

# INFLUENCE OF STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME ON STUDENTS' ACADEMIC PERFORMANCE IN OFFICE TECHNOLOGY AND MANAGEMENT COURSES IN COLLEGES OF EDUCATION IN DELTA STATE

BY

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## Abstract

*This study was conducted to determine the influence of industrial training on the students' academic performance in the Office Technology and Management course in Delta State. Ex post facto survey research design was adopted. Four research questions and four hypotheses were put forward. The sample size consisted of 68 students. The student results for 2015/2016, 2016/2017 and 2017/2018 academic sessions in office practice/management, shorthand, word processing, computer appreciation and information technology and computer application from the four colleges of education in Delta State were used to collect data for the study. The data collected were analyzed with mean and standard deviation for descriptive statistics while the t-test was used to test the null hypotheses at 0.05 level of significance. The result revealed that there was an improvement in the students' academic performance in shorthand after the industrial training. It also showed that there was no significant difference in the students' academic performance in office practice/management, word processing, computer appreciation, and information technology and computer application. It was concluded that the students' industrial work experience scheme has a positive influence on the OTM students' academic performance in shorthand. Based on the findings, it was recommended, among others, that the institution should ensure that the OTM students were sent to establishments where they would be exposed to the practical use of modern office machines, that the establishments should ensure that the students sent to them on industrial training fully participated and acquired the needed knowledge and experience required for their studies.*

**Keywords:** *Students Industrial Work Experience, Office Technology and Management, Colleges of Education, Nigeria*

## Introduction

Students Industrial Work Experience Scheme (SIWES) was introduced in 1973 by the Industrial Training Fund (ITF) as a programme to train students on skills development and it was specifically designed to expose tertiary institutions students to the industrial work condition they were likely to meet after graduation. This scheme was instituted with the responsibility of bridging the gap between theory and practice

in student learning. The Information and Guidelines for SIWES (2002) states the various objectives of SIWES which include enhancing the industrial skill acquisition and working experience of students during their course of study and to complement the theoretical knowledge gained in the classroom through the practical experience that would enable the students to meet the practical challenges at the work environment and also to expose the students to the methods and techniques in handling equipment and machinery that might not be available in their institutions of learning.

An obvious implication of the objectives is that SIWES is restricted to students who would need industrial experience in their workplace. Thus according to Gomez, Lush and Clements (2004), SIWES is a programme that is restricted to a certain categories of students, such as students in universities, polytechnics, colleges of education and related institutions who study courses in various areas of Engineering, Technology and Technical and Business Education studies. SIWES is a core academic requirement with six credit units in the university and four credit units in the polytechnic and college of education. Therefore, this requirement must be met by all students in Office Technology and Management (OTM) in all the colleges of education including the four Colleges of Education in Delta State namely College of Education, Warri, Agbor, Mosogar, and Federal College of Education (Technical), Asaba before graduation. The training programme is undertaken in the first semester of year III of the Nigeria Certificate in Education programme.

Onwe (2010), as cited in Agbonghale and Iserameiya (2017), assert that SIWES has a great influence on job performance of fresh graduates in most institutions, especially those in the Office Technology and Management, and Engineering. According to him, SIWES has exposed students to practical experience rather than theories and abstractions taught in the classrooms.

SIWES can also be seen as a programme designed to expose and prepare students of institutions of higher learning for an industrial work situation that they are likely to meet after graduation (Oyeniyi, 2011). Ugwuanyi and Ezema (2010), assert that SIWES is a cooperative industrial internship programme that involves institutions of higher learning, Industries, the Federal Government of Nigeria, Industrial Training Fund (ITF), National Universities Commission (NUC) and NBTE/NCCE in Nigeria. Similarly, Olawale, (2012) states that the scheme was planned to serve as a bridge between educational institutions and the industrial employers, with the later providing general and specific occupational skills and knowledge. Nevertheless, SIWES is the Nigerian government human resources development (HRD) training and development programme that was inaugurated to bridge the gap between the theoretical work of the tertiary institutions in the following courses, engineering, technical, vocational, business and other related practical courses, and what takes place practically, in the world of work.

