

## *Factors of female participation in University Education in Nigeria: Policy Direction towards achieving SDG4*

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### **Abstract**

*This study examined the factors that influenced female participation in university education and identified factors that could be monitored and manipulated to enhance participation. The data collected to determine female participation consisted of students proportion admitted into various courses of study in Nigerian universities over four years while those used for regression analysis were collated by states and the FCT. The results of the analyses revealed that female participation*

*rate in university education, based on year, ranged from 44.3% to 46.5% and on the basis of course of study, it oscillated between 13.9% for engineering, technology and environment courses and 56.6% for education. Also, the seven independent variables explained 94.5% of variance in female participation in university education. The results of the study suggest the need to recognise the complexities and range of supports required to enhance female participation in university education and by extension to reduce gender inequalities common in education, politics, and governance and generally in the society. It is recommended among others there is need for policies that will induce more collaboration and interaction among various organs and agencies within and outside the university, particularly those that would ensure inclusiveness of university education and guarantee sustainable development.*

**Key words:** Factors, Female Participation, University Education, Policy direction and Achieving SDG 4

## **Introduction**

Emergence of “inclusive and equitable quality education for all and promotion of lifelong learning” as Sustainable Development Goal Four (SDG4) and the fundamental premise of the Sustainable Development Goals (SDGs) that “no one will be left behind” demonstrate the fact that many people, especially the disadvantaged would have been circumvented, excluded or marginalised in the course of reaching Millennium Development Goals (MDGs). In particular, it was noted that the uneven progress made did not only bypass women but also sidestepped those who were lowest on economic ladder because of their age, disability and ethnicity. Even with the varying levels of achievements. Ban Ki-Moon in 2015 summed it up that inequalities still persist with world’s poor remaining overwhelmingly concentrated in some parts of the world, nearly 60 percent of the world’s one billion extremely poor people living in just five countries and too many women still dying during pregnancy or from childbirth-related complications and disparities between rural and urban areas remaining pronounced (United Nations, 2015).

However, it appears for each of the development indicators assessed, women are worse off. They make up 41 percent of paid workers outside the agricultural sector, 20

percent of parliamentary members, unequal access to work, economic assets and participation in private and public decision-making and have greater tendency to live in poverty than men. In addition, it is on record that women with advanced education have higher rates of unemployment than men with similar levels of education. As a closing remark, it was concluded that the “world today still has far to go towards equal gender representation in private and public decision-making”.

The global picture of unequal gender representation in development activities is reproduced in Nigeria, if not more profound. In the case Nigeria, the imbalance is more to the disadvantage of the female group, even though the country’s Constitution (Federal Republic of Nigeria, 1999) with the National Policy on Education from its enunciation in the year 1977 till now, has been impartial on matter of gender participation in development. Also, the ratio of female to male population of 1:1.03 (National Bureau of Statistics, 2015 & 2016) does not foretell a significant difference as noticed in the economy and polity. That is, females are disfavoured in the scheme of development. For instance, Gross National Income per capita for female was 4,132 while that of male was 6,706 and their respective labour force participation rates were 48.4 percent and 64.0 percent. On governance, women held 5.8 percent of the seats in the parliament and the remainder was held by men. In all, Human Development Index for female was put at 0.483 and that of male at 0.569 (UNDP, 2016). Complimentary statistics on education given by the National Bureau of Statistics in the year 2013 revealed similar pattern. Though, more females than males had pre-primary education (53.6% for female and 46.4% for male) and primary education (54.9% for female and 45.1% for male) as peak of their education, less females than males had secondary education (47.2% female and 52.4 % male) and tertiary education (45.2% female and 54.8% male) as the highest level of education reached.

The discrepancy in educational attainment between female and male populations in favour of male, especially at the secondary and post-secondary education levels possibly explains the low participation of females in governance, judiciary and wider development space. More so, that a high degree of correlation has been found between educational status of individuals, especially females and measures of development. For instance, it is

on record that increased education participation is associated with better health, and more investments in the education and health of children, especially among women and particularly in developing countries (UNDP, 2015).

Again, in many developing countries, especially in Nigeria, females still have poorer educational attainments, especially at the secondary and tertiary levels. Therefore, achieving gender equality in education in these countries will not only promote greater equality in employment outcomes but also help postpone early-marriages, reduce infant mortality rates and improve health and education of future generations. These observations appear evidence based as reflected in extensive literature review by (Santiago, Tremblay, Basri, and Arnal, 2008).

Therefore, the inclusion of SDG4 as a commitment to addressing all forms of exclusion and inequalities in access and participation in education as well as imbalance in learning outcomes is unquestionable and very appropriate. For emphasis, it suggests that making right the imbalances in education would serve as conduit to redressing marginalisation and discrimination against disadvantaged groups in political, economic, social and administrative spheres of the society well as culminate to overall sustainable development. This position is accentuated with prime issues in education making a stand-alone goal (SDG4) and being included as targets under several other SDGs, like those on health; growth and employment; sustainable consumption and production; and climate change (UNESCO, 2016). That is, education is seen as a means of fast-tracking progress towards the achievement of all of the SDGs.

