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BRIDGING THE SKILLS GAP OF GRADUATES OF TECHNICAL COLLEGES AND THE INDUSTRIES IN NIGERIA

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ABSTRACT: *The skills gap that exist between the graduates of technical colleges and the industries has limited the employability of the graduates of technical colleges in Nigeria to the advantage of expatriate skilled manpower who have taken over the jobs that are available for the teeming Nigerian youth population. The causes of the skills gap have been traced to poor funding, inadequate infrastructure and facilities in the technical colleges to poor partnership between the industries and the technical colleges amongst several other causes as numerated in the main write up. Consequently, the following recommendations are therefore proffered in order to bridge the skills gap between the graduates of technical colleges and the work places:*

- *A strong career orientation must be inculcated in the minds of the students of technical colleges on the relevance of general education in improving their basic skills*
- *Technical Colleges should maintain a close link with the industry for technical co-operation and mutual benefits*
- *Technical Teachers Training should be expanded to increase the capacity of instructors and teachers of technical colleges*
- *Training and grant opportunities available within non-governmental and international organization should be taken advantage of by the technical colleges*
- *Independent technical boards and commissions should be established at the various states to oversee the operations of technical colleges instead of allowing them as appendages of the general ministries of education.*

KEY WORDS: technical colleges, skill gaps, vocational and technical education

INTRODUCTION

Technical Colleges are institutions where vocational trade courses are offered through which students acquire skills for self, public and private employment. Technical Colleges in Nigeria are established to train craftsmen as skilled workers for the industries and master craftsmen as industrial supervisors (FGN, 2004). The courses offered at the Technical Colleges leads to the award of National Technical Certificate (NTC) and Advance National Technical Certificate (ANTC). The curriculum programmes of Technical Colleges according to Federal Government of Nigeria (2004) are grouped into related trades. These include the computer

trades, electrical/electronic trades, building trades, wood trades, hospitality trade, textile trades, printing trades, beauty culture trades, business trades and mechanical trades. According to Ogwo and Oranu (2006), Technical Colleges provide students with relevant training and adequate knowledge, skills and attitude for employment under the guidance of a teacher in related occupations. Students are trained in trade courses such as auto-mechanics, woodwork, plumbing, electrical installation and maintenance, computer craft practice, building, mechanical and several other trade courses as approved by the National Board for Technical Education(NBTE).

The Federal Government established the National Board for Technical Education(NBTE) by Act 9 of January 1977 in order to implement the recommendations of a working committee on scientific and technical manpower and science education that was set up to recommend how to implement the Third National Development Plan(1975-80) objectives for education(FRN,2009). Part of the working committee's recommendation stated "in order to have a nationally accepted standard in technical education, there should be a harmonization of the entry qualifications and diploma standards throughout the nation……." The NBTE is therefore charged with the responsibility of setting standards for the establishment of courses and programmes of technical education institutions including the technical colleges whose mandate is to train middle level skilled manpower for the Nigerian industries.

The 21st century is a century where the production of goods and services has become highly scientific and technologically driven. The 21st century society is a knowledge and technologically driven society, information, computer, digital, new media age and digital revolution age. The century has witnessed rapid development in technology such that the developed and the New Industrial Countries (NICs) have made giant strides in technology, entrepreneurship and Information Communication Technology (ICT). The South East Asian countries have the best educational systems by the 2015 ranking. Japan has gone padogotronics, excessive use of technology in teaching and learning. The implication of this is that it would take **a highly skilled** and **professionalized manpower** to cope with the rapid changes taking place across the globe (Dung-Gwom, 2009). In Nigeria, the rapid growth of small scale industries that are science and technology based places an unprecedented demand for **skilled and qualitative graduates** from our technical and vocational education institutions and in particular the technical colleges which are charged with the mandate of producing qualitative middle level manpower to rise up to this challenge. In recent times, the Nigerian industry has criticized the situation where there are **skills gap** between the **graduates of technical colleges** and **the industry** to the extent that graduates who are employed have to be retrained on the machines, equipment and tools of the industry. But like in many countries of the world according to Turbot(2012) employers in France would prefer if fresh graduates arrived better prepared when they come knocking on the job-market door. Businesses worldwide say there is an acute shortage of skilled workers even though 73 million young adults are looking for jobs. It would seem that the world of work in Nigeria as it is all over the globe is no longer debating the importance of vocational technical education and relevance to the economic development of the country but whether the graduates of technical colleges and other academic institutions possess the requisite skills to fit into the

industry. The objective of this paper is to trace the causes of the skills gap between the graduates of Technical Colleges and the industries in Nigeria and proffer solution on how these skills gap could be bridged. Fig 1 below shows that Education providers believe that their graduates are prepared for the world of work while the graduates and the employers disagree with this assertion.

