

The Nigerian National Senior Secondary Schools Curriculum and Its Implications for Admission into Universities

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Abstract

The fundamental principle of Technical and Vocational Education in Nigeria and the development of the New National Senior Secondary Schools Curriculum Structures in Nigeria is to allow everybody to acquire technical skills and to allow the youth to have an intelligent understanding of the increasing complexity of technology. This is also to match or at least to compete with what is obtainable in the developed countries of the world. A cursory look at the training of Senior Secondary School Education in the area of subject selection for the Technological subjects can cause a lot of problems to the possessor of such certificate as a dead end certificate that can never be used to gain admission to the Tertiary Institutions or University to study his intended course that is, Engineering or Technological subjects. It is however discovered that the implementation of this scheme can be haphazardly done by some Principals, Teachers and even Ministry Officials who do not even know what the introduction of the new curriculum of Technological subjects(Engineering or Technological) affects the admission to the Tertiary Institution or University in Nigeria or even in the overseas countries. The problems are identified and we try to find solution to the problems in this paper, so that our policy making bodies, teachers, principals, and ministry officials both at Federal and State levels will not award “dead end certificates” to those students who choose technological and business education subjects options in Senior Secondary Certificate Examination (SSCE).

Keywords: Secondary Schools, Curriculum, Vocational, Education, SSCE.

INTRODUCTION

The National Policy on Education defines technical and vocational education “as a comprehensive terms referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life”. Therefore, any education that is geared towards teaching technical skills and attitudes suitable to such skills can be regarded as technical education. Universal Basic Education (UBE) introduced in 1999 by the Olusegun Obasanjo administration was conceptualised to provide greater access to quality, basic education in Nigeria. It was meant purely as a programme of government to capture school age children that were not interested by the formal education system, and made it mandatory for the children to experience nine years of uninterrupted primary and junior secondary school education.

Under the programme, basic education ends at the Junior Secondary School level, which is disarticulated from the Senior Secondary School programme.

Goals for Secondary Education

The objective of the Secondary Education shall be to prepare the individual for;

- Useful living within the society; and
- Higher education

Goals of Technical and Vocational Education

The objectives of the programme as specified in the implementation guideline by government in 1999 are as follows;

- Provision of trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels;
- Provision of the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;

- Giving training and impart the necessary skills to individual who shall be self-reliant economically.

The Problem

Universal access to education has been prime target for Nigeria in the last four decades. So at both National and International levels, Nigeria is committed at providing basic education to all citizens. For technical and vocational studies some of the condition in pursuance of these objectives or goals as stated by National Policy on education are as stated below thus;

- Trainees completing technical college programme shall have three options;
 - Secure employment either at the end of the whole course or after completing one or more modules of employable skill;
 - Set up their own business and become self-employed and be able to employ others;
 - Pursue further education in advance craft/technical programme and in post-secondary (tertiary) technical institutions such as Science and Technical Colleges, Polytechnics or Colleges of education (technical) and universities.
- This research therefore set to assess the problem in the area of implementation of the scheme as related to the introduction of trade subjects into the curriculum of Senior Secondary Schools. It is observed in this research that when one set to opt for Technological and Business Education aspect of the scheme while entering Senior Secondary Schools, the combined subjects arranged presently in the curriculum are not appropriately chosen since the possessors of such certificates will not have the basic qualification to enter the University for either Engineering, Technological and Business Based subjects. This negates the goal of the Senior Secondary School to secure admission to "Higher Education". This automatically gives the possessor of such certificate what I describe as "dead end certificates"

RESEARCH METHODOLOGY

The Research design adopted for this study is a cross sectional survey which is being both descriptive and exploratory entails a once and for all observation of some of the stakeholders of the Technology option of SSCE as postulated by the Federal Ministry of Education on National Policy of Education in Nigeria and the minimum entry requirements for Engineering and Technological subjects in the Tertiary Education and Universities in Nigeria prepared by Joint Matriculation Board (JAMB). We also make use of some of the seminars and write up of West African Examination Council (WAEC).

