

The Importance Of The Siwes Program In Architectural Education In Nigeria (Case Study Of Rivers State University, Port Harcourt)

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Abstract: The importance of industrial training in architectural education can be evaluated through the analysis of the effectiveness of the SIWES program in the Department of Architecture, Rivers State University, Port Harcourt. Architectural practices are constantly changing; it is therefore necessary for students not only rely on knowledge gained from classroom based learning but to acquire knowledge from practical experiences. In the Department of Architecture, Rivers State University (RSU) students in their second and third year of enrollment are required to partake in this program as a prerequisite for completion of their education. This paper aims at examining the influence of the SIWES program on the overall development of students. A descriptive research design was employed for this study by making a survey using a questionnaire as the instrument for data collection. The sample included 157 respondents who were students of the Department of Architecture, Rivers State University and had recently passed through the program. The findings of this study were that students were able to gain working and practical skills from the SIWES program but some challenges hindered the effectiveness of the program. It was observed that the major challenge of the program is to secure place of attachment and non-supervision of students by institutions supervisors. Based on the findings, some recommendations were made.

I. INTRODUCTION

From history, many architects underwent training by mentors who were experienced architects, who transferred their knowledge and skills to the apprentice, Kadi (2009). Most famous architects of the past were not graduates of any school, but started as masons and builders and gradually became master builders, Doxiadis (1974). Vitruvius (2005) opined that architects who are educated in both theory and practice excel over those who pursue only theoretical knowledge without practice and are "hunting the shadow, not substance". Mentorship in education is vital to students who study practical courses that require hands on experience, Lave and Wenger (1991) approached mentorship different from other schools of thought in education that concentrated on cognition; acquiring knowledge through information and thought, they focused on it as a social situation of learning in which students learn through apprenticeships in a social context. The SIWES program is a training program geared at developing the skills of students of various universities,

colleges and polytechnics by exposing them to hands on experiences (Oyeniya, 2011). Students of the Department of Architecture, Rivers State University are expected to partake in the program on their long vacation in their second and third year of enrollment. This program provides the platform for students to be mentored for a period of three months by professional architects who can engage them in tasks that give them an insight as to what they will face succeeding graduation (Mafe, 2009). Mafe (2010) further said that for an individual to be well rounded, one must not only acquire knowledge but should also be resourceful in practical application as there are various ways in which people learn.

Students gain practical knowledge that strengthens their theoretical knowledge gotten from classroom based learning, this also allows students the opportunity of networking, professional development and gaining useful contacts that can be used in the future. An active involvement in the program allows students to be familiarized with equipment and processes they have learnt about that they might not have access to in their institution and also improve their

interpersonal skills and ability to work with others in teams (Obasi, 2009).

The study of the importance of the SIWES scheme will help in identifying the challenges and lead to the optimization of the program whereby students can fully utilize the opportunities to be well rounded architects that meet the essential demands of the architectural industry.

II. INDUSTRIAL TRAINING IN NIGERIA

The Industrial Training Fund (ITF) was established by Decree 47 of 1971. The main objective was capacity building for industries and commerce in the Nigerian economy through manpower training. To further realize its goal, it established the Students Industrial Work Experience Scheme in 1973. It was to prepare and expose university students to industrial work situation they are likely to meet with after graduation (ITF, 1997). The Industrial Training Fund withdrew from the scheme in 1978 because it could not cope with the increasing number of students. The scheme was taken over by the Federal Government in 1979 and handed over to National University Commission (NUC) and the National Board for Technical Education (NBTE). The Federal Government reverted back the management of the scheme to the Industrial Training Fund in 1985 with funding provided by the Federal Government (Ashore, 2018). The ITF has operated consistently in the years of its existence and has pursued the goal of developing the nations human resources vigorously and efficiently. The main objectives of the scheme are as follows:

- ✓ To provide an avenue for students in the Nigerian universities to acquire industrial skills and experience in their course of study.
- ✓ To prepare students for the work situation they are likely to meet after graduation.
- ✓ To expose students to work methods and techniques in handling equipment and machinery that may not be available in the universities.
- ✓ To provide students with an opportunity to apply their theoretical knowledge in real work situation, thereby bridging the gap between university work and actual practice.
- ✓ To make the transition from the university to the world of work easier, and thus enhance students contacts for later job placement.
- ✓ To enlist and strengthen employers involvement in the entire educational process of preparing university graduates for employment in the industry (ITF, 1999)

The stakeholders in the scheme are the Federal Government, the Industrial Training Fund (ITF), supervising agencies (NUC, NBTE and NCCE), the employers of labour and the Institutions with SIWES directors, departmental coordinators and students.