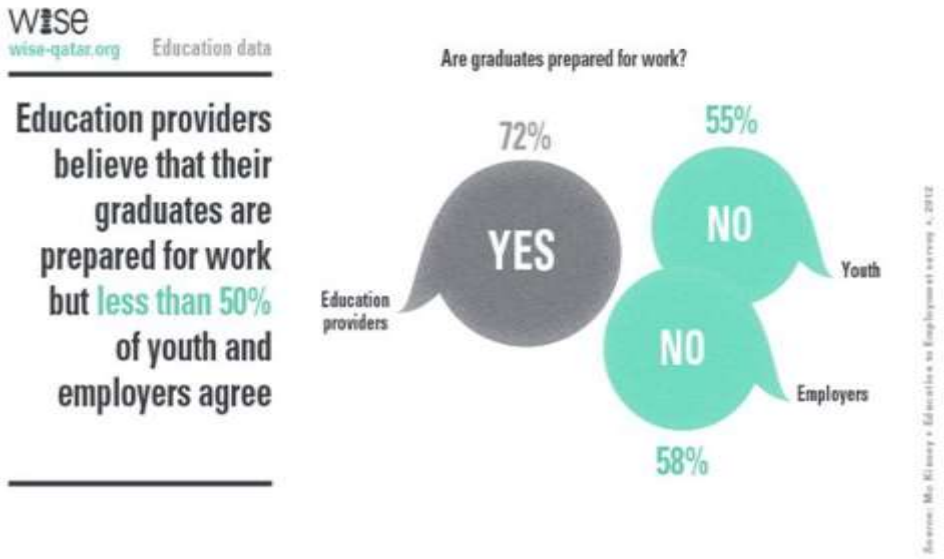

Fig 1: Wise-qatar.org Education data (2012).

What is a Skill Gap?

A skill gap is the shortage in performance; it is the difference between what is required or expected and what we actually get. According to Kayode (2009), a skill gap is the required performance minus the present performance and that it is a significant gap between the needed skills and the current capabilities of the work force in an organization. It thus follow that skills gap exist at the point when the organization or the industry can no longer grow or remain competitive because its employees do not have the right skills to help drive business or production results or support its strategies and goals.

The industrial sector of the Nigerian economy is already hard hit with the problem of skills gap; a situation where graduates of the technical colleges can't fit into the industry and skilled workers from neighbouring countries now dominate the manufacturing, construction and production industries in the country. This predicament is collaborated by Egwu (2009) a one-time minister for education in Nigeria when he said:

"Nigeria's ability to realize its vision of becoming one of the top 20 economies of the world by the year 2020 is largely dependent on its capacity to transform its population into highly skilled and competent individuals. Many developed economies place great emphasis on the knowledge and acquisition of technical and vocational skills. Unfortunately our society places a stigma on that type of education, showing preference for academic track disciplines.

We now import labour from the all over the world especially our neighbouring West African countries like Ghana, Benin Republic and Sierra Leone because we do not have Nigerians with the adequate skills to meet the demand of the labour market such as artisans"

The comments of Egwu bring to limelight the dearth of skills in the technical colleges in Nigeria whose responsibility it is to train the middle level skilled manpower that are so much in dire need for the industries and for building infrastructure for the transformation and development of the country. The skills gap is noticeable in four major areas amongst the graduates of technical colleges and these are:

- **Basic Skills:** These include lack of proficiency in reading, writing, simple calculations, communications and human relations.
- **Technical Skills:** These are lack of capabilities in interpreting drawing designs, manipulating engines, machines, equipment, construction and computers.
- **Management/Leadership Skills:** These cover areas like supervision, team building and goal setting.
- **Emotional/ Intelligence Skills:** These are innate capabilities. They manifest as self-awareness, self-discipline, persistence, sympathy, perseverance and intuition.

From the foregoing, it is obvious that the skills gap are not merely improving the workers' competence in the core fields like technology, engineering, science and mathematics but there are gaps too in non-technical areas such as leadership, management and communication. Education with relevant syllabi and training in specific areas play crucial roles in achieving rapid changes in updating technical and engineering skills in our technical colleges.

Causes of Skills Gap amongst Graduates of Technical Colleges in Nigeria

There are challenges that impede the level of skills acquisition in the Technical Colleges in Nigeria. A major and significant cause for the skills gap as observed by Ogboru (2017) is poor funding which affects the entire educational sector. The education sector is the key driver of development in any economy, as it is the nexus to the industrial and manufacturing sectors as well as all other sectors. Budgetary allocation to education in Nigeria show that this sector is not accorded the required premium it deserves. The allocation still falls short of the United Nations Educational Scientific and Cultural Organization (UNESCO) minimum benchmark of 26% of national budget recommended to the education sector as depicted in table 1.

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Table 1: Nigeria's Budget and Budgetary Allocation to Education

Year	Total Budget ₦ trillion	Budget Allocation to Education ₦ billion	UNESCO 26% Benchmark
2010	4.6	249.086	6.4
2011	4.48	306.3	10.1
2012	4.7	400	8.4
2013	4.92	426.53	8.7
2014	4.6	493	10.7
2015	4.3	492.34	11.5
2016	6.08	369.6	6.1

Source: Ogboru (2017).

A cursory look at these budgetary allocations to the education sector (tertiary, secondary and primary levels combined), only suggests that the desire to attain meaningful development is still far from being realized as there is no nation toying with her education sector the way Nigeria does, and yet hopes to break new grounds as far as technology, industry, manufacturing and human development capacities are concerned.

