

Technological Stagnation and Distortion through Admission Polices; the Case of Architecture in Nigerian Universities

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ABSTRACT

Nigeria as the largest nation in Africa will experience rapid growth and development economically and otherwise if subscribed fully to technology education at primary, secondary and tertiary education. The study examined technological stagnation and distortion through admission policies in Nigerian universities. The following concepts were considered in the study; Analysis of national curriculum for senior secondary school examinations and national business and technical examination board curriculum for national technical certificate examination, architecture as well as facts about technological stagnation and distortion through university admission policies in Nigeria. The study revealed that NABTEB, NECO and WAEC provides platform for students to gain admission into Nigeria universities to offer architecture and engineering course. Ministry of education in corroboration with Nigerian National University Commission (NUC) as policy making bodies concerning tertiary education should make polices that will favour science and technical education in general and particularly science and technical school graduates so as to remove bottle neck that hinder them from getting admission into Nigerian universities to offer architecture and engineering courses of their choice. National Board for Technical Education (NBTE) should educate JAMB and university administrator through workshop and seminar on subjects offered by science and technical college students so that upon graduation they gain admission into Nigerian universities to courses of their choice and that University authorities in Nigeria should create equal opportunities for science and technical colleges' graduates to gain admission into the university to offer architecture and engineering courses like their counterpart who graduates from secondary school.

Keywords: Technological, Stagnation, distortion, Admission Polices and Architecture

INTRODUCTION

Stagnation means the state of being inactive not being lively. On the other hand, distortion is defined as misleading alteration or the state of reporting something in a way that is inaccurate or misleading. In did, technological growth and development in Nigeria is not as it should have being. A number of factors can be attributed to technological stagnation and distortion in Nigeria, among which are stakeholder's perception, inadequate facilities, lack of funds, lack sound or unfavorable university admission policies. This paper unveils the unfair treatment of science and technical school graduates seeking admission into Nigerian universities.

The Concepts Architecture

Architecture is the profession that deals with designing of buildings, open areas, communities and other artificial constructions and environments with some regard to aesthetic effect. Otero (2010) opined that architecture covers design, supervision of construction work and the examination, restoration or remodeling of existing buildings. Otero (2010) further stated that the word architecture originates from Latin

and Greek called architectura and arkhitekton which means architecture. In Greek the word arkhi means chief and tekton meaning builder. Barrington (2012) view architecture as the process and the product of planning, designing and constructing buildings and other physical structures.

According to Bass, Paul and Rick (2012) architecture generally means to describing buildings and other physical structures. It's the art and science of designing buildings and non building structures. Architecture is the style of design and method of construction of buildings and other physical structures. It is the art of unifying a structure, unifying the knowledge of art and science, technology and humanity. The person that practices the profession is called an architect. An architect design activities that are involve in the construction work from the micro-level (construction details and furniture) to the macro-level (urban design, landscape architecture). Therefore, architecture means offering or rendering professional services in connection with the design and construction of buildings, or built environments.

Architecture is a vocation, a calling as well as a science and a business. It has been described as a social art and also an artful science. Architecture must be of the highest quality of design. Architecture provides a sense of place and support of all types of human activity. Architecture helps the man-made fit in harmony with the environment while promoting health and well-being, enriching lives aesthetically and spiritually, providing economic opportunities that create a legacy that reflects and symbolizes culture and traditions.

Looking at the concept architecture, it cut across the technology, science art and humanity. The area of technology that directly deal with architecture is building construction which is adequately captured in NABTEB syllabus is theoretically and practically delivered to science and technical school graduates. This also proof why science and Technical College graduates particularly those that specialized in building construction or blocklaying and concreting and other subjects like English language, mathematics, physics, chemistry, economics and building/engineering drawing a

greater opportunity to offer architecture than candidates with English language, mathematics, physics, chemistry, economics and art subjects without building construction. JAMB O level requirement for entry into Nigerian universities has completely neglect building construction and building/engineering drawing denying NTC candidate admission into Nigeria universities to offer architecture. This is a clear case of technological stagnation and distortion in developing nation like Nigeria. The issue of poor academic performance of architecture students in Nigerian universities and Polytechnics is continually blamed on the admission requirements of JAMB.

Adewale and Olasunmbo (2014) in their study on entry qualifications and academic performance of architecture students in Nigerian polytechnics: are the admission requirements still relevant stated that the admission requirement is not completely relevant saying there should be strict supervision of examination both external and internal and that students should be made to receive some through national diploma before entering Nigerian universities to offer

architecture. However, their study fundamentally let out the inclusion of building construction and building/engineering drawing among others as one of the O level requirements for students with NTC, WAEC and NAECO to be admitted into Nigerian universities.

