

## Perceptions of strategies for revitalizing industrial work experience scheme toward vocational and business education graduates' employability in public universities, Nigeria

Ibhade Joy Ojeaga\* and David Nwanna Dumbiri

Department of Vocational and Technical Education, University of Benin, Nigeria

\*Corresponding Author: [ibhade.ojeaga@uniben.edu](mailto:ibhade.ojeaga@uniben.edu)

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**Abstract:** This paper investigated educators and students' of vocational and business education students' perceptions of strategies for revitalizing industrial work experience scheme in public universities in Edo State. Four research questions and one hypothesis guided the study. The study utilized the descriptive survey. A sample of 66 vocational and business educators and 178 students making a total 242. The study used stratified random sampling technique. The instrument was a 4-point scale. It was rated Strongly Agree, Agree, Disagree and Strongly Disagree and assigned weights of 4, 3, 2 and 1 respectively. Two experts in Vocational Education validated the instrument. Reliability was done with test-retest method. 20 copies of the instrument were administered on 20 business education students who are in the population but not in the sample. The first and second administrations of the instrument were done in an interval of one week interval. Analyses of the data was done with PPMC (Pearson Product Moment Correlation) Coefficient and the reliability coefficient of the instrument yielded  $\alpha = .78$ . Data for the study was analyzed with percentage, mean, standard deviation and t-test. Findings revealed that vocational educators and students agreed that all the institution based strategies such as train the institution based supervisors on the goals of ITF, identify placement opportunities for student's attachment and plan practical contents and real life learning experience among others are necessary for effective revitalization of SIWES.

**Keywords:** Perceptions, Strategies, Public Universities, Revitalizing

### 1. Introduction

Nigeria is acclaimed to be among the poorest countries of the world with a teeming youth population that seem to lack self-reliant or self-employment skills. Many concerned persons blame the unemployable condition of the youths on the nation's educational system. According to (Akudolu, 2010), at the introduction of Western Education in Nigeria, emphasis was mainly on the acquisition of the 3Rs (reading, writing and arithmetic) with the overarching aim of preparing the learners for "white collar" jobs or for employment by the missionaries or colonial government. According to (Omoniwa & Adedapo, 2017), in the present day knowledge based economies that have emerged following globalization and information technology revolution, education especially university is expected to play a more pivotal role by generating, harnessing and transmitting knowledge for sustainable development and improved standard of living through skills acquisition and entrepreneurship. Unfortunately, it appears that university education in Nigeria generally and vocational and business education in particularly in public universities are not well equipped to carry out these responsibilities effectively at the moment. The current curricula of vocational and business education programmes at university level seem to disagree with the employment demands

in the workplace ([Alao et al., 2022](#)) thereby creating serious crises of unemployment and unemployability among graduates.

([National Bureau of Statistics, 2020](#)) reported that when considered by educational status, unemployment of youth with first degree/HND stood at 40.9%. Under the age-groupings, the highest rate of unemployment was recorded among the 15-24-year age-group with 40.8%, followed by those aged between 25-34 with 30.7%, together the youth population recorded an underemployment rate of 35.4%. Thereby making a combination of unemployment and underemployment rates of those aged between 15-24 to be 71.3%. Meanwhile, International Labour Organization (ILO) specified that the concept of unemployment covers persons aged 15–64 who during the reference period (which is usually the week preceding the time the survey is administered) were available for work, actively seeking work, but were unable to find work as reported by ([Chukwuma, 2015](#)). Unemployability on the other hand was conceptualized as:

*means the development of skills and adaptable workforces in which all those capable of work are encouraged to develop the skills, knowledge, technology and adaptability to enable them to enter and remain in employment throughout their working lives (HM Treasury in ([McQuaid & Lindsay, 2005](#))).*