Although SIWES has several benefits for students, several studies seem to indicate that the scheme is yet to build the needed bridge to close the gap between the theory-based studied classroom and the practice as is obtained in the world of work. The inability of SIWES to meet its objectives could be seen from the little attention that is paid to the training value of the scheme. Also, it could be seen from the poor academic performance of students in their course of study after the training exercise. Students do not seem to take the scheme seriously and only a few employers appear enthusiastic in engaging the students not even as 'learning workers' but as 'producing workers'. In all, SIWES appears to have failed in meeting the practical production skills, attitudes, abilities and competencies required to make Nigerian technological,

engineering, business (OTM) and other vocational education graduates readily employable or to be self-reliant. This position is re-affirmed in, this research carried out with the students of the colleges of education in Delta State revealed that the objectives of enhancing the industrial skill acquisition and work experience of (OTM) students especially in the aspect of exposing them to modern office management, technology, and information systems have not yet be accomplished.

### **Theoretical framework**

The specific theory underpinning this study is the Vroom's Expectancy Theory. Vroom (1964) assumes that behaviour results from conscious choices among alternatives whose purpose it is to maximize pleasure and to minimize pain. Vroom realized that an employee's performance is based on individual factors such as personality, skills, knowledge, experience and abilities. He stated that effort, performance and motivation are linked in a person's motivation. He used the variables: Expectancy, Instrumentality and Valence to account for this (Lunenburg, 2011). Vroom suggests that motivation, expectancy, instrumentality and valence are related to one another by the equation.

Motivation = Expectancy x Instrumentality x Valence.

Expectancy is regarded as a person's estimate of the probability that job-related effort will result in a given level of performance. In other words, an OTM student who puts in much effort in learning both theory and practice is expected to perform well during examination whereas, instrumentality is seen as an individual's estimate of the probability that a given level of achieved task performance will lead to various work outcomes. In other words, the level of performance attained will be instrumental to the reward received by the student while valence is the strength of a person's preference for a particular reward, that is, the amount of value attached to the reward received.

The multiplier effect in the equation above is significant. It simply means that there will be higher levels of motivation if expectancy, instrumentality and valence are all high than when they are all low. The multiplier assumption of this theory also implies that if any one of the three factors is zero, the overall level of motivation is zero and therefore performance will be zero. Therefore, for example, even if a student believes that his/her effort will result in high performance, which will result in reward, motivation will be zero if the valence of the reward he/she expects to receive is zero (i.e. if he/she believes that the reward he/she will receive for his/her effort has no value to him/her).

Finally, it is this current researchers' point of view that the expectancy theory will be most applicable to this study because it is believed that increase effort will lead to increase performance in other words if the right resources are available, the right skills to do the job is also there and again the necessary support to get the job done in form of supervisor support, or correct information on the job is available then the level of performance is expected to be high.

The main emphasis of SIWES however, is on practical application of knowledge. Practical knowledge is related to doing. Ochiagha (1995) explains that practical knowledge is an aspect of learning without which to obtain mastery of an area of knowledge may be very difficult to achieve. Practical knowledge again can be seen as a process of developing skills through the use of tools or equipment to carry out tasks that are related to a specific job or study. OTM students who are taught courses in office practice/management, shorthand, word processing, computer appreciation, and information technology and computer application are exposed to industrial training and

it is expected that the industrial training would have some positive influence on the students' academic performance after the training programme.

Leffingwell and Rot (2018) uphold that, office management can be considered as a branch of art and science of management which has to do with the competent performances of office work, at whatever time and anywhere that work is done. Office management could also be defined as the art of guiding the personnel of the office in the use of materials, methods, machines and equipment appropriate to their environment to achieve its specified purposes (Mills and Standingford, 2018). According to Wylie (2018), office management could be described as the management and control of men, methods, machines, and materials to attain a viable result- a result that will be considered to be of viable quality with an imaginable amount of effort and expense, within a short time and a method acceptable to the top management.

