills development in their workplace?

Hypotheses

Ho1 There is no significant relationship between the Students Industrial Work Experience Scheme and the technical skills acquisition of library science students in Nigerian Universities.

Ho2 There is no significant relationship between the Students Industrial Work Experience Scheme and the personal and interpersonal skills acquisition of library science students of Nigerian Universities.

Ho3 There is no significant relationship between the Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development in their workplace.

REVIEW OF RELATED LITERATURE

It is no record as revealed by Okoh (2010) and Okorie (2018) that institutions of higher learning spend a tremendous time on theory at the expense of developing practical skills in the Students Industrial Work Experience Scheme because of the lack of teaching materials and facilities needed to impart on the student the necessary skills needed in industries. This then attests to the fact that self-knowledge and occupational knowledge are very important means of ensuring a relatively accurate and adequate occupational decision toward career choice (Makinde & Kayode, 2017).

While emphasizing the benefits of the Student Industrial Work Experience Scheme according to Ekpenyong (2011), it is one of the viable existing programs that enables students to acquire technical skills and experience for professional development in their studies. He further reiterated that it creates an avenue whereby students are exposed to handling equipment and machines in industry which will enable them to acquire prerequisite knowledge and skills. Similarly, Hisrich and Shepherd (2018) and (Akerejola 2018) lamented that the Student Industrial Work Experience Scheme enables students to acquire Technical Education that has contributed to the educational development in Nigeria. He equally emphasized the need for an established relationship between public and private sectors to partner effectively with Vocational Technical Education and skill acquisition programs urging that no society can achieve meaningful progress could be achieved in a nation without encouraging its youth to acquire necessary practical skills. Such skills enable them to harness available resources to meet the needs of society.

In the words of Moely (2020), Participating in industrial work experience increases the student's belief that they could make a difference, have an interest in future volunteer service, have plans to become involved in helping careers, and have a greater ability to get along with people of different background thereby enhancing their personal and interpersonal skills. In the same vein, Makinde, and. Kayode (2017) pointed out that the Student Industrial Work Experience Scheme prepares them to contribute to the productivity of their employers and national development immediately after graduation and enhance their attributes such as critical thinking, creativity, initiative, leadership, time management, presentation skills and interpersonal skills, amongst others. SIWES prepares library science students for employment and makes the transition from school to the world of work easier after graduation

Furthermore, Okolocha and Okolocha (2012) and Nsa (2016) also submitted that the urgent need for resource transformation for technological development has brought about an emphasis on practical skill acquisition which means learning by doing. They further stated that most Nigerian tertiary institutions do not have the necessary equipment and facilities to equip the students with the necessary skills and competencies, it is then necessary for schools to liaise with industries where these modern facilities can be found for students to be exposed to real practical activities. Without any doubt of course as Okorie (2018) stated 'someone who has been exposed to both the theoretical and practical methods and the hands-on experience' would and should be better in the real work. For an individual to effectively function in the world of work theoretical knowledge is not enough because such an individual needs to be versatile in the application of practical skills to perform specific jobs. Okorie cited an example that, while someone can learn and imbibe all the available information on the processes involved in cataloging and classifying a book in the classroom, it is unlikely that the individual would, based on this knowledge alone not be able to process a book at the first opportunity.

METHODOLOGY

The study adopted the descriptive research design of the correlational types since it seeks to investigate document, describe, and explain the existent or non-existent on the present status of a phenomenon being investigated. A total of ninety (90) library and information science students drawn from the federal university library schools in the six geo-political zones, that is, fifteen (15) each using a nonproportionate sampling technique was used as the population of the study. A self-designed questionnaire was the main instrument used for data collection while regression analysis was used to answer both the research questions and test the hypotheses.

Response Rate

Out of the ninety (90) sets of questionnaires administered, eighty-three (83) representing 74.6% were retrieved and found usable for the analysis. The decrease in response rate could be attributed to the problems of distance and communication gaps during instrument administration.

Research Question 1 What is the relationship between the Students Industrial Work Experience Scheme and the technical skills acquisition of library science students in Nigerian Universities?

Table 1: Pearson's Correlation Analysis of the relationship between Students Industrial Work Experience Scheme and technical skills acquisition of library science students.