Many politicians, parents and researchers are of the view that the main problem with Nigeria youth is not unemployment but unemployability. According to ([Pantami, 2022](#)), the main challenge is not unemployment. Pantami stressed that unemployment is not discarded as a problem, but the major challenge is unemployability, a situation where a graduate cannot be able to do the technical work that the certificate shows that was studied. Also, ([Chidiebere et al., 2014](#)) noted that as far as the formal sector is concerned, the average Nigeria graduate is not employable and, therefore, does not possess the skills needed by the employers of labor for a formal employment. ([Chidiebere et al., 2014](#)) blamed the problem of youth unemployability on Nigeria's education system which is accused of liberal bias. Emphasizing that the course contents of most tertiary education in Nigeria appear to lack entrepreneurial contents that would have enabled graduates to become job creators rather than job seekers. This makes many of the graduates including those from vocational and business education not productive and have actually been reduced to petty traders and smugglers without the needed employable skills. According to ([Odu Obor & Kayode, 2022](#)), despite the daily increase in the number of graduates in Nigeria, employers are not satisfied with the quality of several employees because the lack skills and competencies for meaningful employment. Thus, the problem of Nigerian graduates including those from Vocational and Business Education appear to be more of unemployability than unemployment because they are not skilled, they are lacking in abilities and qualities that are needed to get employed although highly educated.

The challenges of teaming graduates' unemployment cum unemployability from the nation's tertiary institutions was foreseen by the federal government in 1972. Thus, the federal government establish the Industrial Work Experience Scheme (SIWES) through Industrial Training Fund (ITF) for engineering, vocational, technology and industrial academic programmes in the nation's universities. SIWES is a work training programme put in place by the federal government to equip undergraduate students of tertiary institutions for real life work situations they are likely to be employed upon graduation ([Nwaozor, 2021](#)). Through the programme, engineering, vocational and technology students are expected to be acquitted with practical work experiences and technologies which may not be available in the classroom. According to ([Anyaneh & Ochuba, 2019](#)), prior to the establishment of the industrial training programme, there was a serious agitation by many industrialists and other stakeholders that graduates of tertiary institutions of Nigeria do not have adequate practical knowledge necessary for employment. SIWES, therefore, was a determination by the federal government to close the gap between practice and theory in tertiary

education fields like engineering, vocational and technology education. Thus, the minimum requirement for graduation in any engineering, vocational and technology programme stipulates that students undergo in Industrial training for either 6 months or 1 year in a related industry. There so many bodies involved in the running of SIWES programme such as Industrial Training Fund (ITF), educational institutions, the industries (employers) and the students (Nwaozor, 2021). According to (Chinedu, 2022), the roles of ITF are to strategize and stipulate guidelines for SIWES operations for students. ITF also has the role to guidelines for training institutions and companies involved in the scheme and regularly organize orientation programmes for students prior to their attachment. ITF is also to receive and process list of placement from the tertiary institutions through their supervising agencies (N.U.C, N.B.T.E, and N.C.C.E), make students industrial training allowances by e-payment and make available logistics and materials for the proper conduct of the training programme.

The educational institutions equally have peculiar roles to play in ensuring the effectiveness of the scheme. According to (Chinedu, 2022), the roles of educational institutions are among others to establish SIWES co-ordination units in their respective institutions and appoint SIWES institutional coordinating staffs within their schools. The educational institutions are also to register the students and take their bank details at registration point. They are also to provide the master and placement lists of students ITF through their supervising agencies, provide job-specifications in line with all the accredited courses and award credit units for proper grading of the students and subsequently present all the duly completed I.T.F forms to I.T.F Area Office.

Apart from ITF and the educational institutions, the industries also have significant important function to perform in the effective conduct of the industrial training programme. Industries represent the various firms, industries, companies, organizations, institutions where students are dispatched for industrial training. Some of the functions of these employers are to accept trainee students and assess students on training. They are also to help student duly complete I.T.F Form 8 and logbooks.

Another stakeholder in effectiveness of the SIWES programme is the students. The students are the trainees that need the knowledge, skills, understanding and development. Their role in the effectiveness of SIWES includes among others to register for the programme and resume work punctually at their different places of attachment. According to (Ojokuku et al., 2015), the students are to complete the industrial training Commencement Attachment Form (S.C.A.F) and gets it signed by the company for onward submission to I.T.F. The students are to record all training activities and other assignments in logbook and complete I.T.F forms for assessment and payment. The students also have the duty to be diligent, honest and take proper care of the employers' equipment that they use throughout the industrial training period. Again, Mafe in (Ojokuku et al., 2015) noted that although all these bodies are important in the successful conduct of industrial training, students are the principal actors who are directly involved in its implementation, all the other actors are less important in the actual training process.