It was however observed that over the years various technological changes have taken place globally and this is equally applicable to OTM where numerous changes in technology in an attempt to provide quality education to students have also taken place. These new technologies in business education with particular reference to (OTM) are designed to prepare students for different types of careers in high-tech business offices. It is not easy to develop a categorization of new technologies in business education because of their diversity and evolution in structures and functions. New technologies have been classified differently by various authors. Other ways of classifying these new technologies are by process and product (McLoughlin and Clark, 1997). Mazda's (1993), agrees that there are core and application technologies. These new technologies can be grouped into four categories, namely: new technologies for all the senses; new technologies for internet explosion; new technologies for the wireless revolution; and new technologies for personal use (Haag, Cummings and McCubbrey, 2002). All their classifications are relevant to this current work.

However, the advent of technologies such as the word processor, the computer, the internet, reprographic machines, automated teller machines, micrographic machines, modern telephonic systems including handset and other multimedia, among others, have not only changed the office environment but have also altered the ways people do things. The computer is one of the most noticeable of the new technologies.

Azih (2013) carried out a study on which she emphasized the necessity for building secretaries' competence in modern office technology. The researcher specified that secretaries should be well-informed of the significance and usage of modern office technology, and recommended that training programmes should be organized periodically for secretaries to update their knowledge on modern office skills and that institutions training secretaries must include in their curriculum these modern office technology skills for programme relevance. Azih (2013) reveals that training is important in complementing the use of modern office technology. The researcher further emphasized that secretaries in various organizations perform several office duties and that if they can use some of these modern office technologies in carrying out their duties it could lead to efficiency in the performance of these assigned duties. Therefore, relevant technological equipment for office use should be provided in every organization, and every organization should ensure that they organize training and retraining programmes for secretaries so that they will be occupationally relevant.

Furthermore, the uses of these modern office technological gadgets by the secretaries have proven to be very useful especially in terms of making their work to be most flexible and easy. Some of these modern gadgets include smartphones, laptops, palmtops notebooks, tablets, faster Windows operating systems (Windows 7 and 8)

among others. Dion (2012) states that new technology advancement is reshaping business industries to industries where every business needs technology to compete successfully. Therefore, the need for OTM students to be competent in the practical skills of these office technologies is of great importance.

Information and Communication Technology which is another basic requirement for the training of the OTM student is not left out. Information technology can be described as a combination of computing, telecommunication and video techniques to acquire processing, store, and disseminating vocal, pictorial, textual and numerical information. Information technology could be depicted as the harnessing of electronic technology in different ways to improve the operations and usefulness of the business in totality (Uzoka, 2002). Information technology again can be described as a technology that supports activities involving the creation, storage, manipulation and communication of information (predominantly, computing, electrical and electronic communications) together with their related methods, management and applications (Oliver, Chapman and French, 1990). The use of information technology has changed the way most people do their jobs and has improved the nature of work in industrialized nations; management practices have also been considerably affected.

The management of firms and their managers must, therefore, understand the implications of this new information technology revolution which requires substantial future readjustment and quickly learn how to benefit from it (Frenzel, 1992). The unification of internet technologies and traditional business concerns impact on industries and is the latest segment in the ongoing progression of business infrastructure and most cases change the way employees respond more and immediately to customer needs (Grant, Hurley, & Hartley, 2000). ICT is mostly used to improve the delivery of and access to effective and efficient services in the office and the organization as a whole. The use of ICT empowers secretaries to improve their understanding of the secretarial practice and functions, increase the quality of their work attitude, thereby increasing their impact on the management of the office and the organization as a whole. ICT based innovations can occur in secretarial functions, their linkage to office management is essential to achieve the intended outcomes of an organization. The findings of Kahiro (2017) reveal that the use of various forms of information and Communication Technology software has a significant impact on the general performance of the secretaries. This is an indication that ICT has a tremendous influence on the general performance of the secretary.

#### Statement of the Problem

Most institutions of higher learning spend remarkable time on teaching theories instead of engaging students in practical skill acquisition due to a lack of teaching resources needed to impart in the students the necessary skills required in the industry. To bridge these gaps, ITF was set up by the federal government with the responsibility of providing students whose courses are practical in higher institutions of learning with the industrial experience. It is assumed that SIWES could help to enhance the academic performance of students of engineering, agriculture, vocational and technical education and other related areas of study to acquire suitable skills and practical work experience to boost their theoretical learning.

