



VOCATIONALISATION OF TVET THROUGH INSTITUTION INDUSTRY COLLABORATION: BRIDGING THE SKILL GAP

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Abstract

Globally, high demand for skill both for self-employment and paid employment has rendered millions of people jobless with no discipline in the academic sense spared. This is further compounded by the speed at which new techniques and of course, emerging technologies beckons for update of skills to handle competently corresponding tasks. Consequently, institutions providing the knowledge and skills as well as work and business environment at which these knowledge and skills are applied can no longer exist in isolation but to work collaboratively to bridge the skill gap created by this fast-changing techniques and technologies. Vocationalisation of TVET stands unique in creating an atmosphere to harness training potentials both at the formal and informal /non-formal basis. This discourse justifies approaches for collaborations between TVET institutions and employers to bridge skill gap

Keywords: *Employer, Employee, Employability, Training, formal, informal/non-formal, institution, practical approach, competence, self-reliance, work*

Introduction

The unending quest for better ways of performing tasks, business or diplomatic; personal or public; domestic or global has equally prompted innovativeness in performing such tasks, thus calling for newer techniques and methods in task performance. Consequently, what seems to be a new technique today can become obsolete tomorrow? No thanks to its consequence - skill gap, which has become a milieu for global concern. It is more worrisome talking about skill gap in a skill-oriented discipline like Technical Vocational Education and Training (TVET). The core mandate of TVET is training to equip those who enrol in it with functional and modern work-related and business skills. Therefore, any mode for TVET delivery - formal or non-formal, emphasis is on skill acquisition. However, the reality is that need assessment by interested groups continue to reveal skill gap among graduates in correlation with the industry demands. Interestingly, TVET graduates, who are products/outputs of the conventional academic institutions (CAIs) or technicians, who are products of vocational enterprise institutions (VEIs) are inputs to industries. Significantly therefore both training institutions (formal or otherwise) and industries are obliged to establish a mid-point for collaboration in addressing the skill gap observed.



Institutions of learning are at the centre of grooming, training, mentoring, coaching, educating and preparing people, especially the younger generations thereby equipping them with relevant skills, ethically, morally, professionally and societal acceptable standards for useful and functional living. Since most industries provide training for up-skilling of their employees, especially fresh graduates that are newly engaged, it will be more practical to channel such training to TVET students through collaborative efforts as this will not only add value to these students but will provide a smooth transition to the world of work with enhanced productivity. What skills do employers set out for in TVET graduates? What do TVET institutions teach or train? What approaches can be used to measure these skills? Where vocationalisation does fits and how can it be applied, especially to these two players? Will this bridge the gap? These and many other issues are addressed herewith.

Technical Vocational Education and Training TVET

Technical Vocational Education and Training encompasses both the formal and informal or non-formal education system. It could be described as an organised programme of instruction offered in the school system and out of school to inculcate in the learners, knowledge, skills, attitude and appreciation of the worth and dignity of labour both in the public and organised private sector as well as self-reliance. Federal Republic of Nigeria (2014) in its National Policy on Education states thus: “Technical and Vocational Education and Training (TVET) is a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life” P.24. Federal Republic of Nigeria further stated that TVET shall cover the following: the following:

- i. Technical Colleges;
- ii. Vocational Enterprise Institutions
- iii. National Vocational Qualification Framework (NVQF)

The goals of TVET shall be to:

- i. Provide trained manpower in the applied sciences, technology and business particularly at craft, advance craft and technical levels;
- ii. Provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; and
- iii. Give training and impart the necessary skills to individual for self-reliance economically.

Thus, TVET must continue to reflect new emerging economic and social changes of the twenty-first century and be readily available to people at all ages. Therefore, its functions include to help develop in people, the right attitude towards work and the habits of mind conducive to the proper use of technology; to stimulate and encourage creativity; to equip school leavers with skills to earn a living.



According to UNESCO (2012) TVET today faces huge demands, challenges and opportunities. Labour markets are rapidly changing and youth unemployment and social disengagement are among many pressing concerns facing nations. Worldwide, governments and other stakeholders expect TVET to address multiple social and economic development priorities, from poverty reduction, food security and social cohesion to economic growth and competitiveness. In contexts of chronic unemployment and underemployment, young people themselves are demanding more opportunities for education and training, and an improvement in the relevance of education and training to the world of work. Self-employment requires entrepreneurial skills, and employers are calling for an ever-increasing range and level of skills and competences, combining technical and interpersonal skills. There are enormous challenges ahead. Despite significant efforts within and beyond the education for All (EFA) movement, too few young people and adults are currently able to develop the skills, knowledge and attitudes they need for today's changing world of work. Furthermore, TVET provision is poorly articulated with labour market demands and TVET is not contributing towards socio-economic development needs as much as expected. Although intended to support social mobility, some TVET policies, systems and programmes limit learners' future prospects and reinforce social inequalities. This is the main working document for the third International Congress on TVET, *Transforming TVET: Building skills for work and life*. It is based on the preliminary findings of a UNESCO study on world trends and issues in TVET conducted as part of UNESCO's strategy for TVET (2010/2015). It is intended to inform discussions in Congress sessions, to provoke critical reflections, and to inspire future developments in the field of TVET. The UNESCO study looks in depth at the major trends and policy developments in TVET since the second International Congress held in Seoul in 1999. This work has two main objectives. The need to continually analyse world trends in TVET in the context of wider development trends and to advance conceptual and policy debates on TVET to address persisting challenges and to proceed towards future frontiers. Hence, it would be pertinent to take stock of the current situation and asks what policy measures might now be taken, in times of economic uncertainty, to facilitate TVET learning and skills progression by more young people and adults, especially in addressing skill gap or skill mismatch among youths, especially those who are TVET bias.