With the laudable objectives of SIWES and the number of agents and agencies involved in the service delivery of SIWES one expects actual skills equipment in real technological empowerment for the students for gainful employment after graduation. However, the reverse appears to be the case. There has been a growing concern over SIWES ineffectiveness in its service delivery. The poor skills acquisition and equipment of students by SIWES is evident in poor performance of the students in the industries when they are employed to work (Okechukwu & Agwi, 2017). The scheme appears to be greatly plagued by challenges that need decisive strategies to revamp, invigorate and regenerate and revitalize it for effective performance. Drastic measures need to be taken towards

addressing the lingering anomaly, so that the scheme does not to go into extinction in no distant time ([Nwaozor, 2021](#)). Again, ([Alao et al., 2022](#)) noted that the management of the SIWES program needs to be revisited if Nigeria is to cease producing the work force of yesterday, instead of the work force of the future. Despite the steps taken by the Federal Government, Students' Industrial Work Experience Scheme (SIWES) programme is plagued by myriads of challenges of which some appear to be institution based, students based, industries/employers based and ITF based. The researchers' observations of poor performance during SIWES, preliminary investigation and results of empirical evidences from literature about the poor performance of students after industrial training and the growing concern of stakeholders about youth unemployability including graduates from vocational and business education necessitated this investigation with a view to proffering solutions that could refocus, reinvigorate, regenerate and reposition the industrial training experience for proper students' skills acquisition. Presently, in Nigeria and particularly in Edo State, there are varied feelings among stakeholders about how much of the industrial training experience is really useful to students in terms of improving their academic performance and job readiness upon graduation ([Nwaozor, 2021](#)). This ugly situation sadly made ([Okechukwu & Agwi, 2017](#)) to recommend that since education is expensive and running an education training programme such as SIWES which fail to equip students with industrial for gainful employment is wasteful and should be discontinued. Again, ([Ikechukwu, 2016](#)) remarked that this programme faultless in paper and policy. Yet, several studies have shown that SIWES has not formed that needed bridge to close the gap between the theories and the practice as is obtained in the actual work situation.

The challenges of the institutions appears to include not giving the programme a sufficient period of time for meaningful training. According to ([Agbonghale & Iserameiya, 2017](#)), the period of SIWES programme are short to acquire meaningful experience. Also, there appear to lack of proper supervision by the institution of trainees during the exercise which makes many students not be interested or committed. Besides, many institutions do not issue employments letter and other logistics materials to students on time. This makes many students to report late to industries for the training programme. The major problems of SIWES in Nigeria are lack of proper implementation and lack of commitment by tertiary institutions, industries, government and the coordinating agencies. The ripple effect of this failure is the persistent increase in the unemployment rate of graduates rolled out of school without the requisite job competencies required in the world of work. Besides institutional challenges, observation also shows that many industries do not readily accept students for industrial training. For some of the industries, the period of the training is too short which is usually 3 to 6 months. To some others, the trainees are not usually serious and some do not show up at all while some employers complain of high level of absenteeism is among industrial trainees. Again, many employers are not open to the trainees and do not grant them access to essential information and technologies needed to acquire real life skills. ([Nwaozor, 2021](#)) also noted that sometimes the students are placed on assignments not related to their academic career while some are used as mere messengers and clerks in their offices of industrial attachment.

Olabiya, Okarfor, and Aiyelabowo in ([Ikechukwu, 2016](#)) found out in their study that inadequate supervision of students by both educators and the industrial based supervisors, disruption in the school academic calendar, and the disparities between the curriculum contents and the experience the students are exposed to during SIWES as major issues. On the part of students, ([Okechukwu & Agwi, 2017](#)) expressed worrisomeness because students sometimes abandon their places of posting when they patiently waited to see their supervisor to come and supervise them, but will not see any coming to supervise them when they are posted outside the school for Industrial Training. Empirical evidences from literature shows that students' knowledge, interest and participation in the training scheme nationwide was very low ([Nwaozor, 2021](#))([Usman & Tasmin, 2015](#)).

