



**TECHNICAL REPORT ON  
STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME  
(S.I.W.E.S)**

**HELD AT  
DEKTOBERT GLOBAL LIMITED CONCEPT  
ILORIN, KWARA STATE**

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**SUBMITTED TO THE  
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## **PREFACE**

*The Students Industrial Work Experience Scheme (SIWES) is an essential part of my academic training as an Electrical and Electronics Engineering student. It provides an opportunity to gain practical experience, industry exposure, and technical skills required for professional development. This report documents my six-month industrial training at Dektobert Global Limited Concept, Ilorin, where I was exposed to various aspects of electrical installations, transformer maintenance, solar power systems, and general electrical works. The training allowed me to apply theoretical knowledge in real-world situations, develop hands-on expertise, and understand the importance of safety and troubleshooting in electrical engineering. The report is structured to provide a detailed account of my work experience, challenges encountered, skills acquired, and the impact of the training on my career development. I also highlight recommendations for improving SIWES for future students. I express my gratitude to Dektobert Global Limited Concept for the invaluable learning experience, as well as my supervisors and academic mentors for their guidance throughout the training period. I hope this report serves as a useful resource for future SIWES students and provides insights into the practical applications of electrical and electronics engineering.*

## **DEDICATION**

This report is dedicated to Almighty Allah for giving me wisdom, knowledge and understanding through the course of study.

It is equally dedicated to my loving parents Mr. and Mrs. ADAMU for their moral and financial support and my siblings.

## **ACKNOWLEDGEMENT**

I sincerely appreciate the Industrial Training Fund (ITF) for establishing the Students Industrial Work Experience Scheme (SIWES), which has provided me with invaluable practical experience in Electrical and Electronics Engineering.

My deepest gratitude goes to Dektober Global Limited Concept, Ilorin, for accepting me as an intern and giving me the opportunity to learn and develop my technical skills. I am especially grateful to my supervisors and senior engineers, whose guidance, patience, and mentorship played a crucial role in my learning process. Their willingness to share knowledge and experience helped me gain practical insights into electrical installations, solar power systems, transformer maintenance, and safety procedures.

I would also like to extend my appreciation to my lecturers and industrial training coordinators for their support and encouragement throughout the SIWES program. Their academic teachings provided a strong foundation that enabled me to understand and apply my knowledge effectively in a real-world setting.

Finally, I am grateful to my family and friends for their unwavering support, motivation, and encouragement throughout my industrial training experience. Their belief in my abilities kept me focused and determined to make the most of this opportunity.

Above all, I thank God Almighty for granting me the strength, wisdom, and good health to successfully complete my industrial training.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF SIWES**

The Students Industrial Work Experience Scheme (SIWES) is a skill-acquisition program designed to provide practical training for students in engineering, technology, and other technical disciplines. It was introduced to bridge the gap between theoretical knowledge and practical applications, ensuring that students gain hands-on experience in real work environments before graduation.

SIWES is a mandatory industrial training program for students in universities, polytechnics, and technical colleges in Nigeria. It provides students with the opportunity to develop technical skills, industry exposure, and problem-solving abilities, making them more employable in their respective fields.

The scheme is supervised by academic institutions, while industries provide training opportunities. It is funded by the Federal Government of Nigeria and coordinated by the Industrial Training Fund (ITF).

#### **1.2 HISTORY OF SIWES**

The Students Industrial Work Experience Scheme (SIWES) was established in 1973 by the Industrial Training Fund (ITF) in response to the lack of practical skills among Nigerian graduates, particularly in science and technology-related fields.

Before SIWES was introduced, many engineering and technical students graduated with little or no practical experience, making it difficult for them to adapt to the industrial work environment. The ITF launched SIWES to enable students to acquire relevant skills, enhance their knowledge, and prepare them for future employment.

Since its inception, SIWES has grown into a nationwide program, with thousands of students participating annually in various industries, including electrical engineering, mechanical engineering, civil engineering, computer science, and agricultural technology.