According to Okon (2015), Technical and Vocational Education and Training (TVET) operates with principles and theories that centre on skills, especially Vocational Education theory propounded by Prosser (1946), which holds that education should be differentiated because of marked difference in interests, aptitudes, and occupational opportunities that are open to the young and noted that what the great majority of children need is, real Vocational Education. In the views of Prosser, students should be made to carry out exercises and projects under conditions applicable in industry. The theorist acknowledged the fact that specific industrial methods are changing rapidly in the face of



emerging technologies. It will therefore be helpful to institutionalise short-term courses for retraining and updating skills and knowledge which both institutions offering Vocational Education and employers of labour are in partnership to achieve (Cross; Wyatt & Groves, 2013).

Prosser's Vocational Education Theory holds promise for today's Vocational Education practices, including of course, TVET practices. Charles Prosser theories are presented as follows:

1. vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment of which he must subsequently work.
2. effective Vocational Education can only be given where the training for jobs are carried out in the same way with the same operations, the same machines as in the occupation itself.
3. vocational education will be effective in proportion as it trains the individual directly and specifically in the thinking habits (cognitive) and manipulative habits (psycho-productive), attitudinal skills (affective and perceptual) required in proportion as it enables each individual to capitalize upon his interest, aptitude and intelligence to the highest possible degree.
4. vocational education will be effective in proportion as it enables each individual to capitalize upon his interest, aptitude, intelligence to the highest possible degree.
5. effective Vocational Education for any profession, calling, trade, occupation or job can only be given to the selective group of individuals who need it and can profit by it.
6. vocational education will be effective in proportion as the specific training experiences for forming right habits of doing and thinking are repeated to the extent that these habits become fixed to the degree necessary for gainful employment.
7. vocational education will be effective in proportion as the instructor has had successful experience in the application of knowledge and skills to the operations and processes, he or she undertake to teach.
8. for every occupation, there is a minimum of productive ability which an individual must possess in order to secure or retain employment in that occupation. If Vocational Education is not carried to that point with that individual, it is neither personally or socially effective.
9. vocational education must recognize the conditions as they are and must train individuals to meet the demands of the labour market even though it may be true that more efficient ways of conducting the occupation may be known and that better working conditions are rightly desirable.
10. for every occupation, there is a body of content which is peculiar to that occupation and which practically has no functional value in any other occupation.



11. vocational education will be socially efficient in proportion as it takes into consideration the particular characteristics of any particular group which it serves.
12. the administration of Vocational Education will be efficient in proportion as it is elastic and fluid rather than rigid and standardized.
13. occupational information and guidance should be provided for vocational-technical students.
14. while every reasonable effort should be made to reduce per capita cost, there is a minimum below which effective Vocational Education cannot be attempted.

These principles cover organisational, administrative and instructional areas of TVET. The principles of Vocational Education imply that practical training is important requirement for skills development. The important area TVET provides practical training for the acquisition of practical skills in diverse areas which the programme covers.

Vocationalisation of TVET for Global Competitiveness

Vocationalisation describes an educational process that gives or expected to give very serious attention in providing students with competent skills for employability; greater productivity as well as economic and development needs of the local and global society. It involves the assessment of the current trend in any educational process and strategies for improvement. It is concerned with improving the skills' need of the contemporary society through a shift from over-emphasis on theoretical enunciation to greater emphasis on practical approach in the educational process; application of ICT as against the manual approach in school administration; the use of modern teaching techniques as against traditional method of teaching, among others. Vocationalisation promotes positive attitudes in the world of work, therefore promotes work ethics, values and dedication. It lays emphasis on quality as opposed to quantity. Weeks (2002) cited Bacchus (1988) where vocationalisation is viewed as efforts by schools to include in their curriculum those practical subjects which are likely to generate among students some basic knowledge, skills and dispositions that might prepare them to think of becoming skilled workers or to enter manual operations. Weeks further explained that the inclusion of practical or industrial arts subjects especially in the curriculum of secondary schools as part of a programme of general education is considered an essential element in the vocationalisation of education. Weeks also cited Mudariki and Weeks (1995) with the following definition: "At a minimum vocationalisation is the introduction of practical subjects into schools, for example, agriculture, commerce, design and technology, and home management - a move away from purely traditional, academic subjects. Vocationalisation can go beyond this to include integration between practical and academic subjects, learning from self-reliance activities, and learning through clubs and societies. In some cases, the whole school is looked at as a productive enterprise, offering a variety of experiences from administration through to technical production".



1. Will be cost effective and facilitate economic development by developing skills, through training people to replace expensive expatriates;
2. Will equip youth to return to their community or villages ("back to the village" syndrome) where they would become engaged in self-employment or job creation in the informal sector;
3. Would help to solve the "time bomb", the spectre of the unemployed school leaver who joins the revolutionary opposition; and
4. Would serve to stem urban drift

The views of Weeks here imply that vocationalisation can be applied at any level of education. Nwazor and Nwaukwa (2015) noted that effective vocationalisation is a call for higher quality of teaching and learning in the classrooms, workshops, laboratories and other places in which the vocational education takes place. Vocationalisation requires competent teachers, engaged students, well-designed courses, and facilities that are fit for purpose. Vocationalisation implies an understanding of these five elements: skills, reflection, relationship, models and context teaching in its interactive sense. Vocationalising TVET is vital in mobilizing more students to interact and gain experiences stated in learning theories. It results in student-centred learning, co-operative learning, creativity and the development of the learners. Vocationalisation reflects on teaching models. It incorporates holistic vocational education that can be managed, which saves time for other teaching activities, and which blends theories and practice, actions and reflection.

