

TECHNICAL REPORT
ON
STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)
AT

TONNEX INFO-TECH
BEHIND UNION BANK, SURULERE, ILORIN, KWARA STATE

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DEDICATION

I dedicate my Industrial Training report to Almighty God, who has given me the grace to participate in the SIWES program, to my Parents and as many that have contributed greatly to the success of my Industrial Training.

ACKNOWLEDGEMENT

I thank God who has seen me throughout my SIWES program and also thank my Industrial based supervisor who guided me through My Industrial training. I also send out my appreciation to my lecturers, friends and Coworkers for their moral support. My special thanks to my wonderful and lovely parents Mr. and Mrs. Olanrewaju who were there for me in terms of care, prayers, financial support and others.

TABLE OF CONTENTS

Title Page

Dedication

Acknowledgment

Table of content

CHAPTER ONE: INTRODUCTION

1.1 Background

1.2 Brief historical development of SIWES

1.3 Objectives of SIWES

CHAPTER TWO: DESCRIPTION OF THE ESTABLISHMENT OF ATTACHMENT

2.1 Location and Brief history of establishment

2.2 Objectives of establishment

2.3 Organization Structure

2.4 Departments in the establishment and their functions

2.5 Operational Processes

CHAPTER THREE: INDUSTRIAL EXPERIENCE

3.1 Work Done

3.2 Tools and Equipment Used

3.3 Safety precautions

3.4 Challenges faced during my SIWES Programme

CHAPTER FOUR: SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Summary

4.2 Conclusion

4.3 Recommendation

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

The Students Industrial Work Experience Scheme (SIWES) is a work-based learning program designed to prepare students for the transition from academic life to professional careers. It is an integral part of the Nigerian educational system, aimed at equipping students with practical skills and knowledge to complement their theoretical studies. SIWES was established in 1973 by the Industrial Training Fund (ITF) in response to the growing concerns of employers about the lack of practical skills among graduates from tertiary institutions (Ezeabikwa, 1991). The scheme is a collaborative initiative involving students, tertiary institutions, employers of labor, and the ITF.

The program was introduced to address the gap between classroom learning and the real-world demands of industries. It recognizes that while theoretical knowledge is essential, it is often insufficient for solving practical problems in professional environments. SIWES provides students with opportunities to gain hands-on experience, develop technical competencies, and understand workplace ethics and culture (Agbai, 1992).

The scheme is a mandatory part of the curriculum for students studying courses such as engineering, technology, medical sciences, agriculture, education, and other applied sciences. It typically lasts for six months for university undergraduates and four months for students in polytechnics or colleges of education (ITF, 2024). Through this initiative, students are exposed to industrial practices and technologies that are not available within their academic institutions. This exposure enhances their employability and prepares them for the challenges of the modern workforce (Adebayo & Adesanya, 2013).

SIWES also serves as a platform for fostering partnerships between educational institutions and industries. These partnerships enable industries to contribute to curriculum development by providing feedback on the skills and knowledge required in the workplace. This collaboration ensures that graduates are better equipped to meet industry standards and expectations (Akinyemi & Abiodun, 2018).

In summary, SIWES is a vital component of Nigeria's educational system that bridges the gap between theory and practice. It plays a crucial role in preparing students for professional careers by equipping them with practical skills, knowledge, and experiences that are essential for success in their chosen fields.

1.2 BRIEF HISTORICAL DEVELOPMENT OF SIWES

The history of SIWES dates back to the early 1970s when Nigeria experienced rapid industrial growth following its independence. This growth created a demand for skilled manpower to operate and manage industrial facilities. However, employers soon realized that graduates from tertiary institutions lacked the practical skills needed to perform effectively in the workplace (Ezeabikwa, 1991).

In response to this challenge, the Industrial Training Fund (ITF) was established in 1971 by Decree No. 47 with a mandate to promote skill acquisition and manpower development in Nigeria. Two years later, in 1973, SIWES was introduced as one of ITF's flagship programs aimed at addressing the skill gap among graduates (ITF, 2024). Initially, SIWES was fully funded and managed by ITF. The program targeted students in engineering and technology-related fields who required practical training as part of their academic curriculum (Adebayo & Adesanya, 2013).