In this wise, reducing gender imbalance, especially in University Education (UE) participation is a step to creating greater economic, political and social opportunities for both men and women as well as engendering sustainable development of a nation that works towards the goal. This is germane as these countries, specially Nigeria, have long history of discrimination against women in social and economic activities with little deliberate effort being made to mitigate it.

Hence, the present study examined the pattern of female participation in university education in Nigeria and identified factors that could be monitored and manipulated to

enhance participation. Perhaps, the study would speak to a target of SDG4: “ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university” and be able to contribute modestly to making education, most particularly university education, universally available and redress gender inequalities that has been persisting, especially at university education level.

## **Methodology**

This is an interpretive case research (Bhattacharjee, 2012) involving collection of data from published documents by the Joint Admission and Matriculation Board in the year 2016 and the National Bureau of Statistics in the year 2015 and 2016. The data collected were systematically collated and analysed to address the objectives of the study by determining pattern of female participation in university education and identifying factors affecting female participation.

### **Procedure for Data Collation**

The data were arranged under two categories: dependent (response) variable and independent (criterion) variable.

#### 1) Dependent variable

*Female Participation:* This was defined as the percentage of female candidates of the total candidates admitted into the universities in Nigeria based on courses or State/Federal Capital Territory. The proportions of female candidates by courses for four consecutive years (2012 to 2015) were calculated to obtain pattern of female participation while that by States/FCT for 2015 was obtained and used as response variable.

#### 2) Independent variables

- i) *Percentage of female with first birth before age 18:* This was considered a proxy of early marriage which has been reported to have indirect relationship to female participation. The data were collated on the basis of States/FCT.
- ii) *Female adult literacy rate:* Adult female literacy rate for each state and FCT was gleaned from the 2016 Report of the National Bureau of Statistics. Besides being an index of nation’s level of development, reports of strong positive relationship

- between adult (female) literacy level and female participation in education are abound.
- iii) *Proportion of poor female*: A measure of economic environment. Computed from the statistics of the poor provided by the National Bureau of Statistics (2016).
  - iv) *Percentage of female student with at least five credits in senior secondary school examination*: Having a minimum of five credits in Mathematics, English and three subjects in senior secondary school examination is a crucial requirement for admission into any Nigerian university.
  - v) *Percentage female mentors in a public sector*: Measured by the percentage of female high court judges in the states and FCT. A self-motivational index.
  - vi) *Percentage of female in employment (self/public)*: Another economic index.
  - vii) *Proportion of female applicants*: Taken as a measure of awareness and interest in university education.

### **Method of Data Analysis**

Descriptive and inferential statistics were used. Particularly, frequency counts and percentages were used to describe pattern of female participation in different courses of study over four years, 2012 to 2014. Multivariate analysis, precisely multiple regression analysis with its family of techniques (Pallant, 2010) was used to explore the relationship between the dependent variable (proportion of female candidates admitted into Nigerian universities by States/FCT in 2015) and the seven independent variables or predictors. For emphasis, the multiple regression analysis was used to indicate how well the set of seven variables was able to predict female participation in UE and specify relative contribution of each of the independent variables to variation in the proportion of female candidates admitted into the universities in the country. are important for several reasons. The statistically significance tests for multiple regression, itself of the individual independent variables were determined at probability levels of less than 0.05 and less than 0.01 with statistically significant estimates being indicated in the tables by asterisks if the probability is less than 0.05 (\*) and less than 0.01 (\*\*).

**Results**

Results of the analyses are presented in tables 1, 2, 3 and 4.

A. Pattern of Female Participation in University Education.

Data and information used to answer the research question on pattern of female in university education (UE) are contained in table 1.

**Table 1: Percentage of Females Admitted into Nigerian Universities by Courses, 2012-2015**

Course	2012	2013	2014	2015	Average
Administration	51.4	49.8	51.5	50.3	50.8
Agriculture	45.5	50.8	49.7	47.7	48.4
Arts/Humanities	53.3	51.6	51.2	52.6	52.2
Education	56.9	53.1	57.8	58.8	56.7
Eng./Tech./Envt.	15.1	14.0	10.5	16.1	13.9
Law/Legal Studies.	50.0	45.6	53.4	54.8	51.0
Med./Medical Rel.	56.5	52.8	54.4	55.7	54.9
Sciences	38.1	38.8	36.0	39.1	38.0
Social Sciences	43.4	42.4	43.1	43.2	43.0
Average	43.8	44.3	45.6	46.5	45.1/.4

**Source:** Joint Admission and Matriculation Board

Table 1 presents proportions of female students admitted into Nigerian universities by courses in the years 2012, 2013, 2014 and 2015. The table reveals a steady increase in the percentage of female candidates admitted into Nigerian universities from 43.8 percent in the year 2012 to 46.5 percent in the year 2015. Also, table 4 shows that the percentages vary with the type of course for which the candidates were admitted. On the average, over the four consecutive years, Education had the highest female students patronage with 56.7 percent, followed by Medicine and Medical Related Courses (54.9 percent), Arts and Humanities (52.2 percent), Law and Legal Studies (51.0 percent), Agriculture (48.4 percent), Science (38.0 percent) and Engineering, Technology and Environmental Courses had the least female students' participation with 13.9 percent (Table 1).

