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Assessment of the Viability of Students Industrial Work Experience Scheme (Siwes) in Nigerian Tertiary Education as Panacea for Graduate Unemployment

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Abstract

This paper assessed the viability of the Students Industrial Work Experience Scheme (SIWES) in Nigerian tertiary education as a panacea for graduate unemployment. Consequent upon this, the explication of the philosophical background of Students Industrial Work Experience Scheme (SIWES) was done in relation to its emergence and the subsequent objectives that necessitated its emergence. This was done principally in connection to the philosophy of pragmatic epistemology of empiricism, the context within which SIWES was premised, within the purview of acquisition of knowledge and skills through practical experience. The inclusion of SIWES in Nigerian tertiary education curriculum was systematically done to guarantee the graduates in their respective areas of specialization the needed employment experiences in the competitive labour market, and thereby enhance the country's technological and vocational/technical frontiers towards poverty reduction and economic development. It was discovered, based on the assessment of the programme initiative in this paper that, the effort by the Federal Government of Nigeria in this direction, though, laudable and commendable, has not yielded the desired results due to factors such as dearth of industries in the country and the subsequent refusal of the available ones to accept students on industrial attachment, inadequate functional libraries, laboratories, vocational/technical workshops among others. Based on this, suggestions were made to make the SIWES programme initiative viable in reducing graduate unemployment in the country, some of which include implementation of the necessary disciplinary/punitive measures to erring industries so as to enforce compliance in accepting students for industrial attachment; adequate provision of the needed practical teaching and learning infrastructures such as power supply, laboratories, vocational/technical workshops to enhance the acquisition of practical experience as a panacea for graduate unemployment in the country.

Introduction

One of the greatest challenges all over the world today besides insecurity, poverty, diseases, including COVID -19 among others is unemployment. Unemployment is ravaging the world including Nigeria like a plague. Consequently, curbing this trend has become one of the top most priorities of most successive governments across the globe including Nigeria as one of the worse hit among other African countries. Although, the level of unemployment varies from country to country, the reasons for this can be traced to so many factors which are peculiar to every nation. In Nigeria, for instance, unemployment can be traced to increase in population,

over-dependence on oil as the major source of the country's national income, corruption and the kind of education system being practised in the country among other factors.

In fact, some politicians in Nigeria use unemployment as a campaign strategy as well as a bait to gain political power. This implies that, they use the unemployment situation in the country to gain employment for themselves as political leaders. This, they do, through promising the teaming unemployed youths various employment opportunities which most at times turn illusive after using them as political thugs to be dumped after successful political voyage(s) to their desired destinations either as members of the Executive or Legislative Arms of government.

In Nigeria, for instance, education is believed to be one of the major ways of curbing unemployment in the country. After graduation, the graduates of all levels of education, especially tertiary levels are expected to be gainfully employed either by self or by others after acquiring knowledge and skills in relevant areas of specialization. This is one of the reasons that various programmes are evolved within and outside the country's formal education system for the acquisition of relevant knowledge and skills needed for the graduates to be well equipped so as to be gainfully employed. One of such programmes is the Students Industrial Work Experience Scheme (SIWES). This programme which is domiciled in the Nigerian tertiary institutions is very vital so much so that this paper seeks to assess its viability in meeting the target(s) for which it was established in the overall interest of the economic development of the nation.

The Philosophical Background of Students Industrial Work Experience Scheme (SIWES)

The acquisition of practical experience through relevant skills acquisition is rooted in the philosophy of pragmatism and epistemology of empiricism both of which lay emphasis on practical knowledge and skills acquisition through practical experience for worthwhile living. In this respect however, the philosophy of pragmatism can be traced to America and credited to the trio of Charles Sanders Peirce, John Dewey and Williams James¹ respectively in eighteen century. On the other hand, the epistemology of empiricism can be traced to Francis Bacon, [including Thomas Hobbes] and John Locke in seventeenth- century England. ² One of the major reasons that has made pragmatism so influential, according to Akinpelu, ³ is that "our age is one in which people are more interested in the material benefits or practical usefulness of any activity that is undertaken." Hence, the philosophy of pragmatism is pre-occupied with the utility of ideas or the "cash value" of ideas that culminates into acquisition of employable form of education that informed the inclusion of the Students Industrial Work Experience Scheme (SIWES) in the Nigerian tertiary education curriculum. This is besides the inclusion of entrepreneurial skills acquisition by Nigerian students in the country's universities. At the moment, entrepreneurship course is a mandatory requirement among other General Studies (GST^S) courses for graduation by all the undergraduates of Nigerian universities.

