Built Environment Education as the Bedrock for Sustainable Socio-Economic Development in Nigeria

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Abstract: **Technology, social and economic phenomena of man are in-separate-able. This is so because right from creation the concepts of technology, social behaviour and economic desire of man were innately deposited or rather inbuilt in him. The quest to know (technology), the quest for companionship (social desire) and the quest to be better up (economic drive) were all seen from Adam and Eve right from creation. Besides, the three terms (technology, social and economic) developments connote the concept of education. They are dynamically advancing. The paper seeks to bring to lime light the relevance of technical education as the only way out for attaining and resolving human social and economic challenges for national growth and the problems that impede the quality of technical education graduates in Nigeria to compete favourable with other advanced technological world. The researchers employed both primary and secondary data as their methodology to draw out findings for this research. The primary data were through personal observations and experiences of teaching over the years and secondary data was through literature review. The findings reveals that technical education of built environment is being hampered by defective education policy, students' poor educational background, poor motivation of staff and poor teaching and physical facilities. These challenges have affected quality of our graduates to drive the technology needed for sustainable national development. To overcome these challenges, the paper recommends that the welfare of the teachers should be reviewed and their salaries increased, government should review admission policy to remove quota system and allow for merit irrespective of geopolitical region, proper funding and provision of functional facilities in schools. In conclusion, technical education holds the key to national development and government at all levels must give attention to it for national growth.**

Keywords: **Sustainable, Technical Education, Technology, Skills, Development, Built Environment and National Development**

I. INTRODUCTION

Education is an instrument for political, socio-economic and national development. Sustainable development (SD) is a fundamental pillar for the socio-economic welfare of Nigeria, as with every other nation. Education oriented by technical knowledge is key, best and the idle thing the developing countries and Nigeria in particular need seriously at the moment. For national tolerance and economic growth of any developing country, the technical knowledge (education) of its built environment must be sustained. This is because both the natural and human resources of our environment hold the key to human advancement. UNESCO (2014) stated that education for sustainable development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future.

Thus, the knowledge of our environment and the various techniques to exploit and maintain the nature endowed resources therein form the bed rock for national development. Though, by nature technology, social and economic phenomena of man are inseparable and multi-dimensional in relationship that he (man) needs positive role for shaping the environment (Busari, 2005). Everything about human existence takes place within the built environment. Nigeria is highly endowed with abundant natural resources to serve our industries as raw materials, if only technical know-how would be sustained (Aloku-olokun, 1999, Yaro and Ebuga, 2013). From creation the concepts of technology, social behaviour and economic desire of man were innately deposited or rather inbuilt in him. The quest to know (technology), the quest for companionship (social desire) and the quest to be better up (economic drive) were all seen from Adam and Eve right from creation (Genesis 3:6). Besides, the three terms (technology, social and economic) developments connote the concept of education. They are dynamically advancing. The paper seeks to bring to lime light the importance and relevance of technical education of the built environment as the only way out for attaining and resolving human social and economic challenges for national growth. The paper tries to analyze contemporary issues in our tertiary institutions that are rather deteriorating the standard of education which is affecting negatively the technical know-how of our graduates in the recent times.

Technical education has been an integral part of national development strategies in many societies because of its impact on productivity and economic development. Despite its contributions, the leaders of Nigeria have not given this aspect of education the attention it deserves which is one of the reasons for the nation's underdevelopment. Therefore, it

is important to assess the effects on the technical education of build environment because studies reveals that education oriented by technological knowledge of natural resources of the built environment creates new ways of discovery and exploitation of our natural resources that will cater for all humanly social and economic challenges for sustainable national development (Altomonte, 2012a; Altomonte, 2012b; Altomonte, Reimer, Rutherford, & Wilson, 2013; Heba& Sahar, 2017).

II. STATEMENT OF PROBLEM

Nigerian government inability to provide sufficiently the basic ingredients for functional education, most especially, in tertiary institutions, has posed a genuine threat to the economic and national development. The continual falling standards of education at all levels in our institutions in the recent times have led to slow technological advancement of the nation (Okonmah & Chikwem, 2015).Most polytechnics and universities admit students with impunity despite admission quotas usually given by National Board for Technical Education (NBTE) and Nigeria University Commission (NUC) to avoid over-enrolment and consequent overcrowding so that polytechnics and universities respectively do not exceed their capacities in terms of resources (Human and material). Yet most of the polytechnics and universities annually witness overcrowding of classrooms, laboratories, workshops and hostels owing to increasing demand. In some tertiary institutions, students listen to lectures standing, sometimes, on corridors and peeping through the windows of over crowed lecture halls (Okolo, 2004). These poor learning environments engendered by the failure of the state to provide appropriate instructional materials breed insecurity when the graduates of the system cannot get jobs.