RESULTS AND DISCUSSION

In our research we discovered that there is a new Senior Secondary Education Curriculum Structure with new Trade Subjects introduced to our Secondary Schools in which the Vocational and Technological subjects called "Trade Subjects" are to be taken from. We need to emphasized that there are prerequisites to all students thus;

"All students must offer;

- all 5 compulsory core crossing subjects.
- Students will offer 3-4 subjects from their field of specialization.
- One (1) elective may be offered outside their field of specialization provided the total number of subjects is not more than nine (9).
- The minimum number of subjects is eight (8).

The Table below shows the new structure;

Compulsory Cross-cutting Core Subjects

1. English Language;
2. General Mathematics;
3. One Trade with entrepreneurship studies;
4. Computer Studies/ICT; (now been removed as a core compulsory Subject, but some secondary schools still allow it to remain as one of thier core subject)
5. Civic Education

Senior Secondary (Science and Mathematics)

1. Biology;
2. Chemistry;
3. Physics;
4. Further Mathematics;
5. Agriculture;
6. Physical Education;
7. Health Education

Senior Secondary (Business Studies)

1. Accounting;
2. Store Management;
3. Office Practice;
4. Insurance;
5. Commerce.

Senior Secondary (Humanities)

1. Nigerian Languages;
2. Literature in English;
3. Geography;
4. Government;
5. Christian Religious Studies;
6. Islamic Studies;
7. History;
8. Visual Arts;
9. Music;

10. French;
11. Arabic;

12. Economics.

Table 1: Comparing Each Subject Combination with Matriculating Compulsory Subjects to Gain Admission to Tertiary Institutions or Universities

SNo	Subject Areas	Subjects to be Offered in the New Senior Secondary Education Curriculum Structure	Matriculation Compulsory Subjects for Gaining Admission to the Universities	Areas of Deficiencies or Implications for admission into Universities
1	Science and Mathematics	<ol style="list-style-type: none"> 1. English Language; 2. General Mathematics; 3. One Trade with entrepreneurship studies; 4. Civic Education 5. Computer Studies/ICT; 6. Biology; 7. Chemistry; 8. Physics; 9. Further Mathematics; 10. Agriculture; 11. Physical Education; 12. Health Education 	English Language, Mathematics, Chemistry, Physics, Biology can be used to enter any Science Based Courses, Engineering Based Courses and some Humanity Based Courses	There is no area of deficiency in this subject combination to enter into any tertiary Institution or University of their choice.
2	Business Studies	<ol style="list-style-type: none"> 1. English Language; 2. General Mathematics; 3. One Trade with entrepreneurship studies; 4. Civic Education 5. Computer Studies/ICT; 6. Accounting; 7. Store Management; 8. Office Practice; 9. Insurance; 10. Commerce 	Classified under Faculty of Administration has UTME as Five SSCE credit passes including English Language, Mathematics, Economics and any other two relevant subjects: Accounting, Business Methods, Commerce, Government, Geography and Statistics	Economics is required here for this subject combination to survive. Note that in the subject combination there is no Business Methods, Government, Geography and Statistics in the subject combination
3	Humanities	<ol style="list-style-type: none"> 1. English Language; 2. General Mathematics; 3. One Trade with entrepreneurship studies 4. Civic Education 5. Computer Studies/ICT; 6. Nigerian Languages; 7. Literature in English; 8. Geography; 9. Government; 10. Christian Religious Studies; 11. Islamic Studies; 12. History; 13. Visual Arts; 14. Music; 15. French; 16. Arabic; 17. Economics 	Classified under Arts/Humanities – Five SSCE credit passes to include English Language and the subjects to be combined	Economics is not required in Humanities for admission. The subject combination here is free and wide enough to choose from.
4	Technology	<ol style="list-style-type: none"> 1. English Language; 2. General Mathematics; 3. One Trade with entrepreneurship studies; 4. Civic Education 5. Computer Studies/ICT; 6. Technical Drawing; 7. General Metalwork; 8. Basic Electricity; 9. Electronics; 10. Auto-Mechanics; 11. Building Construction; 12. Woodwork; 13. Home Management; 14. Food and Nutrition; 15. Clothing and Textile 	To enter any Engineering /Environmental/Technology courses in the University you need to have Credit in English Language, Mathematics, Physics, Chemistry, Biology (In some Universities) and any one of other relevant Science/Technical subjects.	This is at variance to the subject combination of this set of people. This is a serious problematic area where the students will not be able to gain admission to any tertiary Institutions or the University. The UTME Subjects is Mathematics, Physics and Chemistry. Physics and Chemistry was not part of the subject combination for this option.

