IMPROVING SIWES PROGRAMME THROUGH COLLABORATION BETWEEN INSTITUTIONS AND INDUSTRY-BASED SUPERVISORS FOR ENHANCED SKILL ACQUISITION OF AGRICULTURAL EDUCATION STUDENTS FOR SELF-RELIANCE

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Abstract

The study was on improving SIWES programme through collaboration between institutions and industry- based supervisors for enhanced skill acquisition of agricultural education students for self-reliance in Enugu State. Two research questions guided the study. The instrument for data collection was questionnaire containing 29 items. It was used to elicit response from 76 respondents who were 64 students of Agricultural Education from University of Nigeria Nsukka and Enugu State University of Sciences and Technology, and 12 lecturers from the two Universities. The instrument was validated by three experts from Enugu State University of Sciences and Technology and its reliability was determined using Cronbach Alpha method of testing internal consistency of an instrument. A reliability co-efficient of 0.81 was obtained. Mean with standard deviation was used to answer the research questions. After analyzing the data from the respondents, it was found that, SIWES programme will be improved if employers in industries will accept students for training, expose them to areas relevant to their studies, experts delegated to supervise the student amongst others. Based on the findings, some recommendations were made. These include; that student should be paid regular visit and guided properly during industrial training and also that the time for SIWES should be extended to at least two years.

Key words: SIWES, Collaboration, Improvement, Skill acquisition, Self-reliance.

Introduction

Students Industrial Work Experience (SIWES) is believed to be a vital tool for developing and training manpower required to tap and manage numerous national resources. Eneje (2012) explains that SIWES is a skill acquisition programme designed to expose and prepare students of universities, polytechnics, college of technology, colleges of agriculture and colleges of education for industry work. Okonkwo (2006) described industrial training as a programme designed for institutions to bridge the gap between theory and practical of vocational, technical and allied discipline. The scheme afford students of Business Education, Home Economics, Engineering, Technology, Fine and Applied Arts, Environmental Sciences, Music, Medicine, Technical Education, Agricultural Education and Library sciences the opportunity of familiarization and exposure to the needed experiences in handling equipment and tools that are usually not available in their institutions. Industrial Training has been in existence for over 35years. It was established in 1973 with collaborative effort of tertiary institutions and other agencies/ organizations that accredit the activities of tertiary institutions such as the National Universities Commission(NUC), National Board for Technical Education,(NBTE), National Commission for Colleges of Education (NCCE), and Industrial Training Fund (IT) which is the fund disbursement unit (Eneje, 2012). Collaboration is described by Hornby (2006) as the act of working with another person or group of people to create or produce something. The justification for SIWES programme and collaboration of the

experts was to find solution to growing concern of industrialists that graduates from higher institutions lack adequate practical experience background studies for employment. Mogbo (2011) averred that the Nigeria education suffer degradation as products of Nigerian universities lack practical and employable skills required to properly fit into the world of work. Inadequacy of practical skills acquisition was noted by (Alio 2006) resulted from the type of education inherited from our colonial master which was liberal and non- practical oriented, and it was not responsive to the need of industrialists.

The type of education that can change the phase of Nigerian industry and enhance national development is that which equips man-power with knowledge, skill and attitude. SIWES programme is expected to argument the practical skills acquired from the school to produce well equip and functional citizens who will remain self-reliant. Equipped and functional citizens are the type people required in the nation, because they are more efficient, productive, work faster, understand their jobs better, make less mistakes, use their expert knowledge and technical skills to establish and advance their businesses, and derived satisfaction from improved standard of living. SIWES programme was designed with expectation of developing human resource to fit properly into a career for self-actualization. Harrison in SA'AD (2010) noted that the programme influences curriculum development because the feedback from industrial work experience helps in restructuring the student's academic curriculum thereby making the much desired link between the school and employers of graduates after schools. This implies that deficiencies in the academic curriculum can be detected and corrected for positive impact in national development.

The objectives of SIWES as stated by Eneje (2012) include;

1. To prepare an avenue for students in institutions of higher learning to acquire industrial skills and experience in their courses of study;
2. To prepare students for the working situation they are likely to come across after graduation;
3. To expose students to work methods and techniques in handling equipment and machine that may not be available in educational institutions;
4. To make the transition from school to world work of work easier improve student contacts for job placement in future;
5. To provide students with opportunities to apply their knowledge in real work situation thereby bridging the gap between what was learnt in school and practical work and
6. To enlist and strengthen employers involvement in the entire education process of preparing students for job in industries.