#### **1.3 OBJECTIVES OF SIWES**

The main objectives of the Students Industrial Work Experience Scheme (SIWES) are:

1. To expose students to real-world industrial environments where they can apply classroom knowledge.
2. To provide students with practical skills and technical expertise needed for their profession.
3. To bridge the gap between theoretical knowledge and practical application in industries.
4. To prepare students for the challenges and expectations of the workplace.

5. To enable students to develop problem-solving skills and enhance their creativity in technical fields.
6. To encourage teamwork, communication, and professionalism in the workplace.
7. To enhance students' chances of employment and entrepreneurship after graduation.

#### **1.4 OBJECTIVES OF ESTABLISHMENT**

The establishment of SIWES aims to achieve the following:

1. Improve industrial training for students in technical disciplines.
2. Enhance collaboration between academic institutions and industries.
3. Develop a workforce with relevant practical skills and industrial exposure.
4. Reduce the dependency on foreign-trained professionals by improving local expertise.
5. Promote research and development through industry-based training.
6. Encourage innovation and technical problem-solving among students.

## **CHAPTER TWO**

### **OVERVIEW OF THE ORGANIZATION**

#### **2.1 HISTORY OF DEKTOBERT GLOBAL LIMITED CONCEPT, ILORIN**

Dektobert Global Limited Concept is an electrical engineering company based in Ilorin, Kwara State, Nigeria. The company specializes in electrical installations, renewable energy solutions, transformer maintenance, and general electrical works. It provides services to residential, commercial, and industrial clients, ensuring efficient power solutions and sustainable energy applications.

#### **2.2 COMPANY'S VISION AND MISSION**

##### ***Vision Statement***

To be a leading electrical engineering company in Nigeria, providing innovative, safe, and sustainable energy solutions for homes, businesses, and industries.

##### ***Mission Statement***

- i. To deliver high-quality electrical engineering services that meet national and international standards.
- ii. To promote the use of renewable energy and sustainable power solutions.
- iii. To ensure safety, reliability, and efficiency in all electrical projects.
- iv. To train and develop skilled professionals in the electrical engineering field.

#### **2.3 CORE SERVICES OFFERED**

Dektobert Global Limited Concept provides a wide range of services, including:

##### **A. Electrical Installation Services**

- Wiring of residential, commercial, and industrial buildings.
- Conduit and surface pipeline wiring.
- Installation of three-phase and single-phase meters.
- Fixing of three-way switches, change-over switches, and cutout fuses.

##### **B. Solar Power and Renewable Energy Solutions**

- Installation of solar panels for homes and businesses.
- Addition and maintenance of solar batteries and inverters.
- Installation of solar battery racks and wiring connections.

##### **C. Transformer Installation and Maintenance**

- Installation of transformers for power distribution.
- Maintenance and replacement of transformer control cabinets.
- Measuring and monitoring incoming voltages to ensure stability.



- Changing of shackle insulators and other transformer components.

#### **D. Street Lighting and Electrical Pole Works**

- Installation of street lights in public areas.
- Maintenance and repairs on electrical poles and power lines.

### **2.4 ORGANIZATIONAL STRUCTURE**

Dektobert Global Limited Concept operates with a structured hierarchy, including:

- **Managing Director:** Oversees the overall operations and strategic direction.
- **Project Managers:** Handle project planning and execution.
- **Electrical Engineers and Technicians:** Perform electrical installations and maintenance.
- **Solar Energy Specialists:** Focus on renewable energy solutions.
- **Administrative and Support Staff:** Manage company operations and logistics.

### **2.5 CLIENTS AND MARKET COVERAGE**

Dektobert Global Limited Concept serves a wide range of clients, including:

- Government agencies (for public infrastructure projects).
- Private businesses and industries requiring electrical installations.
- Residential homeowners seeking power solutions.
- Educational institutions and healthcare facilities needing stable electricity supply.

