Strategic Training for Quality Higher Education Graduates: Achieving United Nations Sustainable Development Goal 4 (SDG4)

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Abstract

Poor quality graduates and poor work adjustment among the work force are some contemporary challenges of higher education training in many societies. Affected graduates usually lack the technical skills, attitudes and competencies required to perform effectively when employed. Often times, difficulties to cope with the demands and expectations of the work environment put some at risk of job loss and redundancy; hence, undermining the achievement of the United Nations Sustainable Development Goals (UN SDG:4). Poor quality graduate outputs have been blamed on diverse factors which include: personal, institutional and socio-cultural. However, this study is focused on the institutional factors. The position of this paper is that institutional inputs which cover training have to be more strategic and progressive for the production of high skilled workforce that are competitive both locally and globally. This will enhance the achievement of UN SDG: 4, which is targeted at enhancing learning for the acquisition of vocational and technical skills for decent work as well as for global citizenship in a global world. Based on the aim of addressing learning gaps among graduates, this paper stresses the need for instructional inputs to be in tandem with global best practices, while adapting indigenous resources (value system) to impart learners, cognitively and affectively. The paper recommends that higher education institutions should leverage the training strategies pointed out in this paper to enhance quality of graduates and future labor force that can contribute to sustainable national development.

Keywords: Higher Education, Strategic Training, Quality Graduate, Sustainable

Introduction

Tertiary or higher education is any education offered after secondary school education. Tertiary institutions in Nigeria include universities, polytechnics, monotechnic, technical and teacher training colleges (FRN, 2014). Universities world over are set up to carry out three key functions as part of their mandate: teaching, research and community service. Research involves systematic enquiry into phenomena in order to give genuine answers to propositions that could serve as theories over time. It is a systematic way of identifying and seeking solutions to problems that plague society in a given sector of development, including, but not limited to, education, health agriculture, and urban development (Ekuri, 2022). In education, research may be seen as the systematic search for solutions to problems that plague the educational enterprise. Such research may focus on the curriculum, teaching methods, assessment and learning resources. They may also focus on innovations in education, including policies. However, the overall goal of research endeavor is to improve educational practice, and by extension, development of society.

Just like research, training is the activities involved in teaching or developing students' capacities in skills and competencies relevant to their areas of study and future careers. The goal of training, in any circumstances be it in the school or in the workplace, is to achieve the following objectives in the learner or trainee: To acquire skills and knowledge in all systematic way to enhance quality learning. 2) To provide job related competencies in the trainee or learner. 3) To bring about change in the attitude of the learner or the trainee that enhances good interpersonal relationship, subordination, followership and friendship in a social setting. Training in the 21st Century carries unique features. Globally, educators the world over have become aware of the need to prepare students to become more reflective and productive. Society hopes to train students who can adjust and adapt to changes in the society. The scope of training in the present era is to develop in students the skills required to succeed in the new world and to help them grow the confidence and resilience to be self-productive. With the explosion in information and expansion of frontiers of learning opportunities, the present system of higher education in the real

sense should focus on harnessing learners' potentials for development of self and society at large. Strategic training methods of training would be key to achieving quality graduate.

The purpose of higher education in Nigeria, as espoused in the National Policy on Education, is to produce high skilled work force that are able to survive in their environment and drive the economy productively. However, because of the need to be abreast of global demand on best practices and learner outcome, standard teaching resources, information and communication technology devices, expertise and professionalism on the part of academics are considered inevitable institutional inputs. The reality is that as modern-day instructors, there is need to understand and be aware of learning objectives critical to effective delivery of 21st century education and dutifully strategize to integrate them in instruction for holistic development of the students. That is, higher education training should in the real sense model the behavioral expectations for learners including the right attitude, social-emotional skills and competencies. Learners' needs must also be taken into consideration during instruction

and assessment. The marking grid should be made clear to students and prompt feedback and reinforcements, should be given to them to make training in higher education worthwhile.

Quality teaching and learning in tertiary institutions will facilitate the realization of the Sustainable Development Goals, especially the Goal 4 which is aimed at ensuring inclusive and equitable quality education. The Sustainable Development Goals (SDG) were set up in 2015 by the United Nations General Assembly. It is a collection of 17 connected goals designed to be a shared blueprint for peace and prosperity for all people on the planet earth.

Teaching-Learning Process and implications for Quality Higher Education Training

According to Coladarci (1963) there are four dimensions of the teaching-learning process and these are;

1. The purpose dimensions
2. The procedure dimensions
3. The information dimensions
4. The measurement and evaluation dimension

The Purpose Dimension: The purpose dimension refers to the purposeful nature of the act of teaching. A good teaching should have a purpose because learning itself concerns a desirable change in the learner's behavior (cognitive, affective and psychomotor). In this light, the act of educating, training, teaching is purposeful, and done intentionally. The implication of this for teachers, lecturers or facilitators of the learning or educative process is that they should have plans, goals and objectives for their lessons. Purpose encompasses all that the teacher, lecturer or facilitator will do and what is expected of the learner as in learner participation and learning behavioral outcome.