Senior Secondary (Technology)

1. Technical Drawing;
2. General Metalwork;
3. Basic Electricity;
4. Electronics;
5. Auto-Mechanics;
6. Building Construction;
7. Woodwork;
8. Home management;
9. Food and Nutrition;
10. Clothing and Textile

Trade Subjects

1. Auto body repairs and spray painting;
2. Auto Electrical work
3. Auto Mechanical works
4. Auto parts merchandising
5. Air-conditioning Refrigerator
6. Welding and Fabrication, engineering craft practice
7. Electrical Installation and Maintenance work
8. Radio, TV and Electrical work.
9. Block laying, Bricklaying and Concrete work.
10. Painting and decorating
11. Plumbing and Pipe Fitting
12. Machine woodworking
13. Carpentry and Joinery
14. Furniture Making
15. Upholstery
16. Catering craft practice
17. Garment Making
18. Textile Trade
19. Dyeing and Bleaching
20. Printing Craft Practice
21. Cosmetology
22. Leather Goods Manufacturing and Repair
23. Keyboarding
24. Shorthand
25. Data Processing
26. Store Keeping
27. Book Keeping
28. GSM Maintenance
29. Photography
30. Tourism
31. Mining
32. Animal Husbandry
33. Fisheries
34. Marketing
35. Salesmanship

In the Fig. 1 below, two optional subjects give critical path that cannot be stopped out of the four optional subjects thus;

- Science and mathematics option; and
- Humanities

But other two optional subjects have a lot of problem that give the critical path leading to dead end thus;

- Technology; and
- Business Studies.

These two optional subjects will bar the possessor of such certificates from gaining access or entrance to higher institutions or universities as enumerated in Fig. 1 and the Table 1.

The Technological lines is the most hit. Unless admission criteria are changed from the present admission system, which stipulates credit in Physics, Chemistry and Biology, it is very difficult for such students who are not offering these subjects to gain admission to higher institution or university studying engineering, technology, or environmental based courses.

In like manner, like that of Technological line, the Business – Oriented Students who do not offer economics as part of their subject combination, will have restrictions as to what Business subject the candidate will offer in the tertiary institutions or university. Their condition is what I termed **“Partial Dead End”**.

The West African Examination Council, Alagbaka, Akure conducted a training which is very useful to this discussion in the areas of the criterion for the selection of subjects according to the New Senior Secondary School Curriculum structure in Nigeria. They make the following declarations;

- Students are to select one (1) Trade subjects from the list of 34 Trade/Entrepreneurship Studies
- It is not expected that a school would teach all the trade subjects. Schools are free to select those trades for which they have the teachers and facilities and which meet the needs of their communities.
- Students are to select two (2), three (3), or four (4) subjects from each field of study depending on their potential, interest and capability
- Students are to select a minimum of eight (8) subjects or a maximum of nine (9) subjects

NOTE:

- If a student selects four (4) subjects from his / her field of study, he/she has eight subjects and **can select one or more from other fields of study** making of nine (9) subjects
- If a student selects three (3) subjects, he/she **can take one (1) or two (2) electives from**

any other field of study making a minimum of eight (8) subjects and maximum of nine (9) subjects

from any other field of study making a minimum of eight (8) subjects and a maximum of nine (9) subjects.

