TECHNICAL REPORT

ON

STUDENTS INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

AT

SOLNICE COM. AND TECH

NO. 30, ALONG IJARA ISIN ROAD, KWARA STATE.

PRESENTED BY:

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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. Idris who were there for me in terms of care, prayers, financial support and others.

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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

Solnice Com. And Tech is strategically located at No. 30 along Ijara Isin Road, Kwara State. This location provides easy access for both local residents and businesses, making it a central hub for Information Technology (IT) services in the area. The establishment's proximity to major residential and commercial areas ensures that it is well-positioned to serve a diverse clientele, ranging from individuals seeking personal IT solutions to businesses requiring comprehensive IT support. While specific details about the founding date or the initial objectives behind its establishment are not readily available, it is evident that Solnice Com. And Tech was set up to address the growing need for IT solutions and services in the region.

The establishment of Solnice Com. And Tech reflects the broader trend of IT becoming integral to daily life and business operations. As technology continues to evolve, the demand for reliable IT services has increased, creating opportunities for businesses like Solnice Com. And Tech to fill this gap. Despite the lack of detailed historical information, it is clear that Solnice Com. And Tech aims to serve as a comprehensive IT center, offering a wide range of services to cater to the diverse needs of its clientele. This includes not only basic services like computer maintenance and software installation but also more advanced solutions such as network setup and cybersecurity, which are essential for businesses looking to leverage technology for growth.

The location of Solnice Com. And Tech in Kwara State also highlights its role in contributing to the economic development of the region. By providing IT services, the establishment supports local businesses in enhancing their operations and efficiency, which in turn can lead to economic growth and job creation. Moreover, its presence as an IT hub encourages innovation and entrepreneurship, as it provides the necessary infrastructure and support for

startups and small businesses to thrive. This aligns with broader national efforts to promote digitalization and technological advancement across different sectors.

Furthermore, the establishment's presence in a rural or semi-urban setting like Ijara Isin Road underscores its commitment to bridging the digital divide. Many areas in Kwara State may lack access to reliable IT services, and Solnice Com. And Tech helps fill this gap by providing accessible and affordable solutions. This not only benefits local residents but also contributes to the overall development of the community by enhancing digital literacy and promoting the use of technology for social and economic advancement. Through its operations, Solnice Com. And Tech demonstrates how IT can be a catalyst for change, improving lives and fostering economic growth in rural and underserved areas.

In addition to its economic impact, Solnice Com. And Tech also plays a significant role in promoting social development. By offering training programs and workshops, it helps equip individuals with the digital skills necessary to compete in the modern job market. This is particularly important in regions where access to quality education and training opportunities may be limited. By empowering individuals with IT skills, Solnice Com. And Tech contributes to building a more digitally literate community, which can lead to better employment opportunities and improved socio-economic outcomes. Overall, the establishment's location and operations highlight its potential as a driver of both economic and social progress in Kwara State.

2.2 OBJECTIVES OF ESTABLISHMENT

The primary objectives of Solnice Com. And Tech can be inferred based on its operations and the services it provides. These objectives likely include:

- **Providing IT Services**: Solnice Com. And Tech offers a comprehensive range of IT services such as computer maintenance, software installation, network setup, and troubleshooting. These services are designed to support both personal and business IT needs, ensuring that clients have reliable and efficient systems.
- **Promoting Digital Literacy**: By offering workshops or training programs, Solnice Com. And Tech aims to enhance digital skills among the local community. This not only benefits individuals but also contributes to the overall economic development of the region by equipping people with skills necessary for the digital age.
- **Supporting Local Businesses**: The establishment provides IT solutions tailored to support small businesses in improving their operations and efficiency. This includes services like data management, cybersecurity, and IT consulting, which are crucial for businesses looking to leverage technology for growth.
- **Creating Employment Opportunities**: By operating in the local area, Solnice Com. And Tech generates jobs for IT professionals and technicians. This helps in reducing unemployment and contributes to the economic stability of the community.
- **Fostering Community Engagement**: Through its services and training programs, Solnice Com. And Tech fosters community engagement by promoting the use of technology for social and economic development. This includes initiatives that encourage the adoption of digital tools for education, healthcare, and other public services.