By 1978, financial constraints forced ITF to withdraw from direct management of SIWES. The Federal Government subsequently transferred oversight responsibilities to the National Universities Commission (NUC) for universities and the National Board for Technical

Education (NBTE) for polytechnics and colleges of education (Legit.ng, 2022). However, this arrangement proved ineffective due to inadequate funding and poor coordination among stakeholders. In 1984, management responsibilities were returned to ITF under a new funding arrangement supported by the Federal Government (SmartBukites, 2023).

Over time, SIWES has undergone significant changes aimed at improving its effectiveness and expanding its scope. Initially limited to engineering and technology disciplines, it now includes other fields such as medical sciences, agriculture, business administration, and education. These changes reflect an ongoing commitment to align SIWES with evolving industry needs and national development goals (Akinyemi & Abiodun, 2018).

Today, SIWES is recognized as one of Nigeria's most successful initiatives for bridging the gap between academic learning and industrial practice. It has become an essential component of tertiary education in Nigeria, contributing significantly to skill development and employability among graduates.

1.3 OBJECTIVES OF SIWES

The primary objectives of SIWES are multifaceted and aim to enhance both student learning and industry engagement:

- To provide students with industrial skills and experience relevant to their field of study.
- To expose students to work methods and techniques that may not be available in their academic institutions.
- To facilitate a smoother transition from academic life to professional employment by enhancing students' networks with potential employers.
- To allow students to apply theoretical knowledge in practical settings, thereby bridging the gap between theory and practice.

- To strengthen employer participation in the educational process by fostering collaboration between educational institutions and industries (Ezeabikwa, 1991; ITF, 2024).

CHAPTER TWO

DESCRIPTION OF THE ESTABLISHMENT OF ATTACHMENT

2.1 LOCATION AND BRIEF HISTORY OF ESTABLISHMENT

Tonnex Info-Tech is strategically located at Behind Union Bank, Surulere, Ilorin, Kwara State. This prime location allows the company to serve a diverse range of clients effectively, leveraging its proximity to major financial institutions and commercial hubs. As a large business center, it likely has a significant presence in the IT and technical services sector, contributing to the local economy through job creation and innovation. Though specific details about its history could not be found, it is evident that Tonnex Info-Tech has established itself as a key player in the region's IT landscape.

The establishment's location in Kwara State also positions it well to capitalize on the growing demand for IT services in the region. With its central location, Tonnex Info-Tech can easily serve clients from various parts of the state and beyond, making it a preferred choice for businesses seeking reliable IT solutions. The company's presence in this strategic location enhances its ability to provide timely and efficient services, which is crucial in today's fast-paced business environment.

Moreover, the location offers easy access to major transportation routes, facilitating the movement of personnel and equipment. This logistical advantage allows Tonnex Info-Tech to respond quickly to client needs, whether it involves deploying technicians for on-site support or transporting equipment for installations.

2.2 OBJECTIVES OF ESTABLISHMENT

The primary objectives of Tonnex Info-Tech are multifaceted and centered around providing comprehensive IT solutions and technical support to its clients. These objectives are designed to drive growth, innovation, and customer satisfaction. Some of the key objectives include:

- **Delivering Innovative IT Solutions:** Offering cutting-edge and efficient IT solutions to meet the technological needs of businesses and individuals. This involves staying updated with the latest technologies and trends in the IT sector to provide solutions that are both effective and cost-efficient. By continuously monitoring industry developments, Tonnex Info-Tech ensures that its clients have access to the most advanced technologies available.
- **Enhancing Technical Capabilities:** Continuously updating and improving technical skills to stay abreast with the latest technologies. This ensures that the company remains competitive and capable of handling complex IT projects. Regular training programs and workshops are conducted to enhance the skills of the technical team, ensuring they are equipped to tackle emerging challenges in the IT landscape.
- **Customer Satisfaction:** Ensuring high levels of customer satisfaction through reliable and prompt service delivery. This is achieved by maintaining a customer-centric approach, where feedback is valued and used to improve services. Tonnex Info-Tech prioritizes building strong relationships with its clients, understanding their unique needs, and tailoring its services accordingly.
- **Market Expansion:** Expanding its market reach and establishing itself as a leading IT service provider. This involves exploring new markets, both locally and internationally, and diversifying its service offerings to cater to a broader client base.