All these issues have made the SIWES programme to degenerate into mere formality and frivolity in Nigeria generally and Edo State in particular. However, despite the numerous challenges plaguing the SIWES programme in public universities in Nigeria generally and Edo State in particular, (Adeyewa, 2015)(Ikechukwu, 2016) are of the view that the SIWES programme could be adequately revitalized to effectively achieve its goals of preparing a vibrant and competent vocational and business education graduates for the nation's workforce there reducing the problem of unemployability. That is the position of this research work. Therefore, it has become extremely necessary and urgent to provide empirical evidence on the actual strategies needed to adequately revitalize, re-invigorate, regenerate and refocus the scheme so that it can effectively achieve its set goals. Almost all the research conducted in this area have found that the scheme has failed in achieving its stipulated objectives (Ikechukwu, 2016). Hence, there is an urgent need to examine strategies that can effectively revitalize the scheme before it is completely extinct. Strategies according to (Jimoh et al., 2013), proves a basis within which establishments outline possible plan and approach of achieving set goals and objectives. Bond in (Ikechukwu, 2016) stated that strategies of ensuring smooth school-industrial relationship for improved performance of SIWES and improving the administrative practices of industrial liaison offices in the institutions may improve on SIWES performance to enhance the beneficiaries' productivity.

The findings of this study would be beneficial to vocational and business education students, educators, administrators of tertiary institutions, Industrial Training Fund (organizer of SIWES) and researchers through publication in a reputable journal, by organizing seminars and symposia. The findings of this study would further benefit all the stakeholders in SIWES as it would provide for them empirical data on actual strategies to effectively revitalize and re-invigorate the Scheme. The findings may also be of benefit to researchers in the field of vocational and business education as it adds empirical information to existing body of knowledge on SIWES administration in Nigeria generally and Edo State in particular.

### *Statement of the problem*

Observations and a search in literature shows that SIWES which was originally design to equip students with trainings and skills that could expose them to real work experience outside institutional training has become a mere formality and frivolity because of the ineffective achievement of its objectives. There are numerous empirical data showing the various challenges of SIWES in empowering students with necessary employability skills and self-employment competences for sustainable employment in Nigeria but there is a complete dearth of empirical information on the strategies to revitalize, revamp and invigorate the Scheme. It is therefore, necessary also to provide empirical evidence on the actual strategies needed to revitalize the scheme with a view to proffering solutions that could refocus, reinvigorate, regenerate and reposition it for proper students' skills acquisition so as to make graduates more employable. This study, therefore, examined strategies for revitalizing the Students' Industrial Work Scheme in public universities in Edo State.

### *Objectives of the study*

The main objective of this study was towards investigating the tactics for revitalizing Industrial Work Experience as perceived by vocational educators and students in government public universities in Edo State, Nigeria. The study specifically investigated:

1. Institution based strategies for revitalizing SIWES programme



2. Industry based strategies for revitalizing SIWES programme
3. ITF based strategies for revitalizing SIWES programme
4. Student based strategies for revitalizing SIWES programme
5. Determine if there exist significance differences in mean responses on strategies for revitalizing SIWES programme between vocational and business educators and students.

### *Research questions*

These research questions guided the study.

1. What are the Institution based strategies for revitalizing SIWES programme?
2. What are the industry based strategies for revitalizing SIWES programme?
3. What are the ITF based strategies for revitalizing SIWES programme?
4. What are the student based strategies for revitalizing SIWES programme?
5. There is no significance difference in mean responses on strategies for revitalizing SIWES programme between vocational and business educators and students.

### *Hypothesis*

H<sub>0</sub> There is no significant difference in mean responses on strategies for revitalizing SIWES programme between vocational and business educators and students.

## **2. Methods**

This study investigated vocational educators and students' perceptions on strategies for revitalizing Students' Industrial Work Scheme in public universities in Edo State. The study was guided by four research questions and tested one hypothesis at 0.05 level of significance. This study utilized the descriptive survey design. The samples were 66 vocational and business educators and 178 students making a total of 242 using stratified random sampling technique.

The instrument was structured on 4 point scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with weights 4, 3, 2 and 1 respectively. Items of the instrument were developed by the researchers with insight gained from literature reviewed. The validity of the instrument was done by two experts in Vocational Education and one in Measurement and Evaluation. Reliability was established using test-retest method. 20 copies of the instrument were administered on 20 business education students who are in the population but not in the sample. The first and second administrations of the instrument were done at one week interval.