The Federal Government is to provide adequate funds and makes it mandatory for establishments, companies, ministries and parastatals to offer opportunities for the attachment of students.

Mafe (2010) observed that government is unable to fund the scheme appropriately and may consider not paying the students allowance and use that for proper administration of

the scheme and thorough supervision of students on attachment.

The Federal Government's role was to mandate ministries, companies, industries and parastatals to offer places of attachment to students, but according to Obasi (2009), that role was neglected from inception of the program and in addition to that inconsistent policies by successive governments led to its abandonment. No government was able to mandate any industry, company or parastatal to take in any students on attachment. Also the rapid growth and expansion of the program against the backdrop of successive economic crises led to the disruption of the smooth operation and administration of the scheme. This have impacted rather negatively on the scheme and institutions of higher learning who are another stake holder charged with responsibility of identifying placement opportunities find it difficult to secure placement for students.

Today, in the world of advanced technology Orimoloye (2016), suggested that automated system can assist with placement of students for SIWES. He proposed a mobile system to be put in place that will automatically recommend suitable organization based on discipline and location preference of the prospective student. The database will be populated by the use of data on suitable organizations on a location basis obtained from previous industrial trainings by SIWES units of various institutions of higher learning. This is a step in the right direction, but even without the mobile system, departmental coordinators can have a data bank with all the names and addresses of places students were attached in the past years. This will ease up the hardship students go through looking for a suitable place.

Another area that needs to be addressed is that of supervision. While the Industrial Training Fund (ITF) zonal supervisors suppose to supervise the students at their places of attachment at least once during the training now vet and endorse students Log books in their various zonal offices.

The supervision of students by University/Departmental supervisors ought to be at least three times during attachment. This is necessary in order to ensure the quality and relevance of training to the field of study, as well as to check on the conduct of the student at work. Departmental supervisors are saddled with ever increasing number of students with some taking up attachment outside the state it becomes quite difficult to visit all. Lack of logistics, especially mobility and adequate funding are some of the factors that impede the supervision of students at workplace.

It is interesting to note how other countries in the world address the problem of industrial training. In Britain, the Royal Institute of British Architects (RIBA) is a professional body for architects in the UK provides accreditation to schools of architecture and runs a mentoring program for students. All RIBA accredited schools benefit from mentoring scheme, which is available to students at different levels and time during their course of study. Only students who are student members of RIBA are eligible for the program. Students are supervised by chartered architects in selected architectural practices. A scheme of activities is put in place by the Institute that must be covered during the attachment by both the students and the supervisors (RIBA, 2018).

Some Architecture schools in Spain send their students for internship program in the second semester of year two, three and four, totaling to more than a year of professional experience. Students are attached to renowned practices and architecture related companies giving them on finishing school an advantage when entering the job market.

In Australia, to be eligible for any mentoring/internship program students must be registered with the Australian Institute of Architects as student members throughout the duration of the program. The program is run by the institute, students are sent to various architectural offices and supervised by chartered architects.

We can conclude from these that the role of the professional body NIA in Nigeria has an important role to play in industrial training program for students of architecture. The Board of Architectural Education of the Nigerian Institute of Architects (NIA) is saddled with the responsibility of accrediting schools of Architecture in Nigeria and administering the professional practice exams. The committee on student affairs has the responsibility to look into the welfare of students in schools of Architecture in Nigeria. This committee ought to look with all seriousness at the Industrial attachment program SIWES and see how they can take up the responsibility to run that program. The educational board of the NIA is more interested in the aspect of preparing graduates for the professional exams, but that is too late, the formative years of the undergraduates as pupils are when they are still at the undergraduate level and need to be properly tutored at school and supervised /mentored during industrial attachment by seasoned architects.