However, students seem not to be acquiring such basic skills through SIWES, since their academic performance does not show any improvement even after the training exercise. As a result of this, some important questions that arise are, whether SIWES is helping the OTM students to develop the practical skills and competencies that could enhance the level of their academic performance in office management. Whether

SIWES is helping the OTM students to develop the practical skills and competencies that could enhance the level of academic performance in shorthand. Another pertinent question at this point becomes whether SIWES can help OTM students to develop the practical skills and competency that could enhance the level of academic performance in word processing; or whether SIWES could aid OTM students in acquiring the practical skills and competency that could enhance the level of academic performance in information technology and computer application. These issues indeed seek to stimulate the need for this study.

### **Purpose of the Study**

The main purpose of the study is to determine the influence of industrial training experience on students' academic performance in OTM courses in colleges of education, in Delta State. Specifically, the study seeks to find out:

1. The level of academic performance of OTM students in office practice/management before and after their industrial training programme;
2. The level of academic performance of OTM students in shorthand before and after their industrial training programme;
3. The level of academic performance of OTM students in word processing before and after their industrial training programme;
4. The level of academic performance of OTM students in computer appreciation and information technology and computer application before and after their industrial training programme.

### **Research Questions**

The following research questions guided the study:

1. Is there any difference in the level of academic performance attained by OTM students in Office Practice/management before and after their industrial training programme?
2. Is there any difference in the level of academic performance attained by OTM students in shorthand before and after their industrial training programme?
3. Is there any difference in the level of academic performance attained by OTM students in word processing before and after their industrial training programme?
4. Is there any difference in the level of academic performance attained by OTM students in computer appreciation and information technology and Computer Application before and after their industrial training programme.

### **Hypotheses**

The following null hypotheses were formulated and tested at  $p \geq 0.05$  level of significance.

1. There is no significant difference in the level of academic performance attained by OTM students in Office Practice/management before and after the industrial training programme.
2. There is no significant difference in the level of academic performance attained by the OTM students in shorthand before and after their industrial training programme
3. There is no significant difference in the level of academic performance attained by OTM students in word processing before and after their industrial training programme.

4. There is no significant difference in the level of academic performance attained by the OTM students in computer appreciation and information technology and computer application before and after their industrial training programme.

### **Methodology**

The study is an ex-post-facto survey employing students' academic results in office practice, office management, shorthand, word processing, computer appreciation, and information technology and computer application. Ex-post facto research is most appropriate when it is not possible or acceptable to manipulate the characteristics of human participants as these are facts that have already occurred.

The population studied comprised of 185 OTM students in the 2015/2016 academic session from the Colleges of Education, in Delta State. This figure was made up of 42 students from College of Education, Mosogar, 54 students from College of Education, Warri, 57 students from College of Education, Agbor, and 32 students from Federal College of Education (Technical) Asaba, these students were admitted in the 2015/016 academic session and graduated in 2017/2018 academic session and before graduation, they had completed their SIWES programme. The choice of these academic sessions is because the students have undergone SIWES at the end of first semester year III that is 2017/2018 academic session and their year three (3) result sheets are also available for comparison with that of year one (1) which 2015/2016 academic session and year two (2) which is 2016/2017 academic session

The sample for the study comprises of Year III OTM students who have completed the SIWES programme in the four Colleges of Education in Delta State. Therefore the purposive sampling technique was adopted in this study. The reason why the purposive sampling technique is most appropriate for this study is that the researchers are only interested in the OTM students who have completed their SIWES programme and the sample size was 68 students which was made up of 15 students from Colleges of Education, Mosogar, 10 students from Colleges of Education, Warri, 13 students from Colleges of Education, Agbor and 30 students from Colleges of Education (Technical) Asaba.

The instrument used for data collection for the study was the result sheet for office practice in 2015/2016 academics session, office management in 2017/2018 academic session, shorthand in 2016/2017 and 2017/2018 academic sessions, word processing in 2016/2017 and 2017/2018 academic sessions, computer appreciation in 2016/2017 academic session and information technology and computer application in 2017/2018 academic session. The instrument that was used to obtain the result for the study has been validated before administering it in examination form on the students. Therefore it is assumed the instrument has already been validated before the examination. The reliability of the instruments was also pre-determined before their administration for the examination. Therefore, no further reliability test was carried out.

