MITIGATING CHALLENGES OF STUDENT'S INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES) THROUGH INFORMATION COMMUNICATION TECHNOLOGY
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Abstract

Students at their studies in Nigerian Universities, Colleges of Education, Polytechnics and other tertiary institutions of learning are expected to undergo a programme known as the Student's Industrial Work Experience Scheme (SIWES), the programme is meant to expose students to real world practical work. Despite all the technologies available, managing the SIWES programmes is still facing a lot of problems such as lack of standard orientation, lackluster supervision, improper mentoring by industries supervisor etc. This paper offers some ICT remedies to these problems, with the view to mitigating the attendant consequences on the quality and standard of the exercise, the problem of lackluster supervision, improper mentoring by industries supervisors, among others have been identified. The availability of information and communication technology (ICT) facilities has the potential to change the narrative positively via a carefully packaged automated system which is discussed in this paper. Constant and continuous application of various ICT tools like computers, projectors, Instagram, WhatsApp, twitter, Facebook and Skype are herein is recommended for SIWES stake-holders to improve and add value to the standard of the exercise and suggest that industries and government agencies willing to engage an interns should make sure all related ICT facilities needed available, and internship should also ensure any industries and government agencies he is about to go for SIWES have related ICT facilities for his/her training and make sure to make best used of them.

Introduction

The Students Industrial Work Experience Scheme (SIWES) is a practical programme designed to expose and prepare students of universities and other tertiary institutions for real life situation they are likely to meet after graduation. It is also a planned and structured programme based on stated and specific career objectives which are geared towards developing the occupational competencies of participants (Mafe, 2007). Consequently, the SIWES programme is a compulsory graduation requirement for all Nigerian university and other tertiary institutions students offering library science, engineering, vocational, technological, computer science, food science and technology and related courses.

SIWES is the accepted training programme, which is part of the approved Minimum Academic Standard in the various degree programmes for all Nigerian Universities, Polytechnics and Colleges of Education. The scheme is aimed at bridging the existing gap between theory and practice of Sciences, Agriculture, Medical Sciences (including Nursing), Engineering and Technology, Management, and Information and Communication Technology and other professional educational programmes in the

Nigerian tertiary institutions. It is aimed at exposing students to machines and equipment, professional work methods and ways of safeguarding the work areas and workers in industries, offices, laboratories, hospitals and other organizations.Prior to establishing the Scheme, industrialists and other employers of labour felt concerned that graduates of Nigeria Universities were deficient in practical background studies preparatory for employment in Industries and other organizations. The employers according to Nwaorgu (2009), concluded that the theoretical education being received in our tertiary institutions was not responsive to the needs of the employers of labour. This forms the rationale for initiating and designing the scheme by the Industrial Training Funds ITF, in 2015.

According to Ochiagha (2010), practical knowledge is learning without which mastery of an area of knowledge may be too difficult to achieve. Practical knowledge involves developing skills through the use of tools or equipment to perform tasks that are related to a field of study. No society can achieve meaningful progress without encouraging its youth to acquire necessary practical skills. Such skills enable them to harness available resources to meet the needs of society. It was against this background that SIWES, otherwise referred to as Industrial Training (IT), was introduced in Nigerian tertiary institutions as a skill development program designed to prepare students of universities, polytechnics/monotechnics, and colleges of education for transition from the college environment to work (Akerejola 2005a). Oyedele (2008) states that work experience are an educational program in which students participate in work activities while attending school.

Akerejola (2008) observed that tertiary institutions in Nigeria are rising to the clarion call of establishing a SIWES unit. Hence, it is important that each institution of learning operates a SIWES unit that will prepare, select, supervise, coordinates, manage, facilitate and enhance the scheme.