Examination malpractice can happen in any part of the world, but the degree and intensity varies from country to country. While countries like South Africa, Kenya, Egypt etc. experience low level of examination malpractice which is among the yardstick for ranking universities in the world, as exemplified in the 2015 world university ranking, Nigerian Polytechnics and universities experience high level of examination malpractice (Agbo, 2005). Most secondary students who sit for Senior Secondary Certificate Examination (SSCE) come out with 9 credits but may not be able to defend their results.

There is a general worry about the poor quality of education outputs in Nigeria. People including non-Nigerians, scholars, and researchers have pointed to the declining performance of graduates from the education system relative to what obtained in the past especially in terms of reading, writing, and practical skills (Adeyemi, 2005; Ogum, 2007). Often times candidates admitted into polytechnics and universities have 9 credits in SSCE like West African Examinations Council (WAEC), National Examinations Council (NECO) and National Business and Technical Examination Board (NABTEB) but could hardly read or write effectively. Most

of the students' polytechnics and universities on Students' Industrial Work Experience Schemes (SIWES) programme who are on their 4 or 6 months industrial attachment can hardly translate the knowledge of classroom into practical terms. Worse of it is that such graduates of technical education lack requisite skills in their fields of study to deliver in the labour markets (Okonmah & Chikwem, 2015).

Built environment experts have bemoaned the country's low investment in technical research and development of machines and equipment for the country's industries to operate optimally, saying it constitutes a major hindrance to the nation's economic growth and general development. They noted that there was a direct positive connection between investment in technical research and development and the level of economic growth, as technical innovation remains the driver of prosperity and sustainable development in nations across the world (Ekpenyong, 2005; Adenle & Olukayode, 2007).

Despite this usefulness of technical education, the technical educations in Nigeria are be devilled with certain constraints. Technical education contends with training that borders on acquisition of knowledge and skills in woodworks metalwork, electrical/electronics, welding and fabrication, building, auto-mechanics, etc. including workshop organization and management which are being crippled by lack of funds and inadequate infrastructures (Ekpenyong, 2005; Adenle & Olukayode (2007).

Particularly, issues that is affecting and deteriorating the efficiency of technological education and this cut across most fields, but this study covers only the Built Environment such as Architectural Technology, Estate Management, Urban and Regional Planning, Quantity Survey, Environmental Management, Building Technology etc.

It is on this trend of observations that this paper seek to highlight the situations in our institutions of learning that have deteriorated the educational system, the causes and effects on economic growth and national development and thereafter recommend the possible ways out. Some of these foundational problems are deadly and hampers our economy growth, national development and integrity if they are overlooked.

III. CONCEPTUAL FRAMEWORK

3.1 Concept of Technical Education

Technical Education is the form of education that comprises of the training in skills necessary for gainful employment as well as acquisition of basic educational foundation in both sciences, applied sciences and humanity, all aimed at developing individuals with the right attitude to work and the competency necessary to compete favourably in a global society (Abdulrahaman, 2013).Technical education, according to Aina (2013) meant skill training in crafts and in certain trades such as building, auto mechanics and woodwork. According to Uwaifo (2009), technical education

is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technologically development of a nation.

Technical Education is a planned programme of courses and learning experiences that begins with exploration of career options, supports basic academic and life skills and enables achievement of high academic standards, leadership qualities, preparation for industry define work and advanced and continuing education. Adenle and Olukayode (2007) described Technical Education as a programme with various branches that can transform Nigeria into a producer/manufactures nation from its present status of a consumer/importer nation. Its various courses are career oriented and thus arms graduates with kills to work in the choose trade or profession.

Technical education programme in Nigeria evolved in response to technological industrial needs of the people. It has received the backing of the National Policy on Education (NPE 1977 revised in 1981). The fields of science, Technology and Engineering have got much to offer in the area of economic development and provision of modern conveniences to mankind (Okoye and Arimonu, 2016).