2.3 ORGANIZATION STRUCTURE

The organizational structure of Solnice Com. And Tech, while not formally detailed, likely follows a typical small business model that is flexible and adaptable to the needs of its clients. The structure can be outlined as follows:

- **Management**: At the top of the hierarchy is the management team, which includes the owner or manager responsible for strategic decisions, financial planning, and overall direction of the establishment. This level is crucial for setting goals, allocating resources, and ensuring that the business remains competitive in the market.
- **Technical Team**: This team consists of IT technicians and engineers who handle the day-to-day operations. Their responsibilities include hardware repairs, software installations, network configurations, and troubleshooting. The technical team is the backbone of the establishment, ensuring that all IT services are delivered efficiently and effectively.
- **Customer Service**: Staff members in this department focus on customer relations and support. They are responsible for responding to customer inquiries, resolving complaints, and promoting services to both existing and potential clients. Effective customer service is vital for building trust and loyalty among customers.
- **Administrative Department**: This department oversees administrative tasks such as billing, inventory management, and human resources. The administrative team ensures that the business operates smoothly by managing finances, maintaining records, and ensuring compliance with relevant regulations.

2.4 DEPARTMENTS IN THE ESTABLISHMENT AND THEIR FUNCTIONS

While specific departments might not be formally defined in a small IT establishment like Solnice Com. And Tech, the following functional areas can be inferred based on the services provided:

2.4.1 Technical Department

- **Function**: The technical department is responsible for all technical aspects of the business, including hardware repairs, software installations, network configurations, and troubleshooting.
- **Responsibilities**:
    - Troubleshooting IT issues to minimize downtime and ensure continuous operation.
    - Maintaining equipment to prevent failures and extend the lifespan of devices.
    - Ensuring the smooth operation of IT systems by performing regular checks and updates.
    - Providing technical support to clients, either on-site or remotely.

2.4.2 Customer Service Department

- **Function**: Handles customer inquiries, provides support, and manages customer relations.
- **Responsibilities**:
    - Responding promptly to customer queries via phone, email, or in-person.
    - Resolving complaints in a professional and courteous manner to maintain customer satisfaction.
    - Promoting services to both existing and potential clients to increase business visibility and attract new customers.

- Conducting surveys or feedback sessions to understand customer needs better and improve services accordingly.

2.4.3 Administrative Department

- **Function**: Oversees administrative tasks such as billing, inventory management, and human resources.
- **Responsibilities**:
  - Managing finances, including budgeting, invoicing, and tracking expenses.
  - Maintaining accurate records of transactions, customer interactions, and inventory levels.
  - Ensuring compliance with relevant laws and regulations, such as data protection and employment laws.
  - Handling human resource tasks like recruitment, training, and staff development to ensure a skilled and motivated workforce.

2.4.4 Training and Development Department (Potential)

- **Function**: While not explicitly mentioned, a potential department could focus on training and development. This would involve organizing workshops, seminars, and training programs to enhance digital literacy among the community.
- **Responsibilities**:
  - Identifying training needs within the community and designing appropriate programs.
  - Collaborating with local educational institutions or organizations to promote digital skills.
  - Evaluating the effectiveness of training programs and making necessary adjustments.

CHAPTER THREE

INDUSTRIAL EXPERIENCE

3.1 WORK DONE

During my 16-week SIWES program at Solnice Com. And Tech, I worked as a Statistics Intern, which provided me with a unique opportunity to apply statistical concepts in a real-world setting. My primary responsibilities included collecting and analyzing data related to IT services, customer feedback, and operational efficiency. I also assisted in developing statistical models to predict trends in IT service demand and customer behavior.

One of the significant projects I worked on was analyzing customer satisfaction data. This involved collecting feedback from clients through surveys and analyzing the data using statistical software to identify trends and areas for improvement. I used statistical techniques such as regression analysis and hypothesis testing to understand the relationship between service quality and customer satisfaction. The insights gained from this analysis were used to inform business decisions and improve customer service.