B. Factors that Influence Female Participation in University Education

Multiple regression analysis via associated statistical techniques was used to identify factors that explain variation in female participation in university education. The number of states in the country plus FCT was used as university unit of analysis. The results of the analyses are contained in tables 2, 3 and 4.

**Table 2: Descriptive Statistics**

Variables	Mean	Std. Deviation	N
Birth<18	26.8	20.1	37
Adultlit	61.6	15.4	37
Povertyel	38.6	14.3	37
O/L5Credit	20.9	14.3	37
Femmentor	25.9	15.9	37
EmpLevel	35.8	21.0	37
Applicant	38.1	11.2	37
AdmittedCan	39.2	10.0	37

Sources: 2016 JAMB & 2015/2016 NBS Reports

However, table 2 presents means and standard deviations of both dependent and independent variables. The statistics for each case is a percentage of the group concerned. N stands for the 36 states plus the Federal Capital Territory.

**Table 3: Correlations**

Variables	Bir<18	Adultlit	PovLev	O/L5Cr	FemMent	Employ	Applic	AdmCan
Birth<18	1	-.64**	.44**	-.57**	-.38*	-.73**	-.86**	-.87**
AdultLit		1	-.41*	.72**	.44*	.70**	.72**	.74**
PovLev			1	-.44*	-.26	-.46*	-.38*	-.41*
O/L5CR				1	.50**	.59**	.72**	.72**
FemMent					1	.31	.46*	.47*
Employ						1	.71**	.75**
Applic							1	.97**
AdmCan								1

\*\*P<0.01

\*P<0.05



Table 3 describes the pattern of bivariate correlations among the seven independent variables and the dependent variable-female participation rate in university education. Table 3 shows that female participation is significantly correlated with the entire predictor variable. While first birth before age 18 and female poverty level show significant negative correlations, all other variables show positive significant relationships. Also, besides inter-correlation between female mentors in labour market and poverty level and that between female mentor in labour market and female employment rate that are not statistically significant, all other relations are statistically significant.

**Table 4: Zero-Order Correlations, Beta Coefficients and Summary of ANOVA**

Variables	Zero-Order	Beta Coefficients	Ranking of Beta
Birth<18	-.87**	-.15*	3
AdultLit	.74**	.03	4
PovLev	-.41*	-.02	5
O/L5Cr	.72**	.01	7
FemMent	.47*	.02	6
Employ	.75**	.18*	2
Applicant	.97**	.64**	1
F(6,29)=81.68; P<0.01			
R= .98      R Square=.96      Adj. R Square=.95			

