

Assessing the Impact of Students Industrial Work Experience Scheme (SIWES) on the Students after the Completion of the Programme

LIKOLO Olufemi Michel¹, Johnson Olatunde Olaniyan Ph.D², Prof. Olorunleke Gabriel, kolade, Ph.D³ & Dr. Michael Steven Juma, DBA, MBA, MSc in Dev⁴

¹Industrial Training Fund, Training Department, Industrial Training Centre, Ikeja, Lagos

^{2&4}Unicaf University, Department of Business Administration

³Adekunle University, Department of Management, Akungba Akoko, Ondo State Nigeria

Received: 20.10.2025 | Accepted: 20.11.2025 | Published: 27.11.2025

*Corresponding author: LIKOLO Olufemi Michel

DOI: [10.5281/zenodo.17738571](https://doi.org/10.5281/zenodo.17738571)

Abstract

Original Research Article

Student Industrial Work Experience Scheme (SIWES) is an organized programme designed for and training and supervising participants to enhance their occupational talents, with an emphasis on skill and competence development. To do this, it is necessary to routinely review the program's success. This study analyzes the effects of (SIWES) after the program has finished. The research population included 96 final-year students from the Federal University of Technology, Akure, and 106 National Diploma II students from Rufus Giwa Polytechnic, Owo, both in Ondo state. The data for the research was acquired by delivering a questionnaire to the participants. The gathered data were analyzed through Mean, Standard Deviation, and T-test. Findings from the research showed that graduates understood the goals and impacts of SIWES on skill development. The research identified variables influencing students during SIWES, examined their implications, and made ideas to improve the program's goal of skill development. The study then proposed that SIWES be adequately presented to possible sponsors, such as banks, multinational enterprises, and other corporate groups, in order to acquire support for developing placement opportunities, training, equipment, facilities, and direct finance for SIWES. The conclusions of this research, based on the (SIWES), may have consequences for creating policies and strategic plans aiming at enhancing students' labor market preparation.

Keywords: Training, SIWES, Skill acquisition, Competencies.

Copyright © 2025 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International License (CC BY-NC 4.0).

Introduction

The ITF developed the Student Industrial Work Experience Scheme (SIWES) in 1973 to alleviate the problem of Nigerian university graduates lacking the practical skills required to secure jobs in the industry. SIWES Programs are

a skills-acquisition program designed for incorporating theoretical as well practical experience in Nigerian's commercial and industrial operations (Onwuji, 2004)

The SIWES is a structured training effort that is monitored meant to help participants strengthen

their vocational abilities. According to the Industrial Training Fund (2003), it is a necessary curriculum for all Nigerian postsecondary students obtaining degrees in specialized engineering, technical, business, applied sciences, and applied arts. SIWES is consequently a complete curriculum that encompasses all university, polytechnic, and educational institution courses. SIWES is consequently not especially suited to any one area of study or specialty.

The benefits come from the talents and capabilities that students who thoroughly engaged in industry training develop. For persons who get industrial training, competent manufacturing skills are permanent assets that cannot be taken away. This is because the information and abilities obtained during training are internalized and used while executing actions (Olusegun, 2009).

Because industrial training improves knowledge and understanding of the aspects that lead to changes in industrial training and their ramifications, it may aid in the resolution of training difficulties at both the national and individual levels. Concerns over the rising growth of student trainees in Nigeria motivated the formation of industrial training. The general belief is that it is only significant in nations where swift industrial training is not an issue. To preserve or change the present pattern of industrial training program exercise at tertiary institutions, countries intending to expand student trainees and move their development rates in other sectors must also consider industrial training. Thus, the SIWES aims to give students privilege to apply and relate their academic knowledge to the actual work environment.

One of SIWES's numerous challenges is a paucity of adequate attachment sites for various courses; most present students lack the needed experience in the field of industrial training programs. Many students never considered it while completing their course tasks. Students are indifferent in industrial training since it cannot be examined at the school certificate level.

This study focuses mainly on the investigation of impact SIWES has on students' attitude changes after they complete their degree.

LITERATURE REVIEW

2.1 Prospect of SIWES among Nigerian Students

The Student Industrial Work Experience Scheme (SIWES) is a structured training initiative that focuses on specific learning and career objectives with the purpose of increasing participants' occupational competencies. SIWES curriculum is used by students in Nigerian tertiary studying specialized engineering, technology, business, applied sciences, and applied arts and must finish (ITF 2004).

