

**EDUCATION IN THE MIDDLE YEARS/JUNIOR SECONDARY SCHOOL IN USA AND NIGERIA:  
A COMPARATIVE ANALYSIS**

James S. Etim

Department of Education, Winston Salem State University, Winston Salem, North Carolina, United States

**ABSTRACT**

Education is the key to building the capacities for achieving sustainable development goals. Education is seen as a medium for national and personal development. It has been linked to health, democracy and the nation's sustainable development. In 1977, Nigeria introduced the 6-3-3-4 system of education, modeled after the system in the United States of America. In 1999, Nigeria introduced universal basic education, a nine year system of education for students in grades 1-9 (Primary 1 through junior secondary school). This paper examined some of the similarities and differences in the two systems of educating 11-15 year olds in the USA and Nigeria. The discussion was focused on six broad areas: Planning, grade Configuration, Curriculum, Teachers, Gender Issues in enrolment and Assessment. The study found out that there were very little similarities in the implementation of education for junior secondary school students in Nigeria when compared to the middle school in the USA. Based on the findings, the study made several recommendations on strategies to be employed for improving the junior secondary school in Nigeria in order to encourage Nigeria's sustainable development.

**Keywords:** Assessment, Comparative Analysis, Curriculum, Education For All, High Stakes Testing, Junior Secondary School, Middle School, Sustainable Development, Quality Teachers.

## INTRODUCTION

Education is the key to building the capacities for achieving sustainable development goals. According to the World Commission on Environment and Development (1987), “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (p.43). According to this report, there are three indicators to sustainability- social, economic and environment. Writing on the social area of sustainable development, the World Bank (2001) indicated that-

Education and training must be available, so that everyone has the chance to earn a decent living and learn new skills. Girls must have the same opportunity as boys to go to school or to get jobs...Social concerns in one country can have impacts that reach beyond national borders. For example, unequal access to education or lack of job opportunities can lead people to migrate.

In Nigeria, according to the National Policy on Education (2004), “education is an instrument for national development; to this end, the formulation of ideas, their integration for national development and the interaction of persons and ideas are all aspects of education “ (p.1). As pointed out by Petrosino, Morgan, Fronius, Tanner-Smith and Boruch (2012,p.8), “ Education is critical to economic development and social welfare in many developing nations” For many Americans, success comes with education (Orlich et al, 2013, p. 4) and according to Hungerford and Wassmer (2004), given the public recognition of the value of publicly provided K-12 education in the USA, Federal, state and local government politicians “ have consequently placed maintaining and improving the quality of primary and secondary public education at, or very near, the top of their policy agendas”.

Many countries, including Nigeria are strengthening their educational systems in light of periodic need for educational reforms, globalization, workforce development and the EFA and the Millennium Development Goals. In the USA, the nation strengthened its educational system with the No Child Left Behind Act (2002) and recently Race to the Top and the Common Core. The focus of these policies and reforms are to provide quality education for K-12 students, improve teacher qualification and teaching practices, assess students for what they have learned more closely and often and encourage parental engagement. These changes have also been a result of frequent complaints of the low performance of American students in many international assessment measures compared to her major economic and developmental competitors (China, Japan, Germany, Singapore etc). However, as pointed out by Feinstein (2009), the standard based reforms in American education with an emphasis on testing has made “American schools less hospitable to Education for Sustainable Development ‘(p3). In Nigeria the educational system has seen a lot of innovations recently. This began with the National Curriculum conference in 1969, through the introduction of Universal Basic Education in 1999 and the revision of the National Policy on Education in 2004. In 2005, the Nigerian Educational Research and Development Council was directed by National Council of Education to produce curriculum in light of international mandates of Education for All , Millennium Development Goals and the Nigerian National Economic Development and Empowerment Strategy. An important outgrowth of this restructuring of the educational system and the curriculum was the Basic Education Curriculum. This 9 year basic education focuses on the learner acquiring

appropriate levels of literacy and numeracy, manipulative and life skills and other areas of value reorientation, job creation, poverty eradication and wealth generation. According to Orji (2012) this 9 year Basic Education program aims at-

1. Developing in the entire citizenry a strong consciousness for education and a strong commitment to its vigorous promotion
2. Providing free and compulsory universal basic education for every Nigerian child of school age
3. Reducing drastically the incidence of early leaving from the formal school system
4. Ensuring the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative and life skills as well as the ethical, moral and civic values for laying a solid foundation for lifelong learning

In 1999, the then President of Nigeria, President Obasanjo launched the Universal Basic Education. However, without an enabling law, certain parts of the program could not be implemented. The enabling law came with the Compulsory Free Basic Education Act (2004), where the Federal Government has directed that :

1. All states shall provide free, compulsory and universal basic education for every child of primary and junior secondary school age.
2. Every parent shall ensure that his child or ward attends and completes his—  
(a) primary school education; and (b) junior secondary school education
3. The services provided in public primary and junior secondary schools shall be free of charge.

