[TECHNICAL SIWES REPORT]

UNDERTAKEN AT FEDERAL MINISTRY OF HEALTH, ABUJA

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**TECHNICAL REPORT ON**

Student industrial work experience scheme (SIWES)

UNDERTAKEN AT

FEDERAL MINISTRY OF HEALTH FOOD AND DRUGS DEPARTMENT

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 **DEDICATION**

I dedicate this write up to my beloved parents, my father Mr. Austin Nnodim and my mother Mrs. Ednah Nnodim. Gratitude to my brother and the rest of my family member for their support. Thank you.

 **ACKNOWLEDGEMENT**

My sincere appreciation and gratitude to God Almighty , for it is with His help everything was done successfully. Special thanks to my supervisor for being there to explain and clear any confusion I have come across. To my parents,, am grateful for the encouragement and advices on how to do things properly. And lastly to the pharmacists that took their time to give me lecture. Also I am thankful to my family and friends.

 **ABSTRACT**

The 3 months Students Industrial Work Experience Scheme (SIWES) which is a requirement for my course of study, Pharmacology, was undertaken at the Federal Ministry of Health, Abuja.

I was an Industrial Attaché (IT) at the Food and Drug Department. The Industrial Training was based on working with drugs, researching on pharmaceutical drugs,, monthly stocking and I also attended seminars and presentation during my stay at the Federal Ministry of Health.

 **INTRODUCTION**

SIWES was established by ITF in 1973 to solve the problem of lack of adequate practical skills preparatory for employment in industries by Nigerian graduates of tertiary institutions. The Scheme exposes students to industry based skills necessary for a smooth transition from the classroom to the world of work. It affords students of tertiary institutions the opportunity of being familiarized and exposed to the needed experience in handling machinery and equipment which are usually not available in the educational institutions.

Participation in Industrial Training is a well-known educational strategy. Classroom studies are integrated with learning through hands-on work experiences in a field related to the student’s academic major and career goals. Successful internships foster an experiential learning process that not only promotes career preparation but provides opportunities for learners to develop skills necessary to become leaders in their chosen professions.

One of the primary goals of the SIWES is to help students integrate leadership development into the experiential learning process. Students are expected to learn and develop basic non-profit leadership skills through a mentoring relationship with innovative non-profit leaders.

Participation in SIWES has become a necessary pre-condition for the award of Diploma and Degree certificates in specific disciplines in most institutions of higher learning in the country, in accordance with the education policy of government.

​**OBJECTIVES OF SIWES**

▪ SIWES will provide students the opportunity to test their interest in a particular career before permanent commitments are made.

▪ SIWES students will develop skills and techniques directly applicable to their careers.

▪ SIWES will provide students the opportunity to develop attitudes conducive to effective interpersonal relationships, the opportunity to understand informal organizational interrelationships and will increase a student's sense of responsibility as well as to acquire good work habits.

▪ SIWES students will be prepared to enter into full-time employment in their area of specialization upon graduation and to develop employment records/references that will enhance employment opportunities

The objectives of SIWES programme are all about strengthening future employees. Such program is successful attempt to help students to understand the underlying principles of their future work. After passing the programs, the student can concentrate on the really necessary factors of his or her work.

**OBJECTIVES OF THE FEDERAL MINISTRY OF HEALTH**.

❖ Undertakes health promotion

❖ Formulation of national policies, guidelines and strategies on food and drugs, ensures ethical delivery

 Of pharmaceutical services nationwide.

❖ Acts as regulator through the pharmacists council of Nigeria, the institutes of chartered chemists of

 Nigeria.

❖ Sponsors the National Institute for Pharmaceutical Research and Development and the National

 Agency for Food and Drug Administration and Control .

 **DESCRIPTION OF TRAINING EXPERIENCE**

 During my SIWES training at the Federal Ministry of Health, Food and Drug department, I carried out my training program in Food and Drugs department and Water Safety Management Program(WSMP) which is a sub division of Food and Drugs and after two(2) months to National Biosafety Management Agency for laboratory practical training.

