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The Shortcomings Of The Student Industrial Work Experience Scheme In The Study Of Agricultural Technology In The Delta State Polytechnic, Ozoro

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ABSTRACT
The student industrial work experience scheme was introduced to develop the occupational competencies of participants in any chosen career. A myriad of problems of varying nature that are institutionally, programme and environmentally specific derail the attainment of the specific objectives of the scheme. This paper therefore highlighted the perspectives of SIWES, examined the place of SIWES in the NBTE curriculum in the study of Agricultural Technology and identifies the shortcomings encountered by the students during SIWES. Information gathered from interactions with NDI Agricultural Technology students of the 2014/2015 academic session reveals shortcoming such as poor supervision, improper placement of students, poor student to student interactions, poor SIWES orientation, emphasis on entering logbooks as against ensuring that activities are performed effectively and delay in the release of funds/allowances. The paper recommends that a comprehensive supervision schedule should be drawn at the commencement of each SIWES year, students should be given the opportunity to indicate their areas of interest and proposed place of attachment that should be incorporated into the placement list, peer learning techniques during SIWES should be encouraged to allow for better student interaction, more time should be dedicated for students SIWES orientation which should be done in batches to accommodate large student population and guarantee effectiveness, timely release of funds for payment of allowances should be vigorously pursued and a double edged approach of ensuring that activities are performed effectively, alongside their entry into logbooks should be encouraged.
Keywords: Agricultural Technology, Delta, Polytechnic, Shortcomings, SIWES, Study

INTRODUCTION
Student industrial work experience scheme (SIWES) was initiated in 1973 by the industrial training fund. The scheme started in 1974 with 748 students from 11 institutions. Statistics show that between 1974-1978, 32 institutions with a total students participation of 13,481 was recorded. But by 1979 through 1984, the industrial training fund withdrew due to problems of organizational logistics and increased financial burden associated with the rapid expansion of the scheme (ITF, 2003). Subsequently, the Federal government funded the scheme for five years through the National Universities Commission and the National Board for Technical Education. The ITF came on board again in 1985 and between 1985-1995 statistics show that 141 institutions with a student population of 348,278 participated. Further statistics show that between 1996-2008, 204 institutions with 210,390 participated. With the growing number of private and public tertiary institutions in Nigeria, it is expected that within the last couple of years the number of students participation would have tremendously increased.

The relevance of the student's industrial work experience scheme cannot be over-emphasized as it constitutes a skill training programme designed to prepare and expose students of tertiary institutions for the industrial work situation they are expected to meet after graduation. It helps students studying occupationally related courses in Higher Institutions to experience what would supplement their theoretical training (Chukwurah, 2008). Polytechnics play a vital role in the educational, scientific and technological progress in Nigeria. They are established to train and produce technical manpower necessary for the execution of the nations development plans, goals and strategies. They offer a two-year course with a three-month supervised student industrial work experience scheme carried out at the end of the first year and at the expiration of the programme, students are expected to engage in a one-year industrial attachment to enable them acquire requisite on-the-job practical skills before proceeding for Higher National Diploma. (Excellence Education Network, 2015)

The National Board for Technical Education Curriculum Specifications (2007) makes it mandatory that the students industrial work experience is a 4 unit course required to be taken by all students of Tertiary Institutions pursuing Business, applied sciences and applied arts (ITF, 2004a). Agricultural Technology being an applied science would therefore require any student studying it to participate in the scheme.

Several problems bedevil student's participation in the scheme thereby derailing the attainment of its set out objectives. Nse (2012) identified the lack of proper co-ordination and supervision of the exercise in Library school. Mafe (2009) postulated offer of placement by co-coordinating unit of SIWES, poor SIWES orientation, lack of uniform standards or criteria for assessing students in SIWES and poor process of payment of allowances in chemical Engineering. The aforementioned problems may be peculiar to students of agricultural technology, but however other problems are expected as each profession and the location of the SIWES being operated may pose new problems. In view of the foregoing, this paper (i) highlights the perspectives of SIWES; (ii) examines the place of SIWES in the NBTE curriculum in the study of Agricultural Technology; and (iii) identifies the shortcomings encountered by students during SIWES.