The universities and the Nigerian Institute of Architects should be encouraged to produce qualified and registrable graduates. The supervisory and regulatory bodies have appreciable role to play ensuring quality architectural education in Nigerian universities. To achieve this there is a need for more collaboration between these bodies.

PROBLEMS AND OBJECTIVE OF THE STUDY

The SIWES program aims at eliminating the gap between theoretical knowledge and practical knowledge. However, there are various problems linked with the process of the program. This study will highlight challenges and make recommendations based on the findings.

RESEARCH QUESTION

What is the importance of the SIWES program in effectively training Architecture students and how is the program perceived by the students?

The hypothesis developed after the preliminary review of findings is:

The ideology of the program is effective but is hindered by functional challenges that impede its complete success.

The specific objectives underpinning this study are

- ✓ To determine how many students partook in the training and where they had secured as their placement
- ✓ Identify the activities and experiences they had and determine its relevance to their development
- ✓ Analyze the students perception of the training program

- ✓ Highlight the challenges faced by stakeholders such as; the students and the university in the course of the program

III. DATA FINDINGS AND DISCUSSION

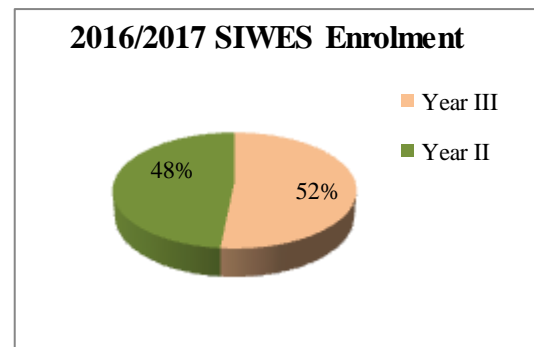
A descriptive research design method was employed in this study and data was collected and analyzed in form of a survey using the instrument of a structured questionnaire. The questionnaire of 19 questions (grouped: Geographical spread, Student placement, Perception of SIWES, Impact of SIWES) was distributed amongst students that have had recent prior participation in the program. A test run questionnaire was created initially and the questions were checked for relevance to the study and then administered to a sample size of 52 students to verify the reliability and effectiveness of the questions. A total of 157 questionnaires were handed out finally to the total population of the current students to cover the whole demographic of students concerned.

Purposively the study adopted the whole population as the sample for the study as shown in Table 1.

Geographical Spread	
Rivers State	128
Bayelsa	12
Delta	5
Imo	3
Akwa Ibom	4
Abuja	2
Lagos	3
Total	157

Source: Field study, 2018

Table 1: Population/ sample of study



Source: Field study, 2018

Figure 1

Table 1 shows the geographical spread of students SIWES placement. The choice of location is discretionary; it is usually close to home or school for the student, making the geographical spread over seven states of Nigeria. Rivers state has the highest number of 81.5% as most architectural practices are located in Port Harcourt, which is the capital. Bayelsa State 8 %, Delta State 3 %, Akwa Ibom 2.5 %, Imo and Lagos State 2 % and Abuja FC 1 %. Total of 18.5 % had attachment outside Rivers State posing difficulties for institutional supervisors to visit such students at place of work.

<i>Student Placement</i>	
Engineering/ Construction Firms	63
Architectural Firms	41
Ministry/Parastatals	21
Other	32

Source: Field study, 2018

Table 2: Organizations of attachment

Table 2 highlights the distribution of students in relevant firms. Architectural firms had 26 % of students on attachment, Engineering/Construction firms had 40 %, Ministry and Parastatals had 13 % and other establishments had 21 %.

From the table 2 we can see that out of 157 students only 26 % of students were attached to architectural firms this being not acceptable. Students belonging to the 'other' group had difficulty finding suitable firms; reasons for this are discussed in the next section.