If a student selects two (2) subjects from his/her field of study, he/she **can take two (2) Or three (3) (electives)**

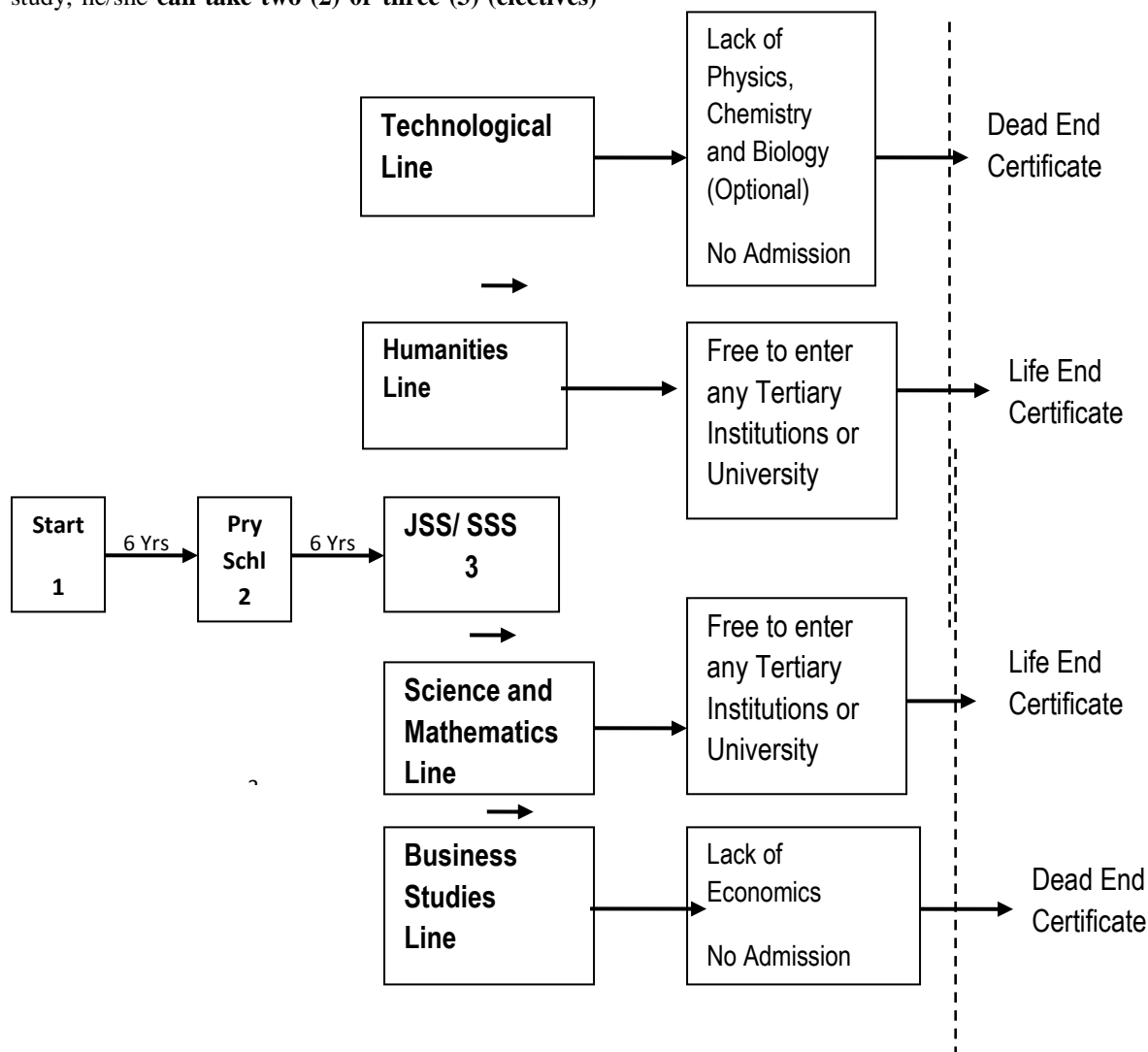


Fig.1 Critical Path Development of the Typical Problem and its Implications for admission to University and the Presentation of Life and Dead End Certificates in the New Senior Secondary Schools Curriculum in Nigeria

Fig. 2 below shows the amendment and suggestions to improve the Dead End Line that does not allow the candidates to go to their tertiary Institution or University of their choice. I will cite Technological field and choose Mechanical engineering my field of specialization as a good example;