Procedure Dimension: The procedure dimension refers to the means through which learning as a goal emerges. Procedure deals with all activities taken by the instructor, facilitator, lecturer to effect an intended change on the learner's behaviors. The activities may include instructing verbally, projecting on the projector, slide share, writing on the white board, using audio materials. These activities enhance teaching

for enhanced learning to occur. Strategic training should become more and more of real modelling to effectively enhance transfer of learning.

The Information Dimension: This dimension covers the facts, experiences and generalization used by the teacher, facilitator or lecturer in the classroom (real or virtual) to bring about learning. Teaching implication require that factors in learning should be taken in consideration and extraneous factors controlled. Such factors as individual differences such as; age of the learner, sex of the learner, class of the learner interest, previous experience and other learner characteristic such as individual difference or cognitive style, home background issues and psychological health. are to be control to ensure effective delivery of lessons. Equally, the instructor should understand the need to intentionally condition the classroom or learning environment that aligns with the nature of the information shared in order to achieve learning goal. Learning should be effective if the interest and attention of the learner has been effectively aroused and

arrested during the period of the information sharing (training).

Measurement and Evaluation Dimension: Measurement and Evaluation dimension involves a process of collecting useful information about learners to determine how much of the desired change expected had taken place. This involves the use of teacher made tests, standard test and examination. In higher education setting, students' learning outcomes are measured and evaluated using a variety of measurement and evaluation tools, the type of tool also depends on the format of lesson delivery. Physical or virtual, the use of information and communication technology has brought in diversification in testing and evaluation. The implication of this dimension is that it helps in making a valid judgment about the learners and the approaches used by the teaching facilitator or instructor.

Higher Education Training and Graduate Quality

Universities are citadels of learning and learning occurs when there is a relatively permanent change in behavior of the learner (that is, the student). This is affected through training experience coming from both curricular and co-curricular activities of the institutions. To this end, under graduates of universities, polytechnics, monotechnic, technical and teacher training colleges and vocational training colleges should be equipped with necessary skills and competencies needed to promote a strong and egalitarian society. This philosophy aligns with the UN SDG:4. This explains why upon graduation from higher education, graduates are certified worthy in learning and in character; but unfortunately, complaints about their competencies persist among stakeholders.

The implication of being found worthy in learning and character is that a transformation should have occurred, and a new thinking express in maturity of mindset. Also, in character the value system internalized should make them Patriotic with a nationalist outlook. As the world have become a global village training should have a global outlook producing graduate of global relevance. However, the above scenario is not really the case today? The reality is left to

be judged by any of concern education stakeholders.   There are usually different opinions of people when discussing the challenges of ineffective training in higher education. Popular among the challenges is poor funding but the issue of dishonest academic practices including examination malpractice are more grievous as these unresolved issues continue to undermine quality of graduate and productivity. In managing the quality of higher education, Abdalla, Cruz, Deleoz and Eusebio (2015) averred that academic dishonesty is a violation of academic integrity. Abolfazi (2016) view dishonest practices as a moral anomaly. The authors recommended that for effective higher education, institutions should promote academic integrity and foster learner engagement among students and provide adequate learning resources or facilities.

Thomas (2017) found a negative relationship between is academic dishonesty and mind-set, individualistic learning environment, individual, student relationship with lecturers and maturation to study. The implication of this finding for effective higher education indicates that improvements in mindset,

students' relationship with lecturers and motivation are expedient for improved quality of graduates. Further observation by Orji (2021) is that many students lack the appetite for study but they want to pass their examination by dishonest practices. Such students require counselling and training on how to develop good study habits. In like vein, institutional inputs such as provision of adequate facilities and more convenient learning environment could make teaching and learning in higher education more effective.

In terms of graduate quality there are persistent and serious complaints that the products of higher education institutions are unemployable and indeed half, baked, (Getenge, 2016). The reason for this has been traced to theoretical based teaching and less practical curriculum. This narrative can take a reverse by adopting evidence based progressive teaching methodology in training. Thus, through effective training, universities may continue to contribute to national development through high level manpower training as espoused in the National Policy on Education (NPE) by the FRN(2014) that the

objectives of Tertiary education institutions are to : contribute to national development through high level manpower training: provide accessible and affordable quality learning opportunities in formal and informal education, in response to the needs and interests of all Nigerians; provide high quality career counselling and lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and the world of woek; reduce skill shortages through the production of skilled manpower relevant to the needs of the labor market; promote and encourage scholarship, Entrepreneurship and community service; forge and cement national unity; and promote national and international understanding and interaction.