Variables	Mean	Std	N	R	r ²
Technical Skills	34.23	3.19	83	0.82	.61
Students Industrial Work Experience Scheme Carried Out	34.41	4.03	83		

Std = Standard Deviation, N = Population size, r = Correlation Coefficient, R² = Coefficient of determination

Table 1 presents the result of the relationship between the relationship between Students Industrial Work Experience Scheme and the technical skills acquisition of library science students in Nigerian Universities. It reveals that the correlation coefficient [r] is 0.82. This suggests that there is a positive relationship between the relationship between Students Industrial Work Experience Scheme and the technical skills acquisition of library science students. This result implies that library science students should take the Students Industrial Work Experience Scheme seriously. The table also reveals that the coefficient of determination [r²] associated with the correlation coefficient [r] of 0.82 is .61. This implies that 61% of technical skills obtained by library and information science students could predict the Students Industrial Work Experience Scheme carried out.

Table 2: ANOVA on the Relationship between the Students Industrial Work Experience Scheme and technical skills acquisition of library science students

Model	Sum of Squares	Df	Mean Square	F	Sig	Decision
Regression	1654.712	1	1634.364	262..542	0.00	Significant
Residual	1532.476	213	7.213			
Total	3187.188	81				

df = of freedom, Sig = Level of Significance p 0.05, F = F-ratio

Table 2 shows that the obtained F-ratio 262.542 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 level of significance set for the study Therefore, it can

be inferred that a significant relationship exists between the Students Industrial Work Experience Scheme and technical skills acquisition of library science students in Nigerian Universities.

Research Question 2: What is the relationship between the Students Industrial Work Experience Scheme and the personal and interpersonal skills acquisition of library science students of Nigerian Universities?

Table 3: Pearson's Correlation Analysis of the Relationship between the Students Industrial Work Experience Scheme and personal and interpersonal skills acquisition of library science students.

Variables	Mean	Std	N	R	r ²
Personal and Interpersonal Skills	33.32	4.15	83	0.76	.48
Students Industrial Work Experience Scheme Carried Out	31.47	5.42	83		

Std = Standard Deviation, N = Population size, r = Correlation Coefficient, r² = Coefficient of determination

Table 3 presents the result of the relationship between the relationship between Students Industrial Work Experience Scheme and the personal and interpersonal skills acquisition of library science students of Nigerian Universities. It reveals that the correlation coefficient [r] is 0.76. This indicates that there is a positive high relationship between the Students Industrial Work Experience Scheme and personal and interpersonal skills possessed by library and information science students This finding implies that as library and information science students participate in the Students Industrial Work Experience Scheme, there is the possibility of an increase in the acquisition of personal and interpersonal skills. The table also reveals that the coefficient of determination [r²] associated with the correlation coefficient [r] of 0.76 is .48. This result implies that 48% of personal and interpersonal skills possessed by library and information science students can predict the Student's Industrial Work Experience Scheme carried out.

Ho2: There is no significant relationship between the Students Industrial Work Experience Scheme and the personal and interpersonal skills acquisition of library science students of Nigerian Universities.

Table 4: ANOVA on the Relationship between the Students Industrial Work Experience Scheme and personal and interpersonal skills acquisition of library science students

Model	Sum of Squares	Df	Mean Square	F	Sig	Decision
Regression	1834.137	1	1714.142	156.279	0.00	Significant
Residual	1619.794	225	8.493			
Total	3453.931	82				

df = of freedom, Sig = Level of Significance p 0.05, F = F-ratio

Table 4 shows that the obtained F-ratio 156.279 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 probability level set for the study. Therefore, it can be inferred that there is a significant relationship between the Students Industrial Work Experience Scheme and personal and interpersonal skills acquisition of library science students carried out.

Research Question 3: What is the relationship between the Students Industrial Work Experience Scheme and the Nigerian University Library science students' practical skills development in their workplace?

Table 5: Pearson's Correlation Analysis of the Relationship between the Students Industrial Work Experience Scheme and the Nigerian University library science students' practical skills development.

Variables	Mean	Std	N	R	r ²
Practical Skills Development	32.57	3.45	83	0.73	0.65
Students Industrial Work Experience Scheme Carried Out	24.75	5.37	82		

Std = Standard Deviation, n = Population size, r = Correlation Coefficient, r² = Coefficient of determination

Table 5 presents the result of the relationship between the Students Industrial Work Experience Scheme and the Nigerian University Library science students' practical skills development in their workplace. It reveals that the correlation coefficient [r] is 73. This reveals that there is a positive relationship between the Students Industrial Work Experience Scheme and the Nigerian University library science students carried out. This result implies that the Students Industrial Work Experience

Scheme contributes to an increase in practical skills development by library and information science students. The table also reveals that the coefficient of determination [r^2] associated with the correlation coefficient [r] of 0.73 is .65. This result implies that 65% of practical skills development possessed by library and information science students could determine the usefulness of students Industrial Work Experience Scheme carried out.