S/N	Question	Agree	Undecided	Disagree
1	Place of attachment was relevant to my course of study	125	7	25
2	Placement was secured easily	25	3	129
3	I accepted the place because there was no other choice	95	5	57
4	My chance of securing a better option would have been higher if the program was longer than 3 months	113	5	39
5	The place of attachment had adequate and modern facilities	106	7	44
6	I was privileged to access all facilities/equipment at the place of attachment	38	12	107
7	The duration of SIWES program was adequate	3	2	152

Source: Field study, 2018

Table 3: Perception of SIWES Program

As it is seen in the table above, more students – 82% found it difficult to secure a place of attachment and 60.5% also accepted wherever they could find due to lack of options. The responses also highlights the challenges of securing placement as a result of the duration of the program at the Rivers state university, with 72% stating that their chance at securing more favorable placements were hindered by the briefness of the program (3 months).

The responses of 67.6% also indicate that the place of attachments had adequate facilities but only 24% agree to having access to all facilities and equipment. A total of 97% revealed that the duration of the program was inadequate.

S/N	Question	Agree	Undecided	Disagree
1	I was able to practice computer aided design	149	2	6
2	I was introduced to working drawings	35	21	101
3	I regularly went to the site under the supervision of my	85	12	60

	industry based supervisor			
4	I learnt how to work in a team	89	12	56
5	The instructions received at school were relevant to the practice at the place of attachment	72	8	77
6	I learnt how to work under strict supervision	65	18	74
7	SIWES taught me to employ initiative and work independently	112	2	43
8	I learnt to work under pressure	95	5	57
9	I was supervised adequately by my industry-based supervisor.	120	7	30
10	Institution supervision was adequate	25	12	128

Source: Field study, 2018

Table 4: Impact of SIWES Program

The table above shows that 95% of the students had practiced computer aided design that has been taught previously in the classroom but only 22% of them were introduced to working drawings. 54% of the students visited sites while 38% did not have the chance to frequently go on site. 56% of students stated that the experience taught them how to work as part of a team and 41% learnt how to work under strict supervision. The program showed to have taught 71% of the students how to work independently and use initiative. 79% of students agreed they were supervised by the industry based supervisors, however only 16% agreed that supervision by Institutions supervisors was adequate.

IV. CONCLUSION

This study shows that the SIWES program is effective in the professional development of the students. However, there are many challenges faced by these students while participating in the SIWES program. Students from the start have difficulties securing placement, mostly because of the short duration of the program as students get declined as they inform firms they will be available for only 3 months. The number of students also poses a threat to the process of securing a placement, as there are limited amount of allotted places in firms for industrial placement and large number of students in various universities. They are then subjected to settling for whatever organization will accept them. The Department of Architecture, Rivers State University may eliminate this issue by extending the length of the architectural program to fit in a whole semester (six months) for the industrial training. The Nigerian Institute of Architects (NIA) is the professional body, which accredits schools of Architecture in Nigeria, should assist with student's placement. Student membership at NIA should be mandatory and through this students would be assigned to architectural firms with fully registered architects whenever due for Industrial attachment. This will also curb the practice of unqualified architects and non-professionals in the building

industry from accepting SIWES students and guiding them incorrectly. From the findings above it is evidential that most students strive to get placement in relevant firms such as architectural or engineering, where they can practice using the facilities and equipment. It is observable that most students reported to gain skills in working both independently and in a team, under strict supervision of their industrial based supervisors, however institutional supervision was not adequate.

V. RECOMMENDATIONS

- ✓ Institutions with the help of the professional body NIA/ARCON should help in placement of SIWES students in architectural practices supervised by chartered architects.
- ✓ Departmental coordinators should create data banks of all addresses of the past SIWES suitable placements to assist students choose organizations in preferred location for attachment.
- ✓ Enough funding and necessary logistics should be put in place for effective supervision of students by institutions supervisors/ITF officials at places of attachment.
- ✓ For students to effectively benefit from the scheme the duration of SIWES program should be extended to six months during the second semester of the third year of their study as prescribed by the National Universities Commission (NUC).

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