SIWES is a skill development program aimed to help students from universities, polytechnics/monotechnics, and colleges of education make the transition from college to the workplace (Akerejola 2008). Oyedele (1990) identified work experience as an educational program in which students complete work responsibilities while attending school. The Student Industrial Work Experience Scheme (SIWES) began in 1974, with 748 students from 11 higher education institutions. By 1978, the effort had grown to cover more than 5,000 students from 32 universities. However, the Industrial Training Fund withdrew from supervising the plan in 1979 owing to logistical issues and the mounting financial load related with SIWES's fast growth (ITF, 2003). The SIWES program has evolved considerably since the ITF commenced operations in 1984. Between 1985 and 1995, the number of SIWES institutions and students expanded from 141 to 57,433. Between 1995 and 2003, SIWES engaged 176 institutions and 210,390 students. This climbed to 204, with 535,210 students from these institutions taking part in the program. Between 2003 and 2011, the number of institutions participating in the system expanded to 215, with 610,122 students (ITF 2008).

Students who are attentive about vocational training profit from the skills and competences they build. These good manufacturing talents are lifetime advantages that graduates of industrial training cannot lose. This is because the knowledge and talents learned throughout training are absorbed and useful when it comes time to do job (Olusegun, 2009).

There is the problem of insufficient finance. SIWES' underfunding has generated a backlog of

student allowance payments. As a consequence, students' perspectives toward SIWES involvement have become more moderate. Students' wrath about nonpayment of their allowances may produce problems and ruin their image, among other negative results (Olusegun, 2009).

It should be highlighted that the SIWES program is meant to acquaint trainees. Mbata (2000), is of the assertion that the approach has failed to achieve its expectations owing to a lack of collaboration between business and educational institutions.

2.2 Evaluation of Student Industrial Work Experience Scheme (SIWES)

According to Ajidahun (2007), training is a vital component of vocational or career development, and it is rapidly becoming a global and omnipresent phenomena in any institution, the absence of which spells doom, and the presence of which defines the success of any organization. Ezeali and Esiagu (2009) describe training as the systematic, planned development of information, talents, and attitudes necessary by an industrial worker to master a given scenario or execute a certain task within an organizational framework. They also stressed the relevance of training outside the job.

Ukwuoma and Akanwa (2006) highlighted, quoting Robinson (1998), that successful training leads in an improvement in job-related knowledge as well as a comprehension of the firm's structure and business units. Ajidahun (2007) characterizes training's function in human resource development as irreplaceable and unquantifiable. Training is crucial for boosting worker efficiency and competency.

According to Onwuji (2004), the SIWES Programmes are skill development programs that integrate theory and practice in our country's industrial and commercial activities. According to Ugwuanyi (2010), SIWES is a cooperative industrial internship program in Nigeria that involves higher education institutions, industries, the Federal Government of Nigeria, the Industrial Training Fund (ITF), the Nigerian Universities Commission (NUC), and the National Bureau of Technical Education/NCCE.

However, Wodi and Dokubo (2009) warned that if the program is not well executed, graduates of the program may struggle to acquire job in their professions or make a seamless transition from school to employment. Their discovery reveals SIWES is achieving its goals. Nonetheless, it is crucial for human resource development in Nigeria, and students, according to Ugwuanyi (2010), must be cognizant of what the current world has in store for them and adapt accordingly.

2.3 Collaboration between colleges and industry encourages technical growth in Nigeria.

According to the ITF (1989), SIWES is a linkage intervention to connect theory and practice existing between tertiary institutions of learning and industries. It was started in 1973. The SIWES curriculum was developed for preparing and exposing students at higher institutions of learning to the real-world industrial employment environment they would confront when they through with their academic in tertiary institutions.

According to the Information and Guidelines for SIWES (2008), SIWES lasts four months in polytechnics and colleges while it takes six months in universities for students in penultimate year of graduation. The amount of months required for the SIWES programme is determined by the course of study of the students.

According to Idirisi (2007), the purpose of SIWES is coherent with one of the principles of vocational education, which requires that students must work in the same workshop and industry after graduation. Ogwo (2000) describes the Student Industrial Work Experience Scheme as a quadrilateral arrangement that includes the ITF, coordinating agencies such as the National University Commission (NUC), the National Board for Technical Education (NBTE), the National Commission for Colleges of Education (NCCE), educational institutions, and industries. According to Okorie (2001) and Alagbe (2007), SIWES, as an arm of ITF, has emerged as a motivational element in giving students with real-world experience and making education relevant to them.

Vocational education courses have been given at Nigerian tertiary institutions for many

years, but there is still a need for strong school-industry relationships to promote economic development via graduate quality. The school-industry link is a cooperation that blends formal education with relevant industrial job experience to assist pupils obtain information, abilities, and a good attitude toward work (Odu, 2010).