Perspectives of Students Industrial Work Experience Scheme

ITF (2004a) stated that students industrial work experience scheme is a skill development programme designed to prepare students of universities/polytechnics/monotechnics and college of Education for transition from the College environment to work. Oyedele (1990) opined that it is an educational programme in which students participate in work activities while attending school. Mafe (2009) noted it is a planned and supervised training intervention based on stated specific learning and career objectives geared towards developing the occupational competencies of participants. Ugwuanyi and Ezema (2010) consider it as a co-operative industrial internship programme that involves institutions of Higher learning, industries, the Federal government of Nigeria, industrial training fund, National Universities Commission, National Board for Technical Education and National Commission for Colleges of Education in Nigeria. They further noted that it is a core academic requirement that is compulsory at the National Diploma level that is scheduled in the National Board for Technical Education curriculum. Mafe (2009) gave a breakdown by stating that SIWES covers about 60 programmes in universities, 40 programmes in polytechnics and about 10 programmes in colleges of education in Nigeria. He further noted that students often mistakenly and commonly refer to SIWES as Industrial Training(I.T) whereas I.T is generic, while SIWES is a form of co-operative or industrial training operated in Nigeria.

The Industrial Training Fund Policy Document No.1 (1973) presented the objectives of SIWES to include;

1. to provide an avenue for students in institutions of Higher learning to acquire industrial skills and experience in their course of study;
2. to provide students an opportunity to apply their knowledge in real work and actual practice;
3. to make transition from school to world of work easier and to enhance students contacts to later job placement;

4. to expose students to work methods and techniques in handling machines and equipment that may not be available in the institutions and
5. to enlist institutions and strengthen employers involvement in the entire educational process through SIWES.

Thus, theses above stated objectives are geared towards making students acquire the needed skills to meet up with the dynamics of a profession and prepare them adequately for the labour market. Mafe (2009) elucidated that SIWES is operated as a joint venture through the contributory activities of stakeholders who are identified as shown below.