Data obtained were analyzed using Pearson Product Moment Correlation Coefficient and the reliability coefficient of the instrument yields  $\alpha = .78$ . The research questions were analyzed using mean and standard deviation. A mean value of 2.50 was established as the decision point to determine acceptance. This implies that a mean value of 2.50 was taken as "Agree" on any item while a mean value lower than 2.50 was taken as "Disagree". Null hypothesis was established using t-test. Rejection was made were the calculated t-value was greater than critical t-value or otherwise accepted.

### 3. Results

#### *Institution based strategies for revitalizing SIWES*

Table 1 showed positive responses to all the Institution based strategies for revitalizing SIWES with mean values which ranged 3.26 to 3.50. The values of standard deviation was from 0.69 to 0.91 showing no wide gap in the responses. Aggregate mean value of 3.36 showed that vocational educators and students agreed that all the Institution based strategies are necessary for effective revitalization of SIWES.

Table 1: Mean & standard deviation results of school based strategies for revitalizing SIWES

S/N	Institutions based strategies	N	Mean	SD	Remarks
1	Train the institution based supervisors on the goals of IT	244	3.46	.63	Agree
2	Identify placement opportunities for student's attachment	244	3.39	.70	Agree
3	Joint orientation programme with ITF for students	244	3.29	.80	Agree
4	Plan practical contents and real life learning experience	244	3.28	.84	Agree
5	Increase the training Period adequately to 1 year for universities	244	3.12	.91	Agree
6	Ensure that there is no disruption in school academic calendar	244	3.37	.74	Agree
7	There should be adequate supervision of students	244	3.36	.68	Agree
8	Post students to industries of relevance to their studies	244	3.50	.59	Agree
9	Establish efficient coordinating units with adequate staff	244	3.48	.66	Agree
10	Submit activities report on training to ITF when training ends	244	3.42	.67	Agree
11	Work with the industries in the determining job specification based on the approved learning activities for SIWES	244	3.47	.59	Agree
12	Students should be assigned to places of attachment at least 3 months before the beginning of the training	244	3.29	.81	Agree
<b>Aggregate Mean</b>			<b>3.36</b>		<b>Agree</b>

#### *Industry based strategies for revitalizing SIWES*

Table 2 showed positive responses to all the Industry based strategies for revitalizing SIWES with mean values which ranged from 3.26 to 3.52. The standard deviation values was from 0.58 to 0.68 showing that there was no wide gap in the responses. Aggregate mean value of 3.44 showed that respondents agreed to all the Industry based strategies for effective revitalization of SIWES.

Table 2: Mean & standard deviation results of industry based strategies for revitalizing SIWES

No	Industry based strategies	N	Mean	SD	Remarks
1	Allow students access to all the needed office information for meaningful skill acquisition	244	3.47	.61	Agree
2	Assign a supervisor from the industry for students on training	243	3.39	.66	Agree
3	Accept students for training unconditionally	244	3.26	.73	Agree
4	Give students entrance to all the office equipment and machines they need for meaningful skills acquisition	244	3.51	.60	Agree
5	Participate fully in the assessment of the students	244	3.45	.58	Agree
6	Support the institutions in designing the job specification based on the approved learning materials for SIWES	244	3.52	.61	Agree
7	Assign students to relevant on-the-job training	244	3.49	.65	Agree
8	Give welfare utility like allowance and pay medical bills of students on attachment	244	3.45	.68	Agree
<b>Aggregate Mean</b>			<b>3.44</b>		<b>Agree</b>

*ITF based strategies for revitalizing SIWES*

Table 3 showed positive responses to all the items on ITF based strategies for revitalizing SIWES with Mean values which ranged from 2.89 to 3.57. The Standard Deviation which ranged from 0.59 to 0.92 implying no wide gap in the responses. Aggregate mean value of 3.41 showed that respondents agreed to all the ITF based strategies for effective revitalization of SIWES.