According to Olaitan, Nwachukwu, Igbo, and Ekong (1999), Nigerian training colleges struggle to keep up with technical changes. Majority of colleges lack the up to date and pertinent equipment that are essential for training the students while others are in disrepair or out of date, provoking recent higher education union strikes. This, according to Okorie (2000), may be one of the reasons why private enterprises regularly complain that universities and other technical schools deliver little or no meaningful work training.

To that objective, UNESCO (2002) stressed the advantages of integrating vocational education and industry:

1. Students can learn early through familiarization with place of work environment via practical experience.
2. Educational institutions require professional support in order to modify their curricula according to labor market requirement, for cutting-edge technology. Joint ventures with firms may generate additional revenue streams.
3. Enterprise may profit directly from cooperation at various periods, enabling it to discover students with the strongest potential for long-term contracts at an early stage.

UNESCO (2002) claimed in its study that numerous countries have devised a successful approach to educate their people in new technologies via collaboration between smart enterprises and training institutes, which include:

1. On the company premises, trainers and educators employ industrial equipment.
2. Joint, collaborative research and training management initiatives; and
3. Industrial and commercial enterprises give specialized equipment to training centers.

2.4 Related Empirical Studies

Some comparable empirical research has been uncovered in the realm of this study. Adekola (2001) completed study on the assessment of SIWES supervision in Delta State. The study's aims were to evaluate whether SIWES was appropriately supervised as well as to identify variables that restrict SIWES supervision. The study made use of descriptive method. Similarly, Jen (1992) reviewed the SIWES Programme at Nigerian polytechnics. The main focus of the study was to examine the existing situation of the SIWES project at Nigerian polytechnics and universities, with a focus on the hurdles that contribute to inefficiency in scheme administration. Olabiyi (2004) evaluated the impact of Student Industrial Work Experience on skill development among technical college students in Lagos State. The study's goals included, among other things, determining who participates in placing students for SIWES, determining how students should participate in practical work sites. In addition, Wodi and Dokubo (2009) reviewed the Students Industrial Work Experience Scheme at five educational institutions in Rivers State, Nigeria. The study's principal purpose was to establish how much effort companies participating in SIWES administration and management put into boosting student skill development.

2.5 Conceptual Framework (Concept of SIWES)

Students Industrial Work Experience Scheme (SIWES) is a human resource development organization that integrates students from higher education institutions to industrial work practices (ITF 2003). According to the author, SIWES was developed to assist students in tertiary institutions to obtain practical skill and information that would allow them to acclimate to the world of work.

According to Osinem and Nwoji (2010), the plan's major purpose was to promote employer engagement in the educational process of preparing students for employment. The project's objective is to promote highly sought-after technical know-how for national development, as well as to produce well trained human resources essential to for building vibrant and

buoyant economy necessary from transformation of the previous narrative for a better one.

After only a few years of implementing the Industrial Training Fund Policy guidelines, the ITF observed a dearth of practical skills among locally licensed engineers and technicians (ITF, 2003). The Fund identified a major gap between theory and practice in practically focused courses at virtually all Nigerian higher education institutions. The ITF created the SIWES in 1973 to solve the well-known gap between theory and practice in college engineering and technology education.

According to Mafe (2010), participation in the scheme now includes Science, Engineering, Technology, Education, Environmental Studies, and Agriculture programs in Universities and Polytechnics, as opposed to only Engineering and Technology when it was first established; in Colleges of Education, SIWES covers NCE programmes in Technical Education, Agricultural Education, Business Education, Creative Arts and Design Education, Computer Education, and Home Economics Education.

According to the ITF (2003), university students participating in suitable courses are offered a 6-month industrial attachment at the completion of their 3rd, 4th, or 5th years, depending on their program. Polytechnic and College of Technology students pursuing National Diploma programs in relevant disciplines get 4 months of industrial attachment at the conclusion of their 1st year, whereas Colleges of Education students get 4 months at the end of their second year. Preparatory and postgraduate students are not eligible (ibid).

2.6 Theoretical Framework

2.6.1 Theory of Skill Acquisition

Sedaei (2003) introduced the idea of acquiring skills, based on Hubert and Stuart Dreyfus' 1973 thesis, which stated that skill development marks the disparity between "knowing that" and "knowing how".

Sedaei (2003), quips in his assertion that a person goes through at least five stages of diversified comprehension of specialized jobs and decision-making processes as he learns and enhances his talents. There are five phases: beginner, advanced beginning, competence, competency,

and expertise. The authors reasoned that, while individuals learn a skill via teaching and practice, they do not appear to make a seamless transition from rule-driven "knowing that" to experience-based "knowing how". The authors recognized that a person must pass through the five phases in order to reach a specific degree of skill or knowledge.