General Objectives of SIWES

Olusegun (2009) point out the objectives of the Students Industrial Work Experience Scheme these include:

a. Provide an avenue for students to acquire industrial skills for experience during their course of study
b. Expose students to work methods and techniques that may not be available during their course of study.
c. Bridging the gap between theory and practice by providing a platform to apply knowledge learnt in school to real work situations
d. Enabling the easier and smoother transition from school by equipping students' with better contact for future work placement
e. Introduce students to real work atmosphere so that they know what they would most likely meet once they graduate.

Importance of Siwes

SIWES is important because it has become a prerequisite for the award of Diploma, NCE and Degree certificates in many Nigerian Institutions according to the Nigerian government Educational policy (National Policy on education (NPE, 2013)). The

duration is for four months for polytechnics and colleges of education students respectively and six months for university students. A breakdown of the scheme duration shows that;

a) Universities students undertakes the exercise at the end of 200, 300, 400 level of a degree program covering a total of 3-6 months.

b) Polytechnics and Colleges of Technology students' proceeds on SIWES at the end of the 1st year of the 2 year ND program covering a total period of 4 months.

c) Colleges of Education students are posted out for the scheme at the end of the 2nd year of the 3 years NCE program covering a total of 4 months.

This is a deliberate effort geared toward achieving the goals of the scheme.

SIWES Unit

Akerejola (2008b) opined that to ensure the smooth running and coordination of the scheme, SIWES units are set up with the following mandates:

a) Seeking of industrial placement for students enrolled in the scheduled for participation in SIWES.

b) Supervision of the students undergoing their industrial training in the various places of IT.

c) Processing of students' logbook, ITF forms and industrial attachment reports upon which is based on the federal government funding of the supervision and students' allowances.

d) Provision of advisory guidance to participating students on career employment opportunities.

e) Monitoring of compliance with the requirements of SIWES on the part of students in eligible disciplines as a condition for graduation.

f) Facilitation of the disbursement of the students' allowance to deserving students through e-payment.

Challenges of SIWES in Nigeria

Despite all the good intention of the programme and efforts to ensure its implementation and goal actualization, like any other enterprise some impediments cannot be over ruled. Hence there are certain challenges and problems that are being encountered by students during the practical training, hindering it from being fully effective and efficient. **They include:**

1. **Lack of standard Orientation:** Most Nigerian Internship Students aren't being properly informed by their institutions and departments on what the programme is all about. Even when it is done in some cases, vital information, facts, are often omitted, thus creating gaps that results in crises. Sometimes, they aren't even guided on how to make payments for the collection of their forms and logbooks. As a result, they often end up securing a place late for their training. A standard orientation should go beyond posting information, required materials but also possible challenges could be highlighted to prepare the minds of the students ahead of the task.

2. **Inadequate/inefficient Supervision and Care:** Supervision is vital in all training endeavors because it provides avenue for exchange of experiences/ideas as well as providing guidance/correction where necessary. Howeversome institutions find it

very difficult to allocate or send representatives to the various workplaces of their internship students to monitor, supervise, grade and advise them on the right things to do. Where they go at all, detail attention are often not given to the students' work as most supervision are hastily done. As a result of this, some students don't even go for training at all.

3. **Lack of Proper Mentoring by Industry Supervisors and teachers:** The general laxity pervading the entire work force could result inhigh rate of laziness by some workers in the firms where students undergo their industrial training. Chances are that majority of these workers may sometimes see and take the internship students as servants. For instance, instead of the students to be properly taught and shown the major activities, they may be instructed to carry out irrelevant jobs such as mopping floors, washing toilets, which negates the primary intention of the training(Mustapha2013).

4. **Placement / selection of SIWES place:** Placement or selection of SIWES place is gradually becoming a bottleneck in the realization of the goals of the scheme. This may not be unconnected with students' population explosion compared to number of available industries. The global economic downturn has forced some industries/companies to fold up or operate at low/half capacity. Invariably, this will limit the number of space from which SIWES students could choose for their training. Currently some students faces difficulties in finding firms for internship; some students search for placement even without having a target organization hence, sometimes applying to the organizations not relevant to their field of study. This practice might then lead to little or no experience gained in their original course of study for which the scheme was established.