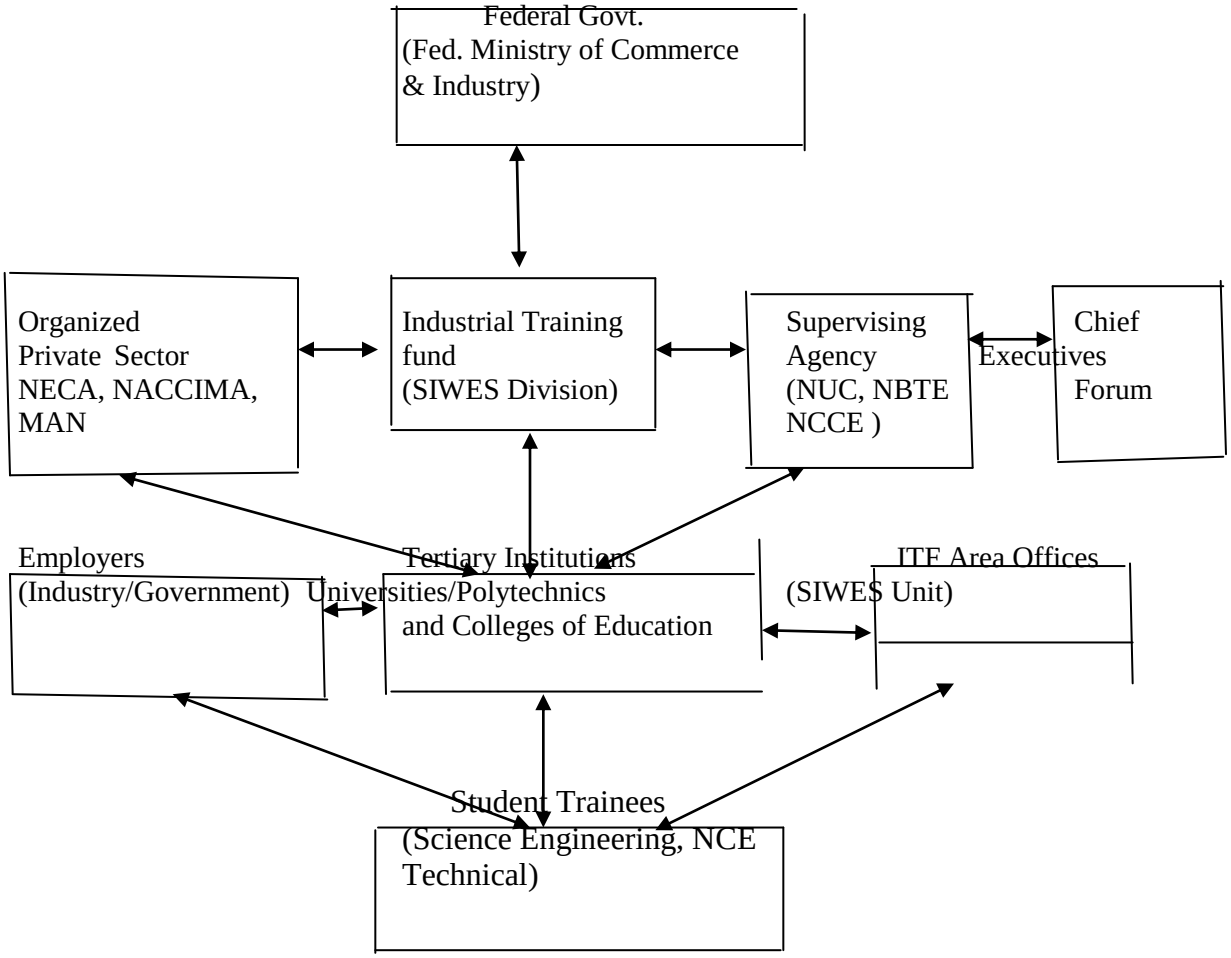

Fig 1: Relationship Amongst SIWES Stakeholders.
Source: ***Mafe (2009) Effectiveness of SIWES with Respect to Chemical Engineering. Paper Presented at Workshop on "Achieving the necessary professional Standard in Chemical Engineering in Universities" Organized by Nigerian Society of Chemical Engineers. P. 16***

Mafe (2009) further presented a SIWES Tripod where the three major actors in the SIWES implementation were identified to include the students, employers and institutions as shown in Fig. I

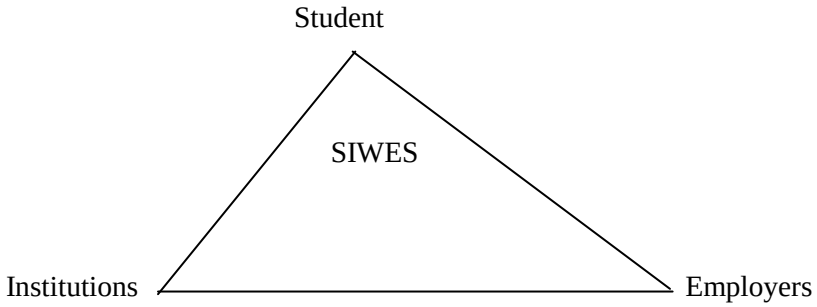

Fig. II: The SIWES Tripod- the Three Actors in SIWES
***Source**: Mafe (2009) Effectiveness of SIWES with Respect to Chemical Engineering. Paper Presented at Workshop on "Achieving the necessary professional Standard in Chemical Engineering in Universities" Organized by Nigerian Society of Chemical Engineers. P. 17*

ITF (2004a) in stipulating the guidelines for the operation of SIWES stipulated the expected roles of each stakeholder as follows:

Federal Government

* Provide adequate funds to the ITF through the Federal Ministry of Commerce and Industry for implementation of the scheme
* Make it mandatory for all Government Ministries, Parastatals and Private Companies and Commercial ventures to offer places of attachment to students.
* Make policies to guide and regulate the scheme at the national level

Industrial Training Fund

* Provide logistics and materials needed to administer the scheme
* Compile list of employers with available training places for industrial attachment and circulate the lists to participating institutions.
* Supervise students on SIWES through the area offices
* Vet and process students log books and ITF Form 8 returns.
* Pay students allowances and supervising allowances due to institutions
* Organize biennial conferences, seminars and Chief Executive fora on SIWES
* Arrange group insurance scheme for students on SIWES
* Review and conduct research into the operations of SIWES