The junior secondary school or lower secondary school provides education for students in the 11-15 age range with a grade configuration of grades 7, 8, 9. Grade 7 is called Junior Secondary School 1, grade 8 is Junior Secondary School 2 and grade 9 is Junior Secondary School 3. When students complete the junior secondary school, they may go into senior secondary school (academic in nature, preparatory to university education or to attending the polytechnic or college of education) or they may attend technical colleges or go to vocational training or apprenticeships. Estimates are 60 percent will be admitted into senior secondary, 20 percent to technical colleges and 10 percent each to trade schools and apprenticeships. In the USA, a great majority of schools educating 11-14 year olds are termed middle schools with a grade configuration of grades 6, 7, 8.

In 1977, Nigeria adopted the system of education practiced in the USA- 6-3-3-4 (Nwagwu, 1997) This paper looks at some of the similarities and differences in the two systems of educating 11-15 year olds in the USA and Nigeria. The discussion will be focused in six broad areas-

In 1977, Nigeria adopted the system of education practiced in the USA- 6-3-3-4 (Nwagwu, 1997) This paper looks at some of the similarities and differences in the two systems of educating 11-15 year olds in the USA and Nigeria. The discussion will be focused in six broad areas-

- a. Planning
- b. Grade configuration
- c. Curriculum
- d. Teachers
- e. Gender Issues in Enrollment

f. Assessment

### **Planning**

In Nigeria, there is centralized planning of the school system. Iman (2012) pointed out that true centralization of education in Nigeria began in 1977 because in order to implement the National Policy on Education, the Federal Government took “ responsibility in terms of centralized control and funding of education. Such centralization was a departure from the colonial education policy based on cost sharing between the proprietary bodies , local community, parents/guardian and the government” (p 190) This centralized control is implemented through the Federal Ministry of Education and the its supporting subunits ( Nigeria Educational Research and Development Council, National Teachers Institute, Universal Basic Education Commission and the Nigerian Language Center etc) . State Ministries of Education for the most part are implementing at state level many of the decisions taken at the Federal level. The National Policy on Education (2004) states that “ Government shall establish efficient inspectorate services at the Federal, State and local government levels for monitoring and maintaining minimum standards” (p.53) .In Section 12 of the National Policy on Education, the Federal Ministry of Education is charged among other things with the following-

1. Enunciating a national policy on education
2. Setting and maintaining uniform standards
3. Coordinating educational practices
4. Acquiring, storing and dissemination of national data related to education

According to Nwagwu (1997) although many policy documents support decentralization of the system of administration, “ there is an ever increasing tendency towards centralization of educational control especially as the federal government is called upon to assume a greater role in funding the education system at all levels. “ Even though there is centralization in terms of policies, structure and the curriculum, states have flexibility in the delivery and implementation of the curriculum especially at the lower levels.

In the USA, the Federal Government does not have direct control over education in the 50 states. However, through the Department of Education, its reach is undeniable in the following areas-

- Directing federal financial aid to states, districts, schools, and students;
- Collecting education statistics, evaluating programs and policies, and administering the National Assessment of Educational Progress;
- Implementing and monitoring the Elementary and Secondary Education Act (more commonly known as the No Child Left Behind Act), which requires states to set standards for each grade, test reading and math achievement in grades 3-8 and once in high school and hold schools accountable for achieving adequate yearly progress;
- Offering competitive grants to states and local education agencies (LEAs) around specific programs, such as Race to the Top and School Improvement Grants (Future Ready Project 2012)

## Grade Configuration

With the Universal Basic Education Act of 1999 and the Basic Education programme, grade configuration for education serving 11-15 year olds is 6-3-3 ( six years of primary education, three years of junior secondary school and three years of senior secondary school). In Nigeria, based on the Universal Basic Education, students complete primary school in a separate building and move to junior secondary school which in most cases is in the same building as the senior secondary school. The students share the same building, may share the same teachers and school administrators. In the USA there is the running argument on how best to educate students in terms of grade configuration. Some educators argue for the K-8 configuration (Hough, 2005; Herman, 2004 and Pardini, 2002) while the official line of the Association for Middle level Education is a grade 6-8 configuration ( see the themed issue on grade configuration in *Middle School Journal* Volume 37.1 September 2005) Most students in the 11-15 age range are in the middle school with a majority configuration of three years (Grades 6-8) . However, there are some deviations from this grade arrangement. There may be configurations of grades 5-8 or K-8 and in rare cases Grades 7-9. According to Wyant and Mathis (2007) By the 1970s the dominant organization for schools included a K-5 elementary school, a 6-8 middle school, and a 9-12 high school. By the end of the 20th century many school districts began to re-evaluate grade configuration as a way to address low student performance and high dropout rates associated with transitioning between schools. Among school districts that are making changes in their grade configurations, the most common change is to return to the K-8 and 9-12 model.

For Nigeria the issue will be- is it appropriate to have a separate environment for students in the junior secondary school or should they continue to remain with those in the senior secondary school? Since basic education ( Primary 1-Junior secondary school 3 ) is now free and compulsory would it not be more appropriate to have these students in the same building? Finally, given the developmental needs of junior secondary school students, will it not be more appropriate to put them in environments where these needs are recognized and dealt with so that learning for this group would be at the optimal level?