The student or candidate can have the following combination of nine (9) subjects;
 English, Mathematics, Civics
 Trade/Entrepreneurship (Welding and Fabrication Eng. Craft Practice)

Computer Studies
 Technical Drawing
 General Metalwork
 Physics and Chemistry
 OR
 English, Mathematics, Civics
 Trade/Entrepreneurship (Auto body Repair and Spray Painting)
 Computer Studies
 Technical Drawing
 Auto - Mechanics
 Physics and Chemistry

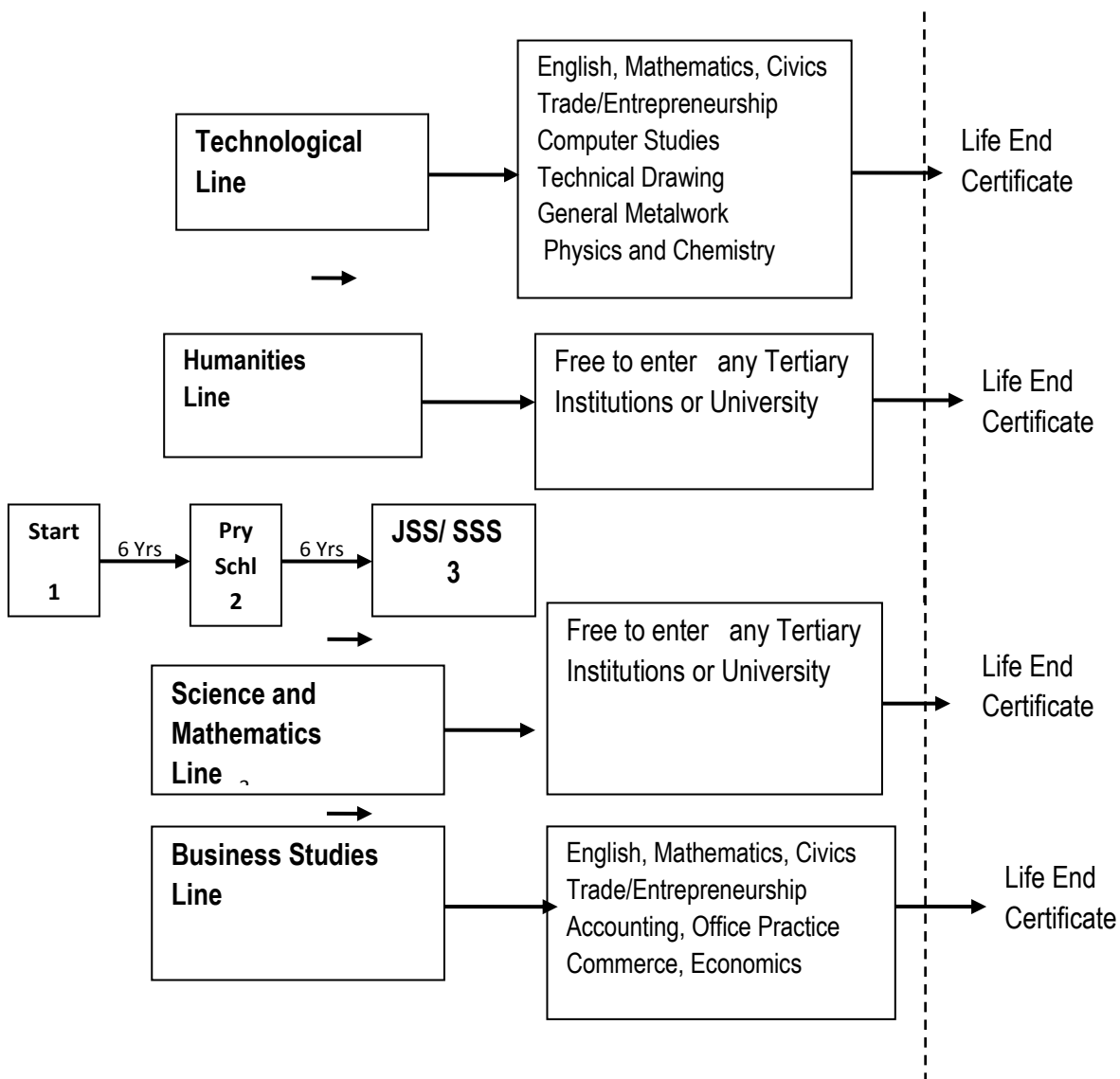


Fig.2 Suggested Critical Path Selection of Subjects that Bring Continuity of Study and its Implications for admission to University in the New Senior Secondary Schools Curriculum in Nigeria

CONCLUSION

The problem of dead end certificates for those students who choose technological subjects option in Senior Secondary Certificate Examination (SSCE) has been examined in this paper. It was however discovered that the UTME Subjects required to enter the Engineering, Technological subjects in the University are Mathematics, Physics and Chemistry. Physics and Chemistry are not part of the subject combination for the Technology option of the new curriculum for Senior Secondary School in Nigeria.

To enter any Engineering /Environmental/Technology courses in the University you need to have Credit in English Language, Mathematics, Physics, Chemistry, Biology (In some Universities) and any one of other relevant Science/Technical subjects. So also that of Business Studies you will be expected to have Credit passes in English, Mathematics and Economics and any other two relevant subjects: Accounting, Business Methods, Commerce, Government, Geography and Statistics.

This is at variance to the subject combination of this set of people which can be used to fulfill the second conditionality of the objective of the Secondary Education which should be to prepare the individual for Higher education.

This is a seriously problematic area where the students will not be able to gain admission to any tertiary Institutions or the University of their choice in Nigeria

It was however discovered that the implementation of this scheme might be haphazardly done by some Principals, Teachers and even Ministry Officials who do not even know what this introduction of new curriculum of Technological subjects (Engineering or Technological) in gaining admission to the University is all about.

RECOMMENDATIONS

From this research it is therefore recommended that;

- Physics and Chemistry should be included in the subject combination of Technology option of Senior Secondary School Curriculum
- Economics should be included in the subject combination of Business Studies option of Senior Secondary School Curriculum.