Supervising Agencies (NUC, NBTE, NCCE)

* Ensure that functional SIWES co-coordinating units are established in participating institutions.
* Encourage the appointment of full-time industrial co-coordinators to operate the scheme in institutions
* Evolve minimum national guidelines in respect of supervised training activities for programmes approved by SIWES
* Vet and approve master and placement lists and forward them to ITF.
* Ensure that institutions abide by SIWES operational guidelines.
* Develop, monitor and review job specifications to guide the training of students on SIWES in collaboration with institutions
* Monitor and review courses eligible for SIWES.

Employers/Industry

* Accept students and assign them to relevant on –the-job training.
* Appoint industry-based supervisors for students on SIWES.

* Control and discipline students attached in a like manner as permanent staff.
* Pay students allowances when received from the ITF
* Provide medical care for students within the limits of the employers conditions of service during the duration of the attachment.
* Follow tailor-made training programmes agreed to with institutions for the training of student attaches.
* Permit representatives of ITF and institution-based supervisors to visit the students on attachment.
* Grade students as provided for in the Assessment form (ITF Form 8) at the end of the programme and submit same to institutions.

Tertiary Institutions

* Establish fully staffed SIWES co-coordinating units in the institutions
* Appoint full-time SIWES coordinators to operate the scheme at the institutional level
* Prepare and submit master and placement lists to the ITF through the respective supervisory agencies (NUC, NBTE, NCCE)
* Place students on attachment with Employers in industry
* Organize orientation programmes for students to prepare them for industrial training
* Work out tailor-made training programmes with the industry-based supervisor to be followed by the students while on training.
* Supervise students on SIWES at least on 3 occasions and sign their log books.
* Assess student's performance at the end of the training and award grades accordingly
* Allocate credit loads to SIWES as recommended by the supervisor agencies.
* Submit ITF form-8 in respect of each student to the ITF at the end of the training.
* Maintain separate bank accounts for SIWES funding.
* Submit comprehensive reports on the scheme to the ITF after each SIWES cycle.

Student Trainees

* Participate in the SIWES orientation programme before proceeding on industrial training.
* Be regular and punctual at respective place of industrial attachment
* Avoid unilateral change of place of attachment except in special circumstances and only with the permission and approval of the institutions SIWES coordinator and the employer.
* Comply with the employers' rules and regulations
* Keep proper record of training activities and other assignments in the log books.
* Arrange own living accommodation during the period of the attachment.
* Submit to the ITF through the institution, the Evaluation form (ITF Form-8) duly completed by the student, the employer and the institution.
* Submit log books, reports and other SIWES Documents required by the respective institutions at the end of the training programme.
* Be diligent, honest and conscientious in all activities.
* Protect and safeguard employers property throughout the period of training.

Chief Executives Forum

* Required to formulate policies for the effective management and implementation of the scheme at the national level.

The Place of SIWES in the Study of Agricultural Technology in the Delta State Polytechnic, Ozoro

The Delta State Polytechnic Ozoro was established by law enacted by the Delta State Government on November 12, 2002 during the administration of the then Visionary Governor of Delta State; Chief James Onanefe Ibori. The polytechnic was one of the four tertiary institutions established at the same time under the control and management of the Delta State Higher Education Project (DSHEP) in partnership with the University of Westminister as technical partners to meet the yearnings of Deltans for the acquisition of qualitative education which was hitherto not being satisfied by institutions owned by the Federal and

State Government (Oboreh, 2915). He further stated the vision of the polytechnic as "to become a world class technological institution, a "centre of excellence" where teaching, learning and research are directed towards meeting the new challenges of the economic, social and technological development of Nigeria. The mission of the polytechnic is stated as " to offer technological driven programmes and provide a conducive learning environment suitable for training and equipping students with hand-on-skills which will generate enterprises for their self=employment and employment of others through snugly packaged National Diploma(ND), Higher National Diploma(HND) and certificate programmes. The polytechnic is currently organized into five schools and twenty departments with twenty eight programmes (ND and HND) which have been duly accredited by the National Board for Technical Education.