\*\*Significant at the 0.01 level; \* Significant at the 0.05 level

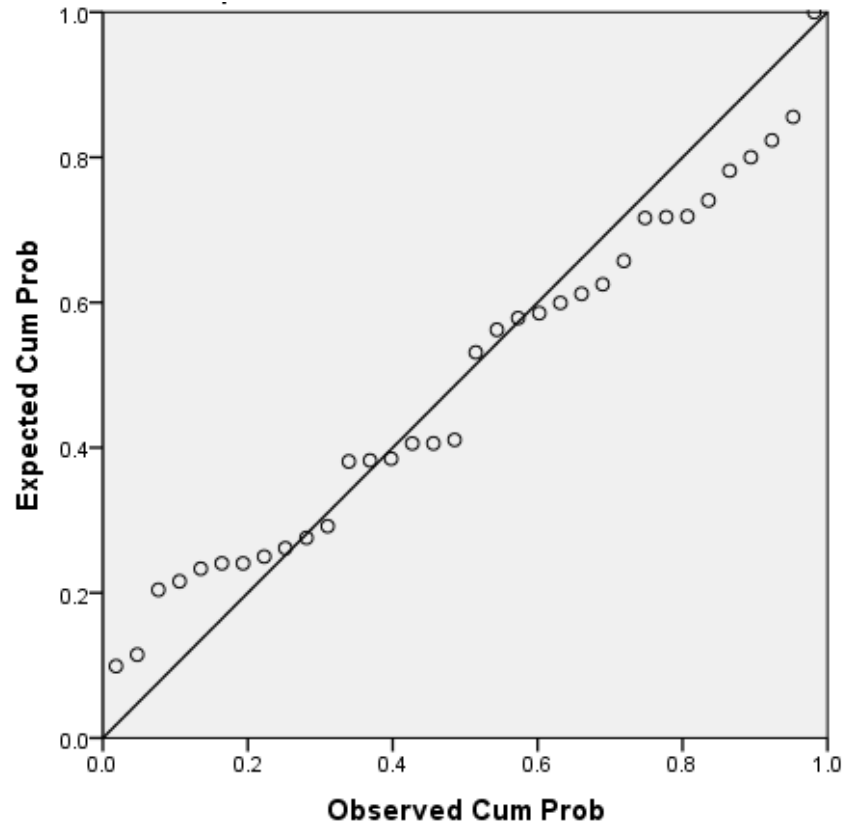


Figure 1: Multiple Correlation Graph

On the account of the zero-order correlation coefficient shown in table 4, each of the independent variables had significant correlation coefficients. However, 'birth before age 18' and 'poverty level' had negative zero-order correlation coefficients, the remainder had positive coefficients. Table 4 also indicates multiple, **R Square** and **Adjusted R Square** University Educations of 0.98, 0.96 and 0.95 respectively. On assessing the statistical significance of the result concerning the relationships (multiple **R**), a F-ratio of 81.7 at probability level of less than 0.01 was obtained (see table4 and figure1).Table 4, in addition, presents contribution of each predictor to 'admission to university education' variance as indicated by the valUniversity Educations of **Standardised Beta Coefficients**. As shown in table 4 (Cols. 3 and 4), the largest beta coefficient is .64 for 'proportion of applicants for university education', followed by .18 (proportion of female in employment), -.15 (first birth below age 18), .03 (female adult literacy rate), -.02 (poverty level among females), .02 (female mentors in labour market), and .01 (Female candidates with at least five credits) in that descending order.

### **Discussion and Policy Direction**

As point of taking off, it is recognised that inclusive or equitable university education has to do with 'access to, participation in and outcomes of' university education. It is also on record and logical to note that fostering inclusive education call to action address of sources of inequalities which include but not limited to 'family socio economic background, gender, immigrants, ethnicity, location, age and disability.' (Santiago, Tremblay, Basri, and Arnal, 2008). Principally, for limitation of data, the present study was limited to participation of females in university education and that is, based on the assumption that gender is a major source of inequality. Also, emphasis is placed on university education as gender differences at primary and secondary education levels seem unpronounced, if not being obliterated at the lower levels (National Bureau of Statistics, 2013).

However, the finding of the present study in table 1 revealed variation in the pattern of participation in university education. It appears it is a reflection of female participation in the society which tends to be stereotypy. The situation in the formal sector is not dissimilar. For about ten years from 1984 to 1993, female participation rates in civilian labour force in Nigeria fluctuated between 34.3 percent and 35.7 (Ifenacho, 2002) and increased steadily to about 40 percent in the year 2016 (World Bank, 2016). Perhaps, percentages the increase in the female labour force participation could be attributed to corresponding increase in women participation in university education about the same period.

In the absence of current statistics, Fajonyomi and Fajonyomi (1995) retrospectively reported that 38 percent of the female workers were employed as sales workers, 28.8 as agricultural workers, 11.5 as service workers, 7.8 percent as professional, technical and related workers, 3.6 percent as clerical and related workers, 3.7 were in unclassified occupations and zero percent in administration and managerial position compared to 43.6 percent of the males being employed in agricultural sector, 18.5 in production industry, 10.3 as sales workers, 8.6 percent as professional, technical and related workers, 6.8 percent in service industry, 5.7 percent in unclassified jobs, 0.6 as clerical and related workers, and 0.5 as administration and managerial workers. The almost equal participation of female in agriculture as a course and in agricultural service might be connected to the lingering perception that both sexes have complementary roles to play when it comes to farming or agricultural production. Mostly however, men do the hard tasks of land preparation, making of ridges and planting of cash crops while the women engage in planting of food crops, transportation, processing and selling of agricultural products (Lawanson, 2008).

This scenario demonstrates the import of role modelling and observation in career choice and vocational interest (Domiya, 2014), and conceivably explains fair representation of females in education and possibly medicines and related courses. Hence, females are found to be appreciably represented in teaching profession, especially at the primary and secondary education levels and in care giving professions, particularly nursing. More,

table 1 tends to present a slight change in gender profile of courses as increasing number of females are being admitted into science, engineering and technical courses. Thus, the implementation of the Nigerian Government's proposal to "ensure continuous gender-focused education programmes by considering policies such as quota- based admission, fees reduction, scholarships and other incentives based on gender" (FME in Oanda and Akudolu, 2010) is long overdue and this will be part of the policy suggestions in the UNESCO reports on STEM (UNESCO, 2017 a & b).