Teaching Methodology in Higher Education

Different approaches and methods are applied by university instructors to deliver instructions. Depending on the topic for discussion and class level of students, methods and techniques vary. These are some of the frequently used teaching methods in higher institutions of learning:

Project-Based Learning – techniques applied include: team teaching, workshop, seminars, field trips, etc.

Laboratory methods – techniques applied include: demonstration, controlled exercises, structured investigations, project work.

Inquiry-Based Learning - techniques applied include: problem-solving, experiential learning, exploration and high-level questioning.

Strategic Training through SIWES

SIWES is an acronym for Students' Industrial Work Experience Scheme. The optimization of Students' Industrial Work Experience Scheme is one of the ways of ensuring quality graduate production. Students' Industrial Work Experience Scheme (SIWES) is an organized programme that fosters students' familiarity with the expectations in the real world of work by having them mentored in similar work situations prior to their graduation (Orji &Uche, 2021). SIWES includes teaching practice, houseman ship, internship, bar practice, etc. Students are expected to acquire practical experience as they work under more experienced persons. But

experience has shown that most times, particularly for non-medical fields, places of industrial experience are chosen by the students themselves. Therefore, one is unsure whether the students actually present themselves for industrial work experience as many of them would turn in their filled logbooks. And even if they do, are they in an organization related or relevant to their training needs or academic field? Are the students' work experience properly assessed and feedback given by their institutions on return? If no is the answer to these questions, then there is a gap in the implementation of SIWES. The sad implication is that training of undergraduates through this instructional procedure without commitment by university authorities will not produce quality graduates. This, undoubtedly, is one of the factors contributing to the poor quality of graduates in Nigeria. It is also responsible for the prevalent problem of unemployability and poor work adjustment among many graduates who are supposed to be high skilled labor force. There is the need, therefore, for higher education institutions to address these lapses and optimize the use of SIWES as strategic instructional tool to bridge the gap between theory and practice in the Nigerian higher education system. If SIWES participation is effective, students, after spending about six (6) months in relevant industries should be an expressed reflection of the goals of SIWES programme in Nigerian higher education.

According to Orji and Uche (2021), the following are the goals and objectives of SIWES:

- Expose student to the real working environment. This can help reduce unnecessary work anxiety in later life.
- Helps students see the connection between theoretical learning with practical work that can enhance their world view about work.
- Adapting and complying with safety regulations in the industry can enhance their work place relationship in terms of subordination and followership.
- Establish and strengthen confidence in the performance of duties can enhance their self-esteem.

- Instill team work and good relationship with other employees can enhance their commitment to work hard.

- Ability to assess themselves to prepare for the working world after graduation can enhance future work adjustment and productivity.

- Raise awareness and increase student interest in the subject selected can enhance their focus on their work and also help them appreciate more the diversity in their work place.

- Uplifting honesty, trustworthiness, dedication, responsibility and self-confidence can promote nationalism and patriotism among them.

The purpose of restating these objectives of SIWES in Nigeria education and connecting it to future behavior of the would be graduate as seen above is to clear off any ambiguity about the import of this curriculum (SIWES) in higher education training. University education for instance is saddled with the function of producing high skilled labor for the society's labor force. Therefore, to ensure that products from the Nigerian universities are effectively trained and properly adjusted at their future work is critical for continued justification of this mandate bestowed on higher education institutions. Therefore, SIWES, as a curriculum for training undergraduate students should be optimized to prepare graduates who are balanced in learning, character and interpersonal relationship skills and attitudes. Orji and Uche (2021) averred that if SIWES is optimized in higher education training that it can help close the gap between theory and practice which can provide safeguard for employability and poor work adjustment among future high skilled labor in Nigeria. Orji and Uche (2021) list some of the benefits of optimizing SIWES in undergraduate training to include; self-confidence, self-efficacy, internal locus, intrinsic motivation and self-reliance.

Developing Study Habits for Effective Learning

Good study habit produces effective learning, and effective learning produces quality graduates. Study habits are strategies

employed by the student to effectively learn. They include behaviors that reflect interest and likeness for school. In class learning, students who have interest in their studies would have positive attitude and intrinsically motivated to participate in class learning. Good study habits include; listening to the lecture and making effort at jotting down points and taking notes. After class learning, a student who has a good study habit, schedules time to go over the day's lesson and read notes, texts and research and maintain study schedule set for self. Effective study eventually pays off as it improves an individual's memory capacity in terms of effective encoding, retention and retrieval of learning and forgetting will be less likely. The effectiveness of memory to a large extent differentiates the low achiever from the high achiever. The instructor can help students develop these skills by introducing some of them in the lesson delivery and evaluation session.