**-**Food and Drug department

I resumed work at Federal Ministry of Health, Food and Drug department on the 1st of July, 2019. On the first day, I was introduced to the operations and activities in the unit. Before the end of the day, I was familiar with the units and how their activities are carried out. The Food and Drugs department acted as aregulator through the Pharmacists Council of Nigeria, the Institute of Chartered Chemists of Nigeria and the Institute of Public Analyst of Nigeria.

They are responsible for the standard treatment guidelines and essential drug list, they keep record of newly approved books on drugs and other aspects of medicine and nationally approved books on drugs in general.

 I learnt about the standard treatment guidelines published by the Federal Ministry of Health in collaboration with WHO which is intended to promote rational, safe, and cost-effective use of medicines in the health care system, providing for therapeutic effectiveness and economically efficient use of medicine by health-care providers, drug manufacturers, marketing agencies and above all policy makers of the country.

 During my training period in this department, I was able to get familiar with the pharmacy department , equipmqents and alsocarry out actual drug compounding , initially by checking for the drug sutability/stability in syrup in the official book, how to calculate the required number of tablets and volume of syrup to be used for the formulation , and also the various compounding ethics and labelling . I was also allowed to compound some drugs( tablets)needed to be formulated into syrup under the supervision of a pharmacist.

 **No of tablets= prescribed drug strength × (duration of use +1) ÷ available drug strength**

 **Volume of syrup = 2.5 ml × daily dosing × (duration of use+1)**

**Where; duration of use is usually 2 weeks(14)days and the +1 for calculation in excess for spillage, prescribed drug strength is the amount in mg of the drug prescribed by the doctor, available drug strength is the amount in mg in which the drug usually comes as, daily dosing is the frequency of drug usage in one day.**

Also, the first day of the month , I was able to have medical knowledge of drug interaction, adverse effects and contributed in the process of learning.

-Water Safety Management Program (WSMP)

 After two(2) weeks at the Food and Drug department, I was transferred to the Water Safety Management Program (WSMP). I was orientated on the operations and activities been carried out in this unit, which included recording of files (incoming and outgoing files) for accurate record keeping under WSMP and practice on how to use the office gadgets among many are: using the photocopy machine, learning to print office documents using the printer.

 This department is basically centered on water sanitation and hygiene. Within two(2) weeks, I was able to attend lectures on water safety and hygiene, attended the zerowater presentation organized by the unit, where I learnt about water realated diseases and their categories and symptoms of these diseases caused by unclean water.

I was oriented on pharmaceutical drugs used in treatment of these water diseases. Diseases like cholera, dengue fever etc and their chemical constituents. And also various type of water for pharmaceutical use especially water for injection.

After my stay in the Water Safety Management Programme, I was able to use office gadgets both simple and complex, prepare documents, pass out circulars for lectures and know the importance of quality water.

-National Biosafety Management Agency

 I was transferred to the National Biosafety Management Agency after one month where I worked for two months. This was for the sole purpose of laaboratory practical training.

I got familiar with the various equipments and facilities in the laboratory for the first two days among which are: thermal cycler, test tubes,centrifuge tube etc and got elementary knowledge on plant extraction, the types of PCR fragment analysis sizing, quantitation, purity assesssment and the three main steps in PCR which are denaturing, annealing, extending stages.

 Within this period, I was able to carry out a PCR test to detect HIV’S genetic material under the supervision of a laboratory scientist.

**RELATION OF WORK EXPERIENCE TO THEORY LEARNT IN SCHOOL**

With respect to theory learnt in school:

—I was able to learn more about drug-drug interaction and drug-food interaction and side effects of drugs based on what I learnt in pharmacology.

**PROBLEMS ENCOUNTERED**

The problems I have encountered during my SIWES training are basically insufficient practical equipment and supplies from the government.

**RECOMMENDATION**

Government should endeavor to provide adequate practical equipments .

Allowances should be paid to students during their programme and not after. This would help them a great deal to handle some financial problems during their training course.

**CONCLUSION**

In the 3months of my training I developed extensive skills on the use of simple and complex office gadgets and how to get the work done in an office( recording and tracking of incoming and outgoing files).

I got a practical knowledge on extraction process of deriving medicine from plants and how to use some laboratory equipments like the thermal cycler and carried out an experiment to detect HIV’s genetic material and knowledge on PCR primers.

I got knowledge on the importance of quality water and the various kinds of water for pharmaceutical purposes.