A TECHNICAL REPORT ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

HELD AT

TKV MOSCO ENGINEERING LIMITED

NO. 4 OFFA GARAGE ROAD, BEHIND HIGH COURT OF JUSTICE ILORIN, KWARA STATE

COMPILED BY

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IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN MINERAL AND PETROLEUM RESOURCES ENGINEERING

SUBMITTED TO:

DEPARTMENT OF MINERAL AND PETROLEUM RESOURCES ENGINEERING

KWARA STATE POLYTECHNIC, ILORIN

DEDICATION

The report is dedicated to the almighty God and my parent **Mr. & Mrs.Ojigiri**

ACKNOWLEDGMENT

All thanks and adoration to almighty God for making this write up a successful one. I acknowledge the effort of my parent Mr and Mrs Ojigiri who provided me the opportunity of passing through this third stage of education in my life, may you live long to eat the fruit of your labour.

I also acknowledge the effort of my supervisor. He had always been with me from the beginning of this four month program to the end, He put me through many things, encouraged me to be bold and vocal, He let me know all qualities of a good communicator. Sir, only God can repay you for this kind gesture.

PREFACE

The Student Industrial Work Experience Scheme (SIWES) was introduced into the nation's tertiary education curricular because of the belief that there is value in putting into practice what has been learned beforehand. There was also the belief that SIWES would help students to acquire on understanding of the society and to interact with different people outside their institution.

It is in this light that the Student Industrial Work Experience Scheme for Polytechnics in Nigeria as stated in the National Board for Technical Education Syllabus aims to produce citizenry conscious of its role in a wider world, proud of its antecedent and prepared for effective leadership role in diversified or society, thereby, ensuring a positive contribution on interaction, greatness and trying or becoming effective in their field of studies or field of specialization.

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CHAPTER ONE

INTRODUCTION

1.1 DEFINITION OF SIWES

The Student Industrial Work Experience Scheme (SIWES) of the Nigeria Polytechnic and colleges of technologies is an arrangement in which practical is integrated with theory.

It was also established by the Industrial Training Fund (ITF) in 1974 to bridge the gap between theory and practicality. The programme has a nice focus on the development of industrial students in the world of work. Also how theory and practical are social skills -and insight in the world of work to create awareness and prospect are the challenges the programme tries to tackle to cope with the development process of the student.

1.2 HISTORY OF SIWES

SIWES was founded in 1973 by ITF (Industrial Training Funds) to address the problem of tertiary institution graduates' lack of appropriate skills for employment in Nigerian industries. The Students' Industrial Work Experience Scheme (SIWES) was founded to be a skill training programme to help expose and prepare students of universities, Polytechnics and colleges of education for the industrial work situation to be met after graduation.

This system facilitates the transfer from the classroom to the workplace and aids in the application of knowledge. The program allows students to become acquainted with and exposed to the experience required in handling and operating equipment and machinery that are typically not available at their schools.

Prior to the establishment of this scheme, there was a rising concern and trend among industrialists that graduates from higher education institutions lacked appropriate practical experience for employment. Students who entered Nigerian universities to study science and technology were not previously trained in the practical aspects of their chosen fields. As a result of their lack of work experience, they had difficulty finding work.

As a result, employers believed that theoretical education in higher education was unresponsive to the needs of labor employers. Thousands of Nigerians faced this difficulty till 1973. The fund's main motivation for establishing and designing the scheme in 1973/74 was launched against this context.

The ITF (Industrial Training Fund) organization decided to aid all interested Nigerian students and created the SIWES program. The federal government officially approved and

presented it in 1974. During its early years, the scheme was entirely supported by the ITF, but as the financial commitment became too much for the fund, it withdrew in 1978. The National Universities Commission (NUC) and the National Board for Technical Education (NBTE) were given control of the scheme by the federal government in 1979. The federal government handed over supervision and implementation of the scheme to ITF in November 1984. It was taken over by the Industrial Training Fund (ITF) in July 1985, with the federal government bearing entire responsibility for funding.

1.3 AIMS AND OBJECTIVE OF SIWES

- The reality of employing student is o fit in industrial and commercial development.
- To broadens the skill of student most especially on the practical aspect.
- To give an industrial experience.
- To make student have vision of what particular section they want to belong and area of specialization.

