

# Orientation and its Significance on Skill Development: A Case study of AcadoPreneurship Industry Immersion Programme For Students (IIP4S)

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## ABSTRACT

Lack of proper orientation prior to the commencement of the Student Industrial Work Experience Scheme (SIWES) has been identified as one of the challenges facing the scheme. In addressing this identified challenge, a four-stage Industry Immersion Programme for Students (IIP4S) consisting of: Planning stage, Orientation and Training stage, Industry Immersion stage and Impact stage has been proposed in this paper has the solution to the SIWES skill development problem. In evaluating the effectiveness of each stage of the scheme, the quantitative data collection methods were used. The data obtained were then analyzed to evaluate the effect of organizing orientation Programme prior to Programme commencement.

## KEYWORDS

AcadoPreneurship, Industry Immersion, Orientation, Student Industrial Work Experiences Scheme (SIWES).

## I. INTRODUCTION

Skill development have been used as a term to account for identifying and filling skill gaps [1]. Concerns regarding skills development, methodology of supporting students in acquiring new skills, school reform, and adapting to changing environments have arisen as a result of the reported ability gaps [2]. In Nigeria, the Students' Industrial Work Experience Scheme (SIWES) was established in 1973 to fill the observed skills gap by availing students' opportunity to have additional practical experience by immersion into the industry [3]. Thus, students from Sciences, Engineering, Technology, Environmental Sciences, Medical Sciences, Veterinary Medicine, etc. fields are to acquire practical skills needed to function satisfactorily in work settings through the introduced SIWES [3].

However, SIWES program effectiveness has been of concern to stakeholders [4-8]. The identified factors contributing to SIWES poor performance includes: lack of proper orientation prior the program commencement [5], mismatch of individuals' set skills with the relevant fields required by the industry, lack of proper support

for research and development, lack of effective coordination and supervision of the SIWES exercise, and lack of adequate funding [6 and 7].

The need for proper orientation for the success of SIWES and other skill related programme has been reported in [11 and 12]. Hence this paper aims at supporting the lemma in [11 and 12] that orientation is important for the success.

In addressing the identified problem associated with SIWES programme, Industry Immersion Programme for Students (IIP4S) was proposed. It is one of the two schemes under the AcadoPreneurship Immersion Programme (AIP) of the research group [9].

AcadoPreneurship simply means turning academic ideas, innovations and researches into businesses and start-ups. This is achieved by synergistic integration and collaboration between academia, regulators and industry experts [10].

IIP4S has been designed as an outcome and experiential learning-based skills development program. The Programme has four different stages, three of which are spread out over a period of twenty-four weeks. The stages are: advertisement, recruitment, and planning stage, induction and training (a four-week Orientation and capacity development workshop) stage, industry immersion stage, and impact stage. Selected IIP4S students are expected to visit partnering industries to gain extra hands-on exposure with equipment and machinery.

The rest of this paper is organized as follows: review of related work is presented in section II, conceptual framework of Industry Immersion Program is presented in section III, the discussion of result is presented in section IV, and conclusion and is presented in section V.

## II. REVIEW OF RELATED WORK

In this section, evidential responses obtained from the critical literatures reviewed are provided in answering three major questions. The questions are:

- i. What are SIWES impacts in recent times?
- ii. Of what importance is the orientation to the success of SIWES?
- iii. Is SIWES required in the post-COVID-19 Era?

### i. What are SIWES impacts in recent time?

Since the introduction of SIWES, efforts have been made to quantify the impact of the programme [8]. Following the relevance of the initiative in Anambra State, students commended SIWES as having positive effects on their academic achievements and in entrepreneurship skill acquisition [14]. The ability of students to transfer school-based learning, behaviors and competences to the workplace is a product of exposure to real-life businesses and office situations while in school. Post-school analysis revealed that exposures and experiences gained through SIWES enables graduates of the institution to be autonomous, self-reliant, fulfilled, and self-actualized [14]. Thus, a significant positive impact to professional development.

In a similar study on SIWESs impact on students from Ogun State, Nigeria, it was discovered that SIWES contributed to higher annual income for farms that allow ITF scheme. It was reported that SIWES-affiliated fish farms had more ponds, larger farms, and deeper stocking depths, all of which increased earnings. It was also reported to be a win-win for both parties involved, as attached students also obtained technical knowledge in fish farming [15].

[16] investigates the effect of the SIWES programme on students' job market viability after graduation. The study among other findings discusses the effect of SIWES on participants' personal qualities and interpersonal skills using feedback obtained from 600 students from related faculties of a university and a polytechnic in South Eastern Nigeria. The findings show that students' employment viability can be increased by actively participating in the SIWES programme. Thus, another study emphasizing the continuous implementation of SIWES programme.