- Or if this is not possible, change the subject combination for Technology option and Business Studies used for both JAMB and admission combination to study Engineering, Environmental, Technological, Business Studies courses in the Tertiary Institutions or University to reflect the new syllabus just introduced.
- Or if these two options are not acceptable, scrap Technology or Business Studies option of the curriculum and stop all the Trade Subjects which are not making any impact in the development of a child in the area of continuity of their educational development beyond School Certificate level.
- As an experienced marker and the chairman of some of the sessions where WAEC is developing of the Trade Subjects, there must be a stop to this move, if the possessor of such certificate cannot use the certificate obtained in WAEC or NECO to fulfill the condition of admission to enter the University, I quote "The objective of the Secondary Education shall be to prepare the individual for; useful living within the society and higher education".
- The Federal Ministry of Education and the State Ministry of Education should as a matter of urgency see to the solution of these identified problems so as not to award what I call "**Dead End Certificates**" to our future generation of youth who in their life time will continue to curse this

generation of curriculum developers, like what is currently happening to the possessors of some technological certificates presently in Nigeria in the areas of continuity of their educational development and job satisfaction after obtaining such certificates.

- This is a warning and a lone voice crying in the wilderness for all and sundry for their timely intervention.

I hope that the Government or the Curriculum Developers in Nigeria are not trying to mortgage the future of our young ones to only secondary school level as presently done for Vocational and Business Schools as evident in their objectives 1 and 2 and the neglect of objective 3 as quoted above and what we are witnessing in our tertiary institutions and university in the treatment meted out to this category of students seeking admission and life after graduating from such schools.

I want to sincerely thank the organizers of this programme for inviting me to contribute my life time experience in the world of Academics, which I have adjudged to be too rough to pass through for a willing soul who is interested in academics like me and mistakenly found himself or herself in choosing a dead end line for himself in life. I pray and hope you will choose a blissful life end for your children and our future generation.

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