CURRICULUM AND INDUSTRIAL DEMAND: A TOOL FOR INDUSTRIAL EFFICIENCY

MOHAMMED U.K[1], KATKEN, K.K[2], ADAMU M.D[3], IGWE, C.O PHD[4]
[1]Dept of Voc. And Tech. FGGC Abaji-Abuja, [2]Plot 374 Sagwari layout Dutse Abuja [3]Niger State Housing Co-operation Minna, [4]Indus. And Tech. Edu. Dept. FUT Minna
mohammedusmankatcha@gmail.com
07031686788

Abstract
This paper discusses the efficiency of the industry via proper design curriculum, the curriculum are more responsible to industry needs and provide the students with employable skills and positive work values needed to meet the changing demands of industries and global environment. The existing methodology is based on basics and current trends of the domain these curriculums developed only theoretical knowledge they won't get any industrial based exposure to overcome this issue, the proposed methodology is based on education and innovative in the industry, current trends in the job market are also considered while developing the syllabus. The paper submits recommendations on further enhanced strategies that will help in the development of education in line with modern trends in curriculum issues.

Keywords: Curriculum demand, development, Industry

Introduction
The curriculum for individual course has been designed by a perfect blend of inputs from renowned academicians and industry experts for each university. To make every graduating student academically excellent and professionally groomed to assume leadership roles in every sector of the industry and economy. The component of curriculum design is along these lines determination and association of educational programs content, educational programs assessment, advancement, circulation and the pertinence of the educational programs is what is required today. There are four primary stake holders: students, educational institutions, the industries and the last but not the least the Government. In the incorporation of industry, instruction, research and development cooperating as key drivers of the learning economy in conveying reasonable development.

Reasons why TVET Institutions Need Linkage with Industries
The following are the reasons why TVET need linkages with industries as anything in isolation will make national development to remain an illusion in Nigeria.

1. **Cost of Establishing TVET Institutions:** TVET is a skill oriented programmes that requires facilities for effective implementation and it involves huge amount of money. It has been observed that very few countries can afford to provide a comprehensive and effective TVET system purely through government financing and Nigeria is not among the few countries. In many developed countries, it is estimated that up to 80% of skills development is provided by industry for its own workers (Lembagu, 2012). This means that the facilities needed for up to date effective skills impartation are better found in industries when compared to TVET institutions. Linking TVET institutions with industries will provide the institutions access to facilities that are not in school and expose their students to have skills relevant to the industries. This is in line with Osman, Omar, Kofi, Mat, Darus and Rahman, (2008) that technical institutions should have closed linkages with the world of work to solicit support of industry in the enhancement of practical

training through such activities as donations of equipment and tools, staff exchange programmes and staff on work experience attachment

2. **Because Industries are the Primary Consumer of TVET Graduates:** The outputs of TVET institutions are the inputs of the industries. It is worthy of note that for the products of TVET institutions to be relevant and contribute to the nation's development, effective industrial – TVET linkages most be established. This is in agreement that in vocational education, practice and theory must go hand in hand, because the more intimately they are related to each other, the more the school will contribute to the learners immediate success in the school and make the person a master of his field (Amaand Offei-An-Sah, 2011). Similarly, Pautler in Amu and Offei-AnSah, (2011) noted that TVET institutions must have a partner to help find solutions and this can be accomplished only by developing linkages with industries so that they can survive and accomplish their intended goals of providing the skilled manpower needs of the country. According to Daily Graphic (2005), poor linkage between vocational institutions and industries has resulted in graduates from such institutions not being accorded the deserved recognition by employers thus contributing to delays in the graduate employment and national development process. This is why TVET- industrial linkage is important for national development, as it enhances the skills of TVET products to be relevant in world of work.

3. **Because of the Rigidity in TVET Institutions Curriculum:** The main aim of any educational institution curriculum is to serve the need of the society and TVET is not left behind in this context. The curriculum of TVET is meant to reflect the need of the labour market (Industry) which is the end consumer of the products. In Nigeria, there exist a mismatch in the curriculum of TVET and the work skills requirement of the industries. It is noted that TVET curriculum teach the history of technology and not the practical skills currently required by industry. Industrial participation in TVET curriculum and workplace training opportunities is the primary ways of achieving this. If employers are not involved in the process of the specific skill attitude and behavior required by graduates, they are less likely to see any relevance between TVET and their skills needs. Therefore, it is important to involve industries during TVET curriculum development so that required skills as needed in the industries are reflected.