Ho3: There is no significant relationship between the Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development in their workplace.

Table 6: ANOVA on the Relationship between the Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development

Model	Sum of Squares	Df	Mean Square	F	Sig	Decision
Regression	1662.234	1	1412.832	147.335	0.00	Significant
Residual	2137.436	81	9.787			
Total	3799.670	83				

df = of freedom, Sig = Level of Significance p 0.05, F = F-ratio

Table 6 shows that the obtained F-ratio 147.337 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 level of significance set for the study. Therefore, it can be declared that a significant relationship exists between the Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development in their workplace.

SUMMARY OF MAJOR FINDINGS

Based on the data analysis carried out on the said problems, the following is the summary of major findings:

1. A positive relationship exists between the relationship between Students' Industrial Work Experience Scheme and the technical skills acquisition of library science students. Since the calculated [r] is 0.82. The coefficient of determination [r^2] associated with the correlation coefficient [r] of 0.82 is .61. This implies that 61% of technical skills obtained by library and information science students could predict the Students Industrial Work Experience Scheme carried out.
2. A positive relationship exists between the Students Industrial Work Experience Scheme and personal and interpersonal skills possessed by library and information science students since

the correlation coefficient [r] is 0.76. Since the coefficient of determination [r²] associated with the correlation coefficient [r] of 0.82 is .61, this implies that 61% of technical skills obtained by library and information science students could predict the Students Industrial Work Experience Scheme carried out.

3. A positive relationship exists between the Students Industrial Work Experience Scheme and the Nigerian University library science students carried out since the correlation coefficient [r] is 73. Since the coefficient of determination [r²] associated with the correlation coefficient [r] of 0.73 is .65, this implies that 65% of practical skills development possessed by library and information students could determine the usefulness of the Students' Industrial Work Experience Scheme carried out.
4. A significant relationship exists between the Students Industrial Work Experience Scheme and technical skills acquisition of library science students in Nigerian Universities since the obtained F-ratio 262.542 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 level of significance set for the study.
5. A significant relationship exists between the Students Industrial Work Experience Scheme and personal and interpersonal skills acquired by library science students carried out since the obtained F-ratio 156.279 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 probability level set for the study
6. A significant relationship exists between Students Industrial Work Experience Scheme experience and Nigerian University library science students' practical skills development in their workplace since the obtained F-ratio 147.337 is significant at the 0.00 level. The null hypothesis was rejected because 0.00 is less than the 0.05 level of significance set for the study.

CONCLUSION AND RECOMMENDATIONS

This study has opened to the fore that tertiary institutions of education in Nigeria need to be complimented with the training obtained during the Students Industrial Work Experience Scheme experience. The undergraduate's work experience and the SIWES program, in particular, have a positive influence on a student's early career success. Students Industrial Work Experience Scheme experience is a model of the school-industry relationship that exposes and prepares the students for technical skills, personal and interpersonal, and, practical skills acquisition centers to enable them to have access to machines and equipment that may not be available in the school. Library and information science students must be willing and ready to take the advantage of Students Industrial Work Experience Scheme experience if they must be professional librarians after graduation from the Nigerian universities.

Given the above revelations, the following are some recommendations that are worth consideration::

1. Higher Institutes of learning should ensure that Students' Industrial Work Experience Scheme experience sites or workstations meet the requirement of having technical equipment for students to use.

2. There should be adequate trained staff put in place to impart the needed personal and interpersonal skills to the students to boost their professional careers,
3. Machines and equipment must be readily available in approved Students Industrial Work Experience Scheme experience stations so that students can have to opportunity to manipulate or operate them well,
4. Students going on Students Industrial Work Experience Scheme experience should be assessed and scored during supervision to make them take it a serious business,
5. The allowances given to students during the Students Industrial Work Experience Scheme experience should be paid during the exercise to enable them to pay for transport to the fieldwork and,
6. Examinations should be given to the students coming back from the Students Industrial Work Experience Scheme experience on the skills acquired to test their level of assimilation.

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