According to the views of Weeks, who cited Coombe (1988), vocationalization can be linked to "experiential education", or learning by doing. Practical education is seen as enhancing learning and promoting cognitive development. It should be emphasised that vocationalisation can be modelled based on the need of individual institution; industry nation, region as well as global need. A model focuses on the increasing prominence of life skills which encompass social attitudes, basic knowledge and practical skills. Nwazor and Nwaukwa (2015) noted that the inability of Vocational Education graduates to apply their knowledge and skills to improve their daily lives or generate gainful employment is causing them to question the very essence of vocational education programme offered to them. Effective vocational education is supposed to equip students with life skills such as problem solving, skills in critical thinking, decision-making, abilities to manage stress and feelings, to develop self-awareness and self-confidence, to communicate well, and teamwork among others. However vocational education programmes in most cases are taught theoretically without the use of modern equipment and instructional inputs. This makes it difficult for students to develop life skills needed for the 21st century. The inability of vocational teachers to use adequate instructional strategies (models) does not enhance students' acquisition of skills and development of self-concepts as well as interests. The lack of use of modern methods alongside other strategies does not encourage originality at work. The reluctance of



vocational education lecturers to use teaching models when deciding on teaching strategies to use to respond to particular learning objectives implies that though courses are repeated, students are ill-prepared to meet future challenges. Effective vocational education programme in the zone is also constrained by having lecturers of vocational courses that lack information and communication technology (ICT) expertise. It is normal for them to impose textbooks on students, use outdated curriculum, and teach topics that are irrelevant to modern business offices, use theory to shut out the practical.

Vocationalisation of TVET will not pose a challenge because, TVET has the potential to be implemented at all levels of education. Okon and Usoro (2014) had earlier posited that TVET has its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable and self-reliant skills. Okon and Usoro further explained that TVET delivery systems are well placed to train the skilled and entrepreneurial workforce that Africa (and of course elsewhere in the world) needs to create wealth and emerge out of poverty. Okon and Usoro identified characteristics of TVET, noting that it can be delivered at different levels of sophistication, implying that TVET institutions can respond to different training needs of learners from different socio-economic and academic backgrounds and prepare them for gainful employment and sustainable livelihoods. It is therefore pertinent to state that TVET can be infused into all academic programmes through the process of vocationalisation, especially with a strong collaboration between educational/vocational enterprise institutions, and industry that would subsequently absorb these individuals or patronise their products and services.

Societies that aspire to gain competitive advantage ought to invest in TVET and of course make TVET an inclusive education and training. Global competitiveness is placing some countries ahead of others, therefore raising posers as to the reason for the gap. Porter (2000) holds that national prosperity is not inherited but created by choices. In other words, national wealth is not set by factor endowments, but created by strategic choices (Porter, Delgado, Ketels and Stern, 2008). Porter's advocacy of creating wealth goes beyond the world of traditional trade theories which have been focusing on international trade originating from Adam Smith. This implies that the 21st Century globalised economy and future emerging economy is perceived as being too complicated to be explained by the traditional trade theories. In considering Global Competitiveness (GC), Porter describes a nation's competitiveness as the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens.

Production of goods and provision of services require the application of technical and soft skills that can be developed. Because there are diverse disciplines most of which are theoretical based, it will only be worthwhile to expose people who enrol for such programme to be provided with special training to acquired skills, especially modern work-related skills



to effectively fit in the modern global business, social and work environment. Porter *et al* observed that the Global Competitiveness Report (GCR) has long been a globally recognised ranking of a country's competitiveness and a tool for benchmarking a country's strengths and weaknesses. The authors portrayed that effort to introduce the best available methodology for preparing competitive rankings have been continuous process, which has equally brought series of improvements over the years. Porter *et al* (2008) reported that an important milestone was reached in 2000, when Professor Jeffrey Sachs introduced the Growth Competitiveness Index (GCI) based on a stronger academic foundation in economic growth theory. In same year (2000), Professor Michael Porter joined the effort in introducing a companion Business Competitiveness Index (BCI) which focuses on microeconomic drivers of prosperity. Porter *et al* also reported that in year 2004, Professor Xavier Sala-i-Martin created a Global Competitive Index (GCI), which included both macroeconomic and microeconomic factors of competitiveness.

Global Competitiveness is a complex and sophisticated phenomenon; hence, new approaches are gradually emerging. For instance, Professor Porter is reported to have worked on a New Index (Porter *et al*, 2008). The foundation of competitiveness is 'Productivity' and 'Prosperity'. It is widely reported that prosperity is determined by the productivity of an economy, which is measured by the value of goods and services produced by unit of the nation's human capital, and natural resources. Porter *et al* (2008) reported that productivity depends both on the value of a nation's products and services, measured by the prices they can command in open markets, and the efficiency with which these products can be produced. Productivity supports high wages, a strong currency, and attractive returns to capital and with them a high standard of living (Porter *et al*, 2008). In sum, therefore, competitiveness is measured by productivity. A country willing to prosper and meet up the prosperity level of other countries must therefore improve her productivity. Can productivity thrive without skills? The answer is obvious; certainly no. The answer is a signal to nations with low productivity and are willing to aggressively transform their ailing or staggered economies to and oasis of prosperity enhanced by productivity.

Skills

Lifelong learning which builds on people core skills is essential if individuals are to meet their personal needs and employer's needs. In the workplace, employees at every level are increasingly expected to take responsibility for the quality of products and services they produce or provide. Also, employers are looking for individuals who can critically and analytically solve problems, communicate well, use information Technology and work with others effectively, and are well equipped to assume the flexible and responsible roles which modern workplace need. Skills are vital for poverty reduction, economic recovery and sustainable development. As a consequence, policy attention to Technical Vocational



Education and Training (TVET) is increasing worldwide. TVET comprises, formal, non-formal/informal learning for the world of work. Young people women and men learn knowledge and skills from basic to advanced levels across a wide range of institutional and work settings and in diverse socio-economic contexts.