2.6.2 Experiential Learning Theory

David Kolb developed experiential learning theory in 1984. At Case Western Reserve University in Cleveland, Ohio, David Kolb taught organizational development (Kolb, 1984). Experiential learning theory (ELT), as described by Kolb and Boyatzis (1999), describes learning as the process by which experience is turned into knowledge. The authors believed that comprehending and modifying experience work together to develop knowledge. Similar to this, Kolb and Boyatzis (1999) stated that some individuals learn new things by depending on their senses, immersing themselves in physical reality, and experiencing the tactile, tangible, and concrete parts of their environment. Instead of utilizing emotion as a guide, some choose to think about, analyze, or deliberately plan in order to acquire new information via symbolic representation or abstract conceptualization. In the process of converting or digesting an event, some people chose to attentively monitor persons involved and evaluate what occurred. However others decide to get right in and get things done. The doers are noted for proudly enjoying active exploration, while the viewers prefer meditative observation.

2.6.3 Two-factor theory of Job Satisfaction

Manisera, Dusseldorp, and Vander (2005) cite Herzberg's two-factor hypothesis. According to the notion, job satisfaction and dissatisfaction are influenced by diverse sets of circumstances. According to the theory, workplace satisfaction is governed by a variety of elements relating to the work itself, including the sort of employment, job accomplishment, chances for personal growth and acknowledgment, and prospects for progress. Herzberg refers to these attributes as motivators as they should drive

people to strive for greater achievement. Job discontent, on the other hand, is induced by issues relating to the job itself. Management must maintain the sanitary criteria on a regular basis as they are never entirely fulfilled.

Benefits of SIWES to Students in Tertiary Institutions

SIWES serves as a critical bridge between theoretical classroom instruction and practical industrial experience. It focuses on the experiential skills as well as knowledge that students from Nigerian institutions gather industrial training. It provides students in Nigerian tertiary institutions with opportunities to apply academic knowledge to real-world settings, enhance employability, and develop professional competencies.

Key Benefits of SIWES include the following

Practical/technical skill acquisition:

SIWES gives students hands-on experience with equipment, procedures and real tasks from their field, helping them translate classroom theory into practical competence. It plays major role in linking theoretical knowledge with practical skills for better understanding and performance (Anyaneh & Ochuba, 2019).

Improved employability / workplace readiness:

Not all theoretical skills acquired by the students can be translated directly into really real world work environment. SIWES helps in grooming students' capability to fit in into the workplace with experiences they might have gathered. Participation increases students' employable skills (technical and soft skills), making graduates more attractive to employers (Anyaneh & Ochuba, 2019).

Entrepreneurship and self-employment development:

Exposure to industry practices helps some students identify business opportunities and acquire skills needed to start micro-enterprises (especially in technical and vocational areas). Acquired skills through SIWES reduce total

reliance of all students on government for job opportunities (Abusomwan & Edokpolor, 2024). They can create job opportunities for themselves and employ others through the skills they have acquired. Typical examples are small enterprises such as solar converter, GSM repair, computer repair etc.

Professional socialization and networking:

Placements expose students to workplace culture, professional ethics, supervisors/mentors and networks that can lead to future job opportunities or mentorship.

Improved academic performance and clearer career focus: Engaging students in SIWES exposes students to practical aspect of their study. This helps to improve their performance academically.

Studies have found links between SIWES participation and better subsequent academic performance for some cohorts and many students report increased clarity about career choices and specializations (Anyaneh & Ochuba, 2019).

Personal and interpersonal skill development: participation in SIWES plays major role in the development of both personal and interpersonal skill. Students commonly gain communication, teamwork, problem-solving, time management and workplace adaptability skills (Ogun State SIWES study, 2022).

Bridges gap between industry and tertiary institutions:

SIWES helps align curricula with industry needs by revealing skills gaps and informing educators about required practical competencies (Abusomwan & Edokpolor, 2024).

Method and procedure

The study demographic comprised 500 Level Students from the Federal University of Technology, Akure, and National Diploma II students from Rufus Giwa Polytechnic, Owo, who had completed the SIWES curriculum. The table below illustrates their population.

Table 3.1: Research Population

School	Number of Students
Federal University of Technology, Akure (500 Level Students)	1925
Rufus Giwa Polytechnic, Owo. (ND II) Students	2120
Total	4045

Source: Field Survey, 2016

The sample for this inquiry was generated using a standard random sampling procedure. A basic random approach was employed to identify two schools at random from among Ondo state's tertiary institutions. The overall sample size was 202. The research technique incorporates quantitative methodologies. The researchers at each institution provided questionnaires to the respondents. They were offered instructions on how to complete the questionnaire and informed that their replies would be kept confidential. Schools were required to give the names of SIWES training recipients. Completed surveys were obtained from respondents soon after they were filled out.