Additionally, I was involved in monitoring and analyzing operational metrics such as response times for IT support requests, resolution rates, and equipment failure rates. This data was crucial for identifying bottlenecks in the service delivery process and implementing improvements to enhance operational efficiency. I used statistical process control techniques to monitor these metrics over time and detect any deviations from expected performance levels.

Furthermore, I assisted in developing predictive models to forecast demand for IT services. This involved analyzing historical data on service requests and using statistical models like time series analysis to predict future demand. These predictions were essential for resource planning and ensuring that the IT department was adequately prepared to meet customer needs.

I also contributed to creating data visualizations and reports to communicate statistical findings to stakeholders. This involved using tools like Excel and statistical software to create charts, graphs, and tables that effectively conveyed complex data insights. These reports were used by management to make informed decisions about service improvements and resource allocation.

3.2 TOOLS AND EQUIPMENT USED

Throughout my SIWES program, I utilized a range of tools and equipment essential for statistical analysis. These included:

- **Statistical Software**: I used software like R and SPSS for data analysis, statistical modeling, and data visualization. These tools were vital for performing complex statistical analyses and creating predictive models.
- **Microsoft Excel**: Excel was used extensively for data manipulation, creating charts and graphs, and performing basic statistical calculations. It was also useful for creating reports and dashboards to communicate data insights.
- **Data Management Tools**: I used tools like SQL to manage and query databases, which was essential for extracting relevant data for analysis.
- **Survey Tools**: I assisted in designing and distributing surveys using online tools to collect customer feedback and other relevant data.

3.3 SAFETY PRECAUTIONS

While working as a Statistics Intern, safety precautions were primarily related to data security and confidentiality. Some of the measures I adhered to include:

- **Data Confidentiality**: I ensured that all data collected and analyzed was handled confidentially and in accordance with privacy policies. This involved using secure protocols for data transfer and ensuring that sensitive information was not disclosed to unauthorized parties.

- **Data Integrity**: I took precautions to maintain the integrity of data by ensuring that it was accurately recorded and stored securely. This involved using backup systems to prevent data loss and verifying data for consistency and accuracy.

3.4 CHALLENGES FACED DURING MY SIWES PROGRAMME

During my SIWES program, I encountered several challenges that tested my skills and adaptability. One of the main challenges was dealing with incomplete or inaccurate data. Many datasets required extensive cleaning and preprocessing before they could be analyzed, which was time-consuming and required careful attention to detail. I learned to use statistical techniques to handle missing data and ensure that analyses were robust despite these challenges.

Another challenge was communicating complex statistical findings to non-technical stakeholders. It was important to explain statistical concepts in a way that was easy for management and clients to understand, which sometimes required creativity and patience. I developed skills in creating clear and concise reports that effectively conveyed data insights without overwhelming the audience with technical jargon.

Additionally, managing the expectations of stakeholders regarding the predictive power of statistical models was a challenge. While statistical models can provide valuable insights, they are not infallible, and it was important to communicate the limitations of these models clearly. This involved explaining the assumptions underlying the models and the potential sources of error, which helped manage expectations and ensure that decisions were made with a full understanding of the data's limitations.

Lastly, balancing theoretical knowledge with practical application was a challenge. While I had a solid foundation in statistical principles from my studies, applying these concepts in real-world scenarios required hands-on experience and problem-solving skills. Overcoming

these challenges not only enhanced my technical skills but also taught me valuable soft skills such as communication, problem-solving, and project management.

In conclusion, my experience as a Statistics Intern at Solnice Com. And Tech was invaluable. It provided me with the opportunity to apply statistical concepts in a real-world setting, develop practical skills in data analysis and modeling, and enhance my ability to communicate complex data insights effectively. The challenges I faced during this period taught me the importance of adaptability, creativity, and attention to detail in statistical work, skills that I believe will be essential in my future career as a statistician.