While pragmatism is a school of philosophy that emphasizes practicality, empiricism on the other hand, is a source of knowledge that emphasizes experience based knowledge through the senses which are referred to as "gateway" to knowledge. The philosophy of pragmatic epistemology, therefore, is anchored on the acquisition of practical skills through experience by way of scientific experimentation in substantial instances. It "is therefore, in this connection

that in the United states, William James called his own philosophy radical empiricism, and John Dewey coined the term immediate empiricism for his view of experience.”⁴ It is in this direction also that Hobbes ⁵believes “the epistemological position of empiricism, the claim that all our knowledge comes through the sense experience” which is commonly referred to as the best teacher in the current usage as the case may be.

It is therefore against this backdrop of acquisition of practical experience that SIWES was included in the school curriculum of Nigerian tertiary education in the spirit of pragmatism and empiricism as one of the ways to curb the prevalent rate of unemployment in the country. The selection of science and technology as well as vocational/technical related disciplines explains the target of choice of SIWES implementation in the country’s education system, particularly at the tertiary institutions level. These disciplines are practical oriented in line with the philosophical tenets of pragmatism and empiricism with the utmost aim of fostering economic growth and development of the nation, in line with the nation’s priority given to science and technology as indicated in the National Policy on Education (NPE).⁶ Thus the NPE posits that special provisions and incentives shall be made for the study of sciences at each level of the national education system. This is aimed at “servicing studies in technology and the cause of technology development among other goals of science education,”⁷ while technical and vocational education shall, among other goals, “provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development” ⁸ of the nation among the comity of nations. Hence the emergence and subsequent inclusion of SIWES in the nation’s tertiary education as indicated in this work is pertinent so as to curb unemployment, boost the country’s vocational and technological base towards industrialization for the country’s economic emancipation.

The Emergence of the Students Industrial Work Experience Scheme (SIWES)

Prior to the emergence of SIWES there was a growing concern that graduates of Nigerian institutions of higher learning lacked adequate practical knowledge and education in higher institution was not responsive to the needs of employers of labour. ⁹However, the scheme was systematically designed to prepare and expose students of Universities, Polytechnics, Colleges of Technology, Colleges of Agriculture and Colleges of Education for the industrial work situation they are likely to meet after graduation.¹⁰ Therefore, the scheme affords students the opportunity of familiarizing and exposing themselves to handling equipment and machinery that are usually not available in their institutions of learning.¹¹

It was however, in the light of the above that the Industrial Training Fund (ITF) was mandated by the Federal Government of Nigeria to initiate, design and introduce SIWES in 1973 to acquaint students with skills of handling industrial equipment and machinery.¹² At formative years, the scheme was solely funded by the ITF but owing to financial constraints, the fund withdrew from the scheme in 1978. At this juncture, after noting the significant role of skills acquisition in the scheme, the Federal Government handed over its management to the National Universities Commission (NUC) and the National Board for Technical Education (NBTE) in 1979. ¹³ However, in November 1984, management and implementation of the scheme was again reverted to the ITF with funding to be solely borne by the Federal Government. ¹⁴

The Objectives of SIWES

Specifically, the objectives of Students Industrial Work Experience Scheme (SIWES) include the following.

- a) Provision of avenue for students in institutions of higher learning to acquire industrial skills and experience in their course of study.
- b) Exposing students to work methods and techniques in handling equipment and machinery that may not be available in their institutions;
- c) Making transition from school to the world of work easier and enhance students contacts for later job placement;
- d) Providing students with an opportunity to apply their knowledge in real work situation thereby bridging the gap between theory and practice; and
- e) Enlisting and strengthening employers involvement in the entire educational process and prepare students for employment after graduation¹⁵

In order to achieve the above stated objectives, several bodies play various roles in the management of SIWES programme. These bodies include the Federal Government of Nigeria; the Industrial Training Fund (ITF); National Universities Commission (NUC); National Board for Technical Education (NBTE); National Commission for Colleges of Education (NCCE); Institution of Higher Learning and the employers of labour.¹⁶ These bodies as identified above have specific roles assigned to them in the administration and management of SIWES programmes.