## Curriculum

In the USA, in order to improve the quality of education and assess what students know and do not know, the No Child Left Behind Act was enacted in 2002. It called for states to assess students in two key subject areas- mathematics and reading beginning in grades 3 through grade 12. As a result of this, the focus of most states in terms of the curriculum is mathematics and reading/English language literacy while the other subjects, although taught are of diminished importance since they are not tested (see Center on Education Policy 2007 study for a detailed analysis). In recent years, some states have developed and tested students in the areas of science and social studies ( or at least one of these areas) The new Common Core adopted by more than 40 states and the District of Columbia encourages deep learning and calls for testing in the areas of mathematics and reading/literacy. The focus therefore remains that of literacy and numeracy.

Table 1 below gives a comparison of the curriculum for Nigeria's junior secondary school and the middle school. For the curriculum in USA , see for example Manning and Bucher (2011)

Table 1 : Comparison of the Curriculum for the junior secondary or middle years in Nigeria and USA.

Nigeria -Upper Basic Education Curriculum ( Junior Secondary School 1, 2, 3)		USA - Middle School/Junior Secondary School Grades 6-8	
Core	Electives	Core	Electives
<b>1. English Studies</b> <b>2. Nigerian Language (Hausa/Igbo/Yoruba)</b> <b>3. Mathematics</b> <b>4. Basic Science</b> <b>5. Social studies</b> <b>6. Creative and Cultural Arts</b> <b>7. The religions(CRK /IRK)</b> <b>8. Physical &amp; Health Education</b> <b>9. French Language</b> <b>10. Basic Technology</b> <b>11. Civic Education</b> <b>12. Computer studies/ICT</b>	<b>1. Agricultural science</b> <b>2. Home Economics</b> <b>3. Arabic Language</b> <b>4. Business Studies</b> <b>Note: Must offer 1 elective but not more than 3.</b>	1.English Language Arts 2. Mathematics 3. Science 4.Social Studies	1. Computer Studies 2. World Languages 3.Arts Education 4. Career Technical Education 5. Healthful Living 6.Driver Education

Source: Obioma, G (nd) The 9 Year Basic Education Curriculum ( Structure, Contents and Strategy for Implementation): Nigeria’s Experience in Educational reform. Abuja, Nigeria: NERDC

From the Table above, two points can be raised (1) there are too many subjects that the junior secondary school student in Nigeria has to take. Obioma (nd) makes this point when he declares that one of the issues for the new Basic Education is the “consolidation of some content and subjects in the basic education context thus reducing subject/content overload”. Too many subjects may mean that not enough focus on the important content areas of English Language arts, mathematics, science and Social studies The reverse is so in the USA. (2) students in the two countries are exposed to the core areas of literacy, numeracy, scientific understanding and social studies. However, while areas like Physical and Health Education, Computer studies and Basic Technology are regarded as core in Nigeria, they are for the most part electives in most school systems in the USA.

## Teachers

Table 2 below presents data on the percentage of JSS teachers in Nigeria for 2010 to 2011

Table 2 : Percentage of JSS teachers in Nigeria by gender 2010 and 2011

	2010	2011
Male	49.0	54.5
Female	51.0	45.5

Source UBEC 2010 JSS Teachers by Qualification and State.

In 2010, the percentage of female teachers was higher than that of male teachers. However, the reverse was the case in 2011.

In a further analysis of the data in Table 3 below, the 2011 data showed the following-

Table 3 : Junior Secondary School Teachers by Qualification 2011

Level of Teacher Qualification	%
Teachers with Higher Degree and Certified	3.37
Teachers with Higher Degree not certified	.7
Teachers with B.A. and certified	28.51
Teachers with B.A. and not certified	.39
Teachers with Nigerian Certificate in Education (NCE)	42.1
Teachers with HND Certified	.25
Teachers with HND without teacher certification	.25
Teachers with Diploma in Education	.35

Source: Analysis based on UBEC 2010/2011 JSS Teachers by Qualification

Table 3 above shows that about 75.00 percent of teachers teaching at the junior secondary school level are fully qualified. UBEC Commission however gives the percentages as 86 percent qualified (UBEC, 2010)

There is a famous motto- a highly qualified teacher in every classroom. This is the aim of most school systems worldwide. The No Child Left Behind defines a highly qualified teacher for the core subjects this way- “ To be highly qualified, teachers must have a bachelors’ degree , full state certification and demonstrated competence in each core academic subject that they teach.” (Institute of Education Sciences, 2008)

Many studies have pointed to the effect of teacher quality and teaching quality on students achievement (Darling-Hammond 2000; Kaplan and Owings, 2001) According to Kaplan and Owings (2001) teacher quality refers to the inputs that the teacher brings to the school ( teacher preparation, aptitude, SAT and other examination scores) while teaching quality refers to the things that teachers do to promote student learning in the classroom (instructional strategies, positive learning climate etc), According to Sanders and Rivers (1996), teachers classroom expertise and behavior strongly correlates with student

achievement. Horgen (2004) also showed that teacher preparation has a greater influence on student achievement than other variables like teacher salaries and class size. Table 4 below presents data from North Carolina showing the comparisons of teacher characteristics based on student growth.