Skill has become a household name in TVET. Therefore, TVET aims to provide the desired skills and knowledge to its beneficiaries to effectively and efficiently function in society. Skill is the ability to perform expertly, facility in performance, dexterity and tact (Okon, 2018). Meanwhile, practical training is required for students if they are actually expected to graduate with competent skills for employability. Employability skills are basic skills needed for one to get a job and to carryout duties well. Employability skills are group of important skills instilled in everyone in order to produce productive workforce. Employability skill is crucial in all profession. It is a form of an active adjustment of individuals towards certain occupations until they could identify and recognize existing career opportunities in the work place. Employability assist employees to adjust themselves towards various changes and to increase working abilities which suit the working environmental needs. It is the relative chances of getting and maintaining different kinds of employment. In absolute term, employability focuses on the need for individuals to obtain credentials, knowledge and social status.

The concept of employability is subjective and dependent on contextual factors. Employability does not only depend on whether one is able to fulfil the requirements of specific jobs, but also on how one stands relative to others within a hierarchy of job seekers. Of course, the global trend in terms of workforce demand is that of competition. Nigeria's competitive ability on the other hand depends greatly on skills competency of graduates of her educational institutions. Thus, TVET by its mandate and composition is positioned to promote skills development and give rise to employability and productivity. It is only through employability skills that graduates from educational system and training institutions can compete globally. Training promotes skill development.

The business and work place in modern sense cannot exist without a carefully planned training programme to improve the skill competence of its workers. Hence, Olivares (2015) observed that: “there are some characteristics frequently included in the job description; they are called skills, abilities, traits, or core competences”, p. 25. Skill can be used interchangeably with competency, hence Olivares further noted: “Abraham, Karns, Shaw and Mena (2001) prefer the term competency because it includes the characteristics, behaviours and traits necessary for a successful job performance”. Olivares further cited Wickramasinghe and Perera (2010) who considered the importance of the employability skills, so the graduate may get a first job, maintain it, or transfer it to a different position in the same or in a different organisation, adapting to his or her personal expectation and conditions. Here, Wickramasinghe and Perera as reported by Olivares (2015) classified employability skills into:



1. Subject skills; and
2. Transferable skills

The subject skills are the discipline-related skills ones, and the transferable skills are generic competences, which are important independently of the organisation or its functional areas. Olivares succinctly put: “the term transferable refers to the possibility of applying the knowledge acquired and use it in different jobs. During the industrial revolution, which began in Europe and America and later spread across other continents in the later part of 19th Century and in the 20th Century, technical skill was in high demand. However, in the wake of 21st Century, which also coincided with the new millennium, soft skill seems to be demanded than technical skills. Soft skills or socio-psychological skills or job survival skills or affective work competency skills include attitudes and behaviours that correlate highly with career success. They are what enable people with different skills work effectively together and without friction. But these skills are hard to teach in a classroom setting and tend to come with office-like experience whether it's from an internship volunteer work, participating in student organizations or part-time jobs. The workforce can only be productive when members of the work force are proficient in skills. Proficient skill means having an advanced degree of competence in vocation or any branch of learning. Thus, the concept of vocationalisation comes in. This implies that TVET students and trainee while undergoing training, must be made to acquire adequate proficient skills to enable be productive in their task's performance. The lack of proficient and relevant work skills therefore, make the graduates unable to work as effective as required by the employers, and this has been attributed to poor quality of training facilities, among others.

Soft Skills

Soft skills are employability skills most frequently required by employers and most likely important for success in the labour market. Possession of soft skills by graduates signifies career readiness. Skills which may be taught through education and workforce development systems fall into three board categories:

1. applied knowledge;
2. effective Relationship and;
3. workplace skills;

Applied knowledge is the thoughtful integration of academic knowledge and technical skills, put to practical use in the workplace.

Effective relationship - Are the interpersonal skills and personal qualities that enable individuals to interact effectively with clients, co-workers and supervisors.

Workplace skills Are the analytical and organizational skills and understanding that employees need to successfully perform work tasks.

In modern sense, employer or industry representative can play active role in supporting students undergoing studies and equip them with career readiness and guarantee



current and future employees by partnering with education and training providers and reinforcing skill development at workplace. The following options are open:

1. Review the employability skills, framework and identify the skills most important to your workplace;
2. communicate your skill needs to your education and workplace training partners to help design curricula and training programme;
3. partner with schools, community colleges and adult education and training programmes to help develop skills;
4. assess the extent to which current and prospective employees possess employability skills;
5. hear what business leaders and the department of education have to say about the employability skills.

Skill Gap among Products of Educational Institutions

Generally, education exposes individuals to worthwhile values and knowledge in different disciplines. Education provides skills in specific areas for those who enrol for these areas. Therefore, those who enrolled for TVET acquire knowledge and skills in TVET, those who enrolled for engineering, Banking and Finance, Management, Law, among others acquire knowledge and skills in these areas. However, it is feared that such faculty courses can no longer sustain the teeming graduates' output from academic institutions the world over. There seems to be consensus that skill gap or skill mismatch contribute largely to graduates' inability to obtain gainful employment.

Skills gap according to Lachs (2017) is described as the difference between what students are taught in school and college and what employers are actually looking for when hiring recent graduates - is constantly growing. Lachs reported that the National Federation of Independent Business found that 45 percent of small businesses in the U.S. were unable to find qualified applicants to fill job openings as of the first quarter of 2017. Findings from the UK Commission of Employment and Skills (UKCES) showed that one in four job vacancies last year were caused by the widening skills crisis across the UK, while "14 per cent of employers report skills gaps in their existing workforce." Australia's Department of Employment released a report last year detailing over forty occupations affected by skills shortages and recruitment difficulties nationwide.