Additionally, going by the experience of Australia in 2000 and UK in 2015 (Universities UK, 2015), time and location are of essence in policy and programme intervention in redressing gender inequality in higher education participation. For instance, in Australia in the 1980s, the odds of participating in higher education were much the same for young men and young women and, in the 1990s the odds of participation/non-participation in higher education for young women were about two times greater than that for young men.. This calls for differential policies with period of time and location in focus. Besides, university teachers and administrators should be called to action to address gender stereotyping. As suggested in an OECD Report (2011), university teachers should consider adopting strategies and materials that raise self-confidence and motivation of both sexes without bias, while administrators should think and act consistently with gender equality principles, particularly in the appointment of women to academic and administrative positions which is presently and grossly lopsided in favour of men (Fajonyomi, Ogungbade, Kolawole, Isarinde and Bolu-Steve; 2016).

Moreover, further analysis revealed statistically significant relationships between the selected predictors and the response variable. In particular, the relationship between 'having first birth before the age of 18 years' and female participation in University Education and the one between 'proportion of female poor' and participation were negative whereas the other independent variables had positive relationships with female participation in university education. The findings are not unexpected. Worthy of note is that the selected predictors explained 94.5 percent (adjusted R-square) of the variance of female participation in university education. This finding clearly indicates all of the

variables and what they stand deserve more attention in effort to enhance female participation in university education and in the bid to foster equity in education at this level.

More so, the zero-order coefficient for each of the independent variable was found to be statistically significant at probability level of 0.01 or 0.05 (table 4). That is, policies should be directed at reducing proportion of young females in the country having their first baby before the age of 18 years and by extension, increasing the age at which young female marry or have their first birth; lessening rate of poverty among female population; ensuring that many more women are employed; guaranteeing that more females are appointed into leadership position; ensuring that many more female students have minimum requirements for admission into the university and motivating increased number of female students to apply for admission into the university would go a long way to boost female participation in University Education and significantly reduce inequality in between both sexes.

Furthermore, studies abound showing close association between adult (parental) literacy level and wards' participation in education (Bingman, Ebert, and Smith, 1999; Aksornkol, 2001; & Matsura, 2009 in Fajonyomi, 2009). Worthy of note is the statement credited to Aksornkol who remarked that *"as the educators of tomorrow's generation of adults, empowering women through (literacy) education creates a ripple effect. It enhances women's life and the life of other members of the family, then spreads out to improve the whole community and finally sets a nation on"*. Policies to beef up the country's adult (female) literacy level should be given serious consideration as against the present lukewarm disposition of government and educational administrator towards adult education in the country (Fajonyomi, 2017).

Also, the finding signifying positive and strong relationship between the proportion of female secondary school leavers with minimum of five credits in the senior secondary school examination and female participation in university education affirms the position that access to and participation in university education could be traced to academic achievement or qualification. Policy or programme intervention could be tri-directional: make provision for standard secondary school so that students are better prepared for the

qualifying examination by their schools; the universities may mount remedial programme; and or introduce deficient students to open and distance learning or extra-mural classes for the remedial programme.

However, inter-correlation coefficients which reflect strength of relationships among the variables, (independent variables especially), presented in table 3, revealed strong relationships between and the variables which insinuate complementality. With the matrix, it is evident that a policy formulated to mitigate the effect of a factor would directly or indirectly touch and influence other related factors. For example, policy designed to redress effect of a factor such as high rate of poverty may also double to address the problem of poor academic achievement in the senior secondary school examination. On the reverse, different policies could be formulated to target a source of low participation. In other words, policies meant to enhance female participation in university education should be all-inclusive.

Without discountenancing contributions of other variables to variation in the rate of female participation in University Education, as shown by the beta coefficients, the contributions of 'percentage of female applicants', 'percentage of female in employment', and 'proportion of female having their first birth before the age of 18 years', in that order of importance, stood out as their beta coefficients were statistically significant (table 4). On the significant contribution of percentage of female applicants, different policy options may be considered. As suggested by Oanda and Akudolu (2010), it may require universities forging linkages with secondary schools, developing programmes for enhancing girls' participation in science and mathematics and enhance mentoring and academic advising to increase the rates of female participation and completion, especially in science and mathematics based programmes.

Again, the positives statistically significant contribution of 'proportion of female in employment' to female participation variance portends that as the number of females in self and public employment increases the higher the percentage of female candidates admitted into Nigerian universities with all things being equal. This finding is logical and

realistic. But, the current position where about 36 percent of women are in self and public employment, 26 percent serving as Judges in the High Courts all over the federation and about 5.5 percent are in Parliament is unpromising and needs political resolution. Also, if the observation made by Okafor, Akinwale and Doyin-Hassan (2007: 241) '*that more women than men were not gainfully employed and the few women employed were paid lower than their male counterparts in the same profession*' still persists, policy to improve the position of female in employment is urgently desirable.