Table 3: Mean & standard deviation results on ITF based strategies

No	ITF based strategies	N	Mean	SD	Remarks
1	Make it mandatory for industries to accept posted students	244	3.53	.60	Agree
2	Make sure that industries which accept students for industrial training enjoy tax rebate	243	3.38	.66	Agree
3	Prompt payment of stipend	244	3.64	.60	Agree
4	Regulate students' posting to industries of relevance	244	3.64	.69	Agree
5	Create a comprehensive data pool of industries of relevance for easy selection by students due for training	244	3.49	.75	Agree
6	Central exam after every session of industrial training	244	2.89	.92	Agree
7	Incorporate ITF result in the student's final grade	244	3.25	.80	Agree
8	Participate in the supervision of IT students	244	3.33	.70	Agree
9	Provide adequate logistic materials needed for the programme	244	3.55	.59	Agree
10	Enhance the stipends for IT students	244	3.57	.66	Agree
11	Industries hosting IT students to be remunerated adequately	244	3.33	.74	Agree
12	Provision of insurance cover for students on IT	244	3.43	.71	Agree
<b>Aggregate Mean</b>			<b>3.41</b>		<b>Agree</b>



*What are the student based strategies in revitalizing SIWES*

Table 4 showed positive responses to all the items on student based strategies for revitalizing SIWES with mean values which ranged from 3.58 to 3.37. The standard deviation ranged from 0.52 to 0.72 implying no wide gap in the responses. Aggregate mean value of 3.50 showed that respondents agreed to all the student based strategies for revitalization of SIWES.

Table 4: Mean & standard deviation results of student based strategies for revitalizing SIWES

Student based strategies	N	Mean	SD	Remarks
1 Obedient to constituted authorities at both the industries, school and ITF office	244	3.58	.58	Agree
2 Be more committed to achievement of goals of IT	244	3.46	.59	Agree
3 Develop more interest in the programme	244	3.58	.52	Agree
4 Develop rich mindset toward skill-building courses	242	3.58	.57	Agree
5 Must attend institutions SIWES orientation programme before embarking on the training	244	3.47	.63	Agree
6 Strictly adhere to all office procedures of the organization where they are engaged for industrial training	244	3.37	.69	Agree
7 Provide periodic report of their training to their institutions	244	3.39	.72	Agree
8 Come to work punctually at their different places of attachment	244	3.56	.55	Agree
9 Avoid indiscriminate change of place of attachment	244	3.51	.56	Agree
10 Note all relevant training functions and assignments in the log book for proper assessment	244	3.55	.58	Agree
11 Complete ITF Form 8 to ensure proper assessment	244	3.49	.63	Agree
12 Protect employer’s property throughout the attachment period	244	3.53	.58	Agree
13 Be diligent, honest and conscientious during IT period	244	3.53	.59	Agree
<b>Aggregate Mean</b>		<b>3.50</b>		<b>Agree</b>

*Hypothesis Testing*

Testing the null hypothesis at alpha level of 0.05 and at a degree of freedom of 242, the result on Table 5 revealed that the p-values are greater than the t-values. Since the p-values are greater than the t-values, the null hypothesis of no significant difference was accepted.

Table 5: Summary of t-test on strategies to revitalize SIWES programme

Variable Categories	Category of Samples	N	Mean	SD	DF	t-value	p-value	Remarks
ITF Based Strategies	Educators	66	3.44	.33	242	.28	.77	Not Significant
	Students	178	3.42	.38				
Institution Based Strategies	Educators	66	3.37	.37	242	.13	.89	Not Significant
	Students	178	3.36	.38				

Industry Based Strategies	Educators	66	3.46	.42	242	.29	.76	Not Significant
	Students	178	3.44	.38				
Student Based Strategies	Educators	66	3.46	.33	242	-1.24	.21	Not Significant
	Students	178	3.52	.34				