Table 4: Comparisons of Teacher Characteristics based on AYP Status and High Growth status 2004-2005

	School Made Adequate Yearly Progress (AYP)	School did not make Adequate Yearly Progress (AYP)	School Made High Growth	School did not Make High Growth
% of Highly Qualified Teachers (HQT)	90%	86%	89%	88%
% of Teachers with 0-3 Years Experience	22%	25%	21%	24%

Source: Adapted from North Carolina’s Revised State Plan for Highly Qualified Teachers (2006) Improving Teacher Quality State Grants. U.S. Department of Education.

<http://www2.ed.gov/programs/teacherqual/hqtplans/nc.pdf> Retrieved December 15, 2013.

Using North Carolina’s data, Table 4 shows that there is a strong relationship between teachers who are highly qualified and student performance in state assessments. Students in schools that had 90% of highly qualified teachers made adequate yearly progress while students in schools that had 86% of highly qualified teachers were more likely not to make adequate yearly progress. When teacher experience was taken into consideration, it can be seen that where a high percentage of teachers had 0-3 years teaching experience, the school did not make Adequate Yearly Progress.

Teachers implement the curriculum and therefore it is worth looking at some literature on the quality of teachers in both societies. Fuller (2001) in a study of Texas schools pointed out that some students may not be taught by well qualified teachers. He added that his study

somewhat confirms the widespread belief that economically disadvantaged and racial/ethnic minority students tend to have less access to qualified teachers than affluent and white students. In general, high-poverty, predominantly African American, and urban schools have lower percentages of properly certified teachers than low-poverty, predominantly not African American, and suburban schools. (P.VIII)

In the USA, there are teacher shortages and the Department of Education produces a list of the shortage areas ( Teacher Shortage Area Nationwide List, 2013) . Thornton (2004) indicates that “In the middle grades, teacher shortages tend to be more severe than other certification levels”( p.6.) and Jeanpierre and Lewis (2007) indicated that “ nationally and locally there have been large numbers of teachers who enter the profession with no teacher education preparation or are asked to teach in subject areas they are not certified in” (p.19) . In their article, Jeanpierre and Lewis describe a program in central Florida designed to

get uncertified teachers certified in mathematics and science called T-MAST given the teacher shortages in mathematics and science. In Nigeria, there are several documented problems in the teaching and learning of English Language Arts, Science and Mathematics at the secondary school level. The first major problem is that of teachers – qualification and teaching quality (Omoniyi 2012; Obiekezie and Timothy 2011). According to Omoniyi (2012), most of the teachers teaching English Language are L2 teachers who were themselves taught by other L2 teachers. Many of these teachers are very familiar with the contrastive analysis method and have not been able to move on to other more constructive methods. Secondly, the textbooks have to be imported making the content not very suitable for use with Nigerian students. Alaba and Adekomi (2012), and Ogunmade (2005) have pointed to some of the problems in teaching science and technology in Nigeria. These include facilities, teaching methods and poor qualification of pre-service students pursuing science education degrees. Ogunmade (2005) found out that although most science teachers in Nigeria were qualified, the teachers did not have appropriate knowledge and skills for teaching “by inquiry and lack opportunity for induction into the profession and for ongoing professional learning and collaboration with colleagues and other professionals on curriculum policy and teaching practice. “ (p167) According to Ogunmade (2005), “Science can be improved by providing sufficient science facilities and equipment; qualified, competent and interested teachers; engaging students in group work; and students being actively engaged in learning.” (p112) In the area of Mathematics, Ali (1989) Ugbe, Bessong and Agah (2010) have both pointed out some problems which include scarcity of teachers, lack of teachers availing themselves to opportunities to upgrade their teaching skills and the general fear by students to take mathematics. Awofala (2012) contrasts the old curriculum and the new universal basic education curriculum, pointing out that the old encouraged traditional teaching which called for memorization of facts while the new is calling for active learning of mathematics.

### Gender Issues

Education For All Goal 5 calls for “Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls’ full and equal access to and achievement in basic education of good quality.” UNESCO 1990. In Nigeria, policies and laws have been enacted to encourage women education. However, there are still problems in the area of women’s education (Etim, 1999, 2013; ) The discussion in this section will present data on gross enrollment ratio for both Nigeria and the USA and then discuss gender related issues. Table 5 gives the Gross Enrollment ratio for secondary education for both Nigeria and the USA. (Gross enrollment ratio is the total enrolment in secondary education regardless of age expressed as a percentage of the population of the official secondary education age)

Table 5 : Gross Enrollment Ratio for Nigeria and the USA 2007-2011

	2007	2008	2009	2010	2011
Nigeria	32	35	39	44	-
USA	95	95	94	93	94

Source: World Bank World Development Indicators- Secondary Enrollment (secondary gross %)

<http://data.worldbank.org/indicator/SE.SEC.ENRR> Retrieved December 12, 2013.