Perhaps, governments at various levels in the country would have to visit and consider provisions of the RIO Summit on Advancement of Women of 1992, Beijing Platform for Action of 1995, the Johannesburg's World Summit on Sustainable Development of 2002, the present 2030 Sustainable Development Goals and similar initiatives to fashion comprehensive policies that will address all forms of gender inequality. Even, advice by OECD (2011) to developing countries facing similar situation as Nigeria may be helpful. Predominantly, the Organization, among others, suggested that government should ensure that employment conditions and job quality need to improve so that women can maximise their productivity, earn a living wage, and have access to maternity leave, sick pay and other forms of social protection; invest in physical and social infrastructure that will help to reduce time spent on unpaid work and thus help women access labour markets as well as formulate policies to improve women's access to, and control over, assets and new technologies. Possibly, this implies that the families, communities, mass media, schools and other social institutions should be encouraged to provide relevant and quality social education and training (Ambali & Fajonyomi, 2015).

In general, the outcomes of this study raise the importance of tangential policy is University Educations related to guidance and counselling, quality education and collaborative research. First, it appears the idea that everyone needs guidance and counsel all most all the time (Balami and Fajonyomi, 1997) is evident. On that the authors proposed what could be tagged intergenerational-lifelong guidance and counselling. This is close to a description given in the 2004 OECD Report on career guidance as provision of guidance and counselling services throughout the lifespan: for young people; for adults;



and for the “third age” and in a wide range of settings: compulsory schooling; upper secondary education; tertiary education; community settings; public employment services; and the workplace.

In recognition of the changing face of tertiary education – expanded participation; increased diversity, choice and competition – and challenges posed, the report suggested group guidance; self-help technique university educations; the use of community members to deliver parts of programmes; the creation of open access resource centres; the wider use of support staff; outreach methods and use of ICT in providing guidance and counselling services, especially in the provision of information to raising people’s self-awareness and improving their decision-making.

Besides, any plan to encourage participation in a programme must factor in relevance and quality conditions. For relevance, potential participant must see that a programme such as university education has bearing on or significance for real-life matters, especially for their livelihood. Also, quality education portends that the graduates of the universities are effectively trained and sufficiently equipped with knowledge, soft and hard skills, value University Educations and attitudes that will enable them to contribute to national development; promote and encourage scholarship, entrepreneurship and community service; forge and cement national unity; be self-reliant and ready for the world of work, and; promote national and international understanding and interaction (Federal Government of Nigeria, FGN, 2013).

Next, is to translate this goal as well as others into action as quality of university education in the country has been under attack recently (Okebukola, 2005; Ipaye, 2007, to mention the two). As matter of quality education, including university education, underpins the chance of achieving SDG 4 and the Vision 2030, it should be treated with all seriousness. Therefore, policies on subject of relevance and quality of education in the light of fostering gender equality and promotion of female participation in university education should focus on strengthening inputs, processes and evaluation of outcomes and mechanisms to measure progress; ensuring that all personnel including administrators, counsellors, instructional technologists, teachers, and educators are empowered,

adequately recruited, well trained, professionally qualified, motivated and supported within well-resourced, efficiently and effectively governed systems; certifying acquisition of knowledge, skills, attitudes and University Educations needed for living in their immediate and remote environments (UNESCO, 2016); and, encouraging cross-border participation of students and academics.

Scrupulous consideration of the SDG 4 and pervasiveness of gender inequalities with discourse on lifelong education and learning, call for innovation and creativity in learning delivery. Nigerian experience has clearly shown that numerical increase in the number of universities with expansion of carrying capacity of existing universities has not obliterated gender differences in university participation. For emphasis, the number of universities in the country increased from 16 in 1980 to 152 in 2017 (National Universities Commission, 2017) and of 1,428,379 applicants to the universities only 29.1 percent could still be offered admission with less than 50 percent being female (Joint Admissions and Matriculation Board, 2016).

In other words, over reliance on conventional learning delivery through extant conventional universities may not be very helpful. Recourse may be found in establishing independent e-learning (open-distance/ virtual) universities or current universities being allowed to run on dual-mode basis, hoping that barriers to accessing university education, especially by prospective female students could be broken (Bhola, 2007; Boshier, 2007; and Jegede, 2017). More, establishment of the single or dual-mode universities, would apart from widening access to equitable university education, promote lifelong learning opportunities for irrespective of gender and other differences (Akinkugbe, 2005 and Fajonyomi, 2008 & 2017).

## **Conclusion**

The present study underscores a fact that policies geared towards enhancing female participation and promoting gender equality in education, especially university education should be multipartite, involving governments at various levels, social and economic institutions and the universities themselves. Among others, deliberate and implementable

policies and legislations on admission, employment, subsidizing costs of university education, provision of compensatory education that guarantees lifelong learning are supported by the outcomes of this study. In addition, it is advised that such policies should be developed across a range of possible partners, including different levels of government, international institutions, social partners, and community organisations and civil society, about the self, about education and training opportunities and about occupations. Last but not the least take-away lesson from the present study is that first thing in addressing the University Education of gender inequalities in education, especially in university education, is to assess the level and basis of the problem through a well-conceived and carefully executed research with collaboration across disciplines and boundaries. The outcomes of such study will suggest actionable policies to be formulated.