The Industrial Training (IT), is believed to have been put into action through the collaboration of the institutions coordinators and employer of labour in different industries for over 35years, yet agricultural education students of higher institution among other students still do not get job on graduation. This implies that there is need to improve on the management of the collaborators.

Improvement in the opinion of Princeton in Ifeanyieze (2010) is a change for better. Galseburge, (2007) explains improvement as activities undertaken based on meeting the target objective and satisfaction from lower achievement. With regards to this study, improvement is the ability of collaborators of SIWES to device means for enhancing their activities for students to acquire the required practical skills that will make them self-reliant on graduation. Hornby (2006) defined self-reliance as the ability to take decision by one-self, rather than depend on other people for help.

There is need for the employers and institutions to perform the roles expected of them to reform SIWES. The roles of institutions and

supervising agents include; to have a functional industrial attachment unit or directorate that should be adequately staffed and funded for effective operation, prepare students for by organizing pre SIWES orientation programme; make qualified staff visit the students on (IT) in order to examine their practical assignment amongst other functions (Ahiwo 2009). In another development, Mogbo (2011) highlighted some of the roles of employers as; to delegate experience staff to supervise students and their activities throughout their progamme; sign students' logbook on weekly basis and comment on their activities and allow accrediting bodies and institution to visit the students for correction and follow-up.

The Industrial Training Fund (ITF) unit is required to organized joint meeting and orientation programme before commencement, supervise IT students and disburse fund to run the progamme. These roles are expected to be carried out to achieve SIWES objectives. The unfortunate reports from participants have shown that there are lapses in supervision, quality of training, funding, implementation of policy for industrial training programme. For instance, Mogbo (2011) noted that most of employers in industries, who are expected to train students reject students posted to them for training only for the students to waste six months at home after which they fake a stamped report and submit to their institution, while the coordinators or supervisors will accept the report because they fail in their supervisory work of visiting the students to know who participated or not.

The SIWES policy made it mandatory for all ministries, companies, Farms and to offer places for attachment of students. The Decree no-47 of the policy stipulated that any office that fails to offer students chances is liable to punishment (SIWES Hand book,2012). Students are rejected because no strict measure is taken for defaulters. A situation such as, non-acceptance of students by the industrialists negates the national objective of producing competent agricultural graduates who will boost national food security hence universities producing incompetent graduates for national development.

Agricultural education students are expected to acquire skills in poultry, small and large ruminants, piggry, fish farming, or in arable crops and other agro materials for industries. They are also required to learn non-technical professional ethics needed for success in a job. Such factors which are habits, values, and attitude considered desirable in all workers. The students could attain the expected level of competency if they are properly supervised and guided by both the supervisors from the institutions and the industry-based supervisors. In the industrial training handbook it is noted that supervising agency should appoint a full time coordinator who must be senior lecturer and make qualified staff visit students at least once a week to examine their practical assignment, regularity in attendance, work ethics exhibited by the students, then sign their log book based on the observation made. Report from students have shown that supervisors do not visit students as required, that in most cases log books are signed when the students claim to have completed their industrial training and, unmerited marks are awarded to those who do not deserve it, by industry-based supervisors. If the students are much it may be difficult for the supervisors to coordinate and visit them as policy demands. Okoli (2011) explains that when the number of clients, are too many for the extension agents, training becomes very difficult and of low quality.

Ogwo and Oranu (2006) noted that countries such as America, Japan, Russia, Gemany, China, and Britain have made giant strides because of exposure given to their youths in industries more importantly is the close supervision. In these countries, youth spend about 80% of their period of study, practicing in the industry, in contrary to Nigerian system where only 10% is allowed for industrial training for the university students. The claim can be proved because only one semester is the

time allotted for SIWES out of a minimum of eight semesters students are required to spend in school before graduation. During at that period students have complained of not being allowed to make use of some tools and equipment for the fear damage (Okonkwo,2006). How then can these students learn? These and many more problems necessitated the study on the need to improve collaboration of employers and institutions for effective skills acquisition of agricultural education students for self-reliance in Enugu State

Research Questions

1. What are the employer's activities for improving SIWES for enhanced skill acquisition of agricultural education students?
2. What are the institution activities for improving SIWES for enhanced skill acquisition of agricultural education students for self-reliance?
3. What are the constraints experienced by students of agricultural education during Industrial Training?