5. **Log book Management:** For a student to gain the required knowledge from industrial training experiences, he/she must be well monitored. One of such areas of monitoring is completing his Logbook to ensure that he/she does not just participate in the training scheme in fulfillment of its mandatory status, but also acquire relevant experiences. Logbook management should go beyond only reporting daily activities but being able to translate the report into practice. Most of the times, what some students report negates the actual experience attained on daily basis, basically, and most record of daily activities are just written to fulfill all righteousness as they have no link/relationship with actual learning experience.

6. **Lack of ICT facilities:** Non-availability of latest ICT equipment, lack of expert technical staff by firms, poor administrative support, most times hinders the actualization of the motives of SIWES in the areas of monitoring, supervising and reporting of day to day training activities where majority of students are engaged.

ICT Remedies to these Problems

Information and Communication Technology today influences a lot of our individual and collective roles as human and a nation. It will continue to do so in many ways such as producing well-developed, educated, skilled and disciplined professionals.

Proper/Standard Orientation
From the forgoing the academic institutions should always ensure that proper/standard orientation programmes are organized for their internship students before embarking on the exercise using ICT gadgets. For instance, Computer as an ICT gadget can assist in the following ways: during the SIWES orientation and when the actual training starts.

Computer is an Electronic machine that process data into information.It allows students to play an active role in the teaching and learning process. It provides teachers with more options to teach and more time to evaluate progress of activities. It prevents barrier such as when, where, and limited resources. It helps students to be a more effective member of the information society.

Therefore SIWES coordination unit can use computer during SIWES orientation to facilitatestudents' participation/interest in the orientation programmePractical use of computer to demonstrate online transaction such as:

a. Payment for and submission of evidence of payment for collection of necessary items needed for the exercise.
b. How to write and forward their application letters to firms/industries of their choice.
c. Fill in their logbooks and transmit information to their supervisors.
d. Write their technical report after the period of training.

SIWES orientation usually attracts large number of students. A large lecture hall is often used to accommodate the students. Meanwhile majority of the students don't pay rapt attention during the briefings which often result in misinformation or lack of relevant information about the impending training. To avoid this scenario, a multimedia projector could be employed during orientation programme because multimedia projector visualized classrooms helps to arrange highly organized notes for taking a class which can assist students during SIWES activities.

When bulleted multimedia PowerPoint presentations that can be visualized by using projectors is utilized during Orientation it can attract the attention of the interns and sustain their interest in the briefing and impact positively on their performance during the SIWES training.

Adequate Supervision and Care
Adequate Supervision and Care can be comfortably achieved using appropriate ICT appliancesby school-based SIWES supervisors. Although their primary responsibility is to make out time to visit their Internship students in their various workplaces to monitor, grade and advise them on the right things to do, they should also ensure that the students actually benefited from the programme instead of only being interested in signing logbooks and marking reports. However, due to security challenges in the country, sometimes school-based supervisors may find it difficult to go for supervision.
Instagramas anICT tools can assist achieving this goal.
Instagramis a free, online photo/video-sharing application and social network platform school-based supervisors can create short video tutorials on what interns should do and share it on their Instagram page for interns'students to view and make use of. Likewise he may ask the interns to record what they do andforward it to him on daily basis. This can improve the supervisory role of school-based supervisors and encourage full

participation in training activities by interns in their respective firms/company of attachment.

Proper Monitoring

Monitoring is the systematic process of gathering, analyzing, and applying data to track a program's progress toward its objectives and informs management's choices. It benefits both the trainer and trainee. It provides a check and balance platform for interns to take the assignment very seriously, it helps to track down the activities of interns during the period of attachment.

The schools and industries should ensure Internship students in their various workplaces are monitored well, to ensurethat they get skills and derive maximum benefit from the programme. To ensure maximum monitoring during SIWES, WhatsAppas an ICT tools can be employed by both the school-based and industrial-based supervisors.