## References

- Ambali, T.T. & Fajonyomi, A. A. (2015). Relationship between economic status of members of community based associations and their level of participation in development projects in Kwara state, Nigeria. *Centrepoint Journal (Humanities Edition)*. 18(2), 1-14.
- Akinkugbe, O. (2005). University education in Nigeria: pain, paradox, and panacea. In, M. Jibril (Ed.), *Perspectives and reflections on Nigeria higher education* (pp.73-86). Ibadan: Spectrum Book, Ltd.
- Balami, Y. G. & Fajonyomi, M. G. (1997). Counselling in adult education in Nigeria in the twenty-first century: Matters arising. In, A. A. Fajonyomi & I. Biao (Eds.), *Policy issues University Educations in adult and community education*, (pp. 80-96). Maiduguri: Mainasara.
- Bhattacharjee, A. (2012) *Social science research: Principles, methods, and practices*. Text books collection. Book 3. Retrieved on 05-02-2015 from [http://scholarcommons.usf.edu/os\\_textbook/3](http://scholarcommons.usf.edu/os_textbook/3)
- Bhola, H. S. (2007). Access to education: a global perspective. In, A. Oduaran & H.S. Bhola (Eds.) *Widening access to education as social justice* (pp. 44-68). Netherlands: Springer.
- Boshier, R. W. (2007) Widening access by bringing education home. In, A. Oduaran & H. S. Bhola (Eds.) *Widening access to education as social justice* (pp.44-68).

Netherlands: Springer.

Carr, D. (2004). *Improving the health of world's poorest people*. Washington, D. C: PRB.

Domiya, A. (2014) *Relationship between career choice of undergraduate students and parental preference in the University of Maiduguri, Nigeria*. Unpublished Ph.D. Thesis. University of Maiduguri, Nigeria.

Fajonyomi, A. A. (2008). Access, equity and quality of education in Nigeria: a discovery response. In, I.A. Njodi, A. A. Fajonyomi, & Bulama, K. (Eds.) *Equity, quality and access to education in Nigeria: problems and the way forward* (pp. 1-15). Maiduguri, Nigeria: University of Maiduguri, Faculty of Education.

Fajonyomi, A. A. (2008). *Women in development initiatives: Seven-point agenda in focus*. Maiduguri, Nigeria: University of Maiduguri, Faculty of Education.

Fajonyomi, A. A. (2009). *Participation of disadvantaged groups in Nigeria universities: Future policies and research thrusts*. Maiduguri: University of Maiduguri, Faculty of Education Publication.

Fajonyomi, A. A. (2017). Overview of Nigeria educational system, lifelong education and national development. *Unilorin Journal of Lifelong Education*. 1(1). In press.

Fajonyomi, M. G.; Ogungbade, O. K.; Kolawole, A. P.; Isarinde, J.O.; & Bolu-Steve (2016) *Gender imbalance in leadership position in the University of Ilorin: Implications for Counselling*. The Counsellor. In press.

Fajonyomi, M.G. (2017). *Counselling, unemployment and entrepreneurship skills in Nigeria*. Keynote address delivered at the 2<sup>nd</sup> National Conference of the Department of Guidance and Counselling, IBB University, Nigeria.

Federal Government of Nigeria (2013). *National Policy on Education*. Abuja: NERDC

Federal Republic of Nigeria (1999). *1999 Constitution of the Federal Republic of Nigeria*. Abuja: Nigeria.

Ifeanacho, M. (2002). Women education and self-reliance in Nigeria. In, Okeke, E. C. (Ed.) *Sociology of Education: Concepts & applications* (pp.213-229). Owerri: Springfield Publishers Ltd.

Ipaye, B (2007). *Reforms in higher education in Nigeria. Considering the ethos and ethics*

*of Academia*. Keynote address delivered at the 2007 Annual Conference of the Faculty of Education, University of Maiduguri, September 27, 2007.