Also, [17] studied the efficacy of SIWES on secretarial skill mastery on 110 students of the National Diploma Programme in Office Technology and Management in five polytechnics in South-Western Nigeria. According to the assessment, the programme has a considerable impact on core secretarial competence mastery but no significant impact on capacity development, such as communication skills. The paper further recommended that the SIWES be extensively revised because it does not take talent and capacity development into account.

Evidence obtained from [14, 15, 16 and 17], have reinforced the idea behind the creation and sustainability of SIWES programme.

### ii. Of What Importance is Orientation to the success of SIWES Programme?

[11] emphasized that a good orientation program is a requirement for participating students in SIWES in Vocational and Technical Education. The authors opined that SIWES coordinating units should organize a good orientation program before students begin the program as this will help spark student interest and reduce ignorance of the objectives of the program.

[12] identified lack of proper orientation as part of the challenges faced by SIWES stakeholders. However, proper orientation should not be overlooked as an improvement, as the goal of orientation is to raise awareness and prepare students for situations that are likely to occur outside of campus at their attachment location, as well as to help students understand what they should and should not do during the SIWES program.

Lack of appropriate planning and adequate orientation for SIWES participating students are among issues battling the scheme's objective as to acquiring the requisite skills for balancing the knowledge gap between theoretical and technical knowhow. According to [19], the duo is required for the programme to achieve its goals and objectives in Nigeria as it will help prepare the minds of the on the objectivity of the programme.

[20] underscore the importance of an efficient SIWES programme. The author was contingent on proper orientation and the use of industry remarks for subsequent students undergoing industrial training. According to the conclusions of the study, SIWES' declining implementation can be ascribed to an ineffective technique of dealing with complaints from industry partners to the institutions. This is required in order to orient future students going into the sector for training and prevent making the same mistakes.

Students' occupational competencies among many other factors is determined by their specific industrial trainings or engagements. [21] found that information gathered from interactions with some selected students revealed flaws such as poor supervision, improper placement of students, poor student-to-student interactions, and a focus on entering logbooks rather than ensuring that activities can all be attributed to poor SIWES orientation. It was noted that without an effective students' orientation, the abuse of SIWES programme is unavoidable.

### iii. Is SIWES Required in post COVID-19 Era?

The COVID-19 Era has undoubtedly proven the importance of capacity development. Moreover, it has shown that skill is an essential strategy for a 21<sup>st</sup>-century economy, especially for its ability to give an edge in the knowledge economy.

SIWES being a capacity development programme has also argued to still be relevant in the post COVID-19 era given the continuous need to produce skilled professionals to meet technological and entrepreneurial demands in Nigeria (cited in [13]). It has been shown that SIWES is a program that utilizes both human and material resources in impacting students' technical knowledge, innovativeness, and skillfulness (cited in [13]). In practice, the integration of the theory and practical skills would enable graduates to be self-sufficient after training completion. Students with sufficient technical expertise are swiftly off the unemployment radar

following graduation, demonstrating the program's success (cited in [13]).

In reducing the effect of unemployment, [13] postulates the need to complement the traditional teaching method with a well-organized SIWES programme. This argument is founded on the fact that implementing an entrepreneurship curriculum alone may not result in the development of entrepreneurial skills or capabilities.

Therefore, regardless of the era, SIWES programme still demonstrates a great potential for value provision for students [11]. Thus, it can conveniently be argued that SIWES is still a relevant engagement required to improve students' skill sets, in post COVID-19 era.

### III. IIP4S FRAMEWORK: A CASE STUDY

Figure 1 shows a four-stage framework that describes the flow of activities for the proposed industry immersion programme orientation and capacity development framework for effective skills development. Each stage is subsequently discussed and has been designed to solve the major problems associated with the existing SIWES programme as reported in [6,7].

Evaluation Assessment (TEA) are also performed at the end of each training session in line with the set KPI.

An interview with panelist was carried out to select students whose interest align with the project goals as suggested in [18]. Successful candidates were then notified by email stating important dates and relevant activities. At the end of this stage, selection for the next stage with material preparation were made obvious. A sample of IIP4S call for interns is shown in Figure 2.



Figure 2: Sample of poster for AI4CE IIP4S Call for interns.