#### 4. Discussion of findings

Results of research question one showed the institution based strategies for revitalizing SIWES programmes in government owned universities in Edo State. All the respondents agreed that the institutions should train the institution based supervisors on the goals of industrial training, carry out adequate supervision of students during SIWES training, post students to industries of relevance to their studies and find proper placement opportunities for students' attachment. These are necessary because without proper supervision and placement in related industries, SIWES for vocational and business education students will be exercise in futility. The students will only be committed to the training if there is internal and external control of their activities by way of supervision. This finding supports the findings of the study by ([Okechukwu & Agwi, 2017](#)) which revealed that students' skill acquisition through Industrial Training Fund in Rivers State will be enhanced if students will be posted to their areas of specialization in the industries during industrial attachment period. There should be effective collaboration by ITF based supervisors, institutional supervisors and industries' supervisors if SIWES must achieve its goal of equipping its recipients with employable skills. Also, supervision of the students should start from their institutions to ensure proper placement in industries related to their fields of study. These findings agreed with the views of Bond in ([Ikechukwu, 2016](#)) that there should be an improved collaboration between Vocational Education Department and the industry, there should be a committee to oversee proper supervision of industrial training in tertiary institutions. Again, all the respondents agreed that there should be orientation by the institutions and ITF for students before they proceed on the training, plan practical contents and real life learning experience based on accredited courses for the training, increase the training period adequately to 1 year for universities and ensure that there is no disruption in school academic calendar. These findings support the findings of ([Agbonghale & Iserameiya, 2017](#)) who recommended that the period of SIWES programmes in universities should be extended to one year so that the students can acquire relevance experience. This implies that the 6 months training period for industrial training of 6 months for vocational and business education programme is grossly inadequate to gain meaningful practical experience.

Research question two results revealed the industry based strategies for revitalizing SIWES programmes in government own universities in Edo State. All respondents agreed that the industries/employers should also improve in their strategies for proper revitalization of the SIWES programme in Edo State by allowing students access to all the needed office information for meaningful skills acquisition, assign supervisors for students on attachment in the industries of attachment, accept students for training unconditionally, allow students entrance to all the training office equipment and technologies for meaningful skills acquisition and collaborate to assess the students. The industries/employers have a pivotal role to play in the achievement of the goals of SIWES because the equipment and materials needed for practical contents and real life learning experience are not available in the schools therefore, the institutions and ITF rely on the industries to adequately meet this need by accepting the students and granting them access to all the needed office information for meaningful skill acquisition, give students entrance to all the office equipment and machines they need for meaningful skills acquisition and assign students to relevant on-the-job

training. This requires an urgent clarion call on employers/industries to change their attitude towards industrial trainees. Many industries do not accept students for industrial training and many if they accept, do not grant the trainees access to their equipment. Again, many industries do not supervise the trainees under their training. There is therefore, the need to adopt good and progressive industrial strategies during training exercise for students so that vocational and business education students could acquire the needed skills for job placement after graduation. This finding agreed with the finding of ([Okechukwu & Agwi, 2017](#)) which revealed that students on industrial attachment will perform better if the institution Students Industrial Work Experience Scheme supervisors and the industry based supervisors that the students are posted for their industrial attachment will effectively supervise the students. This finding has serious implications because it is through supervision that institutions and ITF will be able to know if students are really participating in the exercise. They will also be able to know the challenges they students are encountering during the exercise and know how to solve the problem so that the exercise can be worthwhile.

Results of research question three revealed the ITF based strategies for revitalizing SIWES programmes in government owned universities in Edo State. All respondents agreed that ITF should make it mandatory for industries to accept posted students, ensure that industries accepting students for SIWES enjoy rebates in taxes, prompt payment of stipend, regulate students' posting to industries of relevance, create a comprehensive data pool of industries of relevance for easy selection by students due for training, introduce a general examination at the end of industrial training session and incorporate the result in the students' graduation requirements. Again, all the respondents unanimously agreed that ITF should participate in the supervision of students on SIWES, provide adequate logistic materials needed to administer the programme, enhance the stipends for it students, make it mandatory for industries hosting it students to be remunerated adequately and provision of insurance cover for students on industrial training. This findings agreed with the views of Oladimeji et al in ([Anyaneh & Ochuba, 2019](#)) who reported that ideally, enhancing SIWES should include among others: effective and regular coordinating and supervising of the exercise by various agencies who are engaged in the management of the SIWES exercise and delivering of Log Books and industrial training Letters quite on time are necessary strategies to revitalize SIWES in Nigeria. Again, the results agreed with the ideas of ([Chinedu, 2022](#)) that the roles of ITF are to design guidelines and document policies on SIWES for all partnering agencies and to also organize orientation sessions for all eligible students prior to their period of industrial attachment, procure and process necessary forms.