Analysis of National Curriculum for senior secondary school Examinations and National Business and Technical Examination Board Curriculum for National Technical Certificate Examination

The senior secondary school curriculum is organized in themes to guarantee good understanding of concepts and for learning to be sequential. Adigun and Ekwukoma, (2015) states that the themes covered in the senior secondary school curriculum are humanities, science/mathematics, technology and business. Humanities consist of Nigerian language, literature in English, geography, government, Christian religious study, Islamic studies, history, visual arts, music, French, Arabic and economics. Science/Mathematics is made up of biology, chemistry, physics, further mathematics, agriculture, physical

education, health education and computer studies. Technology consist of the following subjects; technical drawing, general metal work, basic electricity, electronics, auto-mechanics, building construction, wood-work, home management, foods and nutrition. Business as a theme has the following subjects; accounting, store management, office practice, insurance and commerce.

Besides, trade/entrepreneurship, English and civic education are made compulsory subjects for the students. Trade and entrepreneurship consist of thirty four subjects which are auto body repair and spray painting, auto electrical work, auto mechanical work, auto part merchandising, air-conditioning and refrigerator, welding and fabrication engineering craft practice, electrical installation and maintenance work, radio, television and electrical work, blocklaying, bricklaying and concrete work, painting and decoration, plumbing and pipe-fitting, machine woodworking, carpentry and joinery, furniture making, upholstery, printing craft practice, leather goods manufacturing and repairs, catering craft practice, garment

making, clothing and textile, dyeing and bleaching, cosmetology, stenography, data processing, store keeping, book keeping, GSM maintenance, photography, tourism, mining, animal husbandry, fisheries, marketing and salesmanship.

According to FRN, NPE (2013) and Ehiamezor, (2011) the criterion for selection of subject for public examinations for senior secondary school is that every student must offer the 4 compulsory core subjects. Meaning that each student should choose two, three, four or five subjects from each of their preferred four fields of studies and the remaining subjects from trade and entrepreneurship depending on their potential, interest and capability such that the minimum number of subjects is eight and the maximum number of subjects is nine. Here the senior secondary school students are expected to choose at least two subjects from trade and entrepreneurship subjects to complete the total number of subjects to be registered.

The National Business and Technical Examinations Board NABTEB was established in 1992 to conduct crafts and technical

examinations which was then done by Royal Society of Arts of United Kingdom (UK) in accordance with the National Policy on Education (NPE). NABTEB was one of the examinations bodies set up in 1992 to reduce the burden of conducting examinations like WAEC for science and technical college students in Nigeria. The board conducts the National Technical Examination (NTC), National Business Certificate (NBC) and advance level Certificate Examination for the following disciplines; Business trades general education, engineering and construction trades as well as miscellaneous trades.

NABTEB certificates are listed by JAMB as one of the prerequisite needed to gain admission into universities, polytechnics and colleges. NABTEB has also has the Modular Trades Certificate Examination (MTCE) which is for persons who need to acquire skills in the following areas: Motor vehicle mechanics work trade, catering craft trade, secretarial studies trade, book keeping trade. The function of NABTEB is to Conducts examinations on the following: National Technical Certificate (NTC), Advanced

National Technical Certificate (ANTC), National Business Certificate (NBC), Advanced National Business Certificate (ANBC) and Modular Trade Certificate (MTC). NABTEB issue results, certificates monitor, collect and keep records of continuous assessments in technical colleges. Prepare and submit an annual report of examination standards and related issues to Federal Republic of Nigeria, Ministry of Education. Conduct research and publish statistics and results to develop examinations syllables and tests in business and technical studies.

NABTEB examination subjects for technical students are English language, Mathematics, physics, chemistry and Information and Communication Technology (ICT). Technology is compulsory for science and technical college students while Economics and Literature in English are optional for them. Candidates for offering catering craft practice, ladies garment making, men's garment making, cosmetology, fisheries and animal husbandry can offer biology as related subjects while technical candidates are not allowed to offer biology.

Introduction to building construction is a compulsory subject for candidates offering any of the below trades: Carpentry and joinery, Painting and decorating, Plumbing and pipefitting and Draughtsman ship craft practice.