Agricultural Technology as a course of study in the polytechnic is domiciled in the School of Agriculture. Amusu (2014) noted that the study of Agricultural Technology serves to produce knowledgeable and innovative agricultural diplomats worthy in skill and character through effective teaching, research, entrepreneurial skills and practical exposure towards self reliance and profitable practices. She further noted that its study help to reduce the shortfalls in animal health, production, agricultural extension and agricultural engineering graduates highly demanded by the government and private individuals. It also serves to produce skilled agricultural technicians capable of adopting modern techniques in agricultural production. The Federal College of Animal Health and Production Technology, National Veterinary Research Institute, Vom (2015) further noted that the study of agricultural technology serves to produce middle level manpower in animal production, crop production, agric. Engineering technology, as well as agric. Extension and rural management who can effectively utilize acquired knowledge to establish and manage farms. In line with the foregoing, an ND product of agricultural technology should be able to;

(i) establish farm enterprises in crop, animal and fish production;
(ii) employ modern technique in apiary, floriculture and micro livestock (e.g Rabbits, cane, Rats and Snailery), Quail and pigeon production;
(iii) employ modern techniques in production of animal feed;
(iv) assist in processing, storage and marketing of agricultural Produce;
(v) assist in pest and disease control;
(vi) carry out agricultural Extension services and
(vii) carry out field survey involving land measurements and field layout.

The Agricultural Technology programme in the Delta State polytechnic Ozoro is structured to be a two-year programme, comprising of four semesters of classroom, laboratory, field and workshop activities as provided in the NBTE Curriculum Specifications (2007). The duration of each semester is 17 weeks with 15 contact weeks teaching (recitation, practical exercises, quiz and tests amongst others) and 2 weeks set aside for registration and examination. A 75% minimum lecture and 80% practical attendance qualifies a student to sit for an examination in each semester. Of the total 100% scores to be earned by a student of the programme 60% is designed for theory and 40% for practicals. A minimum of 72-80 units are also required to be registered by any student of the programme.

At the end of the first year in the course of the programme, a three month supervised SIWES is mandatorily carried out. Mofesola (2012) noted that participation in SIWES is a necessary pre-condition for the award of National Diploma and Degree certificates in specific disciplines in most Higher Institutions in Nigeria. She further opined that the mandate of the polytechnics and the programme curriculum of study lays emphasis on practical work and the set objectives of SIWES. Ifejika, Odunze, Ayanda and Sado (2008) stated that the realization of skill weakness in Nigeria's degree and certificate awarding institutions inspired the need to expose students to practical experience to acquire the needed job skills training needed to face real work situation that would ultimate bridge the gap between theory and practice. Agric. Technology fall under the list of approved disciplines by the National Board for Technical Education for SIWES funding (ITF, 2004a). The Delta State Polytechnic Ozoro falls under the list of approved polytechnics with supervising ITF area office in Benin.

In the source of the implementation of SIWES as stipulated by ITF (2004a) in the Information and Guidelines for SIWES, the following are required;

(a) **Master List**

This is a document prepared by the department (e.g. Agricultural Technology) to show the following; name of student, matriculation number and year, programme of study, dates showing duration of attachment as well as nationality of students.

(b) **Placement List**

This is a document prepared by the department that shows everything contained in the master list, but additionally the specific places that students are expected to do their attachments. The placement of students under SIWES is of utmost importance, Decree No. 47 of 1971 as amended 1990, section 7A (1)(b) stipulated as follows; "**shall accept students for industrial attachment purposes**". Section 7A(2) stipulates penalties in default of 7A (1)(b) "Any employer who is in breach of the provisions of this sub-section shall be guilty of an offence under this act and is liable to conviction;

(i) in the case of body corporate to a fine of ₦5,000 for the first breach and ₦10,000 for subsequent breach; and

(ii) in the case of Chief Executive, Secretary or other Principal officers of the company to a fine of ₦1,000 or two years imprisonment without option of fine for subsequent breach.