Table 5 above shows that the percentage of secondary aged students registered in secondary school is less than 50 percent for Nigeria and more than 90 percent for USA for the five years. Secondary education in public schools has only recently been made free and compulsory in Nigeria up to the end of junior secondary school ( about age 14-17) while education in public schools is free up to the end of secondary education ( age 17-19) and compulsory in most states up to age 16 in the USA.

Girls education is a human right, provides economic benefits to girls and their families and is an international objective beginning from the Beijing Convention through the current EFA (Birdsall, Levine and Ibrahim 2005) To what extent then do girls have access to education in both countries? Do more boys attend school than girls ? Is the ratio the same or is it different? These are some questions that can be answered comparatively using data from both countries.

Table 6 provides data on ratio of female to male enrolment in secondary education in percentages for 2007-2011.

Table 6 : Ratio of Female to Male Enrolment in secondary education in percentages 2007-2011

	2007	2008	2009	2010	2011
Nigeria	78	85	88	89	-
USA	101	100	101	101	100

Source: World Bank World Development Indicators <http://data.worldbank.org/indicator/SE.ENR.SECO.FM.ZS?page=1>

Retrieved December 12, 2013

Although data shows that more boys are registered in school than girls nationally in Nigeria, a further analysis of data shows there may be regional differences. According to Universal Basic Education Commission (2010), “In JSS, South East recorded the highest GPI of 2.75. This is a clear indication of more girls than boys in schools. Generally, in the southern states there are more girls than boys in schools while there are more boys than girls in schools in the northern states. “

#### Assessment

No Child Left Behind has brought in annual testing of Grades 3 to Grade 10 students in most states. Parts of the Act stipulates the following-

1. States must implement assessments that measure what students know and learn in reading and math in grades 3-8 and at least once in grades 10-12 by 2005-05
2. Each state must develop and administer a science test at least once during the elementary, middle and high school years for the student by 2007-2008
3. Students in grade 4 and grade 8 ( based on state selected sample) will take the NAEP exam each year for purposes of comparison.
4. States must set targets that will lead to the goal of all students reaching proficiency in reading and mathematics by 2013-2014 (Institute of Education Sciences, 2008)

In some states, there have been attempts to tie student achievement in these standardized year end tests to teacher pay. Also student promotion/progress has been tied to these high stakes tests for students in many states especially for those in the elementary and middle grades. Many schools have been closed for lack of adequate yearly progress and the careers of many

teachers and principals have been affected as a result of student performance on these standardized high-stakes tests. The result has been the complaints of teachers teaching to the tests or spending more time on content related to the tests ( Abrams, 2004; Bussert-Webb, 2000) , states lowering the bar in order to allow students perform at the proficiency level (Marchant, 2004) . Johnson and Johnson (2002) reported that high stakes tests disproportionately affected poor and minority children and in their own study, Paris and Urdan (2000) opined that teachers believed that there were too many tests and that these tests are unfair to minority and ESL children. However some studies have pointed to the benefits of high states testing including teachers focusing on instruction, more time spent on core subjects, remediation for failing students and schools and more parental engagement ( Marchant 2004).

In Nigeria, the new Basic education calls for pupils to move directly from Primary 6 to JSS1 without an examination and there will be a final examination (Basic Education Certificate Examination) at the end of JSS 3. Continuous assessment will be the focus since junior secondary 3 is now regarded as Basic education. There is nothing like high stakes testing (for now) and students will face major national tests at the end of Senior Secondary 3

### **Looking Ahead.**

In both countries, the Federal Government plays an important role in educational policy and school reforms because of the power of the Government in regards to funding. However, this role is more centralized in Nigeria given that in the USA, Federal level of funding is at 7 percent of GNP. The United States has had a longer history and therefore has put in place more of the apparatus that has made its educational system more sustainable and an envy of many. Given this, four issues will be discussed in terms of Nigerian education

1. Centralized planning and Federal control
2. Teachers- teacher quality, class size, continued professional development , redesign of the teacher education curricula and reading for all etc.
3. Girls and Women's Education
4. Accountability and the Need for states to develop assessment tests

### **Centralized Planning and Government Control**

Given that there is centralize planning of education, there is the need that accurate data be produced and provided to the public on the state of education in Nigeria yearly. In the past, there has been cases of inaccurate data that may have contributed to the failure/ improper implementation of curriculum reforms. For example, the first attempt at Universal Primary Education suffered from lack of accurate data (Edho, 2009) . He writes that the case may not have changed since “The adverse effects of under funding have led to payment of teachers' salaries in arrears, non-completion of new constructions and provision of incentive for teaching and learning” (p.185) in Delta State Nigeria. Nigeria has set up the National Bureau of Statistics and the UBEC Commission has produced some data. The hope is that like the Institute of Education Sciences in the USA, accurate data that will inform the public and teachers especially will be produced.