CHAPTER TWO

2.1 HISTORICAL BACKGROUND OF THE ORGANIZATION

TKV Mosco Engineering Limited is incorporated in ILORIN, Nigeria with Company's registered office address is the No. 4 offa -garage road behind high court of justice in Ilorin kwara state. Several years of of experience had shown the need, the status to organize some form of publicity for its work and progress and it had become clear, forgo to corporation was established, that no other could care for the business of spreading creative design and education in the state better than the state itself indeed, experience has shown that a great deal Is of the work of development, which had been carried out in the state and according to the tastes ,dictates and desires of the people, had been treated like a candle put under the bushel would give creative design studio to the art and culture of the people of Kwara state, and according to the edict, carry report of outstanding and general interest as well as informed criticism and features.

2.2 AIMS AND OBJECTIVE OF THE ORGANIZATION

TKV Architects aims to build and maintain a close working relationship with its clients, giving suitable time and commitment to the individual projects.In order to achieve this broad aim, the practice has set a number of objectives which include:

- Developing a participative approach to the process of creating attractive buildings
- Promoting a practical approach to sustainable and efficient construction
- Advocating a team approach and always being aware of the wider picture
- Possess and understand advanced knowledge in the development and critical analysis of architectural designs, urban planning, and the interplay of housing and urban design.
- Demonstrate a coherent understanding of the historical, theoretical, national, regional, and international knowledge of architecture, including architectural heritage.
- Apply integrated knowledge to situate architecture within historical, social, cultural, and ecological contexts, emphasizing landscape architecture and the benefits of urban vegetation and parks.
- Understand and apply techniques, methods, and tools to evaluate social, economic, and spatial aspects through the design and planning process, incorporating elements of mathematics, geodesy, and building physics

2.3 MAJOR ACTIVITIES OF THE ORGANIZATION

The major activities of the organization is based on making a creative design people on social, economic, and spatial aspects through the design and planning process, incorporating elements of mathematics, geodesy, and building physics

Some of these activities also include the following:

- To maintain an experienced and qualified management team, suitable for the needs of both our customers and our company
- To commit to the continual improvement of all processes and systems through ongoing investment in technology and resources
- To actively encourage participation in the review of systems and processes by all employees
- To effectively communicate the company's health, safety, environmental and quality objectives

2.4 VISION

Our vision is to be an environmentally responsible developing architectural designs, urban planning, and the interplay of housing and urban desig . with a key focus on safety, conservation and delivering a reliable supply of high-quality product

MISSION

Our mission is to produce end-products that contribute to the local economy and surrounding community infrastructure. We are focussed on growing sustainable production while delivering our commitments for excellence.

CHAPTER THREE

3.1 EXPERIENCE GAINED IN TKV Mosco ARCHITECTURAL ENGINEER ILORIN KWARA STATE

During my Students Industrial Working Experience Scheme (SIWES) at TKV Mosco Architectural studio. We were able to learn and gain a lot of industrial and organizational experience.

One of my major experiences in TKV Mosco architectural studio is that I know more about identification and analysis of architectural problems, drafting and development of architectural projects and service for community in the professional field taking into consideration also general social and environmental issues.

Another experience I gained during my internship at TKV Mosco Architectural studio is understanding what CAD stands for computer-aided design. BIM is an acronym for Building Information Modeling. These applications are the software tools of architects, drafters, engineers, and builders. Various types of software can create plans, construction drawings, and precise lists of building materials, and even instructions on how and when to put together the parts. For constructing and designing things, CAD and BIM are more efficient than paper and pencil because the application records lines as vectors based on mathematical equations.

The idea of designing with the help of computers began in the 1960s with the growth of automobile and aerospace companies. The CAD industry became firmly established in the 1970s with software and hardware sold together in very expensive, dedicated machines. It wasn’t until the 1980s that personal computing (PC) was possible and affordable, with the goal of having a PC on every desk in the office. The growth and evolution of CAD is traceable to the global advancement of science and technology and the need to evolve a faster, more accurate and a more flexible approach to design problems. The desire and

necessity to overcome the limitations of manual drafting techniques has led to subsequent improvement on CAD (Computer-aided Design) applications and the development of new ones. With CAD, a designer could switch between two-dimensional (2D) and three- dimensional (3D) views; zoom in and out for close-up and distant views; rotate images to view them from different perspectives; manipulate the shape of images; and change the scale of images – when one value changed, related values automatically adjust.
There are more than seventy different CAD applications software in use today. Only about twenty of these are in widespread use for Architectural jobs in Nigeria presently. Just as Microsoft Office is the most popular word processor, AutoCAD is equally the most wide spread CAD application in use in the world today.

I have experience on how to make use of computers. The use of computers in architectural practices has increased so much in this decade that all the leading architectural firms in Nigeria are fully computerized. A careful observation will reveal that the firms that are not computerized do not normally get large commissions and projects. Furthermore, only the firms that are computerized are in most cases called to bid for new projects through design competitions. The smaller firms, not computers, never win or get the upper hand when invited for such competitions. Furthermore, these architectural firms not yet computerized are now training their staff in the use of Computer Aided Design. If this new development continues, no graduate of architecture will get a good job without being computer literate.