This paper considers the role played by the Federal Government of Nigeria because of its relevance to this work. To the roles the paper turns as explicated below:

- a) Provision of adequate funds to the Industrial Training Fund through the federal ministry of industry, trade and investment for the scheme;
- b) Making it mandatory for all ministries, companies and parastatals to offer places for the attachment of students in accordance with the provisions of Decree No. 47 of 1971 as amended in 2011.¹⁷ However, the relevant provisions of the amended Act are as follows:

Section 7A (1) stipulates: shall accept students for industrial attachment purposes. The Decree under Section 7A (2) stipulates penalties in default of Section 7A (1) (2). For instance, Section 7A (2) states that “any employer who is in breach of the provision of the Sub-Section (1) of this Section shall be guilty of an offence under this Act and liable to conviction¹⁸

- a) In the case of a Corporate body, to a fine of five hundred thousand naira (₦500,000.00) for the first breach and one million naira (₦1,000,000.00) for subsequent breach, and
- b) In the case of Chief Executive, Secretary, or other principal officers of the company, to a fine of fifty thousand naira (₦50,000.00) or two years imprisonment for the first breach and three years imprisonment without option of fine for each subsequent breach.¹⁹

Assessment of the Viability of SIWES as a Panacea for Graduate Unemployment

The emergence of SIWES and its subsequent inclusion in the Nigerian tertiary education curriculum so as to bridge the gap between theory and practice, curb unemployment, reduce poverty and enhance the country's economic development is highly commendable. This

programme is indeed, a right step in the right direction, considering the need for education in the country to meet the scientific, vocational and technical needs of the nation among other functional values of education in relation to the national needs of the nation in its quest for industrialization in the global arena.

In line with the foregoing, this paper believes that the effort by the federal government of Nigeria in this direction though, laudable and commendable, has not yielded the much desired results in meeting its targets. In the first instance, this is partly due to the existence of only few industries available in the country that cannot match the large number of students scrambling for such opportunities to carry out their mandatory attachment. This is apart from the fact that the perennial challenge of power supply in Nigeria which is the function of industrial breakthrough of every country across the globe has grossly limited the industrialization drive of the country, thereby reducing the few available ones to mere shadows of themselves. Invariably, no country in the world can achieve any meaningful level of industrialization without adequate power supply. Unfortunately, this is the Nigerian situation in this direction. With the above scenario at hand, it is very difficult for SIWES to optimally achieve the desired goals of providing employment opportunities for the teeming Nigerian graduates as expected.

In addition to the above position, this paper believes that one of the reasons for the SIWES failure to achieve its objective of providing the necessary avenue for students of institutions of higher learning to acquire the needed skills and experience in their course of study is that, as the industries which students are to acquire the necessary experience are not enough to absorb the students, they may resort to patronize the available business centres that may not have the requisite standard facilities and machinery for the students to acquire meaningful experience as expected of them, just to fulfill the mandatory requirement(s) of SIWES programme by way of attendance without any meaningful corresponding skills acquisition necessary for employment. This accounts partly for the students' inability to meet the needs of industries after graduation as posited subsequently in this paper.

In Nigerian education system today, most schools at all the levels are experiencing large influx of students that outweigh the available facilities in the schools. For instance, it is common to see students of higher institutions of learning in Nigeria standing up or hanging by the windows to receive lectures. In fact, some of the students can easily be seen outside the lecture theatres/halls discussing issues while lectures are going on owing to lack of space in the lecture theatre/halls enough to accommodate them. The same story can be told of laboratories, vocational/technical workshops and libraries where the learners are expected to acquire the necessary skills to guarantee them some employment opportunities in the competitive labour market after graduation. Unfortunately, some students only have the opportunity to see some machinery for the first time in their academic programmes at the industrial attachment centers if at all the machines are available. They may not even have the opportunity to operate such machines within the whole period of their industrial attachment allocated to them for their industrial training exercise. How can such students be effectively efficient after graduation when they have not been able to be exposed to the relevant techniques of handling equipment and machineries that may not be available in their institutions as spelt out in the SIWES objectives?