Challenges facing TVET institutions linkage with industries in Nigeria

TVET is an important tool that can improve the employability of individuals, increase productivity in industry and reduce poverty, however, it suffers from a mismatch as it produces entrants to labour force with qualifications that do not match the requirement of the productive sectors of the economy in Nigeria. The following are the notable challenges facing TVET-Industry linkage in Nigeria:

a) Non-involvement of industry representatives in development of TVET Curriculum: The curriculum of any TVET institutions should bear the skill needs of the industries in mind as they are the end users of TVET products. In the development of TVET curriculum, employers of labour are not usually consulted to provide the skills they need TVET institutions to inculcate in their students to become employable in the work place. According to Tansen (2013), TVET system is hampered by inadequate links with industry, outdated curriculum and delivery strategies, little flexibility to respond to training needs at the local level as industries are not consulted during the accreditation process of the curriculum. This shows that there is no feedback from the employers to TVET institutions leading supply driven training

skewed in favour of theory. According to Amissah (2006), TVET linkages with industry in terms of input for curriculum development are weak resulting in mismatches of supply and demand skills. Technical graduates lack hands on experience and have poor work attitudes and are inflexible to changes happening in industries (Republic of Kenya, 2002).

b) Lack of teaching and learning resources: Lack of up to date teaching and learning facilities in TVET institutions is a factor that has contributed in widening the gaps between TVET and industries. It has been observed that most TVET institutions in Nigeria still use outdated facilities that are no longer relevant in industries as teaching and learning facilities. This is in agreement with UNESCO (2000) that less than 1% of secondary education in Nigeria is oriented towards technical and vocational skills, worse still, workshops for TVET at tertiary education level showcases dumps of outdated and obsolete machines, equipment and tools. This ugly situation could be attributed to inadequate funding of education by the government at all levels in Nigeria. According to Offei-Ansah (2011), TVET teachers have limited experience of life outside the classroom and no access to resources materials through which to emphasize relevance. It is has been observed that industries are the end users of TVET products, and currently, skill activities in industries are changing as the demand of the society is changing while little or no change is taking place in TVET institutions hence the gap between TVET and industries.

c) Image of TVET in Nigeria: TVET graduates are struggling to fit in the work place because of the wrong perception society placed on it. Nigeria graduates of engineering and other related trades are often referred to as engineers and this has a greater influence on the way society looks at it. It is entirely different in TVET graduates as there is no generally acceptable name given to the graduates from TVET to place them shoulder to shoulder with graduates from engineering faculties in Nigeria. It has been observed in industries where TVET students seeking for industrial attachment are been rejected on the ground that they are not from faculty of engineering. Similarly, Ratnata (2013), found out that young people and their parents whenever they have the possibility chose higher education over TVET due to their predominant perception of TVET not as valuable as general education. The statement also buttressed the assertions of Okoye and Okwelle (2014) that low societal estimation of TVET with its professional practice not seen as a substitute to gaining employment in any other quarters that are highly remunerated lends TVET inferior in the eyes of the public. According to AU (2007) and Afeti (2008), the impression sometimes created by government that the primary objectives of the TVET track is to keep dropouts off the streets rather than project this type of training as an effective strategy to train skilled workers for the employment market. This is a worrisome situation that has hindered the advancement of TVET in the country including industrial linkage.

d) Lack of Legislation: In Nigeria there is no law binding TVET institutions and industries which are the end consumers of TVET products. According to Asare-Bediako (2005), there is no legal framework for coordination of the activities of the government ministries, private organizations and agencies that participate in the provision of TVET in Nigeria. Tertiary institutions and industries are two different social entities; as a result they differ considerably in the nature and objectives of their activities. This is in agreement with Siegal (2003) that cultural barriers are pervasive in tertiary institutions and industry interactions, given that stakeholders operate under divers organizational environment and have different norms, standards and values. The author noted that firms typically do not want researchers to publish their results and the academics believe that the body of knowledge generated through scientific activity is

subject not to private, but to public ownership. This is obtainable in Nigeria, because there is no legislation binding TVET and industries together.