### **Results**

The data collected were analyzed using the Mean ( $\bar{X}$ ), Standard Deviation (SD) to answer the research questions while a t-test was used to test the null hypotheses at 0.05 level of significances. The results of the data analyses are presented in the order of the hypotheses.

**Hypothesis 1:** There is no significant difference in the level of mean academic performance attained by the OTM students in office practice/management before and after their industrial training programme.

**Table 1: Summary of t-test of students' performance in office practice/management**

Tests			Std.	df	t-value	p-value	Decision
	Mean	N	Deviation				
Before industrial training	54.78	68	11.622	67	.576	.567	Retain
After industrial training	53.91	68	12.536				

Table 1 reveals the result of the test of the level of OTM students' performance in office practice/management before and after industrial training. The result shows that students had a mean performance of 54.78 before the industrial training and a mean performance of 53.91 after the industrial training. This showed that the mean performance before the training is slightly higher than the mean performance after the training. To test if this difference is significant, an independent sample t-test was conducted.

The test of the hypothesis shows that the students' performance before and after the training is not significant  $t(67) = .567$ ,  $p = .567$ . Hence, the null hypothesis is retained. This implies that the students' performance in office practice/management before the training did not significantly differ from their performance after the training.

**Hypothesis 2:** There is no significant difference in the level of mean academic performance attained by the OTM students in shorthand before and after their industrial training programme

**Table 2: Summary of independent sample t-test of students' performance in shorthand**

Tests			Std.	df	t-value	p-value	Decision
	Mean	N	Deviation				
Before industrial training	45.59	68	14.842	67	-2.628	.011	Reject
After industrial training	49.94	68	17.638				

Data presented in Table 2 shows the result of the test of the level of OTM students' performance in shorthand before and after industrial training. The Table reveals that the students had a mean performance of 45.59 before the industrial training and a mean performance of 49.94 after the industrial training. This showed that the mean performance before the training is lower than the mean performance after the training. To test whether one difference in the mean is significant, an independent sample t-test was conducted.

For the test of the corresponding hypothesis, the table shows that the students' performance before and after the training was significant  $t(67) = -2.628$ ,  $p = .011$ . Hence, the null hypothesis is rejected. This implies that the students' performance in shorthand before the training significantly differ from their shorthand performance after the training.

**Hypothesis 3:** There is no significant difference in the level of mean academic performance attained by the OTM students in word processing before and after their industrial training programme.

**Table 3: Summary of independent sample t-test of students' performance in word processing**

Tests	Mean		Std. Deviation	df	t-value	p-value	Decision
	Mean	N					
Before industrial training	52.04	68	12.886	67	.216	.830	Retain
After industrial training	51.54	68	17.222				

The result of Table 3 represents the result of the test of the level of OTM students' performance in word processing before and after industrial training. The data shows that the students had a mean performance of 52.04 before the industrial training and a mean performance of 51.54 after the industrial training. This showed that the mean performance before the training is slightly higher than the mean performance after the training. To determine whether this difference in the mean is significant, an independent sample t-test was conducted.

Correspondently, the test of the hypothesis shows that the students' performance before and after the training was not significant  $t(67) = .216$ ,  $p = .830$ . Hence, the null hypothesis is retained. Thus, the students' performance in word processing before the training did not significantly differ from their performance after the training.

**Hypothesis 4:** There is no significant difference in the level of mean academic performance attained by the OTM students in computer appreciation and information technology and Computer Application before and after their industrial training programme.

**Table 4: Summary of independent sample t-test of students' performance in computer appreciation information technology and computer application**

Tests	Mean		Std. Deviation	df	t-value	p-value	Decision
	Mean	N					
Before industrial training	55.45	60	11.326	57	-.404	.688	Retain
After industrial training	56.08	60	12.359				

The results in Table 4 represent the level of OTM students' performance in computer appreciation, information technology and computer application before and after industrial training. The data shows that the students had a mean performance of

55.45 before the industrial training and a mean performance of 56.60 after the industrial training. This showed that the mean performance before the training is slightly lower than the mean performance after the training. To test whether the difference in one means is significant, an independent sample t-test was conducted.