By expanding its market presence, Tonnex Info-Tech aims to increase its revenue streams and solidify its position in the global IT market.

- **Quality Assurance:** Maintaining high standards of quality in all services provided. This includes implementing rigorous quality control measures to ensure that all IT solutions meet or exceed client expectations. Tonnex Info-Tech adheres to international quality standards, ensuring that its services are reliable, efficient, and meet the highest industry benchmarks.
- **Sustainability and Social Responsibility:** Contributing to the community through sustainable practices and social initiatives. This may involve participating in local IT education programs or supporting environmental conservation efforts. By engaging in these activities, Tonnex Info-Tech demonstrates its commitment to being a responsible corporate citizen and contributing positively to society.

2.3 ORGANIZATION STRUCTURE

For a large business center like Tonnex Info-Tech, a suitable organizational structure could be a combination of functional and divisional models. This structure allows for efficient management of various IT functions while catering to different business units or client segments.

- **Upper Management:** Includes roles such as Chief Information Officer (CIO), Chief Technology Officer (CTO), and Chief Information Security Officer (CISO), who guide the overall direction of the IT department and ensure alignment with business objectives. These leaders are responsible for strategic planning, resource allocation, and overseeing major projects. They play a crucial role in setting the company's vision and ensuring that all departments work towards common goals.

- **Functional Departments:** Such as procurement, infrastructure, and administration, which handle specific tasks like resource acquisition, network management, and project planning. These departments are crucial for maintaining the operational efficiency of the organization. For instance, the procurement department ensures that all necessary IT resources are acquired at competitive prices, while the infrastructure department manages the company's IT infrastructure to ensure reliability and security.
- **Divisional Structure:** Allows for specialized departments focused on specific areas like cybersecurity, software development, or customer support, each with its own team leaders and responsibilities. This structure enables the company to tailor its services to meet the unique needs of different client groups. For example, the cybersecurity department focuses on protecting IT systems from cyber threats, while the software development department creates custom software solutions for clients.
- **Project Management Office (PMO):** Oversees the planning, execution, and monitoring of projects to ensure they are completed on time, within budget, and to the required quality standards. The PMO plays a vital role in coordinating cross-functional teams and managing project risks. By using project management methodologies like Agile or Waterfall, the PMO ensures that projects are delivered efficiently and effectively.

2.4 DEPARTMENTS IN THE ESTABLISHMENT AND THEIR FUNCTIONS

Given the nature of Tonnex Info-Tech as a large IT business center, it may have departments or teams focused on the following areas:

- **IT Support Department:** Responsible for providing technical assistance to clients, including troubleshooting, maintenance, and repair of IT systems. This department is often the first point of contact for clients experiencing technical issues and plays a critical role in ensuring client satisfaction. The IT support team operates around the clock to provide timely assistance, using tools like remote desktop support and ticketing systems to manage requests efficiently.
- **Technical Services Department:** Focuses on installing, configuring, and maintaining hardware and software systems for clients. This includes setting up networks, servers, and other IT infrastructure to meet clients' specific needs. The technical services team works closely with clients to understand their requirements and design customized solutions that enhance their operational efficiency.
- **Consulting Department:** Offers advisory services on IT solutions and strategies tailored to clients' needs. This department helps businesses assess their IT requirements and develop strategies to improve their technology infrastructure. By providing expert advice, Tonnex Info-Tech enables its clients to make informed decisions about their IT investments.
- **Customer Service Department:** Handles customer inquiries, feedback, and ensures client satisfaction. This team is responsible for building strong relationships with clients and addressing any concerns they may have. The customer service department uses various communication channels, including phone, email, and chat, to ensure that clients can easily reach out for assistance.