The data acquired from respondents via questionnaire was coded and analysis was carried out through the use of SPSS software. Bivariate analyses were employed to investigate the correlations between the variables. The statistics were then supplied in frequency and percentage format via tables.

Research Questions

1. What is the extent of the knowledge acquired during the SIWES Programme in relevance to their course of study?
2. What is the impact of SIWES on students after completion of the programme?

3. What are the limiting factors affecting the effectiveness of the SIWES programme?

Result and discussion

Extent of Knowledge Acquired During the SIWES Programme

4.1 Orientation Programme Organized before Commencement of SIWES Programme

The sample for this inquiry was generated using a standard random sampling procedure. A basic random approach was employed to identify two schools at random from among Ondo state's tertiary institutions. The overall sample size was 202. The research technique incorporates quantitative methodologies. The researchers at each institution provided questionnaires to the respondents. They were offered instructions on how to complete the questionnaire and informed that their replies would be kept confidential. Schools were required to give the names of SIWES training recipients. Completed surveys were obtained from respondents soon after they were filled out.

The data acquired from respondents via questionnaire was coded and analysis was carried out through the use of SPSS software. Bivariate analyses were employed to investigate the correlations between the variables. Tables were then used to present the data in frequency and percentage format.

Table 4.1.1 Orientation Programme Organized by ITF and Your Institution before Commencement of SIWES Programme

	Frequency	Percent	Cumulative Percent
Yes	202	100	100
No	-	-	100
Total	202	100	

Source: Field Survey, 2016.

Skills/Training Method Employed during SIWES Programme

The survey indicated in Table 4.5 the skills/training technique applied during the SIWES program for knowledge acquisition: 73.3% respondents were of the opinion that lecturing method was employed, 47.5% were of the opinion that demonstration method was used, 93.1% were of the opinion that practical method was used, 19.8% were of the opinion that field

trip/site inspection method was used, 47% were of the opinion that supervision method was used, and 19.3% were of the opinion that brainstorming was used. This demonstrates that the majority of respondents (93.1%) gained information in a practical way, while 19.3% claimed that knowledge was acquired via the brainstorming process. This suggests that a fewer number of kids brainstormed with their supervisors. Inadequate brainstorming may likely contradict the project's aim and dissuade students from fully participation.

Table 4.1.2 Skills/Training Method Employed during SIWES Programme

Training Methods	Yes	Percent	No	Percent
Lecture	148	73.3	54	26.7
Demonstration	96	47.5	106	52.5
Practical	188	93.1	14	6.9
Field Trip	40	19.8	162	80.2
Supervision	95	47	107	53
Brainstorming	39	19.3	163	80.7

Source: Field Survey, 2016.

4.1.3 Operating Machine during SIWES

Table 4.1.3 below indicates that 72.8% of the participants in the programme are of the

opinion that they had access to operate machine during their SIWES programme while (27.2%) were not.

Table 4.1.3 Were you Allow to Operate Machine during SIWES.

	Frequency	Percent	Cumulative Percent
Yes	147	72.8	72.8
No	55	27.2	100
Total	202	100	

4.2 Impact of SIWES on Student after Completion of the Programme.

4.2.1 Student Performance Rating during SIWES Programme

According to Table 4.2.1, 47.0 percent of participants regarded themselves outstanding

during the SIWES Programme, while 45.5% ranked themselves "Very Good". 6.4% of respondents assessed themselves as "good," while the remaining 1% ranked themselves as "average."

Table 4.2.1 Respondent Rating their Performance during SIWES Programme

	Frequency	Percent	Cumulative Percent
Excellent	95	47.0	47.0
Very Good	92	45.5	92.6
Good	13	6.4	99.0
Average	2	1.0	100.0
Total	202	100.0	

Source: Field Survey, 2016.

4.2.3 Supervisor Performance Rating during SIWES Programme

Table 4.2.3 demonstrates that 75.7% of respondents assessed their supervisors'

performance as "Very Good" during their SIWES Program, while 16.8% rated them as "Excellent". 6.4% of respondents evaluated their boss as "good," while the remaining 1% assessed them as "average."

Table 4.2.3 Respondent Rating their Supervisor Performance during SIWES Programme

	Frequency	Percent	Cumulative Percent
Excellent	34	16.8	16.8
Very Good	153	75.7	92.6
Good	13	6.4	99.0
Average	2	1.0	100.0
Total	202	100.0	

Source: Field Survey, 2016.

According to table 4.2.4, the majority of respondents (28.7%) stated that SIWES increased their practical talents and competence, demonstrating that hands-on training was still the most important advantage of the program. 22.8% indicated greater employability and job

readiness, indicating that SIWES prepares students for the labor market. A smaller minority (6.4%) responded that the key advantage was a stronger mastery of classroom theory, demonstrating that direct technical application is more important than theoretical reinforcement.