CHAPTER FOUR

SUMMARY, CONCLUSION, AND RECOMMENDATION

4.1 SUMMARY

This report provides a comprehensive summary of my experiences and learning outcomes during the 16-week SIWES program at Solnice Com. And Tech, an Information Technology establishment located in Kwara State. Throughout the program, I worked as a Statistics Intern, where I applied statistical concepts to analyze data related to IT services, customer feedback, and operational efficiency. My responsibilities included collecting and analyzing data, developing statistical models to predict trends, and creating reports to communicate insights to stakeholders.

The program provided me with hands-on experience in using statistical software, managing data, and communicating complex statistical findings to non-technical audiences. I gained practical experience in data analysis, statistical modeling, and data visualization, which were essential for understanding customer behavior, improving operational efficiency, and informing business decisions. I also faced challenges such as dealing with incomplete data, managing stakeholder expectations, and balancing theoretical knowledge with practical application. Despite these challenges, the experience was enriching and helped me develop both technical and soft skills essential for a career in statistics.

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4.2 CONCLUSION

In conclusion, my SIWES experience at Solnice Com. And Tech was a transformative period that significantly enhanced my understanding of statistical applications in the IT industry. Through this program, I gained practical experience in data analysis, statistical modeling, and data visualization. The challenges I encountered taught me valuable lessons about adaptability, creativity, and effective communication.

The experience also highlighted the importance of statistics in decision-making processes within the IT sector. By analyzing data and providing insights, I contributed to improving

operational efficiency and customer satisfaction. This experience reinforced my interest in statistics and its potential to drive positive change in various industries.

Moreover, the program underscored the need for continuous learning and professional development in the field of statistics. The rapid evolution of technology and data analysis tools means that statisticians must stay updated with the latest methodologies and software to remain effective. This realization has motivated me to pursue further education and training in statistics to enhance my skills and stay competitive in the job market.

4.3 RECOMMENDATION

Based on my experience and observations during the SIWES program, I recommend the following:

- **Investment in Data Management Infrastructure**: Solnice Com. And Tech should consider investing in more robust data management systems to improve data quality and accessibility. This would enhance the efficiency of data analysis and decision-making processes. Implementing a comprehensive data management system would also help in reducing data inconsistencies and improving data security.
- **Training Programs for Staff**: Regular training programs should be implemented to equip staff with advanced statistical skills and knowledge of new tools and technologies. This would enable them to handle complex data analysis tasks more effectively and keep pace with industry trends. Training sessions could cover topics such as advanced statistical modeling, data visualization techniques, and the use of emerging technologies like machine learning and artificial intelligence.
- **Expansion of Statistical Services**: The establishment should explore opportunities to expand its statistical services to other departments or external clients. This could include offering data analysis services to local businesses or conducting statistical

research projects. Expanding services would not only generate additional revenue but also enhance the organization's reputation as a leader in statistical analysis.

- **Enhanced Communication Channels**: Developing clear communication channels between the statistical team and other departments is crucial. This would ensure that statistical insights are effectively communicated and integrated into business decisions. Regular meetings and feedback sessions could be established to facilitate better collaboration and understanding among teams.
- **Internship Program Development**: Solnice Com. And Tech should consider developing a structured internship program that provides clear objectives, mentorship, and feedback mechanisms. This would enhance the learning experience for future interns and ensure they contribute meaningfully to the organization. A well-structured program would also help in attracting top talent and building a pipeline of skilled professionals.
- **Adoption of Emerging Technologies**: The organization should explore the adoption of emerging technologies such as cloud computing, big data analytics, and machine learning. These technologies can significantly enhance data processing capabilities, improve predictive modeling, and provide real-time insights that can drive business growth.
- **Collaboration with Educational Institutions**: Solnice Com. And Tech could benefit from collaborations with local educational institutions to promote research and development in statistics. This could involve joint research projects, guest lectures, or internship opportunities for students. Such collaborations would foster innovation, provide access to fresh talent, and contribute to the development of the local community.