A TECHNICAL REPORT

STUDENT INDUSTRIAL WORKING EXPERIENCE SCHEME

(SIWES)

Held at

TSL Tech Hub

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DEDICATION

I dedicate this technical report to the Almighty Allah, the giver of knowledge, wisdom and who is rich in mercy.

ACKNOWLEDGEMENT

I take this opportunity to express my profound gratitude and deep regards to the creator of heaven and earth, the one who knows the beginning and the end, the alpha and the omega, the Almighty Allah and also to my guides (MR & MRS AREMU , and to all those who has helped me during my SIWES programme. The blessings, help and guidance given by them, time to time has carry me so this far and shall carry on the journey of life on which I am about to embark. I also take this opportunity to express a deep sense of gratitude to compliment my mentor for his cordial support valuable information and guidance which helped me in completing my SIWES through various stages.

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INTRODUCTION

1.1 **Background of SIWES**

Students Industrial Work Experience Scheme (SIWES) is a Skills Training Program designed to prepare and expose Students of Universities, Polytechnics, Colleges of Technology, Colleges of Agriculture and Colleges of Education for the Industrial Work situation they are likely to meet after graduation. The Scheme affords Students the opportunity of familiarizing and exposing themselves handling equipment and machinery that are usually not available in their institutions.

1.2 HISTORY OF SIWES

The Students' Industrial Work Experience Scheme (SIWES) was initiated in 1973 by the Federal Government of Nigeria under the Industrial Training Fund (ITF) to bridge the gap between theory and practice among products of our tertiary Institutions. It was designed to provide practical training that will expose and prepare students of Universities, Polytechnics, and Colleges of Education for work situation they are likely to meet after graduation.

Before the establishment of the scheme, there was a growing concern among the industrialists that graduates of institutions of higher learning lacked adequate practical background studies preparatory for employment in industries. Thus the employers were of the opinion that the theoretical education going on in higher institutions was not responsive to the needs of the employers of labour.

As a result of the increasing number of students' enrolment in higher institutions of learning, the administration of this function of funding the scheme became enormous, hence ITF withdrew from the scheme in 1978 and was taken over by the Federal Government and handed to National Universities commission (NUC), National Board for Technical Education (NBTE) and National Commission for Colleges of Education (NCCE). In 1984, the Federal Government reverted back to ITF which took over the scheme officially in 1985 with funding provided by the Federal Government.

1.2 **Objectives of SIWES**

The specific objectives of SIWES are to:

- Provide placements in industries for students of higher institutions of learning approved by relevant regulatory authorities (NUC, NBTE, NCCE) to acquire work experience and skills relevant to their course of study

- Prepare students for real work situation they will meet after graduation.

- Expose students to work methods and techniques in the handling of equipment and machinery that may not be available in schools.

- Make transition from school to the labour market smooth and enhance students' conduct for later job placement

- Provide students with the opportunity to apply their knowledge in real life work situation thereby bridging the gap between theory and practice

- Strengthen employer involvement in the entire educational process and prepare students for employment in industry

  Promote the desired technological knowhow required for the advancement of the nation.

1.3 **Overview of TSL Tech Hub**

TSL Tech Hub is a technology-focused organization dedicated to fostering innovation, digital transformation, and software development. The company provides services such as software development, IT consultancy, cloud computing, cyber security, and digital marketing.

1.4 Purpose of the Report

This report outlines the experiences gained during the SIWES program at TSL Tech Hub, highlighting the practical skills learned, challenges faced, and recommendations for improvement.

CHAPTER TWO

COMPANY PROFILE

2.1 About TSL Tech Hub

TSL Tech Hub is a leading technology firm specializing in:

- Software development
- Web and mobile app development
- IT infrastructure management
- Cyber security solutions
- Data analytics and artificial intelligence

2.2 Company Vision and Mission

- **Vision:** To be a leading technology hub providing innovative solutions for businesses and enterprises.
- **Mission:** To empower businesses with cutting-edge digital solutions and enhance technological capabilities.

2.3 Organizational Structure

TSL Tech Hub operates under a structured hierarchy including:

- Chief Executive Officer (CEO)
- Software Development Team
- IT Support and Networking Team
- Digital Marketing and UI/UX Team
- Cyber security Unit
- HR and Administrative Staff

CHAPTER THREE

DESCRIPTION OF INDUSTRIAL TRAINING

3.1 Department of Attachment

The SIWES program was conducted under the **Software Development & IT Infrastructure Department**.

3.2 Roles and Responsibilities

During the internship, key responsibilities included:

- **Software Development:** Writing and debugging codes, working on front-end and back-end applications.
- **Web Development:** Designing user interfaces using HTML, CSS, JavaScript, and frameworks like React.
- **Database Management:** Learning about My SQL and MongoDB for data storage.
- **Networking:** Setting up and maintaining network configurations.
- **Cyber security Awareness:** Understanding basic security protocols and encryption techniques.
- **Project Collaboration:** Working in teams using Agile and Scrum methodologies.

3.3 Tools and Technologies Used

- Programming languages: Python, JavaScript, PHP
- Frameworks: React.js, Node.js, Django
- Databases: MySQL, MongoDB
- Cloud Platforms: AWS, Google Cloud
- Project Management Tools: GitHub, Trello, Jira

CHAPTER FOUR

EXPERIENCE AND LEARNING OUTCOMES

4.1 **Practical Knowledge Gained**

- Hands-on experience in coding and debugging.
- Exposure to real-life project management and teamwork.
- Understanding of software lifecycle development.
- Experience in troubleshooting IT and network issues.

4.2 **Challenges Faced**

- Difficulty in understanding new programming frameworks initially.
- Adapting to corporate communication and project deadlines.
- Managing multiple tasks in a fast-paced environment.

4.3 **Solutions and Adaptations**

- Undertook self-learning and online tutorials.
- Improved time management skills.
- Actively participated in team discussions and brainstorming sessions.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Industrial Training

The SIWES experience at TSL Tech Hub was invaluable in bridging academic knowledge with practical industry applications. It provided real-world exposure to software development, IT solutions, and cyber security.

5.2 Recommendations for Improvement

- TSL Tech Hub should introduce a structured mentorship program for interns.
- Provide more hands-on training sessions on cyber security and cloud computing.
- Increase collaboration opportunities for interns with senior developers.

5.3 Conclusion

The industrial training at TSL Tech Hub was an enlightening experience that enhanced technical skills, problem-solving abilities, and teamwork. The knowledge gained will be instrumental in future career development in the technology industry.