Table 4.2.4 Impact of SIWES on Students after Completion of the Programme**Table 1: Frequency Distribution**

Impact of SIWES	Frequency (f)	Percentage (%)	Rank
Improved practical skills and competence	58	28.7	1
Enhanced employability and job readiness	46	22.8	2
Exposure to real work environment	38	18.8	3
Improved technical knowledge and innovation	28	13.9	4
Development of interpersonal and communication skills	19	9.4	5
Better understanding of classroom theory	13	6.4	6

4.3 Limitations to the Actualization of the Objectives of the SIWES programme

4.3.1 Duration before Securing SIWES Placement

The field survey, as revealed in Table 4.9, indicated that larger number of the participants (59.4%) secured their SIWES placement in less than one month before commencement, 19.8 of them secured it less than one month after the

expected dates of commencement, 10.9% of the respondents secured their SIWES placement three months or more before commencement, 6.9% secured their SIWES placement two months or more before commencement, and 3.0% secured their SIWES placement. According to the data, the majority of students were able to attain SIWES placement within the prescribed time limit.

Table 4.3.1 Duration before Securing SIWES Placement

	Frequency	Perc ent	Cumulative Percent
Less than One Month before Commencement	120	59.4	59.4
Two Months before Commencements	14	6.9	66.3
Three Months and Above before Commencement	22	10.9	77.2
Less Than One Month After the Expected Dates of Commencement	40	19.8	97.0
More Than One Months After the Expected Dates of Commencement	6	3.0	100.0
Total	202	100. 0	

Source: Field Survey, 2016.

4.3.2. Rate of supervision by your Industrial Based Supervisor within a Week

Table 4.10 shows that 44.2% of respondents think their Industrial Based Supervisor supervises them daily, 29.2% think

they are monitored once a week, and 19.8% and 16.8% think they are supervised twice a week or not at all. This illustrates that comprehensive monitoring of students is required to ensure that SIWES objectives are met.

Table 4.3.2 How often were you supervised by your Industrial Based Supervisor within a Week.

	Frequency	Percent	Cumulative Percent
Daily	69	34.2	34.2
Once	59	29.2	63.4
Twice	40	19.8	83.2
Not at All	34	16.8	100.0
Total	202	100.0	

4.3.4 Rate of supervision during SIWES Programme apart from Industrial Based Supervisor

According to Table 4.3.4, (79.3%) of respondents stated they were monitored during the SIWES Programme in addition to their Industrial Based Supervisor, whereas (20.7%) believed they were supervised simply by their

Industrial Based Supervisor. This indicates that pupils are not appropriately monitored by teachers at their schools. Students should be routinely checked by their professors. Students are more inclined to admire their academic supervisors than corporate bosses. This is because they recognize what they would lose if they do not participate.

Table 4.3.4 Supervised during SIWES Programme apart from Industrial Based Supervisor

	Frequency	Percent	Cumulative Percent
Yes	161	79.3	79.3
No	41	20.7	100.0
Total	202	100.0	

Source: Field Survey, 2016.

According to Table 4.3.5 45.7% of respondents believed they were supervised once during the SIWES Programme by a supervisor other than an

Industrial Based Supervisor, while 35.3% and 19.1% claimed it was twice or more, respectively.

Table 4.3 5 Times Supervised during SIWES Programme apart from Industrial Based Supervisor

	Frequency	Valid Percent	Cumulative Percent
One	78	45.6	45.6
Twice	62	35.4	81.0
More than Twice	33	19.1	100.0
Total	173	100.0	

Source: Field Survey, 2016.

5.2 Conclusion

The requirement of industrial training in our schools is vital right now since it would aid Nigerian pupils construct human resources while they are still in their reproductive years. The objectives of SIWES can only be achieved if educational institutions, businesses, and students are prepared to change their perspectives toward the SIWES activity. Everyone must be devoted to perfecting their fitness program through doing the right thing when appropriate. The implication of this is that tertiary institutions of learning need to upgrade their administrative operations, expressing gratitude to industries for their readiness to accept to train students via letters, initiating support, and programs. This will surely aid immensely to the creation of collaborative ties between Nigerian higher education institutions and companies.

Based on the facts acquired so far, there appears to be a wide range in the actuality and execution of the SIWES aims. It is distressing to discover that one of the challenges inhibiting the SIWES's performance is a lack of appropriate exercise coordination and monitoring. However, all hands must be on deck to guarantee that students are appropriately prepared with the skills and information required for work efficiency.

5.3 Recommendation

The following are recommended based on findings from the research carried out.