The master lists and placement lists are then submitted to the participating institutions and the respective supervising agencies for vetting and approval. Six sets of the aforementioned are then required to be sent to the ITF at least three months before each SIWES year commencement of industrial attachment

(c) **Summary List**

This is a document that has all the components of the placement list, but on the top page, there is usually listed in a summary form. (i) total number of students in the programme (ii) total number of attaches in each state and (iii) total number of students involved.

(d) **Orientation programme**

Students of a programme accepted for SIWES are given orientation by their institution during which an ITF accredited staff must be in attendance within the first week of the SIWES. This is required to highlight the essence, components and required students activities and behaviour. However, it has been reported by Mafe (2009) that some students fail to attend such orientation programme. He also noted that very large student population has also negatively impacted on the effectiveness of the orientation programme.

(e) **Supervision of Students**

Students on attachment are to be supervised by supervisors from their institutions and professional staff of the ITF. The institution supervisors are required to visit students at least twice during the attachment (ITF, 2004a).

(f) **Zonal Supervision**

Students on attachment in a given zone are supervised by lecturers from designated supervising institutions of that zone rather than their own lecturers.

(g) **Log Books**

Students on attachment are given log books to record work done on a daily basis. The National Centre for Vocational Education Research regard the log books as one which contains records kept by a person on the knowledge, skills or competencies attained during on or off-the -job training. It serves as a training manual for supervisors to guide and follow student activities. Hence log books are to be signed by institution/industry based supervisors and ITF during supervision.

Challenges Encountered by Agricultural Technology Students of the Delta State Polytechnic Ozoro in the Course of SIWES

A personal interaction with NDI Agricultural Technology students (2014/2015 academic session) of the Delta State Polytechnic Ozoro revealed the following challenges:

(i) Poor Supervision: the students noted that in the course of the scheme, supervisors "leave them to their fate" They are usually not told what to do when they report for their daily activities such that they determine what they do even if it is not relevant. Supervisors from the institutions are required to visit students on SIWES at least twice during the course of the programme. But close to the end of the programme, they reported that no supervisor had visited. Monitoring students constitutes an aspect of supervision. Inadequate monitoring of students during SIWES constitutes one of the problems identified by Mofesola (2012). Hence it could be tagged "a common problem" encountered by students during SIWES.

(ii) Improper Placement of Students: Most of the students observed that conscious efforts were not made to ascertain their preferred area of interest before placing them in organizations. Interest has a psychological role in learning by either promoting favourable or unfavourable attitudes. Agricultural technology being a platform for general agriculture has several areas of specialization. Specific mention of their placements in certain poultry farms to do attachments as against their preferred interest of being in crop production farms dominated the students assertions. Although, certain cases of rejection of students for attachment in farms were reported by the students which necessitated their placement in farms against their interest. However, conscious efforts were not made to impose the students on the organizations in compliance with Decree No. 47, Section 7A(I)(b) and 7A(2) of 1971 as amended 1990.

(iii) Poor Student to Student Interaction: Most of the students stated that rather than adopt a concerted approach to on-the-job learning, some students seem to be reserved by either learning alone and keeping their knowledge to themselves rather than sharing the knowledge to help others learn better. To further buttress this, they noted that arguments and quarrels are common phenomenon when tasks are given to be accomplished leading to lack of co-operation amongst them.

(iv) Poor SIWES Orientation: Majority of the students stated that the orientation given to them for SIWES was poor as it was not all encompassing. They noted that only a one-day orientation exercise with very "sketchy" and unclear details of their requirements was given. They further noted that the very large population of the students of the department in attendance led to having a very large class size that was uncomfortable for effective dissemination of vital information. They noted that the instructor detailed to carry out the exercise was ineffective and that the exercise would have required a team of instructors and lecturers for a more effective dissemination of information. The result was that a lot of the students embarked on the scheme with very little fore-knowledge of the operational guidelines.

(v) Emphasis on Entering Activities in Log Books: Most of the students asserted that they are compelled to make entries into log books without a conscious effort by their supervisors to ascertaining whether the activities have been performed effectively. The major problems arising from this scenario is that students present "doctored" reports at the end of the scheme which does not reflect their actual learning experiences. Some students as a result deliberately stay away from their place of attachment for a long time or appear only towards the end of the scheme. http://elearning.europa.infuo/en/blog-twitter-digital-logbook (2011) reported that the situation is further aggravated by the fact that school supervisors are unable to see log books until students are back to school at the end of the scheme making them unable to follow the progress of students learning experiences.