Strategies for effective TVET Institutions-Industry linkage in Nigeria

It is evident that linkage between TVET institutions and industries in Nigeria is weak due to some known challenges which demand for enhancement strategies.

a. **Sharing of equipment and tools:** TVET is an expensive educational programme that government cannot finance alone because of the dynamic nature of the work skill requirements. Sharing of equipment and tools between TVET institutions and industries for teaching and learning will equip the students with the skills on how to use facilities that are not in school but are needed in the work place. This is in line with Republic of Kenya (1999), that technical institutions should have close linkage with the world of work to solicit support of industry in the enhancement of practical training through such activities as donations of equipment and tools. It has been observed that most students do not have sound knowledge of what goes on beyond the school environment and so are not aware of the requisite skills, knowledge and attitudes expected of them in the work place (Asare-Bediako, 2005). Therefore, the sharing of equipment and tools between TVET institutions and industries will establish a good link, and as well solve the challenges caused by lack of up-to-date teaching and learning resources in TVET institutions.

b. **Staff/Students Exchange Programme:** Involving staff from industries to participate in the teaching of TVET students practical skills as it relate to the need of industries is a good link that will usher in the desired change in the nation's workforce. TVET teachers/lecturers can also go for instructors' industrial experience during long vacation to update their skills in latest tools and equipment used in industries. This is in agreement that technical institutions should have close linkages with the world of work to solicit support of industry in enhancement of practical training through staff work experience attachment (Republic of Kenya, 1999; Obwoge et al, 2013). According to Amu and Offei-Ausah (2011), excursions and field trips to industrial sites can be an effective means of establishing link between the TVET institutions and industry to help in equipping graduates with usable skills for the world of work. The authors identified that participation of industries in the training of students in form of seminars and workshops is another major way of linking TVET institutions and industries.

c. **Involving industries in development of TVET curriculum**: It has been observed that the mismatch in the skills acquired in TVET institutions and the actual skills needed in the work place is as a result of non- involvement of industries in the development of TVET curriculum. Therefore involving industries during TVET curriculum development will serve as a major pathway to linking TVET institutions to industries. This is in accordance with Tansen (2013) that employer representatives if involved in curriculum development will identify occupations where training gaps exist and specify the required skills standard.

d. **Up Lifting the image of TVET**: There is no doubt that TVET is faced with image problem in Nigeria as a result of wrong perception that TVET is education for the dropouts. The creation of awareness to show that TVET is the power house of Nigeria work force as it equips individual with skills needed to be employable and self-reliant in life becomes an imperative. This is in line with Okoye and Okwelle (2013) that providing training within national policy framework, increased funding, strengthens guidance and counseling services to trainees as well as promoting industry and academic interaction among others will enhance the image problem of TVET in Nigeria.

e. **Provision of Appropriate Legislation**: There can be meaningful linkage between TVET and industries in Nigeria, if there is any law mandating all the industries to participate in the training of both the students and staff of TVET to equip them with the skills needed in the world of work. This is in accordance that clear national legislation and policies to support linkages between TVET and industry with legal requirement of the compliance and enforcement by government are the ways to ensure TVET-industry linkage (http://www.tvet.com). Therefore, appropriate legislation that will ensure that all the industries in Nigeria participate and that the participating industries obtain cheap labour from TVET students and staff to maximize profit while both the students and staff acquire the practical skills, knowledge and attitude needed to be employable and self-reliant upon graduation will serve as good reinforcement to TVET-industry linkage.

Conclusion

This paper looked at the curriculum and industrial demand as a tool for industrial efficiency and has shown that there is little or no linkage between TVET situations and industries which are the end users of TVET products. This probably may have been the aim of many industries in Nigeria for rejecting TVET graduate applicants or retraining their new employees immediately after recruitment to equip them with the needed skills in the industries. If proper strategies and links are established, this mismatch will be greatly reduced and TVET graduates will come out with skills that are employable, effective, relevant and applicable to the labour market.

Recommendations

The following recommendations are made for effective TVET institutions and industries linkage for national development in Nigeria:

1. Sharing of equipment and tools between TVET institutions and industries should be encouraged to keep abreast of changes taking place in the world of work.
2. There should be collaboration between TVET institutions and industries during curriculum development to carter for the skills needs of the industries.
3. Nigeria government should set up policies and legislation requiring mandatory linkages between TVET and industrial institutions to enhance employability skills among TVET graduates.
4. There should be regular staff and student exchange programmes between TVET institutions and industries to equip students and staff with the practical skills while industries benefit from the theoretical knowledge of staff and students of TVET.

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