- i. Regular seminars, workshop field trips, and excursions should be offered to expose students to the most effective technique of performing industrial training operations. This will enable both sides to remark on the SIWES activity's merits and defects.
- ii. SIWES should be effectively presented to prospective sponsors, such as banks, international organizations, and other commercial entities, in order to acquire placement opportunities, training, equipment, and facilities, as well as direct assistance for SIWES.
- iii. SIWES should be effectively presented to prospective sponsors, such as banks, international organizations, and other commercial entities, in order to acquire placement opportunities, training, equipment, and facilities, as well as direct assistance for SIWES.
- iv. The several organizations participating in the administration of SIWES courses should contact the many enterprises ahead of time in order to restrict or eliminate rejection of the students for the programme.

References

- Abusomwan, V. I., & Edokpolor, E. J. (2024). The Role of SIWES in developing students' skills in Nigeria tertiary institutions. *International Journal of Entrepreneurship, Technology and Innovation*, 1(2), 161–166.
- Adekola, Y.A. (2001). Evaluation of SIWES Supervision in Delta State. *Unpublished M.Ed Thesis*, University of Nigeria, Nsukka.
- Adeniyi, E.O and I.T Ladun, (1997): "Women in National Development: The Place of Science, Technology and Mathematics education, 11th Annual congress proceeding of the Nigeria Academic of Education.
- Afolalu, F.O. (2009). Towards Effective SIWES Curriculum Development in Applied Sciences for Adequate Skill Utilization: A Case Study of the School of Applied Science, NuhuBamaili Polytechnic, Zaria. *The Pacific Journal of Science and Technology* 10(1), pp 234-239.
- Ajidahum, C.O. (2007). The Training, Development, and Education of Library Manpower in Information Technology in University Libraries in Nigeria. *World Libraries* 17 (1): 1-14
- Akerejola, O. (2008): Information and Guidelines for Student Industrial Work Experience Scheme available: http://www.itf_nigeria.org/docs/SIWES_of_guide_pdt
- Alagbe, O.K. (2007). Strategies for cooperation between industries And Technical Institutions in Lagos State.(Unpublished PG/MED thesis).University of Nigeria, Nsukka.
- Ani, A. O. (2004): Women in Agriculture and Rural Development. PriscaquilaPublishers, Maiduguri, BornoState, Nigeria.
- Anyaneh, V. K., & Ochuba, C. D. (2019). Influence of Students' Industrial Work Experience Scheme (SIWES) in Enhancing Employable Skills of Business Education Students in Federal Tertiary Institutions in Anambra State. *Multidisciplinary Journal of Education, Research and Development*, 3(1).
- Arnold, J. and Fonseca, M.C. (2004). Multiple Intelligence Theory and Foreign Language Learning: A Brain-based Perspective. *International Journal of English Studies* 4(1), pp 119-136.
- Dauda, M.O.S. (1998): The Relevance of Science and Technological Subjects in Female Education, A paper presented at the workshop organized by the Guidance and Counseling Unit, Kaduna State Ministry of Education, Kafanchan and Godogodo Zonal Education held at GGSS Kafanchan.
- Ekwunke C. U. (2008) Strategies for Improving Manpower Production in Vocational Technical Education in Nigeria: Global journal of educational research Vol. 7, No. 1&2 pg. 2.
- Eze, N. M (1998), Industrial Work Experience: A Medium for actualization vision 2010 through Home economics education. *Journal of women in College of Education*, pp. 154-160.
- Ezeali, B.O., &Esiagu, L.N. (2009). *Public personnel management: Human capital management strategies in the 21st century*. Onitsha: Chambers Books.
- Idirisi, I. (2007). Comparative graduation of the perception of electrical and building students regarding technical college programme implementation features in Nigeria State. *Journal of Vocational and Adult Education*. 6(1), 100-109
- Industrial training handbook (2008) published by: Industrial Relating Committee, March 2008. (ITM, 2008): Industrial Training Manual (2008): School of Engineering and Science, Curtin Sarawak. Eee.wikipedia.com.retrieved10january2012.
- Industrial Training Fund (2003).Students Industrial Work Experience Scheme in Human Resource Development in Nigeria. Jos: Industrial Training Fund.
- Industrial Training Fund (1989).Essential Foundations for economic and Industrial development in Nigeria.The 9th Annual National Training Conference. (ITF) Conference Proceedings.