Methods

The study adopted a survey research design. Alio (2008) described survey research design as one where generalization is made based on the analysis of data collected from a sample deemed to be a representative of the entire population. The study was carried out in Enugu State. The population for the study was 76 purposively selected from 64 students of agricultural education of Enugu State University of Science and Technology ESUT and University of Nigeria Nsukka UNN who have completed their industrial training and 12 Lecturers from the two universities. The instrument for data collection was a structure questionnaire containing 29 items. The instrument contains two research questions which were used to elicit response from the respondents. The instrument was validated by three experts two from the department of technology and vocational education and one expert in measurement and evaluation, all from Enugu State university of Science and Technology. A test of reliability was conducted using Conbach Alpha method to determine the internal consistency of the instrument. A reliability coefficient of 0.81 was obtained. The instrument has a four point scale of strongly agreed (SA) Agreed (A), disagreed (D) and strongly disagreed (SD) with corresponding nominal value of 4,3,2 and 1 respectively. The instrument was administered using three research assistants within four weeks and were all retrieved. Mean with standard deviation was used to answer the research questions. The decision was reached using the principles of upper and lower limit, thus:

3.50 - 4.00 Strongly Agreed
2.50 - 3.49 Agreed
1.50 - 2.49 disagreed
1.00 - 1.49 strongly disagreed

Values of standard the deviation help to determine the closeness of the respondents to the mean or otherwise.

Results

Research question 1

What are the Industry-based supervisor's activities for improving SIWES for enhanced skill acquisition of agricultural education students?

Table 1: Mean with standard deviation of the activities of employers for improving SIWES for enhanced skill acquisition of agricultural education students

S/N	Questionnaire Items	$\bar{X}$	SD	Decision

1	Employers need to expose students to areas relevant to their study.	3.82	0.39	SA
2	Employers need to accept students for SIWES in their industries.	3.72	0.45	SA
3	Allow student utilize relevant tools and equipment for skill enhancement.	3.72	0.45	SA
4	Experts need to monitor and supervise students on SIWES together with institution on equally bases.	3.63	0.94	SA
5	Employers need to keep record attendance to make sure that students complete their period for SIWES.	3.27	0.62	A
6	Competent supervisors in the industry should be assigned to supervise the students.	3.18	0.58	A
7	Curriculum developed by both institution and employers should be used to trained the students.	3.38	0.63	A
8	Employers need to have hands in developing the curriculum for training of SIWES students.	3.18	0.58	A
9	The curriculum of the programme developed should target market demand.	3.36	0.48	A
10	Modern equipment need to be used for the training of the students in the industries.	3.53	0.50	SA
11	Employers need to access the students bit by bit on each task perform credibly.	3.44	0.66	A
12	Always change the training method and programme to suit new technology in area of agriculture.	3.53	0.50	SA
13	Employers should keep the records of punctuality and attendance.	3.46	0.50	A
14	Supervision of the students constantly will improve SIWES programme for skill acquisition.	3.53	0.52	S A
15	Employers are required to assign duties, projects to the students.	3.18	0.72	A

The data presented in Table 1 reveals that items 1,2,3,4,10,12 and 14 had their means score ranging from 3.54-3.81. The scores falls within the range of strongly agree. This shows that the statement in the items are strategies for improving SIWES by employers of labour. The rest of the items had their means scores ranging from 3.18-3.46, showing that the respondents agreed that the statement are also necessary for improving SIWES for effective skill acquisition of agricultural education students. The standard deviation of these items ranged from 0.33-0.54. This is an indication that the subjects mean are close.

Research Question 2

What are the institution activities for improving SIWES for enhance skill acquisition of agricultural education students for self-reliance?

Table 2: Mean with standard deviation on activities of institution that can improve SIWES for quality of training of agricultural education students.