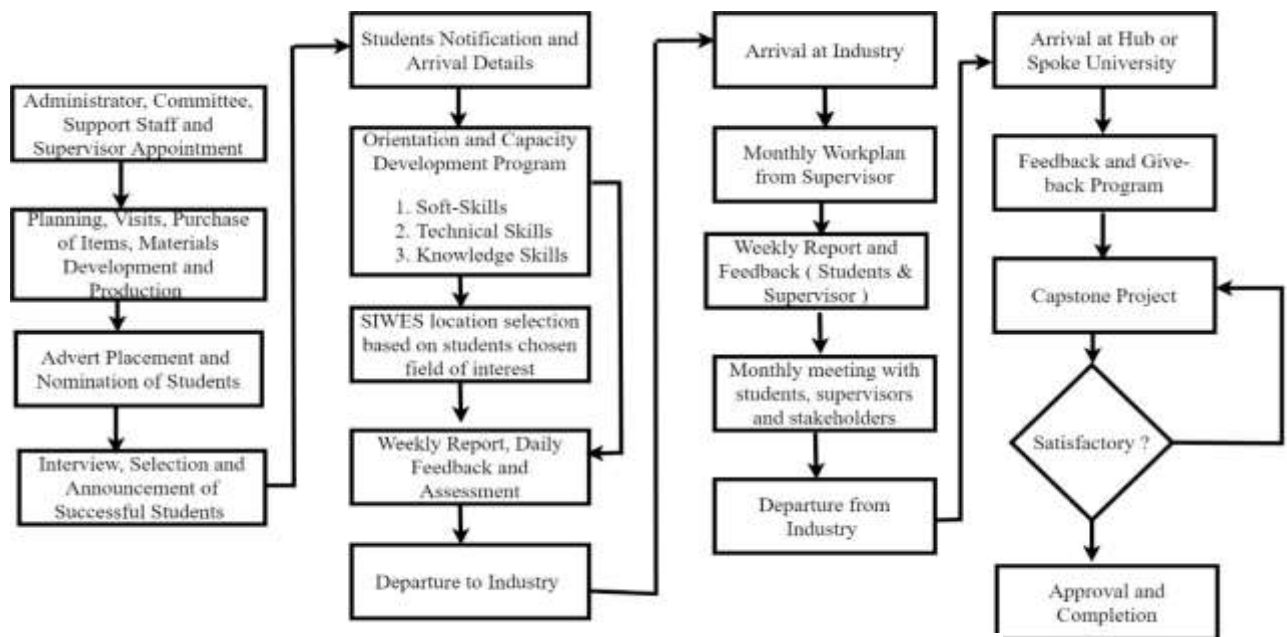


Figure 1 Pre-Industry Immersion Programme Orientation

**Stage one: Planning stage:** In the first stage, the appointment of the programme administrator, committee and other critical stakeholders for the success of the Industrial Immersion Programme for Students (IIP4S) is undertaken. The key performance indicator is also set at this stage. The committee members and administrator roll out a call for application of interested candidates for the scheme. Programme for the scheme is also drawn up which is then followed with training materials gathering and preparation. The learning materials are designed using Outcome Based Learning (OBL) approach, Teaching

**Stage two: Orientation and Training stage:** During this stage, orientation on skills development for optimal functioning of the students are conducted. The importance of soft skills in addition to other skills is emphasized during the orientation. This period, which lasts for four weeks ensures that students are properly oriented and also serves as the transition period from classroom to industrial floor. Among the programs during this period includes: Cultural Intelligence, Emotional Intelligence, Work/Office Ethics, soldering, PCB fabrication, Introduction to LMS Development, and Web

Programming. Erudite speakers and trainers are invited to facilitate various sessions using face-to-face and virtual learning approach.

**Stage three: Industry Immersion stage:** Students are sent to various industries during this stage. The industry immersion stage is expected to be a sixteen-week programme. The students are expected to appoint team lead among themselves. Similarly, the students are also appointed faculty-based Immersion supervisor that would continuously monitor students' activities at the industry.

In solving the identified monitoring problem, during the industry immersion the following activities are recommended and are to be monitored by the Programme Coordinator (PC):

- a) Weekly Online Report submission.
- b) Weekly Attendance Report Filing.
- c) Industry Supervisor feedback.
- d) Weekly 1-Hour Online Meeting with the Supervisor.
- e) Monthly 1-Hour Online Meeting for all students and Management.

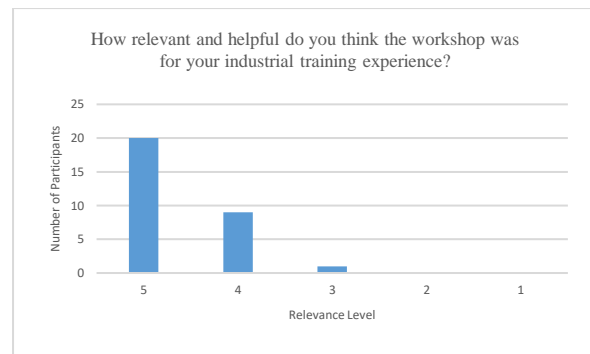
**Stage four: Impact stage:** In extending the impact from the immersion, upon completion of the industry immersion programme, students are expected to return back to their respective universities and use the skills gained during the previous period to train other students and colleagues.

Furthermore, upon return they are expected to complete a Special/Capstone project within a 4-week period.