## **Teacher Quality**

- a. There will be continuous need to improve the quality of education through the improvement of the quality of teachers. The Federal Government has set the Nigerian Certificate of Education as minimum qualification level for teachers. However, there are still a large number of teachers teaching with only Diploma in Education or Grade 11 teacher certificates.
- b. There may be the need for colleges of education and faculties of education in the universities to redesign curriculum for teacher training in order to adequately prepare prospective teachers for the junior secondary school. The redesign may include additional courses in Adolescent Psychology, teaching methods relevant to 11-14 year olds and field experiences and student teaching more at the junior secondary school level.
- c. Given the importance of literacy in the new Universal Basic Education Act and since literacy has been found to correlate strongly to achievement, there is the need for all prospective junior secondary school teachers to take a course in Reading/Literacy and for practicing teachers to continue to receive continued training in literacy so that they can implement literacy strategies even in the content areas.
- d. Every new curriculum reform calls for professional development for existing teachers who will be the implementers of such curriculum. There will be the greater need in Nigeria for such workshops given the lower number of qualified teachers ( about 75 percent).
- e. There will be the need to reduce class sizes for teachers. The current rate of 1 teacher to 37 students at the junior secondary school level (UBEC, 2010) may be too large for quality instruction. According to a study on Mathematics teaching and learning in the USA (Raytheon 2012) 85 percent of students said they preferred lessons that involved hands-on, interactive activities or computer based. The Universal Basic Education is encouraging these types of classroom activities. However large classes of 37 or more may hamper the implementation of such strategies.

## **Girl's and Women's Education**

Government has instituted several policies related to gender (Federal Ministry of Women Affairs and Social Development 2008; British Council 2012, Table 12 p. 27). However, there is still gender disparity in the education of girls (Etim 2013) In the USA, the current issue is the boy crisis (Anfara and Mertens, 2008; Mulvey 2012), where there are more girls in K-12 than boys and more women graduating from college than men etc. The disparity however still exists in the STEM areas. Nigeria needs to continue the drive to improve the number and access of girls to basic education and improve the number in the STEM areas. According to the British Council (2012) many schools fail to provide a safe environment for girls and other negative factors to girls education include corporal punishment, bullying, humiliation and poor teaching quality (p.vi) Other issues that militate against girls and women education in Nigeria include early marriages and tradition especially in the northern states. All these need to be addressed with policies and programs that make education attractive not only for the children but also for the parents.

## **Accountability and the Need for states to develop assessment tests**

Worldwide, there are many who are pushing for more high stakes testing in the early grades up to grade 12 (Jehlen, 2004; Polesel, Dulfer, Tumbull 2012 ). Many of the literature on high stakes testing will point to the idea that there are both negatives

and positives to the implementation of these standardized tests. On the positive side, studies reported will point to the idea that teachers are forced to focus on what is tested, that such systems work to develop high quality teachers, that these teachers are conscious of good teaching methods and use some of them and that instructional time is well spent. The opponents will dwell on the reliability and validity of these tests, that teachers are teaching to the tests, that other important subjects are crowded out of the curriculum and finally, these tests may lead to higher levels of drop out and may be disadvantageous to minority children and English as a second language learners. Nigeria is currently going on the continuous assessment route with some form of standardized national test at the end of Junior Secondary School 3. The policy may need to be re-considered to include the development of standardized testing at the end of each year of junior secondary school purely for diagnostic purposes. So, instead of it being high stakes, it will allow relevant data to be kept for each student on strengths, gaps in student learning and how and what to remediate during the year or in the next school year by the next teacher. When this happens, teachers also will not just teach what they want but what is important for students. Finally, since the new educational system for grades 1 through 9 is basic education, there is the need to avoid a situation where at the end of junior secondary 3, society does not wake up to find out that students cannot read, write or compute because accountability measures were not set up throughout the earlier years.

## CONCLUSION

The paper began with a comparative analysis of the education provided at the middle years/junior secondary level in the USA and Nigeria respectively. Nigeria in 1977 had adopted the system of education practiced in the USA – the 6-3-3-4 system. The discussion was focused on six broad areas- Planning, grade configuration, Curriculum, Teachers, gender Issues in Enrolment and Assessment. The study found out there were very little similarities in the implementation of education for middle grades and junior secondary school students. In terms of sustainability, in Nigeria, there is the need to revise the curriculum to include more areas/topics that will lead to a greater discussion among students of the concepts engrained in sustainable development. Moreover, there needs to be more in making the curriculum more relevant and open to going to vocational schools.

## REFERENCES

- Abrams, L (2004) Teachers' View of High Stakes Testing: Implications for the Classroom. Policy Brief. Tempe, AZ: Education Policy Research Unit, Arizona State University.
- Alaba, S.O. and Adekomi, B. (2012) Improving Science, Technology and Mathematics Education in Nigeria: A Case Study of Obafemi Awolowo University, Ile-Ife. *World Journal of Education* 2.6:13-19
- Ali, A. (1989) Content Competence Mathematics Attained by Grade II Teacher for teaching Primary School Mathematics. *Journal of Education Studies* 2: 28-43.
- Anfara, V. and Mertens, S. (2008) Do Single –sex classes and schools make a difference? *Middle School Journal* 40,2: 52-59
- Association for Middle Level Education (2005) *Middle School Journal* 37.1 September
- Awofala, A.O.A (2012) An Analysis of the New 9-Year Basic Education Mathematics Curriculum in Nigeria. *Acta Didactica Napocensia* 5.1: 17-27
- Birdsall, N., Levine, R and Ibrahim, A. (2005) *Towards Universal Primary Education: Investments, Incentives and Institutions*. Sterling, VA: Stylus Publishing.