- **Procurement Department:** Manages the acquisition of IT resources, including hardware, software, and services. This involves sourcing high-quality products at competitive prices and ensuring compliance with procurement regulations. The procurement team works closely with suppliers to negotiate favorable terms and ensure timely delivery of goods.
- **Infrastructure Department:** Oversees the management of hardware, software, and data infrastructure. This includes maintaining data centers, managing cloud services, and ensuring the reliability and security of IT systems. The infrastructure department is critical in ensuring that all IT systems are running smoothly and efficiently, supporting the company's operations and client services.
- **Cybersecurity Department:** Specializes in protecting IT systems from cyber threats and ensuring data security. This team implements security protocols, conducts vulnerability assessments, and responds to security incidents. By using advanced security tools and techniques, Tonnex Info-Tech safeguards its clients' data and systems from potential threats.
- **Software Development Department:** Focuses on designing, developing, and maintaining software applications for clients. This includes creating custom software solutions, updating existing systems, and ensuring software compliance with industry standards. The software development team uses agile methodologies to deliver projects quickly and efficiently, ensuring that clients receive high-quality software solutions that meet their needs.
- **Data Analytics Department:** Provides data analysis services to help clients make informed business decisions. This involves collecting, processing, and interpreting data to identify trends and opportunities. By leveraging data analytics tools and

techniques, Tonnex Info-Tech enables its clients to gain valuable insights into their operations and market trends.

- **Training and Development Department:** Offers training programs for clients and staff to enhance IT skills and knowledge. This department plays a crucial role in ensuring that both clients and employees are equipped with the latest IT skills. Training programs are designed to be interactive and engaging, using real-world scenarios to illustrate key concepts and best practices.

2.5 OPERATIONAL PROCESSES

The operational processes at Tonnex Info-Tech are designed to be efficient, transparent, and client-centric. These processes include:

- **Service Request Management:** A structured system for handling client requests, ensuring prompt and effective service delivery. This involves using ticketing systems to track requests, assign tasks to technicians, and monitor progress until resolution.
- **Project Management:** A systematic approach to managing projects from initiation to completion, focusing on timelines, budgets, and quality. Project managers use methodologies like Agile or Waterfall to plan, execute, and monitor projects, ensuring they meet client expectations.
- **Quality Assurance and Control:** Regular audits and assessments to ensure that all services meet the company's quality standards. This includes conducting quality checks on completed projects and gathering feedback from clients to identify areas for improvement.
- **Continuous Improvement:** Regular feedback sessions and performance reviews to identify areas for improvement and implement changes. By fostering a culture of continuous learning and improvement, Tonnex Info-Tech stays ahead of the competition and adapts to changing market conditions.

CHAPTER THREE

INDUSTRIAL EXPERIENCE

3.1 WORK DONE

During my SIWES program at Tonnex Info-Tech, I was involved in a variety of tasks that provided me with hands-on experience in the IT industry. Some of the key responsibilities included:

- **Technical Support:** I worked closely with the IT support team to assist clients with technical issues. This involved troubleshooting hardware and software problems, providing solutions over the phone or via email, and sometimes visiting clients on-site to resolve complex issues. I used diagnostic tools to identify problems and applied problem-solving skills to find effective solutions.
- **Network Administration:** I assisted in managing and maintaining the company's network infrastructure. This included configuring routers, switches, and firewalls to ensure secure and efficient data transmission. I also participated in setting up virtual private networks (VPNs) for remote access and configuring network protocols to optimize network performance.
- **Software Installation and Configuration:** I was responsible for installing and configuring software applications for clients. This involved ensuring that software was properly licensed, updated, and integrated with existing systems. I worked with various software packages, including operating systems, productivity suites, and specialized business applications.
- **Cybersecurity Measures:** I participated in implementing cybersecurity measures to protect client systems from threats. This included setting up antivirus software, configuring firewalls, and conducting vulnerability assessments to identify potential

security risks. I also helped implement encryption technologies to safeguard sensitive data.