Skill gap has been acknowledged as a global issue and is experienced even in developed economies. Frischmann (2018) reported what could be described as empirically-supported situation, where skill culture was recommended and puts: "I am going to share statistics and observations to illuminate the 'Skills Gap' problem, then present why I think a Skills Culture is the mind set and Skills Based Approach the methodology/application to tackle this and other problems related to lifelong learning". The reports of Frischmann is presented as follows:



“In standard education, US students are behind in basic skills. U.S. lags on both tails of basics skills measurement higher rate for low basic skills and lower rate for high basic skills. For example, on the low end, 'one in three adults have weak numeracy skills' in this U.S. compared to 'one in five' for the cross-country average. And, on the high end, '8 percent of adults scored the highest level' in the U.S. compared to a '13 percent cross-country' average”. The Organization for Economic Co-Operation and Development (OECD): “Time for the U.S. to Reskill?”

“There are improvements in Common Core; there will be more improvements. Only 18% of teachers strongly agree that their resources were aligned with the standards (up from 9% in 2002). thirty-nine percent of teachers feel 'very prepared' to teach the standards (up 20 percentage points from 2002). -EdWeek article

“Students in high school are not engaged. Almost 'three quarters of all surveyed fifth-grade students' are engaged, while only 'one-third of surveyed students in 10th, 11th and 12th grades are engaged”. - Gallup Survey

“Skills Based Approach is effective in track learning in skill in education; Common Core is largely skills based. Skills Label is a resource to communicate and display what is being learned for any task. Skills Culture might be a way to improve poor engagement in high schools as students play a more active role and apply what they are learning”.

Alternatives to Higher Education

“The 'other Skills Gap' is about filling jobs not requiring a four-year degree. Over the next couple of years, there will be a resurgence of 'the new blue collar' with over 2.5 million good-paying jobs being added to the economy (representing nearly 40% of all job growth)”. - *USA News article*

“Skills Based Approach is useful for tracking learning in all these new age programs for learning boot camps, micro-credentials/nanodegrees, and traditional and emerging apprenticeships”.

Higher Education

“Employers are looking for applied skill when hiring. 84% 'knowledge' and 79% 'applied skill' are 'very important' in hiring decisions (compared to only 28% for 'degree' and 9% for 'college attended’)” - Gallup Poll.

“Employers say students do not have required skills. 33% disagree and 34% are neutral to the statement higher education graduates have the skills my 'business needs’” Gallup Poll

“Critical thinking is perhaps the single most important skill across disciplines and subjects”. In his book *Underachieving Colleges*, Derek Bok says: “It is impressive to find faculty members agreeing almost unanimously that teaching students to think critically is the principal aim of undergraduate education.”



“Higher education institutions are not doing an adequate job getting students to improve critical thinking. No statistically significant gain in critical thinking, complex reasoning, or writing skills for at least 45 percent of students”. *Academically Adrift*

I refer to this disconnect: Squeeze on Higher Education . Skills Based Approach suggests working with skills and competencies in higher education (applied learning), and tracking all the learning that takes place in and out of the classroom. For skills like Critical Thinking, we need to get a level deeper and understand the imparting of underlying methods and applications.

Professional

“Employees lack the skills needed to do their job. In a survey of senior talent and strategy executives around the work, the most important future workplace strategy of its respondents (65%) is to 'invest in reskilling current employees'”. - *Future of Jobs Survey conducted by World Economic Forum*

Workers existing skill sets are expiring faster.

“From the perspective of the executives. The top two technologic drivers already impacting employees' skills, “mobile internet, cloud technology” (22%), “processing power, Big data” (13%). - *Future of Jobs*

“From the perspective of the workers. Fifty-four percent and thirty-three percent of workers say training / skills development throughout their work will be” “essential” and “important, but not essential”. - *Pew Research The State of American Jobs*

“Employers have a captive audience and incentive to train employees”. “Sixty-three percent of low-skilled adults in the U.S. are employed” and “an intervention should yield lifetime returns”. - *Future of Jobs*

“Occupation or specialties are changing too fast, require thinking in skills”. “The most in-demand occupations or specialties did not exist 10 or even five years ago, and the pace of change is set to accelerate.” *The Future of Jobs*

“Workers are required to makes sure they are adequately prepared with skills”. Seventy-two percent of American adult workers say “a lot” of responsibility falls on individuals to make sure that they have the right skills and education. - *Pew Research*

Skills Based Approach suggests working with an evolving skill set, so students and professional constantly hone a skill set and remain relevant. It also suggests putting workers in the 'driver seat' of their learning. Finally, it is a platform for management and workers to negotiate training, demonstrated competencies, and plan future growth (on boarding and performance reviews).

Bridging the Skill Gap

Vocationalisation is a veritable tool for bridging the skill gap currently experienced among products of educational institutions. Academic institutions and other critical



stakeholders have roles to play to develop skill culture in learners. The following strategies are open:

- a. Integrating and strengthening entrepreneurial programmes into all academic disciplines;
- b. Encouraging students to develop and nurture projects and business models of their interest as well as documenting same in standard books;
- c. Making exhibition an integral part of academic requirement for students to showcase by-products of their projects and business models

Skill Process Cycle and Bridging Skill Gap through Collaboration

Skills may differ from industry to industry but there is strong perception that every industry strive to engage employees with desirable skills. Desirable skills that every industry tends to look out for include quest to learn about one's chosen industry, focus and the ability to listen, assimilate knowledge and then apply it, a clear communicator, and having technical knowledge and creative problem solving skills, coaching ability, teamwork, strong work ethic, strong communication skills and independent initiative, taking responsibility for your own actions is, along with ambition, politeness, empathy, reliability, and most importantly, being passionate about work, self-motivation, reliability, handling pressure and adaptability, ability to listen and then act on what is heard, strong communication skills, passion for the job, attention span, focus, and critical thinking, knowledge of oneself and what one is passionate about, being enthusiastic about work.