(vi) Delay in Release of Funds/Allowances: The students reported that in the course of SIWES nothing was paid to them as allowances for their upkeep (to take care of feeding, transportation and accommodation amongst others). The result is that they are unable to meet up the basic needs of being comfortable for effective learning. ITF (2004a) reported that the guidelines of SIWES provides that a monthly stipend of ₦2,500 is due to each student and an institutional supervisory allowance of ₦250 per student. Mafe (2009) noted that there is the problem of poor process of payment of student allowances usually resulting in backlogs. Hence the students in the course of SIWES make outrageous financial

demands from their parents and relations. On the other hand, the students reported cases of unnecessary and unwarranted extortions by the institutions supervisors to the tune of ₦1,000 to ₦2,000 each from them. This is an aberration of the guidelines of the operations of the scheme and amounts to a "corrupt act" punishable in line with the institutions code of ethics.

CONCLUSION

SIWES is a well structured scheme with defined objectives and stipulated expected roles from its stakeholders. The scheme is an important pre-condition for the award of National Diploma in Agricultural Technology that must be engaged in by students at the end of the first year to develop their occupational competencies. Several conditions derail the attainment of the objectives of the scheme and these are either student-centred, supervisory institution-centred, institution centred and industry-centred.

RECOMMENDATIONS

The postulations by varying authorities and the revelations from the interaction with Agricultural Technology students participants of SIWES for the 2014/2015 session leads to the following recommendations;

1. A comprehensive supervision schedule should be drawn at the commencement of each SIWES year. This should involve at least five lecturers of the department of Agricultural Technology. Five zones covering the whole of Nigeria should be created such that one lecturer will cover each zone. There should be in place defined time schedules to allow for supervision of students three times throughout the SIWES year. The schedule of visit should be kept secret to take students unaware in order to avoid them playing truancy.
2. The Department of Agricultural Technology should design and administer questionnaire to students towards the end of the first semester of any session for NDI students to ascertain their areas of interest before preparing the placement list. Furthermore, the students should be encouraged to seek for specialized areas of interest in agriculture where they intend to do their attachments. Aside from the Department issuing letter of request through the students for placement, conscious efforts should also be made to ensure that such organizations are credible and capable of providing the needed resources that would boost the occupational competence of the participants
3. Peer-Learning techniques in the course of SIWES should be encouraged. This will allow students learn with and from each other as fellow learners without any implied authority to any individual. This will make the students to construct their own meaning, understanding of what they learn. In this light, the students will be involved in searching for, collecting, analyzing, evaluating, integrating and applying information to solve a problem or complete an assignment. It engages them intellectually, socially and emotionally to reaching a consensus or dissent as the case may be.
4. For the SIWES orientation programme to be more effective, there should be enough time (not less than one week) to intimate the participants of all the requirements during the scheme. This orientation exercise should be made compulsory such that any student who is absent should not be allowed to partake in the scheme for that SIWES year. On the other hand, the challenges of large class size can be most effectively tackled by putting the participants in batches of not more than 30-40 students in each. This will create a class size where the lecturer/students ratio is convenient enough for effective dissemination of relevant information.
5. Industrial supervisors should be encouraged to treat students on SIWES as their permanent staff. They should be implored to pay more attention to students learning by being made to fashion out work schedules, monitoring the implementation of work schedule and ensuring that the activities are reported in logbook as soon as they are carried out.
6. A National commission for student industrial training or a National Board for Co-operative Education should be put in place as recommended by Mafe (2009). This is to enhance effective implementation of SIWES and bring focus as it will constitute their primary mandate. This will help to address the problem of delay in the release of funds and allowances necessary to run the scheme.

7. The supervisory body of SIWES in Nigeria should consider introducing a trans-national exchange programme for students on SIWES. This will help them to understand the operations of their career in other countries and provide an opportunity for them to introduce new facets that will make the practice of their career more effective in Nigeria and make them fit into global best practices.

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