The test of the hypothesis shows that the students' performance before and after the training was not significant  $t(57) = -.404, p = .688$ . Hence, the null hypothesis is retained. Thus, the students' performance in computer appreciation and information technology and computer application before the training did not significantly differ from their performance after the training.

### **Discussion of Findings**

This study was carried out to examine the influence of industrial training experience on students' academic performance in office technology and management courses in colleges of education. The reasons for carrying out this study was to find out whether SIWES programme helps OTM students to develop more practical skills and competency that could enhance the level of their academic performance in office management, shorthand, word processing, and information technology and computer application.

The findings of the study with regards to research question one and hypothesis one revealed that the Mean score (X) for office practice was 54.78 while that of Office Management was 53.91. The findings from the hypothesis showed that there is no significant difference in the OTM students' academic performance in office practice and office management before and after their industrial training. This implies that even though the students undergo the industrial training exercise there was no significant improvement in their knowledge of office management. Hence, there is no significant difference in their previous and present performance.

The findings of the study concerning research question two and hypothesis two revealed that OTM students performed better in shorthand after their exposure to the SIWES programme. This finding conforms with the findings of Ojokuku, (2015), in a study on the influence of SIWES on Professional Development of Library and Information Science students in South-West, Nigeria where it was found that SIWES added a good deal to the students' knowledge and that the students were able to apply the knowledge gained at school to the real-life setting.

The findings of the study for hypotheses two indicated that there is a significant difference in the level of academic performance attained by the OTM students in shorthand after their industrial training programme. This finding is in agreement with the findings of Chukwuedo (2011), in a research carried out on Students' perception of the influence of students industrial work experience scheme on academic achievement in Edo State where it was found out that SIWES influenced students' academic performance and was relevant to their practical skill acquisition. It is obvious here that this study tried to link academic performance and practical skill acquisition which is the essence of SIWES.

The findings of this study for research question three and hypothesis 3 indicated that the result of the test of the level of OTM students' performance in word processing before industrial training is slightly higher than after the industrial training. The findings from the hypothesis showed that there is no significant difference in the OTM students' academic performance in word processing before and after their industrial training.

The findings of this study concerning hypothesis four indicate that the level of academic performance attained by the OTM students in information technology and Computer Application before and after their industrial training programme has no significant difference. This is in contradiction with the findings of Buseni (2013), in a study carried out on "Effect of Information and Communication Technology on Secretaries Performance in Contemporary Organizations in Bayelsa State", where it was discovered that the usage of computer, telecommunication techniques, and video techniques does improve the performance of public sector secretaries.

### **Conclusion**

Based on the findings of the research, it is concluded that the industrial training has a positive influence on the OTM students' academic performance in shorthand. In other words, the students' ability to write and translate shorthand improved tremendously after the industrial training exercise.

However, on the other courses (office management, word processing and information technology and computer application), industrial training has no significant influence on the OTM students' academic performance.

### **Recommendation**

Based on the findings of the study, the following recommendations are made: Institutions should ensure that OTM students are sent to establishments where they will be exposed to the practical use of modern office equipment such as computers (laptops, tablets), internet facilities, photocopier, risograph machine and institution-based supervision objectively carried out.

Office Technology Management students need to recognize the importance of industrial training to their academic programmes and be truly committed to the training as a means to enhance their performance in the related courses on return back to their institutions and to prepare them for the world of work after graduation.

Establishments should ensure that the students sent to them on industrial training fully participate and acquire the needed knowledge and experience that is required for their studies by allowing them to take part in the administration of the office daily, adequately exposing them to their facilities and supervising them properly.