For business students NABTEB has the followings as subjects to offer English language, Mathematics, Economics are compulsory for business students while physics, chemistry, biology, Literature in English and ICT information communication technology are optional for them. From the analysis of the of national curriculum for senior secondary school and NABTEB curriculum for science and technical college students, it is very clear that science and technical colleges graduates who gain Nation Technical Certificate (NTC) upon graduation have equal chances of getting admission to offer architecture and engineering courses like their counterpart who hold West African Examination Certificate (WAEC) and National Examination Council of Nigeria (NAECO) among others in Nigerian universities.

FACTS ABOUT TECHNOLOGICAL STAGNATION AND DISTORTION THROUGH UNIVERSITY ADMISSION POLICES IN NIGERIA

University admission is the process through which students enter universities. The university admission systems vary widely from country to country and sometimes from institution to institution. In Nigeria, prospective university students apply for admission during their last year in secondary and technical school education. In Nigeria, an independent organizations or government agencies called Joint Admission and Matriculation Board (JAMB) is saddle with the responsibility of conducting admission examination upon application into the universities. World Education News and Reviews (WENR, 2017) states that before 1970s, Nigerian universities set their own admissions standards but due to the growing number of universities in Nigeria's sprawling higher education system, this practice became problematic, and, in 1978, the Nigerian government established the Joint Admission and Matriculation Board (JAMB) to oversee a centralized admissions test called the Unified Tertiary

Matriculation Examinations (UTME).

The oral interview with Ikeghtsev (2017) disclosed that Joint Admission and Matriculation Board requirement for admission into Nigerian universities has placed Science and Technical College graduates at disadvantage since its inception in 1978. According to Hime (2017) most graduates of from technical colleges who have the basic foundation theoretically, practically and otherwise to read architecture and engineering courses in Nigerian universities are being denied admission, stagnating the technological growth of a developing nation like Nigeria.

The United Nation (UN) declaration of Human Rights provides among other things the right of the individual in society to education. This provision is contained in article 26 of the human right to which Nigeria became a signatory upon joining the United Nations at the attainment of independence in 1960. Article 26 of human right states that everyone in Nigeria and beyond has the right to education. Education shall be free at least in

the elementary and fundamental stages. Elementary or basic education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit: education shall be directed to the full development of the human personality (Adeboye 2015). JAMB admission requirement for Nigeria university admission seekers has violet the right of science and technical school graduates by denying them the opportunity to further their studies in engineering and architecture courses respectively.

In Architecture and engineering courses, JAMB admission requirement as stated by Toscany (2013) is English language, mathematics, physics and any one of chemistry, biology, economics or geography. Five O/L credits in English language, mathematics, physics, fine art or technical drawing and any one of geography, chemistry economics or biology. National Business and Technical Examination Board (NABTEB, 2014) asserts that general education subjects offered by science and technical college candidates are English language,

mathematics, physics, chemistry, biology, information communication technology (ICT) and building/engineering drawing. Others are economics, literature in English, commerce, civic education, agricultural science, geography, Christian religious studies and Islamic studies besides trade subjects in building construction, metal work, auto-mechanics and electrical electronics among others.

According to NABTEB (2014) English language, mathematics, physics, chemistry, information and communication technology (ICT) are compulsory subjects while other subjects listed are said to be optional. Building/engineering drawing is not included in JAMB requirement for admission into Nigeria universities, denying science and technical college graduates access into the Nigeria universities to offer courses of their choice. Many science and technical college graduates (holders of National Technical Certificate, NTC) lamented the issue of admission denial into Nigeria universities. Okoghenun (2014) states that he was denied admission into University of Benin and National

Open University of Nigeria (NOUN) in spite of beating the university's cut-off mark for his course of choice which is a clear case of technological stagnation and distortion. Most Federal and State universities in Nigeria do not admit candidates with NTC certificates to read architecture and engineering courses because the

admission policy of these universities is not in favour of science and technical college graduates.