WhatsApp is a mobile application that enables users to chat with one another one-to-one or as a group. School supervisors and industries supervisors can create a WhatsApp group and share notes, activities, pictures and videos with students for proper guidance. This will provide constant opportunity for interns to relate with their supervisors, ask o the job questions and give progressive updates on daily activities rather than wait until they come around physically for supervision.

Placement/ Selecting of SIWES Place

Twitter as an ICT tools can be used to select and secure SIWES placement by students seeking places to undertake the mandatory scheme. Rather than engage in physical search that has its challenges (risk of accident, kidnapping, huge waste of finance as well a precious time that can be used for some other meaningful engagements). Twitter is a free social micro blogging service that allows registered members to broadcast short posts called tweets. Hence, the coordinating unit, students and scheme-based supervisors can through twitter find and secure placement for the training. Teachers/ Supervisors can use Twitter to send out short messages to students about better organizations an internship students can apply to thereby minimizing risk associated with physical search involving long distance travels.

Facebook isa popular free social networking website that allows registered users to create profiles, upload photos and videos, send messages and keep in touch with friends, family and colleagues. Internship students can use Facebook platform to post and announce his intension to go for SIWES, stating the type of Government agency or industry he needed and seek assistance from friends, family, colleagues and general public for searching such Government, agency or industry. Teachers/supervisors can also create a Facebook group for their internship students in order to assist them in searching and sharing of information and learning materials with students.

Logbook Management

Logbook management during SIWES program is very essential as internship used a logbook to keep a daily record of their activities during training. It also gives a means of retracing his past experiences and verifying their accountability during supervision. However, the need for an electronic logbook for S.I.W.E.S nowadays cannot be over

emphasized as a result of technology advancement. Daily reporting of activities in the logbook could be made simpler and easier for computer literate interns. Entries into the logbook can be done without stress using inbuilt apps like CorelDraw, Photoshop, and Publisher etc. that are readily available in the computer.

Similarly, can be used to disseminate information about logbook records/entries in advance to the supervisors who in turn can use it to monitor internship students from the comfort of their homes or when they travel out of town. Skypeisan IP telephony service provider that offers free calling between subscribers; Skype enables file transfers, texting, video chat and videoconferencing

Conclusion

Students of tertiary institutions of learning undergo SIWES program, which is meant to expose them to real world practical work. But, managing the program is still facing a lot of problems such as lack of standard orientation, lackluster supervision, improper mentoring by industries supervisor etc. This paper offered some ICT remedies to these problems, towards mitigating the attendant consequences on the quality and standard of the exercise, the problem of lackluster supervision, improper mentoring by industries supervisors, among others have been identified. The potential of ICT tools towards to changing the narrative positively via a carefully packaged automated system was discussed in this paper. Constant and continuous application of various ICT tools like computers, projectors, Instagram, hatsApp, twitter, Facebook and Skype are herein recommended for SIWES stake-holders to improve and add value to the standard of the exercise and suggested that industries and government agencies willing to engage an interns should make sure all related ICT facilities needed are available, and internship should also ensure any industries and government agencies he/she is about to go for SIWES have related ICT facilities for his/her training and make sure to make best used of them.

Recommendations

From the foregoing it is recommended that:
1. Government should devote sufficient financial resources to all levels and aspects of education to enhance effective running of educational programmes especially SIWES.
2. The Universities, Colleges of Educations, and Polytechnics should be encouraged to establish Information and communication Technology (ICT) and technological development centers to translate innovations from staff and students to goods and services.
3. Training and re-training of ICT teachers should be encourage by the Universities, Colleges of Educations, and Polytechnics, particularly in ICT as well as interactive teaching method, using social networks and the sharing of best practices among the academic staff.
4. Government and Industries willing to engage an ICT intern should make sure all related ICT facilities needed available, and internship student should also ensure any Government and Industries he is about to go for SIWES have related ICT facilities adequate for his/her training.

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