- **Data Backup and Recovery:** I helped manage data backup processes to ensure that client data was safely stored and could be recovered in case of system failures or data loss. This involved setting up automated backup systems and testing recovery procedures to ensure data integrity.
- **IT Consulting:** I assisted in providing advisory services to clients on IT solutions and strategies. This involved assessing clients' IT needs, recommending appropriate technologies, and developing plans to implement these solutions effectively.
- **Project Management:** I was involved in managing small-scale IT projects, which included planning, execution, and monitoring to ensure projects were completed on time and within budget. I used project management tools to track progress and coordinate with team members.

3.2 TOOLS AND EQUIPMENT USED

Throughout my SIWES program, I utilized a range of tools and equipment essential for IT operations. Some of the key tools included:

- **Networking Equipment:** Routers, switches, and firewalls were used to manage and secure network infrastructure. I configured these devices to optimize network performance and ensure security.
- **Computing Hardware:** Desktops, laptops, and servers were used for various tasks, including software development, data storage, and network management. I worked with different hardware configurations to troubleshoot and resolve technical issues.
- **Software Applications:** Tools like Microsoft Office, antivirus software, and network monitoring software were used for productivity, security, and system management. I installed and configured these applications to meet client needs.

- **Diagnostic Tools:** Software and hardware diagnostic tools were used to troubleshoot technical issues and identify system problems. I used these tools to analyze system logs, check for malware, and diagnose hardware faults.
- **Cloud Services:** Cloud platforms were utilized for data storage, software deployment, and remote access to resources. I helped set up cloud accounts and manage cloud-based services for clients.
- **Programming Languages:** I worked with programming languages like Python and Java to develop small-scale applications and scripts for automating tasks.

3.3 SAFETY PRECAUTIONS

During my SIWES program, safety precautions were a priority to ensure a safe working environment. Some of the safety measures included:

- **Electrical Safety:** Proper handling of electrical equipment was emphasized to prevent electrical shocks or fires. This included using surge protectors and ensuring that all equipment was properly grounded.
- **Data Security:** Confidentiality and security of client data were maintained through the use of secure protocols and encryption methods. Access to sensitive data was restricted to authorized personnel.
- **Physical Safety:** The workspace was kept clean and organized to prevent tripping hazards. Regular breaks were encouraged to prevent fatigue and maintain productivity.
- **Health and Safety Training:** Regular training sessions were conducted to educate employees on health and safety practices, including emergency procedures and first aid.

- **Fire Safety:** Fire extinguishers were readily available, and employees were trained on their use. Regular fire drills were conducted to ensure preparedness in case of emergencies.

3.4 CHALLENGES FACED DURING MY SIWES PROGRAMME

Despite the valuable learning experience, I faced several challenges during my SIWES program:

- **Technical Complexity:** Some technical issues were complex and required advanced knowledge to resolve. This sometimes involved seeking guidance from more experienced colleagues or conducting extensive research to find solutions.
- **Time Management:** Balancing multiple tasks and projects simultaneously was challenging. Effective time management skills were essential to meet deadlines and deliver quality work. I had to prioritize tasks, manage my time efficiently, and delegate responsibilities when possible.
- **Client Communication:** Communicating technical information to non-technical clients could be difficult. It required patience and the ability to explain complex concepts in simple terms. I developed my communication skills by practicing clear and concise communication.
- **Adapting to New Technologies:** The IT industry is rapidly evolving, and staying updated with the latest technologies and trends was a continuous challenge. Regular training and self-study were necessary to stay current. I attended workshops, read industry publications, and participated in online forums to stay informed.
- **Team Collaboration:** Working in a team environment required strong interpersonal skills. Building relationships with colleagues and understanding their roles and responsibilities was crucial for effective collaboration. I learned to communicate

effectively with team members, respect different perspectives, and contribute to team goals.

- **Problem-Solving:** Some problems required creative solutions, which challenged my ability to think outside the box and explore unconventional approaches. I developed my problem-solving skills by analyzing problems from different angles and considering multiple solutions.