The current Nigeria National Policy on Education places great emphasis on technical and vocational education as an integral part of national development strategy. National Policy on Education (2004) describes Technical Education as a comprehensive term referring to those aspects of the education process involving in addition to general education the study of technology and related science and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life. For a country to advance both socially economically and technologically, its citizens must be productive and creative. It must have a productive citizen majority of which can be job creators rather than job seekers.

3.2 Concept of Built Environment

The built environment concept dates back between 489BC to 408 BC when the ancient Greek cities were developed using grid plans to map the cities. The concept of built environment as used in this paper comprising the entire human habitats, that is, the entire ecosystem in which human activities take place which is referred to a built environment. In social science the term built environment refers to the human-made surroundings where people gather to live, work and play (Mohit, 2013 as cited by Streimikiene, 2014). It encompasses the physical structures where people do these activities and the supporting infrastructure, such as transport, water and energy networks that is, all fields of human endeavor (Nreh, 2015). The term 'built environment' refers to everything that is man-made, as opposed to a part of the natural environment (Tougwa, 2018). This includes the objects inside our homes and businesses, as well as our buildings, communities and cities. According to Griffiths (2004), "The built environment disciplines is a term that has come to be used by many UK universities to refer to a range of practice oriented subjects concerned with the design, development and management of buildings, spaces and places….."

The built environment field can be described as an Interdisciplinary as it does not only involve the combination of different academic disciplines into one activity, but it is also about creating something new by crossing boundaries and thinking across them (Tougwa, 2018).

In the context of this paper, built environment is a multidisciplinary field, meaning that it covers a range of quite diverse disciplines that can be found in different faculties or schools at universities that are at long run become professionals in the shaping and development of the environment for man's activities. In build environment, specializations differ considerably in the approach they take to the construction of environment. Some are concerned with building it, others with its sale, management or maintenance. Some consider how to sustain it, while others focus on its creation.

Between them, the courses in the field draw the accreditation and recognition of many different professional bodies. Based on the particular field you choose, your course must be recognized by one or several professional associations or bodies (Okoroma, 2007).

3.3 Concept of Development

Development has been defined in different forms, from physical development to mental development which include social and economic wellbeing of an individual as well as that of a nation and the world at large. Development in human society is a complex term, many sided phenomenon and means different situation and to different thinkers (Adenle and Olukayode, 2007). It can mean development of infrastructures such as road, hospital, airports, dams, school etc., as well as development of people in terms of education and health care, even sport and likes. Agbionu (1994), define development in term of education in the levels of poverty, illiteracy and unemployment and income inequality perhaps at the individual level growth in knowledge, skills, attitude and enhance ability to service are example of development. At the society level, development is associated with modernization, material advancement, industrialization, scientific and industrial progress, new knowledge about men and the universal improvement in standard of living, decrease in lots of living and social security management towards social tribal and gender equality, decrease in unemployment and availability of job opportunities. Aghenta in Adenle and Olukayode (2007) opined that development is any position changes, which bring about desirable benefit to the individual and the society. From the aforesaid definitions, the roles of technical and vocational education in the development of Nigeria are evidenced.

3.4 National Development

National development is an exploitation and utilization of both human and material resources to improve the lots of a nation (Lawal, 2013). It involves the improvement of the social welfare of the people of that nation. Education on the other hand, is particularly acknowledged as the cornerstone to any form of development as well as democratic processes. In Nigeria, Vocational and Technical Education is the form of education perceived to be the greatest weapon that can be used to bring or achieve a quick desirable changes or development in the country's economic, political, sociological and human resources (FRN 198, p.2). Lawal (2010) describe vocational and technical education as that types of education that prepare people who could apply relevant practical skill to make positive changes within their society and afford a self-dependent life . This form of education has been attest severally as an education that provides self-employment, enhance productivity and self-reliance. It seduce the over dependence of school graduates on government own jobs (Habibu, 2007). Vocational and technical education gives individual the skills to live learn and work as productive citizen in a global society.