### **2.6 ACHIEVEMENTS AND CONTRIBUTIONS**

- Successfully installed and maintained transformers in various locations.
- Provided renewable energy solutions through solar panel installations.
- Improved power distribution systems in different communities.
- Trained and mentored young engineers and technicians in the electrical industry.

## **CHAPTER THREE**

### **WORK EXPERIENCE DURING SIWES**

#### **3.1 TASKS AND RESPONSIBILITIES**

During my Students Industrial Work Experience Scheme (SIWES) at Dektobert Global Limited Concept, I was actively involved in various electrical and electronics engineering tasks. The training exposed me to real-world applications of theoretical knowledge, safety measures, and problem-solving techniques in electrical systems.

Below is a summary of my work experience during the training period.

##### **1. Electrical Installations and Wiring**

- Learned the difference between conduit and surface pipeline wiring.
- Carried out the installation of three-way switches.
- Assisted in fixing change-over switches and cutout fuses.
- Installed and maintained single-phase meters.
- Worked on the installation of three-phase supply systems for buildings.

##### **2. Solar Power System Installation**

- Installed solar panels for renewable energy solutions.
- Learned how to add and connect solar batteries.
- Participated in the installation of solar battery racks.

##### **3. Transformer Installation and Maintenance**

- Assisted in the installation of transformers for power distribution.
- Replaced and maintained the control cabinet of transformers.
- Measured incoming voltages to ensure proper power distribution.
- Changed shackle insulators to improve transformer efficiency.

##### **4. Electrical Pole and Street Light Installation**

- Worked on electric poles for wiring and maintenance.
- Installed and connected street lights for road illumination.

##### **5. Safety Measures and Troubleshooting**

- Learned the importance of safety precautions when handling electrical equipment.
- Troubleshoot faulty electrical components and corrected wiring errors.
- Used multimeters and other electrical tools to measure voltage and continuity.

#### **3.2 CHALLENGES ENCOUNTERED**

During my industrial training, I faced several challenges, including:

1. **Technical Challenges:** Handling heavy electrical equipment was physically demanding. Complex wiring connections required careful attention to avoid errors. Troubleshooting electrical faults was also sometimes challenging due to hidden issues.
2. **Environmental Challenges:** Weather conditions affected outdoor installations, especially during transformer and streetlight projects. Workplace hazards, such as exposure to high-voltage electricity, required strict adherence to safety measures.
3. **Learning and Adaptation Challenges:** Adapting to a fast-paced work environment required focus and quick learning. Understanding new technical concepts took time, especially when dealing with transformer components. Balancing multiple tasks required proper time management and organization.

Despite these challenges, I was able to overcome them through supervision, teamwork, and continuous learning.

### **3.3 SKILLS ACQUIRED**

Throughout my SIWES training, I developed valuable technical and professional skills, including:

#### **A. Technical Skills**

- Electrical wiring and installations for residential and commercial buildings.
- Installation and maintenance of transformers for power distribution.
- Solar panel and battery installation for renewable energy systems.
- Use of electrical tools such as multimeters, testers, and pliers for troubleshooting.

#### **B. Safety and Compliance Skills**

- Adherence to workplace safety procedures when handling high-voltage equipment.
- Understanding of electrical hazard prevention and protective measures.
- Knowledge of proper grounding techniques to prevent electrical shocks.

#### **C. Problem-Solving and Troubleshooting Skills**

- Ability to diagnose and fix electrical faults efficiently.
- Practical knowledge of voltage measurement and power distribution analysis.
- Improved critical thinking skills when solving real-world electrical problems.

#### **D. Professional and Soft Skills**

- Teamwork and collaboration with experienced engineers and technicians.
- Time management and multitasking in a fast-paced environment.
- Communication skills when interacting with supervisors and clients.
- Adaptability and quick learning in new technical environments.