CHAPTER FOUR

SUMMARY, CONCLUSION, AND RECOMMENDATION

4.1 SUMMARY

This report summarizes my experience during the SIWES program at Tonnex Info-Tech. The program lasted for 16 weeks and provided me with comprehensive hands-on experience in the IT industry. During this period, I was involved in various tasks, including technical support, network administration, software installation, cybersecurity measures, and data backup and recovery. I utilized a range of tools and equipment, from networking devices to software applications, and adhered to safety precautions to ensure a secure working environment.

Throughout the program, I faced several challenges, such as technical complexity, time management, client communication, adapting to new technologies, and team collaboration. Despite these challenges, I gained invaluable skills and insights that will benefit me in my future career. The experience not only enhanced my technical skills but also developed my problem-solving, communication, and teamwork abilities.

One of the most significant aspects of my experience was the opportunity to work with a diverse range of clients, each with unique IT needs. This exposure helped me understand the importance of tailoring solutions to meet specific client requirements and ensuring that services are delivered efficiently and effectively.

Moreover, I had the chance to engage with various departments within the company, including IT support, technical services, consulting, and customer service. This broad exposure provided a comprehensive understanding of how different functions within an IT organization work together to achieve common goals.

4.2 CONCLUSION

In conclusion, my SIWES experience at Tonnex Info-Tech was highly beneficial and transformative. It provided me with practical experience in the IT sector, allowing me to apply theoretical knowledge in real-world scenarios. The program helped me build confidence, develop practical skills, and enhance my career prospects. The challenges faced during the program were valuable learning opportunities that prepared me for the demands of the IT industry.

The experience reinforced the importance of continuous learning, adaptability, and teamwork in achieving success in the IT field. By applying the lessons learned during my SIWES program, I am better equipped to navigate the complexities of the IT industry and contribute positively to future employers.

Furthermore, the experience highlighted the significance of staying updated with the latest technologies and trends. The IT industry is rapidly evolving, and professionals must be willing to learn and adapt quickly to remain competitive. This realization has motivated me to continue pursuing ongoing education and professional development in the field.

Additionally, I gained a deeper understanding of the importance of client satisfaction and how it drives business success. Ensuring that clients receive high-quality services and support is crucial for building strong relationships and maintaining a positive reputation in the industry.

4.3 RECOMMENDATION

Based on my experience, I recommend the following:

- **Enhanced Training Programs:** Tonnex Info-Tech should consider offering more comprehensive training programs for interns and new employees. This could include workshops on emerging technologies and soft skills development to enhance their adaptability and effectiveness in the workplace. Training programs should be regularly updated to reflect the latest industry trends and technologies.
- **Mentorship Initiatives:** Establishing mentorship programs where experienced professionals guide interns and new employees can provide valuable guidance and support. This would help in addressing technical challenges and fostering a sense of community within the organization. Mentors can offer insights into best practices, share their experiences, and provide career advice.
- **Client Feedback Mechanisms:** Implementing robust client feedback mechanisms can help identify areas for improvement and ensure that services meet client expectations. Regular surveys and feedback sessions can provide insights into client needs and preferences. This feedback should be used to refine service delivery processes and enhance overall client satisfaction.
- **Investment in Emerging Technologies:** Tonnex Info-Tech should continue to invest in emerging technologies such as artificial intelligence, blockchain, and cloud computing. This will enable the company to stay competitive and offer innovative solutions to its clients. By leveraging these technologies, the company can expand its service offerings and explore new markets.

- **Community Engagement:** Continuing community engagement initiatives, such as IT education programs and environmental conservation efforts, is crucial. These activities not only enhance the company's reputation but also contribute positively to society. Community engagement helps build strong relationships with local stakeholders and supports the development of the IT sector in the region.
- **Infrastructure Development:** The company should continue to invest in modernizing its infrastructure to support its operations effectively. This includes upgrading hardware and software systems to ensure they are efficient, secure, and capable of handling the demands of a rapidly growing client base.
- **Talent Acquisition and Retention:** Tonnex Info-Tech should focus on attracting and retaining top talent in the IT industry. This involves offering competitive compensation packages, providing opportunities for career development, and fostering a positive work environment that encourages innovation and collaboration.