IV. ROLESOF TECHNICAL EDUCATION IN NATIONAL DEVELOPMENT

According to Lawal (2013) that Technical education played a vital role in national development, especially in areas which include the following:

i. Generation of employment/creation of job opportunities: - Technical education helps to reduce the rate of drop outs or unemployment in the society. Technical education could be used to developed marketable skills in students/youths so that they can become easily employable.
ii. Industrial development: - Technical education helps a nation develop technologically and industrially by producing people competent and capable of developing and utilizing technologies for industrial and economic development. It is a tool that can be used to develop and sustain the manpower needs of any nation.
iii. Entrepreneurship strategy: - Technical and vocational education offers the beneficiary the ability to be self-reliant, to be job creators and employers of labour.
iv. Poverty alleviation: - Many who are fortunate to graduate in a regular school system and excel in various fields of leaning fall back to the skills acquired in technical institutions in time of employment crisis and become self-reliant.
v. Promotion of the Nigerian Economy: - It promotes the national economy through foreign exchange by exporting our products. The knowledge of technical and vocational education helps in the conversion of local raw materials, this reduces the importation of foreign goods which lessen our import dependency and encourage exportation of our local products.

V. SUSTAINABILITY AND BUILT ENVIRONMENT EDUCATION IN NIGERIA

For technical education to be sustainable for economy and national development in this country, technical education administrators, principals/vice principals and technical teachers in technical and vocational education institutions must change our ways of thinking and doing things from every aspects of our life (Aloku-olokun, 1999; Busari, 2005; Adefolalu, 2008). Academic environments are places that our future are been entrusted and secured. These are places of training of trainers.

For the sustainability of technical education, concerted efforts should be put in place in the areas of curriculum, instructional techniques, instructional facilities and the human resources aspect (Sule and Nerkar, 2006). The wide range of natural endowed resources/ raw materials we have in this country are enough and are better grounds for putting our acquired technical skills into practice for sustainability of the system and national development (Aloku-olokun, 1999).

In Nigeria, technical education programmes are run in formal schools such as vocational training centres, technical colleges, polytechnics and some few universities of technology (Ngalburgi, Yakubu & Wala, (2017).The built environment consists of a broad range of professionals supporting these requisite infrastructures including architects, building experts, surveyors, planners, quantity surveyors and engineering experts. Requisite conventions and practices at various levels are on-going both locally and internationally to ensure that sustainable development ethos is embedded in academic curricula that produce the respective professionals in each field. It is therefore often debated that, issues of sustainability are not new but the concern is knowledge and skills dearth (Ekung & Odesola, 2017).

Built environment in some institutions is a school or faculties which have programmes or courses that have to do with physical environment. In Nigeria, the built environment nomenclature refers to either School of Environmental Studies or Environmental Sciences as in polytechnics and Faculty of Environmental Design, Environmental Studies, Environmental Sciences or Environmental Technology as in the universities. The programmes offers include; Architectural Technology, Estate Management, Urban and Regional Planning, Quantity Survey, Environmental Management, Building Technology, Surveying and Geo-informatics etc., and nearly all certificates are connected with trades. They handle the whole thing within the career, from shop fitting, carpentry, building and construction to decorating and painting, roof tiling and many others just name it. Undergraduate programmes in built environment can be obtained at numerous institutions, which include universities, institutes or any private higher education

institutes such as polytechnics and monotechnics. The institutions awards either a degree certificate as in the case of university and ordinary diploma, national diploma, higher national diploma and postgraduate diploma certificates as in the case of polytechnics and monotechnics (National University Commission, 2014; National Board for Technical Education, 2002.

VI. DETERIORATING EDUCATIONAL SYSTEM IN NIGERIA: THE SITUATIONS IN OUR INSTITUTIONS

The deterioration of educational system negatively affects the end products we give to the society as graduates' takes systematic manner. Systematic in the sense that, it happens gradually and in all stages of a child's learning. We intend to make highlight some of the present situations happening so that we can have a good understanding of our campaign message. The situation happens at different levels of educations and begins from the point of entry, that is, admission to writing of examinations.

The situations begin from the nursery to primary stages of learning, most parents are in haste and do not allow their children/wards to repeat a class irrespective of whether the child has the requisite knowledge inbuilt in the curriculum. For those children that grow beyond their age, most parents jump the children some classes. A child may grow fast but the brain and the mind of child do not function that way. As a result, such children end up suffering some deficiency silently. This takes long time and difficult to be corrected.