Interestingly, educational institutions and training centres have the mandate to prepare for the world of work be it as self or paid employment. However, it has been observed that these institutions and centres are still handicapped in providing adequate skills for modern work demand. Consequently, products of these institution seem not to possess the required skills by employers. Some of the skills employers look out for in employees that are not typically cultivated during formal education are basically transferable or soft skills. Of course, it is a well-established fact that formal education usually trains technical or hard skills and fewer soft skills. There is therefore an urgent need by these institutions to adopt a balanced approach in the teaching of skills where both hard and soft skills are taught in school. It should be noted that soft skills last longer than hard skills. In most cases, hard skills learnt in school can become outdated. It should equally be borne in mind that some technical or hard skills learnt in schools and of course those needed by industries, especially those that are technology-driven will fat become obsolete due to industry's adaptation to the use of super computer and ROBOT. Change in skills over the next decade will most likely be in relation to technology, especially in the area of very low-level programming jobs because many of them will be taken over by robots/computers. The only good side of it is that



someone will still be needed to run, understand, and manage these machines. To avert redundancy in totality and avoid certain hard skills not becoming obsolete is to stay informed about the progression of these technologies and try to leverage this knowledge by getting schools involved in training people to gain advantage. Changes in technology and artificial intelligence should be the main factor in changing skill sets. Skill of learning itself is gradually dying and could become obsolete because the modality of learning is not just face-to-face, but predominantly web-based, one-sided which could be an advantage as international borders are becoming borderless therefore no more hindrances for acquiring knowledge and skills. Educators should focus less on teaching knowledge, especially in theory and concentrate more on teaching problem-solving skills that can be applied to new situations and challenges, emphasising the need to include intercultural experiences. Those who facilitate learning of these skills would have to foster creativity, thinking of things in new ways and developing the use of technological and 21st century skills.

Practical approach should be enhanced in schools and on-the-job through shadowing experiences, internships, part-time jobs, refresher courses, among other means. Virtual learning should be improved by setting up virtual educational environments and linkage with business environment to enhance conversations with business people where the students can contribute by offering services as a class or individually. Emphasis on teaching students means of self-awareness and self-leadership to enable them to choose a path suitable for their interests and passion. Teachers are willing to teach these skills but seem to lack the resources, time, and support. Again, teachers themselves need training, which is essential in building their competence in teaching these 21st century skills. Furthermore, schools need access to these technologies and other useful tools to help implement them in the classroom through collaborative approach. Educationists should provide more real-life training, less theory, more hands-on training. Employers therefore should be working closely with members of the academic community to avail them the opportunity to inject into the school system, the kind of skills they need, and schools should adapt their academic programmes to that. What is currently the Students Industrial Work Experience Scheme (SIWES) should be implemented when students are through with other academic activities and have written their final examination before proceeding on SIWES to make it a transition programme between school and the real work.

The skill process cycle is a collaborative strategy where critical stakeholders, who are potential beneficiaries of the products of one another and are obliged to contribute significantly in the improvement of the services of each stakeholder. Critical stakeholders are those who are major investors and direct beneficiaries of the output of the education sector. Among these categories are:

1. Students and their relatives who are direct investors;
2. Educational Institutions and their proprietors who are also direct investors;



3. Government of nations with their relevant agencies that create enabling environment, formulate policies, including funding;
4. Donor Agencies as indirect investors;
5. Regional and International Bodies;
6. Employers of Labour;
7. Professional Bodies;
8. The Society/General Public and other groups that may directly or indirectly fall under any of the afore-mentioned groups.

Students/Parents

Students are those admitted to learnt skills and knowledge in educational institutions. They pay tuition fees or other charges (where tuition is free); buy educational materials, pay for accommodation and feeding and spend time reasonable enough to acquire the much-needed skills that will be beneficial to them and the society. They serve as input to educational institutions and vocational enterprise institutions on admission and on graduation, serve as output with competent skills that attract employers of labour for hiring or be self-reliant. Once students become graduate outputs other stakeholders can hire them for the service they can render. The need therefore arise that other stakeholders should nurture these students while they are undergoing training. This will go a long way to groom the kind of student employers and the general public want.

Educational Institutions/Vocational Enterprise Institutions

Educational Institutions and Vocational Enterprise Institutions accept students as inputs, process them through pedagogical skills and assimilation of worthwhile values and send them back to the society where they can function through labour engagements (employees) or engagement of labour (employers). The educational institutions or vocational enterprise institutions in its complexities include the personnel, physical infrastructure, the curriculum and other resources including the internal and external environment. Educational institutions cannot exist in isolation in providing the much-needed skills hence collaborative approach is open by bringing other stakeholders (Gown and Town Relationship GTR). Interestingly, educational institutions are the first set of employers to hire the products of their system. Both public and private ownership of educational institutions should be encouraged to allow for access after all, both offer public goods. In these wise, wealthy members of the society should invest heavily by establishing more educational and vocational enterprise institutions. Meanwhile, irrespective of ownership of educational institutions, other stakeholders are required to support in funding, formulation of dynamic policies and regulating the activities of these institutions to ensure that standard is enhanced, maintained and sustained.