S/N	Questionnaire Items	$\overline{X}$	SD	Decision
1	The institution need to recruit qualified SIWES agricultural education coordinators.	3.30	0.75	A
2	The institution supervisors required to pay regular visit to students of agriculture on SIWES.	3.72	0.47	SA
3	Qualified stake holders need to manage the affairs of SIWES.	3.44	0.66	A
4	The Institutions need to monitor the implementation of the developed curriculum by industry- based supervisors for students on SIWES.	3.36	0.49	A
5	Establish proper link and create good rapport with the industry by the institution will improve SIWES.	3.45	0.90	A
6	Review of the developed curriculum by the institution and the industry-based supervisor will improve SIWES programme.	3.21	0.70	A
7	Joint supervision need to be carried out both by the institution and employers.	3.44	0.66	A
8	The institution should organize the internal defense when the students come back from SIWES for final scoring.	3.72	0.45	SA
9	Motivation of the coordinators will improve SIWES programme	3.27	0.45	A
10	Institution need to post students to industries carrying out replica of work expected to meet in future by students.	3.81	0.39	SA
11	Policy measures for SIWES need to be adhered to by the institution and industry-based supervisors.	2.80	0.98	A
12	Institutions need to establish a close link with successful entrepreneurs and connect students to them.	3.63	0.64	SA
13	Institution need to work close with the government to make sure that more industries are established to accommodate students for SIWES.	3.81	0.39	SA
14	Manageable student teacher ratio need to be maintained.	3.44	0.66	A

The data presented on table 2 shows that items 2, 8, 10, 12 and 13 had their mean score ranging from 3.63-3.81, indicating that the respondents strongly agreed that the statements on the items are ways institution can help of revitalizing SIWES, while items 1, 3, 4, 5, 6, 7, 9, 11 and 14 had means scores ranging from 3.17-3.47. this indicates that the respondents agree that the statement are ways of revitalizing SIWES for affective training of students of agricultural education for self-reliance. The standard deviation of these items ranged from 0.39-0.75. This shows that the respondents are homogenous in their view on the issue.

Discussion of findings

From Table 1, it was found that the employers (industrialist) have vital roles to play for students of agricultural education on industrial training. If these roles are carried out effectively SIWES will be revitalized and students' acquisition of skills will be enhanced, better work ethics will be developed for self-reliance.

It was found that: accepting students for training in the industries, allowing them to make use of equipment and tools, giving the students closes supervision, assigning projects to the students and teaching them work ethics, employers of labour participating in curriculum development will improve SIWES and enable the students acquire the required skills that will enable them to be self-reliant.

The findings of the present study on exposing students to the use of equipment and tools in the industry is in agreement with the objectives outlined by Eneje (2012) that the aim of students work experience scheme is to exposing the students to manipulate equipment and tools which are not available in their schools and also to expose the students to the work environment replace to what they are likely to face on graduation. Also Oliatan (2000) stated that SIWES programme if properly coordinated and students are exposed to the required practical experience, better academic achievement can be recorded. Elobuike (2010) also carried out a study on provision of quality junior secondary school prevocational subject and found that for secondary school students to be productive; they should be exposed to necessary skills, and be guided properly to use workshop tools.

From table 2, research question 2 it was found that institutions have a much roles to play for improvement and quality industrial training of students. Among the finding made by the present study include to recruit qualified lecturers to coordinate SIWES, pay regular visit to students on SIWES, joint supervision of institution supervisors/coordinator and industry based supervisors, to be carried out, filled trips with students to successful entrepreneurs, establishing link with related industries appoint a full time coordinator among others. The present finding on appointment of coordinator is in line with the finding of SA'AD (2010) who found that SIWES activities could be enhance if a competent coordinator is appointed by the institution for home-economic students. The student's interest can be captured and their interest focused to learn. SA'AD (2010) also found that the institution coordinator needs to visit the students regularly. Regular visit to students will enable the institution pass the accurate judgment and award marks creditably.

Similarly, it was found the present study that collaboration in carrying out a project strengthens it. This finding is in line with Nwosu in SA'AD (2010) that technology and vocation be improved and activated, if the stake holders collaborate in training the recipients and that such collaboration should involve industrialist. If these issues are addressed properly, students will acquire the required skills that will make them competence to be self-reliance and contribute to national development.

Conclusion

Industrial work experience scheme (SIWES) is a vital tools for enhancing, skill acquisition of students. It is a medium by which students can be properly trained to become self-reliance. This can be achieved through effective collaboration between the employers of labour (industrialist)) and the institutions. Each group of collaborators should perform their roles by posting the students, visiting them, giving them close supervision, allowing them to make use of relevant tools and materials which will help to enhance their skills acquisition amongst others. It was found that that if the quality of industry training is enhanced, students can compete successfully in the labour market.

Recommendations

Based on the findings some recommendations were made. These include

1. Students should be guided properly during industrial training
2. Fund should be mapped out to run SIWES programme.
3. Supervision of SIWES should involve all the collaborators
4. Students should be placed in their areas of study within the industry for training.
5. Students should be allowed to use relevant tools in the industry to learn.

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