At secondary school level, pride among students would not allow the dull ones to repeat when asked do so. Some of these secondary school children would expose themselves to immoral attitudes and indulging in stubbornness thereby blocking their sense of understanding and knowledge. At this stage, most schools proprietors do not repeat candidates that are not sound for promotion to the next class. They are afraid of parents transferring their children/wards to other schools. Similarly, teachers involve in examination malpractice by aiding and abetting in order for students pass SSCE/NECO examinations. They end up graduating without due knowledge neither can they defend their certificates.

At the level of admission, the admission policy affects the quality of student to be graduated.

At the entry point (admission) if their quality is low then, the processing becomes more challenging and often times the output (graduate) is substandard (Okoroma, 2007). Some admission policies in Nigeria have contributed to a fall in educational standard. Akani (1996) in Okoroma (2007) noted thus: "In a bid to correct some observed imbalances in the Nigerian society the policies of catchment areas, backwardness factor, quota system of admission and discriminatory fees were introduced. The effect of these policies is that admissions into educational institutions were turned into a gold mine and the quality of persons accepted as students was lowered".

These admission policies did not place emphasis on merit but rather are more concerned with the geographical origins of applicants (Okoroma, 2007). For examples, catchment area policy stipulates a certain percentage of persons for admissions must come from the geographical environment in which a school is established. This implies that whether such persons are educationally qualified or not they must be offered admissions. The backwardness factor provides that all geographical territories in Nigeria that are considered educationally backward must have a certain minimum percentages of their indigenes offered admissions without prejudice to their qualification statuses. The quota system admission policy has permanently allocated various percentages to the various States (there are 36 states) in Nigeria which must be taken into account in every admission exercise. These policies have been found to be very discriminating and retrogressive. Several instances abound where less qualified candidates have been offered admissions at the expense of very bright candidates. That these practices have precipitated poor educational standards cannot be a surprise (Obaji, 2005.

Another concern is the employment dichotomy that exists between Universities and Polytechnics graduates. This become a problem when JAMB/UTME candidates want to apply for school they prefer to select universities than the polytechnics as result the universities take the better candidates and leave the polytechnics to take the remaining weak ones with less score points in UTME and also the caught off point in the UTME is often reduce for polytechnics to have more candidates to admit (Okoroma, 2007).

These problems are summarized as follows:

i. In tertiary institutions, factors deteriorating educational system are multi-facets in nature. Just like the crises in the society, they take different forms in tertiary institutions like religious dimension, financial, political, tribal or family relations, regional and admission policy of quota system, etc (Miller, 2011)

ii. Assessments of students are also been influenced for one of those factors in point one. Thus, many have graduated half-baked. At least, for one of these reasons some students are been favored with marks unnecessarily (Nworlu-Elechi, 2013).

iii. Regular interference of academic activities by strikes actions reducing the duration of semester activities. Students are morally destabilized. The strikes actions are either caused by the Federal Government, State Government or the Management (Adavbiele, 2015).

iv. Funding of technological schools is a serious problem faced by most schools. This poses serious challenge for students' practical (Momoh, 2012; Mohammed, 2001).

v. Appointment of incompetent management staff normally lead to embezzlement public funds. Money mean for equipment and development of other structures are mostly diverted for personal leaving the schools in handicap position (Uwaifo, 2009).

vi. The ineffectiveness of implementation/learning of the designed curriculum for most of our technological schools is due to the foregoing factors (Oranu, 2004).

VII. CAUSES OF DETERIORATING TECHNICAL EDUCATION AS OUTLINED IN THE FOREGOING SECTION

The standard of Nigeria's technical education is in the verge of collapsing due to certain factors. The main cause is corruption. Financial resources are not used for what they are meant for. The allocated budget for the sector is being embezzled for personal use. The government no longer focuses on the education sector; much attention has been directed to the oil sector. The infrastructures are nothing to write home about. Some are on the verge of collapsing while some are totally dilapidated.

The poor working condition and the absence of motivation and remunerations reduce staff commitment. Salaries are not paid regularly, staff are only motivated by their intrinsic values, and that is for those who love teaching. The absence of the extrinsic value in terms of regular and high salaries, good working condition, and promotion at the appropriate time drains the staff's Morales to teach. If they are not motivated, they will not give their best and only the God fearing ones will go to classes to teach, and if staff doesn't teach, the appropriate learning process will not take place. The students that supposed to come to school to learning skills will have nothing new to learn this in turn affect the technological advancement of the nation.