Educational and vocational enterprise institutions should encourage students' mobility as well as scholar research collaboratively, where students and scholars can be sent



to other institutions within and outside the country. Okon (2018) explained that students' mobility involves policies designed to encourage and internationalisation of higher education, where a broad array of nationally funded student mobility scholarship is instituted. Scholar mobility and research collaboration is important. Here, Okon posited that policy activity in this area is being undertaken by many countries around the world, as well as by key regions notably Europe, where the European Union is investing heavily in this area under the Horizon 2020 initiative. Common types of initiatives in this category include support for visiting scholars, programmes and grants to send faculty abroad, policies to repatriate faculty living in other countries and project-based research grants. Educational and vocational enterprise institutions that send their scholars abroad on research mission would have these scholars returning with new ideas, skills and invention that would be transferred to students during training.

The World of Work/Labour Market/Employers/Establishments

The world of work also known as the labour market is largely made up of employers and their agents. These are critical stakeholders that engage graduates passed out by educational and vocational enterprise institutions thus, giving them the opportunity of having direct returns on their direct investments and giving the society opportunity to enjoy returns indirectly. These institutions through the services of their employees enhance productivity and create wealth, thereby raising the standard of living of the teeming populace.

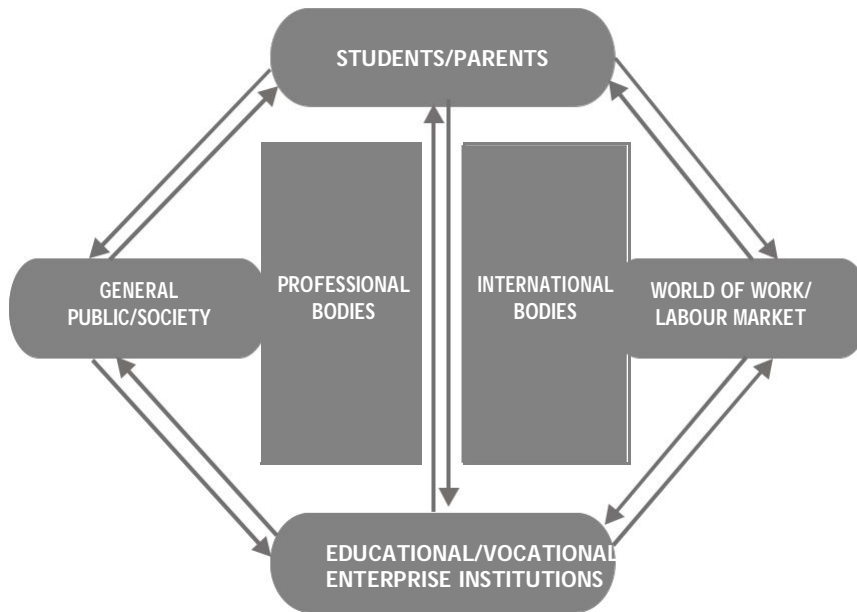
The General Public/Society

This category is yet very critical in the cycle. The society supplies input factor to both educational institutions and the labour market and patronise the products and service of organisations. The level of quality of inputs the send in and their contribution in the course of training these inputs determine the quality of outputs they expect from the system.

Other Stakeholders

Other stakeholders such as governments, professional bodies, regional, continental and inter-continental bodies through funding and other services rendered help to promote skills development and the quality of skills students acquire. They equally hire the services of graduate outputs.

There is therefore a revolving process where the services these stakeholders affect the performance of one another. Importantly, each stakeholder has roles to play in skill development. Educational institutions should therefore collaborate with all stakeholders to bridge the skill gap perceived to be the case among graduates of educational and vocational enterprise institutions. These are illustrated diagrammatically in Fig. 1.



Source: Developed by the Author, Dr. Edet E. Okon

Notably, industry provides the real work environment, which may not perfectly be the situation with the training environment provided for students, who, on graduation are to be absorbed by these industries. It is agreeable that the prepares students for the labour market, it should be noted that doing so collaboratively with industries would be a more perfect blend. Hence, Okon (2018) argued that the schools provide knowledge and practical experiences but are sometimes short-lived due to inadequacy of facilities and equipment that can provide the needed skill level for ever-changing work environment as technologies keep pushing for new application of work skills, techniques and approaches. The only option is for schools to locate different organisations with different degrees of technologies, where the schools can collaborate for students' exposure through school employer partnership for students' industrial work experiences.

Despite these bilateral approach to handling students' skill needs, most students still afford themselves training opportunities either on graduation or while undergoing course of study in preferred training centres. This framework further recycles into job environments where employers out-rightly provide training opportunities for varying periods depending on pre-work schedule for both new and existing personnel. This is to avail graduates with the opportunity to be proficient in skills in order to fit into the global work environment; enhance productivity on the job; wealth creation and organisational success as well as societal wellbeing. Educational and vocational institutions enhance work force development, raise productivity, and create wealth for national economic development as well as individual, organisational and societal wellbeing. Beneficiaries of TVET and education generally are



students and graduates of TVET, organisations and the larger society. They would derive more benefits when they further redefine the next level and re-injects the innovations acquired for improvement, thus, giving the next generation of those who enrol for TVET programmes a platform to adapt to emerging work and societal environment through better learning and training environment. Despite its lofty goals and objectives, TVET has not been positioned to tackle the many woes bedeviling the global economy. The trend in recent time where many youths and graduates are challenged in securing gainful employment is worrisome and calls for aggressive and urgent approaches to curb the menace. Thus, vocationalisation of TVET and of course education generally is imminent and should be applied among diverse economies and educational culture of nations. Vocationalisation integrates improved teaching skills, increased funding, expanded commitment by stakeholders and guarantees skill development among students.

Vocationalisation of TVET alongside collaboration is the game-changer for TVET. Okon (2018) deciphered that collaboration promotes internalisation of Business Education, which is an aspect of TVET. This model is presented further in this discourse thus:

Type 1: Student Mobility

Policies designed to encourage and facilitate student mobility stand out as the most common focal point for policy-making related to internationalisation of higher education. A broad array of nationally funded student mobility scholarship programmes from Saudi Arabia to Chile, Kazakhstan to Brazil, among many others are the prime manifestations of this policy focus.