Table 2: Annual Budgetary Allocation to Education of 20 Countries Sampled by the World Bank

Country	% Budget Allocation to Education	Position
Ghana	31.0	1st
Cote d'ivoire	30.0	2nd
Uganda	27.0	3rd
Morocco	26.4	4th
South Africa	25.8	5th
Switzerland	24.6	6th
Mexico	24.3	7th
Kenya	23.0	8th
United Arab Emirates	22.5	9th
Botswana	19.0	10th
Iran	17.7	11th
United States of America	17.1	12th
Tunisia	17.0	13th
Lesotho	17.0	14th
Burkina Faso	16.8	15th
Norway	16.2	16th
Columbia	15.6	17th
Nicaragua	15.0	18th
India	12.7	19th
Nigeria	8.4	20th

Source: Ogboru (2017).

A glance at the World Bank sample of 20 countries as in table 2 above shows how poor Nigeria budgetary allocation to education is as indicated, being the least yet with expectation of building her human capacities for competitiveness for the world of work. The implication for low budgetary allocation to education is that most of the technical colleges which are within the purview of the state government may not get any budgetary allocation for the development of facilities and machines to train skilled workforce that will fit into the industries. It is observed that most of the state governments who own the technical colleges are grabbling with the payment of workers emolument and are unable to allocate funds to the technical colleges.

Some other causes for the skills gap that have been re-echoed over the recent years according to (Gowon, 2004; Akinseide, 2010; and Salami, 2010) are:

1. Students' poor attitude towards general education subjects
2. Poor infrastructure and facilities thereby inhibiting the teaching and learning of skills
3. Erratic and epileptic power supply from the national grid which also inhibits practical sessions for skills acquisition
4. Inefficiency of some instructors/teachers in providing adequate skills instruction
5. Poor perception of vocational and technical education by the society which rates it as vocation for the never do well. This discourages trainers to be proud of their vocation and dampens their zeal for proficiency in skills acquisition
6. Lack of partnership between the industry and the institutions of training
7. Brain drain of skilled instructors/teachers to greener pastures unrelated to vocational and technical education such as seeking political offices, banking and other businesses
8. Poor salaries, wages and allowances for the instructors and teachers who seek for supplementary means of making ends meet at the expense of commitment and dedication to their duties of training others in skills acquisition
9. Non diversification of the vocational and technical education curriculum to cater for entrepreneurial education development.

Bridging the Skills Gap

The wide gap in skills between the various technical colleges and the industries in Nigeria is not in dispute. The factors within and without responsible for the poor state of skills acquisition of graduates of the technical colleges according to Ayofe, Ajetola & Oyewole(2009) and Adeyemo(2010) can be reversed if the appropriate actions are taken by the various stakeholders such as the institutions for skills acquisition, the government, community, the students and the industries. The following measures can help bridge the skills gap of the graduates of the technical colleges and make them fit into the work places:

- The national assembly should make a legislation compelling the Federal and State governments to appropriate minimum budgetary allocation of 26% to education to meet up with the UNESCO benchmark.
- Educational policy makers should emphasize certification of graduates of technical colleges based on completed skill modules rather than the paper qualification, making training **skills bound than time bound** which lays emphasis on graduation once the period earmarked for the training is over oblivion of whether or not the skills have been acquired

- The Federal Government should ban the importation of products from China, Italy and other countries that have dominated our markets in order to stimulate production in the local industries
- Infrastructure and facilities in technical colleges should be ungraded to meet international standards and trends in technology and the industry
- Government and the private sector should urgently rescue and revamp the power sector for effective workshop practice and sustainable production in the industry
- The Students Industrial Work Experience Scheme (SIWES) for students of technical colleges should be reviewed so that graduates of the colleges should spend one year post graduation in the industries. This will perfect the skills of the graduates and prepare them for either self-employment or employability in the labour market
- Instructors/technical teachers in technical colleges should on regular basis attend refresher courses in the industries update their skills and keep abreast with new technologies in the industries
- Express scholarship, grants and tool kits should be given by government to students with interest in technical courses to encourage enrolment and boost the image of technical education in the society
- Special allowances and remuneration should be provided for technical teachers to curb the brain drain to other fields of endeavour
- Information and Communication Technology (ICT) facilities should be established in all technical colleges to keep both teachers and students abreast of new development in their various trade areas
- Machines, tools and equipment of the various workshops should be up graded in quality and quantity to match the growth and development in new technologies in the industries
- Skilled middle level manpower training of the technical colleges should be based on market demand approach rather than the supply demand which produces unemployed graduates.

CONCLUSION

The skills gap that exist between the graduates of technical colleges and the industries has limited the employability of the graduates of technical colleges in Nigeria to the advantage of expatriate skilled manpower who have taken over the jobs that are available for the teeming Nigerian youth population. The causes of the skills gap have been traced to poor funding, inadequate infrastructure and facilities in the technical colleges to poor partnership between the industries and the technical colleges amongst several other causes.

Recommendations

The following recommendations are therefore proffered in order to bridge the skills gap between the graduates of technical colleges and the work places:

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