- Jen, S.U. (1992). Appraisal of the Students Industrial Work Experience Scheme Programme in Nigerian Polytechnics. *Unpublished M.Ed Thesis*, University of Nigeria, Nsukka.
- Kolb, D.A. & Boyatzis (1999). *Experiential Learning Theory: Previous Research and New Directions*. Retrieved on 07/12/2011 from www.d.umn.edu/~kgilbert/..731/.../experiential-learning-theory.pdf
- Mafe, O.A.T. (2010). Effectiveness of SIWES with Respect to Chemical Engineering. A Paper Presented at the Workshop on “Achieving the Necessary Professional Standards in Chemical Engineering in our Universities” organized by the Nigerian society of chemical engineers, University of Lagos.
- Mafe, O.A.T. (2009). *Guide to Successful Participation in SIWES*. Lagos: Panaf Publishing Inc.
- Manisera, M.; Dusseldorp, E. & Vander, K. (2005). Competent Structure of Job Satisfaction Based on Herzberg’s Theory. Retrieved on 09/11/2011 from www.data-theory.nc/pages/fullmanuscript-finalem.pdf.
- Mbata, A. (2000): Towards a More Effective Manpower, Training and Development in Technical Education. Lagos: Journal of Technical Education Board Review Vol. 2, No. 2 pp. 205.
- Odu, K. O. (2010). School- industry link in entrepreneurship in vocational technical education in the face of global economic crises in Nigeria. *Unizik Orient Journal of Education*. 5(2), 8-14.
- Ogun State SIWES study. (2022). Students’ perception of SIWES: Benefits and challenges (Ogun State). ResearchGate / Journal of Educational and Social Research.
- Ogwo, B.A. (2000). Industry-based supervisors’ training techniques in the students’ industrial work Experience Scheme (SIWES) in nine states of Nigeria. *Nigeria vocational journal*, 10(3), 39-43.
- Oju, K. O. (2008). School- industry link in entrepreneurship in vocational technical education in the face of global economic crises in Nigeria. *Unizik Orient Journal of Education*. 5(2), 8-14.
- Okorie, J.U. (2001). *Developing Nigeria’s workforce*. Calabar: Page Environs Publisher.
- Olabiya, O.S. (2004). Relevance of Students Industrial Work Experience to Skill Acquisition among Technical College Students in Lagos State. *Unpublished M.Ed Thesis*, University of Nigeria, Nsukka.
- Olaitan, S.O., Nwachukwu, C. E., Onyemachi, G.A., Igbo, C.A. & Ekong, A.O. (1999). *Curriculum development and management in vocational education*. Onitsha: Cape publisher
- Olusegun (2009): Effectiveness of SIWES with respect to Chemical Engineering. www.http//.wikipedia.com/retrievedjan,2012.
- Onwubiko, G.C. (2003). Assessment of the Supervised Students Industrial Work Experience Scheme in Abia State. *Unpublished M.Ed Thesis*, University of Nigeria, Nsukka.
- Onwuji, J. (2004). The Role of Industrial Placement Centre (IPC) in the training of our Graduands. *Fedponk News*, 1(4):30-31.
- Osinem, E.C. & Nwoji, U.C. (2010). *Students Industrial Work Experience in Nigeria: Concepts, principles and practice*. Enugu: Cheston Agency Limited.
- Oyedele, J.P. (1990). Co-operative work experience programme for youths in business education. *Business Education Journals* 2 : 30-53.
- Rene, V.D.; Lloyd, H.L. & David, J.U. (1968). *A theory of Work Adjustment*. Retrieved on 17/12/2011. From www.eric.ed.gov/ericwbportal/recorddetail?Accno=Edo31740
- Sedaei, S. (2003). *Theory of Skill Acquisition by Hubert and Stuart Dreyfus*. Retrieved on 07/12/11 from www.samsedaei.com/HubertandStewartDreyfus.pdf.
- Ugwu, E.I. (2010). Towards Effective Education and training of Library and information Science delivery in the south East geographical zone of Nigeria. *Journal of*

Library and Information Science & Technology, 1(1): 17-33.

Ugwuanyi, E.F. (2010). Challenges of Students' Industrial work Experience Scheme (SIWES) in Library and Information Science in the ICT environment library. Available:

<http://www.faqs.org/periodicals>.

Ulwuoma, S.C & Akanwa, P.C. (2006). Human Resources Development programmes in Study of Universities in Imo State. *Samaru Journal of Information Studies*, 8(2): 38-47.

Umoh, M.I. (2000). Evaluation of the Implementation of Students Industrial Work Experience Scheme (SIWES) in Agriculture in Colleges of Education in

Eastern Nigeria. *Unpublished Ph.D Thesis*, University of Nigeria, Nsukka.

UNESCO (2002). Technical and vocational education and training for the twenty-first century. Paris: UNESCO Publication.

UNEVOC (2003). Establishing partnership between technical/vocational education and industry. Retrieved on 12th February 2011 from <http://www.unesco.org>

Wodi, S.W and Dokuba (2009); An Appraisal of Student Industrial Work Experience Scheme (SIWES) in Five Tertiary Institutions in Rivers State, Nigeria; *European Journal of Social Science*, 2009.