Bussert-Webb, K. (2000) Did my holistic teaching help students' standardized test scores? *Journal of Adolescent and Adult Literacy* 43.6:572-573

British Council (2012) Gender report in Nigeria 2012: Improving the Lives of Girls and Women in Nigeria.

Center on Education Policy (2007) Choices, Changes, and Challenges: Curriculum and Instruction in the NCLB Era. Washington D.C.: Center on Education Policy  
[www.cepstudyjuly2007](http://www.cepstudyjuly2007) Retrieved November 10, 2013.

Darling-Hammond, L. (2000) Teacher Quality and Student Achievement: A Review of state policy evidence. *Education Policy Analysis Archives* 8.1 <http://epaa.asu.edu/ojs/article/view/392/515>

Edho, O.G. (2009). The Challenges Affecting the Implementation of Universal Basic Education (UBE) in Delta State, Nigeria. *Journal of Social Science*. 20.3:183-187.

Etim, J (2013). Gender parity and educational development in Nigeria: an analysis of recent trends. *International Journal of Education Economics and Development*. 4.2:117-132

Etim, J. (1999) Women's Education Nigeria: Improving Trends in James, V and Etim, J. ed. *The Feminization of Development Processes in Africa: Current and Future Perspectives*. Westport, CT: Praeger/ Greenwood Press

Federal Government of Nigeria (2004) Compulsory Free Basic Education Act 2004.  
<http://www.placng.org/lawsofnigeria/node/121> Retrieved December 04, 2013

Federal Ministry of Women Affairs and Social Development (2008) Nigeria-National Gender Policy Strategic Frameworks: (Implementation Plan) Federal Republic of Nigeria 2008-2013. Abuja, Nigeria: Federal Ministry of Women Affairs and Social Development.

Federal Republic of Nigeria (2004) *National Policy on Education*. Lagos, Nigeria: Government Printers.

Feinstein, N (2009). Education for sustainable development in the United States of America. Madison, WI: University of Wisconsin/International Alliance of Leading Education Institutes. Online  
<http://www.k12.wa.us/environmentsustainability/pubdocs/USAreport7-19-09.pdf>  
Retrieved January 20, 2014.

Fuller, E.J. (2001) Inequality of Educational Opportunity: The Distribution of Properly Certified Teachers in Texas. University of Texas. Unpublished PhD dissertation. Ann Arbor, MI: UMI.

Future Ready Project (2012) Basic Facts about K-12 Education in the United States.  
[http://www.futurereadyproject.org/sites/frp/files/Basic\\_Facts\\_About\\_Education.pdf](http://www.futurereadyproject.org/sites/frp/files/Basic_Facts_About_Education.pdf)  
Retrieved December 7, 2013.

Herman, B.E. (2004) The Revival of K-8 Schools. *Phi Delta Kappa Fastbacks*. 519. 3: 7-37

Horgen, J (2004). Teacher Quality, Teaching Quality and School Improvement. *School Administrator* 61.7: 48

Hough, D.L. (2005) The Rise of the 'Elemiddle' School. *The School Administrator* 62.3: 10-11, 13-14

Hungerford, T.L. and Wassmer, R.W. (2004). K-12 Education in the U.S. Economy: Its Impact on Economic Development, Earnings and Housing Values. Washington, D.C: National Education Association.

Imam, H (2012) Educational Policy in Nigeria from Colonial Era to Post-Independence Period. *Italian Journal of Sociology of Education*. 1.: 181-204

Institute of Education Sciences (2008) Exhibit 1-Key provisions of the No Child Left behind Act. Institute of Education Sciences/ National Center for Education Evaluation and Regional Assistance  
[http://ies.ed.gov/ncee/pubs/titleI\\_final/exhibits/exhibit\\_01.asp](http://ies.ed.gov/ncee/pubs/titleI_final/exhibits/exhibit_01.asp).

Retrieved December 5, 2013.

Jeanpierre, B. and Lewis, N, (2007) An Alternative Path to Becoming a Successful Middle Grades Math and Science Teacher. *Middle School Journal* 38.3: 19-24

Jehlen, A. (2004) High Stakes for Planet Earth. *NEA Today* 22.4:38-39

Johnson, D.D. and Johnson, B (2002) High Stakes: Children, testing and failure in American schools. Lanham, MD: Rowman and Littlefield

Kaplan, L.S. and Owings, W.A. (2001) Teacher Quality and Student Achievement: Recommendations for Principals. *National Association of Secondary School Principals, NASSP Bulletin* 85.628: 64-73

Manning, M.L. and Bucher, K.T. (2011). *Teaching in the Middle School* 4<sup>th</sup> ed. New York: Allyn and Bacon

Marchant, G. (2004) What is at Stake with High Stakes Testing: a Discussion of Issues and research 1. *The Ohio Journal of Science* 104.2: 2-7

Mulvey, J. (2012) Feminization of schools: What is happening to our boys? Etim, J. ed. *Essays in Helping Diverse Students Attain Educational Success: When the classroom isn't white and Middle class*. Lewiston, NY: Edwin Mellen Press.