#### IV. RESULTS AND DISCUSSION

In ascertaining students' perception on the importance of the orientation and effectiveness of the Industrial Immersion Programme for Students' Framework (IIP4S), the survey approach was adopted using feedbacks collected from the students at the end of the four weeks orientation and capacity development workshop. The population of the survey comprised of students from three different universities, namely, the Federal University of Technology Minna, Ibrahim Badamasi Babangida University Lapai and Nile University Abuja. The data collected were analysed using a simple bar chart and was interpreted in percentages.

Figure 3 shows the result obtained in assessing the relevance of the orientation to students' industrial training experience. 66.7% of the respondents agreed that the workshop was extremely relevant and useful and 30% said it was very relevant and useful while 3.3% said it was relevant and useful. This demonstrates that the students understand the importance of proper orientation before going into the industry and its important to their academic and career pursuit. Thus, proper orientation is necessary [12]. Therefore, it would be relevant to conduct appropriate orientations before students are sent to industries for more training.



**Figure 3:** Relevance of Orientation and Capacity Development Workshop to Industrial Experience

The satisfaction level of students in the orientation is necessary to determine the efficacy of the immersion programme framework. Figure 4 shows result of an aspect that addresses the satisfactory level of students. 53.3% of the respondents were very much satisfied with the orientation and capacity development workshop, 43.3% were very satisfied and 3.3% were satisfied. This demonstrates that the students found the workshop to be extremely beneficial. The result shows that to gain students' focus, proper orientation is required prior to being sent to industries which is in line with the result reported in [12 and 14]. Hence, indicating that an effective approach was adopted in preparing the students in becoming industry-ready graduates.



**Figure 4:** Students Satisfactory level with pre-Immersion Workshop

In evaluating the relevance of the core activities carried out and the level of satisfaction derived from the training session, an aspect of the quantitative data collection methods was designed to handle this.

In Figure 5, 73.3% and 26.7% of the participants confirmed that the training sessions during the workshop were very relevant and relevant respectively, 60% and 40% responded very relevantly and relevant respectively to the mini-projects worked on in the course of the orientation, while 53.3% and 46.7% responded that the assessment taken at the end of the orientation was very relevant and relevant respectively. Figure 6 shows that 36.7% were extremely satisfied with the content of the training session, 56.7% were very satisfied, and 6.7% were pleased with the content of the lectures.

The result demonstrates that the participants agreed that the activities were relevant and the lectures were beneficial in enhancing knowledge and skills that were not necessarily taught in the

classroom but was essential for industrial experience. This is in line with [11] as it will trigger students' interest and reduce obliviousness.

Thus, the lectures delivered, assessments and mini-projects at the orientation plays a significant role in aiding learning. Hence, this should form part of the activities in future immersion and skills development program.

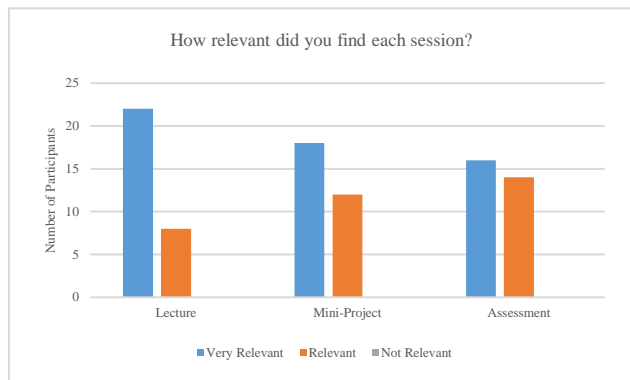


Figure 5: Relevance of Core Activities of the pre-Immersion Workshop

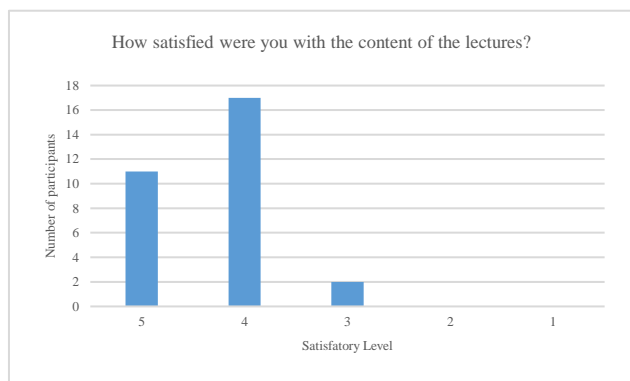


Figure 6: Students Satisfactory level of lecture contents

## V. CONCLUSION

In this paper, the importance of organizing orientation programme prior to the commencement of skill acquisition related programme has been. Results obtained using AcadoPreneurship IIP4S as a case study have shown that the effect of orientation Programme cannot be wished away and it should be an integral part of any skill acquisition related activities.

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