Type 2: Scholar Mobility And Research Collaboration

Policy activity in this area is being undertaken by many countries around the world, as well as by key regions notably Europe, where the European Union is investing heavily in this area under the Horizon 2020 initiative, and specifically through such mechanisms as the Marie Skłodowska-Curie actions. Common types of initiatives in this category include support for visiting scholars, programmes and grants to send faculty abroad, policies to repatriate faculty living in other countries and project-based research grants.

Type 3: Cross-border Education

Whether involving branch campuses and other kinds of physical 'outposts' or virtual (or hybrid) forms such as MOOCs national policy and programme activity in this realm includes initiatives to foster partnerships for capacity building, to create educational 'hubs', to encourage domestic institutions to establish campuses and programmes abroad and to more effectively regulate cross-border activity in practice.

Type 4: Internationalisation at Home

This is a nascent but rapidly emerging critical focal point for internationalisation. Few policy documents currently address it overtly. The European Commission's 2013



strategy for internationalisation, 'European Higher Education in the World', is a notable exception. But this is surely an important space to watch for future policy developments.

Type 5: 'comprehensive Internationalisation' Policies

We see a small number of initiatives that present a rather sweeping set of rationales, action lines, focus areas and-or geographic orientations rather than being singularly focused on specific action lines. Again, the European Commission's policy vision for internationalisation stands out, but so does Canada's 2014 'International Education Strategy' and Malaysia's 2011 'Internationalisation Policy for Higher Education Malaysia', among others.

Importance of Skills

Skills are needed in all aspect of human endeavour and task performance. The skill acquisition is therefore the core mandate of TVET. Usoro (2016) maintained that skills acquisition and development is embodied in the concept of Technical Vocational Education and Training (TVET) and further stated that skill development therefore:

- i. Involves muscular dexterity
- ii. Must lend itself to the coordination of activities
- iii. Requires that the amount of work to do should be performed with competency
- iv. Implies that performance should be by keen sense of direction, pressure and a great deal of relaxation and must have some intellectual content
- v. Emphasizes accuracy as an important characteristic

Notably, acquisition of skills holds direct benefits to different groups of persons including but not limited to individuals acquiring or have acquired the skills. According to Usoro (2016), skill acquisition and development has enormous benefits. These include:

Benefits for the Individual

Here, skill helps to:

- a. Find new way of thinking and problem solving
- b. Recognise the impact of their actions and teaches them to take responsibility for what they do rather than blame others
- c. Build confidence both in spoken skills and for group collaboration and cooperation
- d. Analyse options, make decisions and understand why they make certain choices outside the classroom
- e. Develop a greater sense of self-awareness and appreciation for others.

Benefits for Employment

- a. The ability to self-manage, solve problems and understand the business environment
- b. Working well as part of the team



- c. Time and people management
- d. Agility and adaptability to different roles and flexible working environments
- e. The potential to lead by influence

Benefits for Society

- a. Recognising cultural awareness and citizenship makes international cooperation easier
- b. Respecting diversity allows creativity and imagination to flourish developing a more tolerant society
- c. Developing negotiation skills, the ability to network and empathise can help to build resolutions rather than resentments.

Usoro concluded that there is need, therefore, to improve on the development of individuals on various skills for:

- i. Self-employment
- ii. Self-sustenance
- iii. Diverse job opportunities
- iv. Employment generation
- v. Productive living
- vi. Crime reduction

Indirect benefit of skills forms a chain that positively affect countless categories of people and organisations. Individuals who have acquired and possess competent skills both hard and soft skills have the ability to:

- a. Raise productivity, which in turn make goods and service available to the populace
- b. Increased productivity, which brings about availability of goods stabilises price and promotes affordability
- c. Individuals with modern work-related skills easily adapt to changes in technology, hence develop positive attitude towards work for others to emulate
- d. Skilled individuals are less vulnerable to conflict within and outside their occupational and residential domains
- e. Skilled individuals can shape the behaviours of others without and reduce redundancy
- f. Skilled individuals create wealth, thus, contribute towards poverty reduction, which is one of the chronic beclouding the global community
- g. The outburst of emerging skills in the society pushes for advancement in technology

Final Thought

Vocationalisation of TVET through institution industry collaboration has the potential to bridge the skill gap currently a major societal issue. It will promote upskilling,



reskilling and sustained-skilling for meeting current and future challenges in the global work and work-related issues. There is a general consensus at the global level that TVET should be adopted for the promotion of skills needed for efficient service delivery, productivity and self-reliance at all quarters. Vocationalising TVET will inject the spirit of skill development in all academic programmes in academic and vocational enterprise institutions. Therefore, every course of study should be infused with rudiments of TVET and strategies for efficient delivery. Further, Vocationalisation of TVET will bring about:

- a. Occupational adjustment without compromising efficiency
- b. Occupational appreciation
- c. Critical judgement by developing resistance to all forms of propaganda that always accompany the politics of falsehood in educational matter, especially in developing economies
- d. Economic literacy for adaptation to economic circumstances
- e. Enhanced consumer education and behaviour
- f. Healthy shift in emphasis on theoretical enunciation to emancipation of practical and hand-on experience approach
- g. Urgent overhaul of outdated courses that have made attendance in school almost hallucination as evidenced in skill gap among products of educational institutions through the exploration of instructional aspects of the existing curriculum
- h. Occupational orientation across disciplines
- i. Renaissance of debate on TVET issues in public forum
- j. The strengthening and development of new philosophies and re-defining the mission of education in line with vocationalisation of TVET

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