### **References**

- Agbonghale, G. O. & Iserameiya F. E. (2017). Influence of students' industrial work experience scheme (SIWES) on student's acquisition of entrepreneurial skills in Nigerian public universities in Edo State. *World Journal of Research and Review (WJRR)*, 5 (6), 31-35
- Azih, N. (2013). Capacity building in modern office technology: An imperative for effective secretarial productivity, *Asian Journal of Business Management*, 5, 193-196.
- Buseni, J. (2013). Effects of information and communication technology on secretaries performance in contemporary organizations, 2 (5) 87-93
- Chukwuedo, S.O. (2011). The students' perception of the influence of students' industrial work experience scheme on academic achievement. *Journal of Education, Health and Technology Research*, 1 (1) 80 - 86
- Dion, H. (2012). Emerging tech trends that will impact business in 2012. Retrieved from: <http://www.dachisgroup.com/2012/01/emerging-tech-trends-that-will-impact-social-business-in-2012/>.

- Ewert, A. & Sibthorp, J. (2009), creating outcomes through experiential education: The challenge of confounding variables. *Journal of experiential Education*, 31 (3) 376 – 389
- Frenzel, C.W. (1992) Management of information technology, USA, Boyd & Fraser Publishing Company, 1st ed.
- Gomez, S. Lush, D. & Clement, M. (2004). Work placement enhances the academic performance of bioscience undergraduates. *Journal of Vocational Education and Training*, 56 (3)
- Grant, N., Hurley, J., & Hartley K., (2000) E-Business and ERP: Transforming the Enterprise, New York, John Wiley & Sons.
- Haag, S., Cummings, M. & McCubbrey, D.J. (2002). Management information systems for the information age (3rd Ed.). Boston: McGraw.
- Kahiro, M.S. (2017). The use of information and communication technology (ICT) and its effect on office technology and management practitioner's performance in Malaysia. *Man in India*, 97 (10), 233 - 245.
- Leffingwell, W. I. & Rot, E. M. (2018) Office management and it's importance. Retrieved from <http://www.yourarticlelibrary.com/office-management/office-management-and-its-importance/53154>
- Lunenburg, F.C. (2011), Expectancy theory of motivation: Motivating by altering expectations. *International Journal of Management, Business, and Administration*, 15 (1), 1- 6
- Mazda, N. (1993). Telecommunication industry. In M. Fraidon (Ed). Telecommunications engineers reference book. (pp.11-18). London: Butterworth Heinemann.
- McLoughin, I. & Clark, J. (1997). Technological change at work. Philadelphia: Open University.
- Mills, G. & Standingford, O. (2018). Office management and its importance. Retrieved 05/12/2018 from <http://www.yourarticlelibrary.com/office-management/office-management-and-its-importance/53154>
- Ochiagha, C.C (1995). Theory and practice of career development. Enugu: Snap Press.
- Ojokuku, B.Y. (2015). Influence of students' industrial work experience scheme (SIWES) on professional development of library and information science students in south-west Nigeria. *Library philosophy and practice (e-journal)* 1330, 1 – 18. Retrived 20/03/2019 from <http://www.digitalcommons.uni.edu.libphiprac/1330>
- Olawale, O.E.A. (2012). Building a bridge between gown and town through infusion of industrial experience into students' final year project. *Journal of Educational and Social Science Research*, 2 (7), 140 -148.
- Oliver, E. C, Chapman, R. J. & French, C.S. (1990). Data processing and information technology: An instructional manual for business and accountancy students, Britain: DP Publications
- Oyeniya, A.A. (2011). Students' industrial work experience and the dynamics of sustainable skills acquisition and utilization among graduates in Nigeria. *Research Journal of International Studies*, 19, 130 -136
- SIWES, (2002). Objective and function of SIWES. Retrieved on 19/05/2018 from <http://www.siwesplacement.com.ng/objectives-and-functions-of-siwes>
- Ugwuanyi, C.F. & Ezema, J.U. (2010). Challenges of students' industrial work experience scheme (SIWES) in library and information science in the ICT environment.

Library Philosophy and Practice. 401 Retrieved 20/03/2019 from <http://www.digitalcommons.uni.edu.libphilprac/401>

Uzoka, F.M. (2002). Effects of information technology on customers' satisfaction in Nigerian financial institutions, *The Nigerian Accountant*, 35 (4), 5-8.

Vroom, V.H. (1964). *Work and motivation*. San Francisco, CA: Jossey-Bass.

Wylie, H. H. (2018). Office management and its importance. Retrieved 05/12/2018 from <http://www.yourarticlelibrary.com/office-management/office-management-and-its-importance/53154>.