The students developing good study habit is critical to their doing well in their academic and this can have positive effect on quality of training outcome Learning is an active process

which involve the attention and effort of the learner in order to succeed. Success in school reflects in adjustment, adaptation, good academic achievement and retention. All these can be possible through encouraging good study habits in the students. In the long run effective learning habit will likely promote academic honesty. The tendency to cheat, involve in exam malpractice or plagiarism would be less likely to occur.

Developing Research Skills for Effective Research Undertaking

In higher education training, to complete research is critical for graduation. Unfortunately for some students, to fulfil this requirement is a nightmare, while for many others it is normal school task. Research follows a scientific approach which involve a sequential and interconnected steps beginning from identification of a researchable problem to data collection (field) and writing up the final report. In higher education training, research is one of the means of acquiring knowledge and developing ability for inquiry and problem solving. Research is a scientific activity; it requires skills to effectively start a project,

follow through and conclude it. University undergraduates really need to be taught and assisted to learn the nitty-gritty of the research process. Sometimes the difficulty in transferring the skills of research to the students is attributed to the poor grasp of these skills by the lecturer or project supervisor. This corroborates the finding, that a high percentage of university lecturers have poor research orientation themselves (Ajake, Isangedighi & Ekuri, 2015).

The acquisition of research skills is important for students and academics to be able to conduct meaningful research studies in higher education in Nigeria. Inaja, Idika, Orji and Onabe (2022) identified thirty basic skills woven around the steps in conducting educational research. These research skills include:

1).Identification of research problem, (2) Appropriate defining the problem, (3) Stating research problem, (4) stating of research objectives, (5) breaking research problem into research questions, (6) formulating appropriate hypotheses, (7) identifying sources of relevant information to the study, (8) locating relevant literature, (9) summarizing relevant literature, (10) interpreting relevant literature, (11) appraisals/evaluation of relevant literature , (12) use of internet for locating relevant literature, (13) identification of appropriate research design, (14) selecting instrument to use for data collection, (15) construction of research instrument, (16) when to apply different types of rating scale, (17) identification of the degree of relevance of instrument, (18) identification of the level of consistency of the instrument, (19) choice of data approach, instrument administration process, (20) screening of the instrument coding of the instrument, (21) coding of the instrument, (22) choosing appropriate statistics for data analysis, (23) Interpreting data analysis output from computer,(24) using computer in data analysis, (25)using of calculators in statistical analysis,(26) presenting research findings in a processes and coherent manner, (27) effectively handling discussions of research findings, (28) writing abstract of the work done,(29) writing meaningful report, and (30)Appropriate referencing or bibliography in line with standard versions of APA or MLA as required.

Developing Anti-Plagiarism Practice and Ethical Considerations

Antiplagiarism behavior is not pronounced among undergraduates and awareness and utilization is poor among many students. The use of Turnitin and Grammarly are evidence-based solutions to integrate into the instructional process, this is purpose dimension. Ethics are norms or standards of conduct that distinguish between right and wrong. Ethics help to determine the difference between acceptable and unacceptable behaviors, actions, and practices. Research ethics encompasses the principles, standard, norms and guidelines that regulate scientific inquiry". According to Ubi, Orji and Osang (2020), research requires a due process, which is ethical consideration. The whole essence of ethical considerations is to protect the integrity and safety of the research participants. Issues of consent, anonymity, participation and data privacy should be clearly free of doubts and dishonesty.

Conclusion

As earlier discussed in this paper, the Sustainable Development Goals (SDGs) were set up in 2015 by the United Nations General Assembly. It is a collection of 17 connected goals designed to be a shared blueprint for peace and prosperity for all people on the planet earth. The Goal 4 of the SDGs is aimed at ensuring inclusive and equitable quality education. The position of this paper, therefore, is that for effective realization of SDG4, there is the need for strategic training or quality teaching and learning in tertiary institutions in Nigeria. The paper identified development of good study habit, development of research skills and commitment to Students' Industrial Work Experience Scheme (SIWES) as strategies for quality training.

Suggestions

The following Suggestions are made to administrators of higher education institutions, government and students.

1. Vice chancellors, Provosts, Rectors respectively, should equip their student's affairs unit. This is to enable the personnel provide counselling services and organize

orientation for students to enhance their development of good study habits and proper adjustment

2. Lecturers should diversify their instructional delivery and utilize evidence-based teaching methodology relevant for 21st century training and learning.

3. Government should provide fund to upgrade teaching and learning Infrastructure for quality lecturer-student engagement.

4. Students should be more focused and pay better attention to lessons to enhance quality learning outcomes.

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