The relevant Sections of the laws establishing the SIWES have spelt out the necessary disciplinary/punitive measures for the industries that refuse to accept students for the industrial attachment, as earlier revealed in this work. Consequent upon this subject matter, some industries have been frustrating the smooth implementation of the SIWES programme by rejecting students for industrial attachment in breach of this very Section of the SIWES law with impunity. This negative behaviour forces the students to patronize ill-equipped business centers to carry out their mandatory industrial attachment programme with little or nothing to show for it. In this regard, how many companies/industries, for instance, have so far been prosecuted and convicted by the relevant authorities for breaching these very Sections of SIWES laws? As a matter of fact, this level of impunity has made a caricature of the relevant laws guiding the attachment exercise, thereby making the laws a toothless bulldog that only barks but cannot bite. As a result of this impunity, most of the industries have continued to reject the students for industrial attachment. Corroborating this argument, the former Minister of Education Prof. Anthony Anwukah, as reported in Daily Trust by Okeke laments that:

We try to address the relationship between universities, the industries and the graduates, how they can fit in and it is not working and it is not providing that bridge between the industries because the most industries are unwilling to accept students on SIWES programme²⁰

Besides the above bottleneck in the implementation of the SIWES programme, another barrier to the smooth implementation of the programme as optimally as possible is the fact that, some of the graduates have not acquired the requisite skills for the consumption of the few available industries in the country such that the graduates have to be retrained at higher cost borne by the industries and thereby contributing in worsening the already existing unemployment situation in the country. Confirming this argument, Prof. Ingawa, as reported by Okeke, ²¹ affirms that, “that is why industries are crying out that graduates of Nigeria are of no value to them when they (industries) employ them they have to retrain them at a very high cost.” Considering the harsh economic situation of the country that is characterized by high inflationary trends, which trigger the cost of production, companies and industries may be forced by this scenario to either down-size or relocate to other countries or even increase the prices of their products. In the event of the occurrence of either of the first or second option or both, the ill-equipped workers with less dexterity owing to inadequate skills acquisition are most likely to be affected. The consequential implication of this is higher rate of unemployment, especially among the youth population range, the multiplier effects of such negative indicator is restiveness, banditry, abduction, armed robbery, thuggery and gambling such as “betnaija” among other social ills in the society that effect the nation’s peaceful coexistence which by extension greatly deters economic development.

Premised on the above, the issue of security is paramount in the economic development of every nation including Nigeria. Economic activities cannot take place in atmosphere of rancour. In other words, both local and foreign Investors cannot invest in a nation that is bedeviled by insecurity of lives and property. Impliedly insecurity is one of the banes of industrialization of a nation. In Nigeria for instance, the insecurity situation orchestrated by

boko haram insurgents, banditry, abductors, militias, herders/farmers crisis among others have greatly hampered the growth and development of industries in the country, thereby forcing the few available ones to either fold up or relocate to other safer places in other countries. This scenario is not a good omen for the economic development of our country. Apart from losing revenue that adversely affects the country's overall National Income, many students may also lose appropriate avenues to carry out their mandatory industrial attachment, thereby limiting their chances of acquiring the basic skills to enable them to either be self-employed or be employed by others, particularly the industries which may, in the long run, not be available to absorb them due to the menace of insecurity inherent in the country as being experienced at moment.

Considering the duration of SIWES programme to be attained by students during the attachment exercise, the period varies from institutions to institutions. For example in Colleges of Education and Polytechnics, the period each student is allocated is four(4) months.²² However, in the case of Universities, the period is pegged at six(6) months respectively for a four or five year degree programme.²³ In critique of this, this paper believes that such periods allocated for the SIWES programme are too limited for real practical skills to be acquired optimally. This is because the graduates' competencies to handle sophisticated machines adequately cannot be achieved at best between four and six months as spelt out in the programme. This paper wonders how, for instance, can a student spend only six months in a four or five year programme and acquire the needed practical experience that will make the transition from school to the world of work easier, and enhance student's contacts for later job placement as embedded in the SIWES objectives? The same rhetorical question applies to the four months duration for Colleges of Education and Polytechnics for practical acquisition of experience for the graduates of the aforementioned institutions in the SIWES programme.

It is in the light of the above that the former Minister of State for Education, Prof. Anwukah advocates for re-schooling of the Nigerian universities graduates to enable them acquire practical skills for one year to make them employable. According to the former Minister, while justifying his position as reported by Chidinma in Daily Trust Newspaper,

Law students attend law school for one year before going for NYSC and medical students go for one year housemanship before they are allowed to practice fully, so it will be necessary for other courses to also go through this process²⁴

If the above position is to be accepted, will government establish such schools and equip them adequately, considering the dearth of industries in Nigeria that accounts partly for the inability of the SIWES programme to achieve maximally the desired results as expected? Besides this, will such schools be well funded considering the problem of funding education in Nigeria, which accounts chiefly for the Academic Staff Union of Universities (ASUU) strikes among others? In consideration of this, who then is going to do it, as this is going to be capital intensive, how long will it come to practice? This is based on the fact that "the SIWES projects, according to Anwukah, introduced for a year industrial attachment for students has failed in the universities (because) it is not doing its role in bridging the gap between the universities and the industries"²⁵