Nwagwu, C. C. (1997) The Environment of Crisis in the Nigerian Education System. *Comparative Education* 33.1: 87-95

Obiekezie E.O. and Timothy, A.E. (2011). Students' Perception of Teacher's Knowledge of Subject Matter and Reading Comprehension Performance of SS3 Students in Cross River state, Nigeria. *Global Journal of Educational Research*. 10.2:105-109.

Obioma, G. (nd) The 9 Year Basic Education Curriculum (Structure, Content and Strategy for Implementation): Nigeria's Experience in Educational Reform. Abuja, Nigeria: NERDC. [http://www.udesa.edu.ar/files/EscEdu/Inclusi%C3%B3n%20Educativa/39%20Godswill%20Obioma%20\(Nigeria\).pdf](http://www.udesa.edu.ar/files/EscEdu/Inclusi%C3%B3n%20Educativa/39%20Godswill%20Obioma%20(Nigeria).pdf)  
Retrieved December 12, 2013.

Ogunmade, T.O. (2005) The Status and Quality of Science Teaching and Learning in Lagos State, Nigeria. Unpublished Ph.D. dissertation, Edith Cowan University, Perth, Western Australia.

Omoniyi, A.M. (2012) Socio-politico- Pedagogical Problems of Language Teaching in Nigeria. *English Language Teaching* 5.5: 31-36

Orji, S.N (2012) The New 9 Year Basic Education Curriculum. Paper presented at a Sensitization and Advocacy Workshop for Teachers in Taraba State held on the 23-24<sup>th</sup> August 2012. Online [http://www.academia.edu/2384801/The\\_New\\_Basic\\_Education\\_Curriculum\\_in\\_Nigeria\\_Power\\_Point\\_Presentation](http://www.academia.edu/2384801/The_New_Basic_Education_Curriculum_in_Nigeria_Power_Point_Presentation)  
Retrieved December 05, 2013.

Orlich, D.C; Harder, R.J; Callahan, R.C; Trevisan, M.S; Brown, A.H; and Miller, D.E. (2013) *Teaching Strategies: A Guide to Effective Instruction*. Belmont, CA: Wadsworth/Cengage Learning.

Pardini, P (2002). Revival of the K-8 School. *School Administrator*. 59.3:6-

Paris, S.G. and Urdan, T. (2000) . Policies and practices of high stakes testing that influence teachers and schools. *Issues in Education* 6.1: 83-107

Petrosino, A ; Morgan, C ; Fronius, T.A ; Tanner-Smith, E.E. and Boruch, R.F (2012). *Interventions in Developing Nations for Improving Primary and Secondary School Enrollment of Children: A Systematic Review*. Oslo, Norway: The Campbell Collaboration

Polesel, J ; Dulfer, N and Turnbull, M (2012)The Experience of Education: The impacts of high stakes testing on school students and their families Literature Review. Penrith NSW, Australia: Whitlam Institute , University of Western Sydney, Australia.

Raytheon (2012) Math Relevance to US Middle School Students: A Survey Commissioned by Raytheon Corporation. New York: Raytheon.

Sanders, W.L; and Rivers, J.C (1996). Cumulative and residual effects of teachers on future student academic achievement. Knoxville, TN: University of Tennessee. Tennessee Value Added Assessment System.

Thorton, H.J. (2004) What Can We Learn About Retaining Teachers from PDS Teachers' Voices? *Middle School Journal* 35.4 :5-12.

Ugbe, AU; Bessong, F.E; and Agah, J.J.(2010). The Mathematics/Science Teachers' Factor in Achievement of the Goal of Universal Basic Education (UBE) *Global Journal of Educational Research* 9,1&2: 41-48

UNESCO (1990) Education for All Goals. <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-all/efa-goals/> Retrieved June 30, 2011

Universal Basic Education Commission (2010) 2010 Basic Education Profile: National and Regional Statistics. Abuja, Nigeria: Universal Basic Education Commission.

US Department of Education (2013) Teacher Shortage Area Nationwide List. Washington D.C." U.S. Department of Education. Retrieved December 12, 2013 <http://www2.ed.gov/about/offices/list/ope/pol/tsa.pdf>

World Bank Group (2001) Social Module. <http://www.worldbank.org/depweb/english/modules/social/index.html>

World Commission on Environment and Development (1987) *Our Common Future*. Oxford: Oxford University Press.

Wyant, C and Mathis, K (2007) North Carolina LEA Study: Middle Grade Configuration and Student Growth. Raleigh, NC: NC Department of Public Instruction.

#### **ABOUT THE AUTHORS:**

James S. Etim: Department of Education, Winston Salem State University, Winston Salem, North Carolina, USA