Results of research question four revealed the students based strategies for revitalizing SIWES programmes in government owned universities in Edo State. All the respondents agreed that the students should be obedient to constituted authorities at both the industries, school and ITF offices, be more committed to achievement of goals of the Scheme, develop more interest in the programme. develop rich mindset toward skill-building courses, must attend SIWES orientation programme before embarking on the training, follow strictly all the regulations of the organizations where they are engaged for industrial training, provide periodic report of their training to their institutions and come to work punctually at their different places of attachment. The respondents also agreed that students should avoid indiscriminate change of place of attachment, document in their logbooks all major training assignments for necessary assessments, complete ITF form 8 to ensure proper assessment, protect industries equipment and machines during the session of attachment. This findings agreed with the views of ([Ojokuku et al., 2015](#)) which noted that the students are to fill their Commencement Attachment Form and sign it by the employers for necessary submission to I.T.F office. Students are also to document all industrial training activities for assessment and remuneration. These findings also supported the views of ([Ojokuku et al., 2015](#)) who noted that although other partners are important in effective delivery of SIWES functions,

students are the main players that are directly involved in its implementation. The implication of this is that the strategies to effectively position the students for industrial training require urgent attention because no matter the efforts of other stakeholders without the adequate commitment of the students it will amount to nothing. Students must fully understand the goal of the programme, apply themselves according and fulfill all necessary requirements so that the training will not be an exercise in futility.

The null hypothesis of no significant differences about the strategies for revitalizing SIWES programme were upheld since the t-values are lesser than the p-values. The result of the hypothesis testing at alpha level of 0.05 and at a degree of freedom of 242 revealed t-values of 0.28, 0.13, 0.29 and -1.24 and p-values of 0.77, 0.89, 0.76, 0.21 respectively. The findings agreed with the views of (Ojokuku et al., 2015) which stated that all educational stakeholders such as Industrial Training Fund (ITF), training Institutions, industries and students are all important and should be involved in the operation of SIWES. This findings also agreed with (Adeyewa, 2015)(Ikechukwu, 2016) who stated that despite all the challenges presently plaguing the SIWES programme, it could be strategically revitalized to effectively achieve its goals of preparing a vibrant and competent vocational and business education graduates for the nation's workforce. This corroborates the views of (Alao et al., 2022) who asserted that achieving the effectiveness of SIWES at tertiary education level is anchored on approaches such as ensuring both internal and external quality assurance, training of educators, adequate funding, and the adequacy of training equipment and facilities by all stakeholders.

## 5. Conclusion

The findings of this study show that there is the need to refocus, reinvigorate, regenerate and reposition SIWES programme for proper skills acquisition so as to make graduates more employable. The findings further revealed that the Scheme urgently need ITF based strategies, Institution based strategies, industries/employers based strategies and students based strategies for proper functioning. It is therefore, concluded that SIWES can effectively and meaningfully achieve its goals of preparing a vibrant and competent vocational and business education graduates for the nation's workforce if the right ITF, institutions, industries/employers and students strategies are put in place. It was also concluded that SIWES can strategized so as to revitalize, revigorate and refocus it to achieve vocational and business education graduates' employability, wealth creation, self-reliance, self-employment and entrepreneurial development.

## 6. Recommendations

This study recommended thus based on findings that:

1. Industrial Training Fund (ITF) should make it mandatory for industries to accept posted students and regulate students' posting to industries of relevance.
2. Tertiary institutions should regularly conduct orientation sessions for Vocational and Business Educators, ITF supervisors, trainee students and employers on their individual responsibilities in the effective achievement of the goals of SIWES.
3. Industries/employers should ensure that they accept eligible students unconditionally for training and participate fully in the assessment of the students.
4. Students should be obedient to constituted authorities at both the industries, institutions and ITF office, be more committed to achievement of the goals of industrial training programme.

### Author contribution

Ibhade Joy Ojeaga is a researcher and analysed data for the study and also worked on the references. David Nwanna Dumbiri is a researcher, worked on introduction, data collection and editing the work.

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### Conflict of interest

No conflict of interest and approved the article for review and publication.

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