Concerning my field experience, Every building erected today is sitting on a site. Sites vary from one place to the other and have various complexities. It is important to note that every site is unique. During my internship period, I have had the privilege to experience firsthand some difficult situations on site and

with the tutelage of my supervisor, learnt to overcome them. I was allowed to go see some of the details I draw in the office on site. Although some site were ongoing before the commencement of my SIWES programme, I was still able to catch up with some of them.

Lastly, I learnt about Microsoft Word is a word processing program used for writing letters, memos, reports and paper presentations. Microsoft Word is also designed to make it possible to create a variety of documents that will look the same between different computers and similar on the screen to how they appear on paper. It is used by businesses and individuals to write personal and professional letters, reports for work and school and to take notes on conversations and in seminars and classes. Because it is so widely used, many businesses appreciate that it's possible to send documents created in Word to clients, employees and other business associates without worrying about whether or not they will be able to open them.

During my internship at the TKV Mosco ARCHITECTURAL ENG, I used Word to type memos, site reports, letters etc.

CHAPTER FOUR

4.1 SKILLS ACQUIRED AT TKV Mosco ARCHITECTURAL ENGINEER

The paramount importance of industrial training experience scheme is to gain additional knowledge to what a person has been taught and learnt in class before. It gives the students a chance to put in practice their beforehand knowledge. The paramount importance of industrial training experience scheme is to gain additional knowledge to what a person has been taught and learnt in class before. It gives the students a chance to put in practice their beforehand knowledge.

- Solve complex problems related to construction, building technology, and engineering, integrating knowledge from geomechanics, building physics, and technical mechanics.
- Innovate in the creation of urban spaces, with a focus on energy-efficient designs, and address the role of acoustics in building physics.
- Execute research on practical skills and theory, exploring materials in architecture, utilizing computer applications in architectural designs, and incorporating environmental management techniques.
- Analyze data, processes, or structures to gain knowledge of principles, solutions, and building materials, using tools from courses such as construction economics and technical mechanics.
- Exercise autonomy and take primary responsibility for professional communication and interpretation, synthesizing insights from art history, design studios, and regional planning.
- Address ethical and professional issues in architecture, integrating insights from courses on ethics, architectural heritage, and the socio-economic context of urban planning.

4.2 EXECUTIVE SUMMARY

The students industrial work experience scheme (SIWES) is a training fund (ITF) in 1973 to bridge the gap between theory and practical oriented among students of engineering, technology, social science and medical science on Nigeria higher institution of learning.

It provides for the job practical experience for students as they are expose to work method and machinery that may not be Available in their institution.

At inception in 1974, the scheme started with 748 from 11 institution and 104 eligible course by 2008. 210 student participate in the course from 219 institution over the 112 eligible course. However the rapid growth and exposition of SIWES has occurred against the backdrop of successive economic crisis which have affected the smooth operation and administration of the scheme.

Most industries are operating below in storage capacity while other are completely shutdown in Nigeria. This has impacted negatively on the scheme as higher institution of learning find it increasingly difficult to secure placement for students industries where they could acquire the much practical experience.

CHAPTER FIVE

5.1 CHALLENGES FACED

The major challenge I faced during the four months program is that of transportation both scarcity of vehicles and financially. I always have a tough morning before getting a cab and later that of charges. There was competition among we SIWES students, everyone wants to be the best and thus, you fight and reconcile between one another.

Transportation, the organization did not have a transportation means to take around whenever there is an event somewhere so we are always sent out to go and cover the event with our own money and bring back stories without any compensation is another challenge I faced at Quarry concept. these challenges didn't make me weak but rather gave me more strength to work hard so that I can become a full fledged journalist in the nearest future.

5.2 CONCLUSION

The SIWES Programme was an interesting one in the organization because what I was taught as a theoretical part in school I was able to put into practical aspects. Things I don't know were being explained and shown to me. The program however prepare me for the task and discipline that I might likely meet in future.

5.3 RECOMMENDATION

As a student who has undergone industrial training, I hereby recommend that government should continue funding this program both financially and morally.

I also recommend that if there is any way in which the government can improve the program in order to benefit the student better and also to increase the technical and practical knowledge of the student so as to enhance the academic performance of student in the country as a whole. It would be a great benefit if the SIWES coordinator of each institute invest in the program in our higher institution, it would be a solid foundation for all.