Below is the list of Nigerian universities that offer architecture with the UMTE admission requirement;

S/NO	NAME OF UNIVERSITY	UTME SUBJECTS
1	Federal University of Technology, Owerri (FUTO)	Physics, Chemistry, English and Mathematics
2	Imo State University (IMSU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
3	University of Lagos (UNILAG)	Mathematics, English, Physics and any one of Chemistry, Biology, Economics or Geography.
4	University of Nigeria (UNN)	Mathematics, English, Physics and one other subject
5	Abia State University (ABSU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
6	Ahmadu Bello University (ABU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
7	Ambrose Alli University (AAU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
8	Anambra State University (ANSU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
9	Bells University of Technology	Physics, Mathematics, English and any of

	(BELLS)	Chemistry, Geography, Art, Biology and Economics
10	Bayero University Kano (BUK)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
11	Caritas University (CARITAS)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
12	Cross River State University of Technology (CRUTECH)	Mathematics, Economics, English and any one of Accounting, Commerce and Government.
13	Enugu State University Of Science And Technology (ESUT)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
14	Federal University of Technology Akure (FUTA)	Mathematics, English, Physics and one of Chemistry, Geography and Technical Drawing.
15	Federal University of Technology Minna (FUTMINNA)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
16	Modibbo Adama University of Technology (MAUTECH)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
17	Nnamdi Azikiwe University (UNIZIK)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
18	Obafemi Awolowo University (OAU)	Mathematics, English plus any other two subjects from Physics, Chemistry, Economics and Fine Arts and Building Construction
19	Olabisi Onabanjo University (OOU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
20	Rivers State University of Science and Technology (RSUST)	Mathematics, Physics, English and any other subjects from Chemistry, Technical Drawing,

Technological Stagnation and Distortion through Admission Policies; the Case of Architecture in Nigerian Universities

		Geography Economics, Fine Arts and Building Construction
21	University of Jos (UNIJOS)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
22	University of Ilorin (UNILORIN)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
23	University of Uyo (UNIUYO)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
24	Kaduna State university (KASU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
25	Ladoke Akintola University of Technology (LAUTECH)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
26	Joseph Ayo Babalola University (JABU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
27	Covenant University (CU)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
28	Crescent University (CRESCENT)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
29	Bauchi State University (BASU)	Mathematics, English as UTME subject
30	Caleb University (CALEB)	English Language, Mathematics, Physics and Economics, Geography, Biology and Chemistry, Fine Art and Technical Drawing
31	Godfrey Okoye University (GO)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics
32	Kano University Of Science And	Physics, Mathematics, English and any of

	Technology (KUST)	Chemistry, Geography, Art, Biology and Economics
33	Tansian University (TANSIAN)	Physics, Mathematics, English and any of Chemistry, Geography, Art, Biology and Economics

Source: Myschool (2017)

The table presented above shows that out of 33 universities in Nigeria that offer architecture, Obafemi Awolowo University (OAU) and Rivers State University of Science and Technology (RSUST) are the only universities that include building construction in their admission requirement. This is discouraging and clear case of technological stagnation and distortion. According to National Business and Technical Examination Board (2014) building construction in science and technical colleges consists of block laying/brick laying and concreting, wall floor and ceiling finishing among others. The question is Obafemi Awolowo University (OAU) and Rivers State University of Science and Technology (RSUST) are they aware that block laying/brick laying and concreting, wall floor and ceiling finishing are considered as building construction?

Building/Engineering drawing which provide a better footing for candidate wishing to offer architecture. Building/Engineering drawing provides science and technical college graduates with technical drawing and building design knowledge. This also is not included by any of the Nigerian universities as entry requirement for admission amounting to technological stagnation and distortion. Nwohu (2011) in his study on Admission Policy and Academic Standard in Engineering Education at the Nigerian Tertiary Education System states that those to study Architecture and engineering courses in Nigeria universities should be train right from primary to secondary school, giving a good foundation for science and technical school graduates seeking admission into Nigerian universities.

CONCLUSION AND RECOMMENDATION

This paper concludes that there is no just reason for refusing science and technical school graduates admission into Nigerian universities to offer courses of their choice. Subjects offered by science and technical college graduates qualify them to offer architecture and engineering courses in Nigerian university and any other university in the world.

Therefore, the paper recommended that;

1. Ministry of education in corroboration with Nigerian National University Commission (NUC) as policy making bodies concerning tertiary education should make policies that will favour science and technical education in general and particularly science and technical school graduates so as to remove bottle neck that hinder them from getting admission into Nigerian universities to offer architecture and engineering courses of their choice.
2. National Board for Technical Education (NBTE) which is an arm of ministry of education saddle with the responsibility of preparing the curriculum content and accreditation of subject and

programs of science and technical colleges should educate JAMB and university administrator through workshop and seminar on subjects offered by science and technical college students so that upon graduation they gain admission into Nigerian universities to offer courses of their choice.

3. University authorities in Nigeria should create equal opportunities for science and technical colleges' graduates to gain admission into the university to offer architecture and engineering courses like their counterpart who graduates from secondary school.

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