## **CHAPTER FOUR**

### **IMPACT OF SIWES ON MY CAREER**

The Students Industrial Work Experience Scheme (SIWES) at Dektobert Global Limited Concept, Ilorin, had a significant impact on my career as an Electrical and Electronics Engineering student. The training provided me with practical knowledge, technical skills, and industry exposure that have shaped my professional aspirations.

The SIWES program was an invaluable experience that transformed my career perspective. It provided me with technical expertise, industry exposure, safety awareness, and confidence in my field. The skills and knowledge gained will play a crucial role in my future as an electrical engineer.

Below are some key impacts of SIWES on my career development:

#### **1. Enhanced Practical Knowledge**

Before the training, most of my knowledge was theoretical. SIWES helped me gain hands-on experience in:

- Electrical wiring (conduit and surface pipeline wiring).
- Solar power system installation (solar panels, batteries, and inverters).
- Transformer installation and maintenance (voltage measurement, control cabinet replacement).
- Working on electrical poles and street lighting.

This exposure bridged the gap between classroom learning and real-world applications.

#### **2. Improved Technical Skills**

During my SIWES, I developed essential technical skills, such as:

- Using electrical tools (multimeters, testers, and wiring tools).
- Troubleshooting electrical faults and fixing faulty installations.
- Measuring and analyzing voltages in transformers and power systems.

These skills are crucial for my future career as an electrical engineer.

#### **3. Increased Confidence and Problem-Solving Abilities**

- The training boosted my confidence in handling electrical installations and maintenance tasks.
- I learned how to analyze and solve electrical problems efficiently.
- Exposure to different work environments taught me critical thinking and adaptability.

#### **4. Awareness of Industry Safety Standards**

- I gained knowledge of workplace safety measures, such as handling high-voltage equipment safely.

- I understood the importance of protective gear (PPE) in electrical engineering.
- The training reinforced my awareness of electrical hazards and preventive measures.

This will help me maintain safety in my future workplace.

### **5. Career Direction and Professional Networking**

- The experience helped me clarify my career path in electrical and renewable energy systems.
- I interacted with experienced engineers and technicians, which expanded my professional network.
- I now have a better understanding of the skills required in the electrical industry.

### **6. Preparedness for Future Job Opportunities**

- The practical training has improved my employability in the electrical and electronics engineering field.
- I now have work experience that can be added to my CV.
- I am better prepared for future industrial roles or even starting my own electrical business.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 CONCLUSION**

The Students Industrial Work Experience Scheme (SIWES) at Dektober Global Limited Concept, Ilorin was an invaluable learning experience that greatly enhanced my practical knowledge and technical skills in Electrical and Electronics Engineering.

Through hands-on training, I was exposed to electrical installations, transformer maintenance, solar power system installation, and electrical safety procedures. This experience bridged the gap between theoretical knowledge and practical application, helping me understand real-world challenges in the field of electrical engineering.

Moreover, working alongside professionals gave me insights into industry best practices, problem-solving techniques, and safety measures, all of which are crucial for my future career. The training also reinforced the importance of teamwork, professionalism, and continuous learning in the engineering field.

In summary, SIWES has been instrumental in preparing me for the workforce, improving my technical competence, and boosting my confidence in handling electrical systems and installations.

#### **5.2 RECOMMENDATIONS**

- i. Students should be proactive and eager to learn: Seek opportunities to participate in various tasks to gain hands-on experience.
- ii. Students should follow safety procedures strictly: Electrical work involves risks, so always prioritize safety.
- iii. Industries should provide more structured training programs to help students systematically learn key aspects of electrical engineering.
- iv. Industries should introduce more advanced electrical testing equipment to enhance students' exposure to modern technology.
- v. Institutions and Government Agencies should ensure SIWES placements align with students' courses of study to maximize learning.
- vi. Institutions and Government Agencies should support more funding and resources for technical training and hands-on learning in engineering fields.