Academic staff often goon strike in order to make demands and negotiations. There is always a conflict between the union's leaders (ASUU and ASUP) and the government as to the problem encountered by the educational sectors. Schools are closed down for months and the government will not bother in trying to resolve the disagreement once and for all. This has a great deal in affecting the technical education that will promote national development.

Many things are responsible for the abnormality and wrong things happening our offices or system today. Key among these is:

i. Corruption
ii. Illiteracy
iii. unfaithfulness/lack of upright standing
iv. Economy /Financial difficulties in the Country
v. Lack of payment of salary/implementation of promotion arrears, and
vi. Appointment of incompetent/wrong hand

VIII. EFFECTS OF THESE SITUATIONS

The effects that interplay for deterioration of technical education are numerous and deadly especially in a developing countries like ours. In this study, we decided intentionally not to pick the study right from the curriculum, effectiveness, and the issue of quality because, we are optimistic of the attitudes of the learners, the teachers and the Management of our Technological Institutions are already enough to kill the technical education. The technical education must not be wiped out of our universities and polytechnics before we say they are dead; but with all the abundantly natural endowed resources we are blessed with, if technical education could make any difference, it is as good as dead.

Thus, if the training system we have cannot honestly and effectively impose the required theoretical and practical knowledge into the trainees' at all subsequent stages of training as they pass through the system, the skills acquired will not make any national impact of development.

In situation where the training systems do not function holistically but favour some and treat some harsh, it weakens the entire system. In such system there is no value of hardworking.

Besides, in a system where there is no fairness and sincerity as well as there is the spirit of embezzlement of public funds, the system suffers backwardness for lack of funds necessary for purchase of training facilities/equipment and updating obsolete ones.

Similarly, a system that is filled with frustration of salaries/wages, lack of promotion/implementation of the promotion and inability of payment of salary/salary arrears will affect the quality training. Example of these can be clearly pictured from the rampant and regular strikes by Academic Staff Union of Polytechnics (ASUP) and Academic Staff Union of Universities (ASUU) in Nigeria (Olakunle, 2011; Clark, 2012; Adavbiele, 2015). This problem normally kills the morale of staff to put in their best for the system. This is because efforts are not seem to be appreciated and rewarded. These are just few instances mentioned here and a lot more are happening in the system which are not stated in this paper.

IX. CONCLUSION AND RECOMMENDATIONS

9.1 Conclusion

Technical education in the field of built environment has been integral part of national development strategies in many societies because of the impact on human resource development, productivity and economic development. It holds the key to national development of most nations. However, despite its contribution to societal and economic development, Nigerian leaders have not given this aspect of education the attention it desires. This could be one of the reasons for the nation's underdevelopment. Deliberate efforts

should be made by the Federal Government and educational institutions at all levels to revive the falling standard of education and improve academic excellence in all fields of education in the country. Particularly, the field of built environment as aspect of technical education in Nigeria should be taken with all seriousness it deserved. Government must invest copiously in built environment to train students to acquire skills, attitude and knowledge which are needed for the economic growth of our nation.

9.2 Recommendations

The following recommendations will be useful in reviving technical education that will in turn boost the economic development of the nation if government takes it very seriously.

   i.   The truth remains that the salary structure of teachers in the country needs to be raised by the government and proprietors of private schools should also do same to curb the high rate of examination malpractice and also to stop the incessant strikes by teachers because it contributes immensely to the decline of education in Nigeria.

   ii.   The admission policy should be revisited by government to remove the issue of quota system and admission based on merit should be given which will enhance quality of our graduates.

   iii. Government should encourage interested persons by giving scholarships, prompt promotion of staff, payment of salaries as at when due and other welfare package that will boost the morale of the staff.

   iv.   Needed classroom facilities should be provided by government for effective teaching/learning of technical education courses.

   v.   The federal and state governments as proprietors of schools should make frantic efforts to provide functional technical workshops, Studios and laboratories in the various vocational trades.

   vi.   The government should urgently remove the dichotomy that exists between University and technical institution. Polytechnic institutions should be made to award degrees. This will not only attract more qualified students to technical education but will also encourage exchange of qualified lecturers/instructors between the two systems.

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