In addition to the above, Nigeria has proposed the establishment of technology village to boost the technology base of the nation.²⁶ In this regard, if this eventually takes place, what will be the fate of the schools the Minister is advocating for, especially in terms of funding and manpower needed to be engaged in the technology village and the schools for graduates to attend for one year in order to acquire practical skills to make them employable? In the opinion of this paper, Nigeria is in a state of confusion in the light of the above elucidation as to the implementation of some educational policies and programmes including SIWES. This is in spite of the introduction of the National Economic Empowerment and Development Strategy (NEEDS), which is aimed at value reorientation, wealth creation, poverty reduction and employment generation²⁷ among other aims of NEEDS. Even with the laudable objectives of NEEDS programme as envisaged in this paper, Nigeria was adjudged in 2018 by the America Brooking Institution²⁸ which conducted a research on the growing poverty in Nigeria as the country with the largest number of people living in extreme poverty just as “the number of Nigerians living in extreme poverty increased by six people in every minute.” According to the Institution’s report, Nigeria had about 87 million people living in extreme poverty, compared with India’s 73 million,²⁹ “although Nigeria is rich in natural and human resources, 6 out of every 10 Nigerians live on less than 1 dollar a day”³⁰

The above unfortunate revelation is besides the lamentation of the Academic Staff Union of Universities (ASSU) which “expresses its displeasure over 16 million unemployed graduates and about 12 million children (who) are out of school”³¹ in Nigeria as at April 2018. This is in spite of the fact that

The government had raised the hopes of declaring emergency in the education sector... apparently to proffer solutions to the low quality of education being offered Nigerian children (yet) the plan to declare an emergency in the sector had not been perfected.³²

The scenario described above is a clear indication that there is a missing link between the theory and practice of education in Nigeria which this paper believes, can be traced partly to the nation’s educational system the nation inherited from the colonial masters that in many instances, produces graduates for white-collar jobs, in spite of the numerous technical and vocational courses and programme initiatives in the nation’s tertiary education, including SIWES, which can create employment opportunities for the graduates, having supposedly been exposed to some levels of practical knowledge and skills acquisition to enhance their employability after graduation

Conclusion

The emergence and inclusion of Students Industrial Work Experience Scheme (SIWES) in the nation’s tertiary education for some selected courses is a laudable and commendable programme initiative by the Federal Government of Nigeria. This is aimed at providing the students with the necessary practical experience through various knowledge and skills acquisition in their respective areas of specialization, so as to guarantee them some employment opportunities after graduation. This initiation is in line with the philosophy of pragmatic epistemology, which emphasizes the acquisition of knowledge and skills through practical experience. The move by the government in this direction however, has not achieved the much desired results, which can be traced to some factors such as unavailable industries

and the subsequent refusal of the available ones to accept students for industrial attachment, inadequate infrastructure such as lecture rooms/halls, laboratories, functional workshops and libraries among others. These have brought to question, the viability of SIWES in curbing graduates unemployment in the country, Nigeria.

Recommendations

In consideration of the preceding discussions in this paper, the following suggestions are made in order to enhance the viability of SIEWES in the country's tertiary education for better productivity:

1. The industrial base of the country should be boosted to enhance the rapid expansion and growth of local industries to compete favourably with foreign ones. In this direction, the security architecture in the country should, as a matter of priority, be refurbished to encourage both local and foreign investment in the country. This will help in accommodating the large influx of students for industrial attachment
2. All the relevant disciplinary/punitive measures aimed at compelling industries and companies to accept students for industrial attachment should be administratively and legally enforced as provided in the SIWES laws in practical terms. This will allow students to acquire practical experience so as to enhance their employability status after graduation.
3. The necessary infrastructure in all the nation's educational institutions should be provided to enhance teaching and learning, including laboratories, technology and vocational workshops, classrooms, offices, libraries among others. This will increase access to the acquisition of functional education by learners that will earn them employment opportunities after graduation.
4. In order to allow for better productivity by way of acquiring more practical experience by students on industrial training and to improve their competencies in their respective areas of specialization as provided in the SIWES regulations, the period provided for industrial attachment should be increased to one year for both National Diploma and Nigerian certificate in Education and two years for degree programmes respectively as against four months for National Diploma and Nigerian Certificate in Education and six months for degree programmes as provided in the SIWES relevant regulations as discussed in this paper.

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