- Iweagu, H. (2012). *The determinants of labour force participation among women in Nigeria*. M.Sc. Dissertation, University of Nigeria. Retrieved from [www.unn.edu.ng/publications/files/images/IWEAGU HELEN E.pdf](http://www.unn.edu.ng/publications/files/images/IWEAGU_HELEN_E.pdf) (Accessed 18<sup>th</sup> August, 2018)
- Jegede, O. (2017). *Introduction to fundamentals of ODL policy: Overview, challenges and beliefs*. July 2017 Workshop organised by COL and NOUN RETRIDAL with NUC, NOUN Headquarters, Abuja.
- Joint Admissions and Matriculation Board (2017). *JAMB Statistics, 2010-2016*. [www.jamb.gov.ng/Statistics.aspx](http://www.jamb.gov.ng/Statistics.aspx)
- Lawanson, O. I. (2008). *Female labour force participation in Nigeria: Determinants and trends 2008* Oxford Business and Economic Conference. Retrieved from [www.gcbeus/2008\\_OBEC/data/Olukemi T. Lawanson.doc](http://www.gcbeus/2008_OBEC/data/Olukemi T. Lawanson.doc) (Accessed 18<sup>th</sup> August, 2018)
- Marks, G.; Fleming, N; Long, M.; & McMillan, J. (2000). *Patterns of participation in 12 year and higher education in Australia: trends and University Educations*. LSAY Research Reports. Longitudinal surveys of Australian youth research report; n. 17. Retrieved from [http://research.acer.edu.au/lsay\\_research/666](http://research.acer.edu.au/lsay_research/666) (Accessed 18<sup>th</sup> August, 2018)
- National Bureau of Statistics. (2013). *Annual Abstract of Statistics*. Retrieved from [www.nigerianstat.gov.ng](http://www.nigerianstat.gov.ng) (Accessed 18<sup>th</sup> August, 2018)
- National Bureau of Statistics. (2015). *Annual Abstract of Statistics*. Vol. 1. Retrieved on from [www.nigerianstat.gov.ng](http://www.nigerianstat.gov.ng) (Accessed 18<sup>th</sup> August, 2018).
- National Bureau of Statistics. (2016). *National Social Statistics Report 2016*. Retrieved from [www.nigerianstat.gov.ng](http://www.nigerianstat.gov.ng) (Accessed 18<sup>th</sup> August, 2018).
- National Universities Commission (2017). *Statistics*. [nuc.edu.ng/statistics](http://nuc.edu.ng/statistics) Oanda, I. & Akudolu, L-R. (2010). addressing gender inequality in higher education through targeted institutional responses: Field evidence from Kenya and Nigeria. In, S. O'hara (Ed.), *Higher education in Africa: Equity, access and opportunity*. New York: Institute of International Education.

- OECD (2004). *Career guidance and public policy-bridging the gap*. Retrieved from [www.oecd.org/edu/innovation-education/3405171.pdf](http://www.oecd.org/edu/innovation-education/3405171.pdf) (Accessed on 17<sup>th</sup> February, 2018)
- OECD (2011). *Education at a glance 2011: OECD indicators*. Retrieved from OECD Publishing. <http://dx.doi.org/10.1787/eag-2011-en> (Accessed on 17<sup>th</sup> February, 2018)
- Okafor, E. E.; Akinwale, A. A. & Doyin-Hassan, A. (2007). *Feminisation of underdevelopment in Nigeria: some theoretical University Educations*. *Anthropologists*, 9(3), 237-245.
- Okebukola, P. (2005). *Quality assurance in teacher education*. Ilorin, University of Ilorin: Committee of Dean of Education of Nigerian Universities.
- Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS*. 4<sup>th</sup> Edition. Australia: Allen & Unwin Book Publishers.
- Santiago, P.; Tremblay, K.; Basri, E.; & Arnal, E. (2008). *Tertiary education for knowledge society* (Vol. 2). Australia: OECD Publications.
- United Nations (2015). *Millennium Development Goals Report- Summary*. Retrieved from MDG.2015 summaryweb\_english.pdf (Accessed on 17<sup>th</sup> February, 2018)
- UNDP (2015). *Sustainable Development Goals*. Retrieved from [www.undp.org/sustainabledevelopment/](http://www.undp.org/sustainabledevelopment/) (Accessed on 17<sup>th</sup> February, 2018).
- UNDP (2015). *Human Development Report 2015*. Retrieved from [Hdr.undp.org/sites/](http://Hdr.undp.org/sites/) (Accessed on 12<sup>th</sup> December, 2018)
- UNESCO (2016). *Education 2030: Incheon Declaration and framework for the implementation of the Sustainable Development Goal 4*. [unesdoc.unesco.org/images/0024/002456/245656e.pdf](http://unesdoc.unesco.org/images/0024/002456/245656e.pdf)
- UNESCO (2017). *Closing the gender gap in STEM: Drawing girls and women into science, technology, engineering and mathematics*. Retrieved from [unesdoc.unesco.org/images/0024/002457/245717e.pdf](http://unesdoc.unesco.org/images/0024/002457/245717e.pdf) (Accessed on 31<sup>st</sup> August, 2018)
- Universities UK (2015). *Patterns and trends in UK higher education 2015*. Retrieved from [www.universitiesuk.ac.uk](http://www.universitiesuk.ac.uk) (Accessed on 20<sup>th</sup> August, 2018)

World Bank (2015). *2015 World Population Data Sheet with focus on women empowerment*. Retrieved from 2015-world-population-data-sheet\_eng.pdf (Accessed on 11<sup>th</sup> September, 2018)