

ANALYSIS OF 60:40 RATIO ADMISSION POLICY IMPLEMENTATIONS FOR SCIENCE AND ARTS RELATED COURSES IN KWARA STATE TERTIARY INSTITUTIONS

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Abstract

This study analysed 60:40 ratio admission policy implementation for science and arts related courses in Kwara State Tertiary Institutions between 2011 - 2016 academic sessions. Content Analysis Research Design Approach (CARDA) was adopted for the study. The population and sample of the study comprised of Thirty-Six Thousand Two Hundred and Eighty-Seven (36287) candidates offered admission for five academic sessions (2011-2016) was used. Five research questions were raised. The results of the study revealed that total percentage of 48.35% candidates offered admission into Kwara State tertiary institution were in the area of science related courses as against 51.65% offered admission in the area of art related courses. This fall short of 60% policy in favour of science courses as against 40% in favour of art courses by the Federal Government of Nigeria through the National Policy on Education (NPE, 2004). It is recommended that admissions into science related courses in tertiary institutions in Kwara State should be highly improved by the management of the institutions. Also, secondary school science should be greatly improved in the state in order for the students to pass terminal examinations which would gained them admission into the tertiary institutions to study science related courses.

Keywords: Admission Policy, Analysis, Implementation, Ratio, and Science

Background

Today the significance of science in human life cannot be over emphasized science is found everywhere, it make our life more secure, simple and convenient than it used to be. Science and Technology however plays an important role in safeguarding human life. For example, in natural calamities, Science and Technology helps in timely prediction of events to help prevent disasters. On the other hand, science help generate new inventions in the areas of medicines, antibiotics and vaccines and so on to tackles diseases and much more (Bajah, 2010). We all accept that science has changed the world we live today with scientific experiments, researches, innovation, and inventions. Indeed, its series of discoveries has helped understand the nature of the world and has improved it for the betterment of the society (Akpan, 2010).

According to Bajah, (2010), it is critically important that the nation's work force attain and maintain a state of technological and scientific readiness that will enable it to thrive in the global economy. Nigerian educational system prioritized Science and Technology education with policies that are favorably disposed to Science and Technology Education.

Science and Technology are very important tools in the development of any nation, it is in view of this that Ukeje (2011) observes that without mathematics which is an aspect of science there will be no science, without science there is no modern technology and without modern technology there is no modern society. In other words, mathematics is the precursor and the queen of science and technology and the indispensable single element in modern societal development (Akpan, 2010). So, if any nation must develop, the study of

science, technology and mathematics should be given adequate attention in the various levels of her education. Nigeria as a developing nation appears to have been prepared to resolve the issue of developments in science, technology and mathematics through her policy on education. The policy provides for a 60:40 admission ratio implementation in the tertiary institutions in favour of Science, Technology and Mathematics education particularly in conventional Universities and Colleges of Educations (FGN, 2004). While it provided for not less than 80% in Universities of Technology (National Policy on Education, 2004).

However in this study the researcher adopted 60:40 admission policy of the University for Tertiary Institutions because JAMB registrar in his speech delivered at the workshop for all Head of Tertiary Institutions in Nigeria (Tunde, 2016). He stated that admission into tertiary institutions will be based on National Policy Education.

This raises the need for strict implementation of the 60:40 admission ratio policy, Also supported by Yusha'u, Wushishi and Umar (2008). According to them, implementation of 60:40 has not been effectively implemented. According to Coombs, (2009), female participation and interest in STM diminishes as they move up in the educational ladder towards the university level due to a variety of factors that are primarily rooted in their religious and cultural beliefs surrounding the role of women in the society. Consequently, gender is considered as a moderating variable in this study.

Statement of the Problem

The Federal Government of Nigeria in an effort to bridge the educational gap between the states introduced some educational polices which includes: The quota system, catchment area and in the National policy on Education (NPE) the 60:40 ratio admission policy (NPE, 2004). In the North Central region there has been low number of Science and Technology Education professionals with Kwara state having the lowest number of professionals in the region, (Olabode, 2015). According to Babatunde (2014) Kwara state has low and unqualified professionals like Medical Doctors, Pharmacists, Engineers, Nurses, Science and Technology Education teachers which make one wonder if the 60:40 ratio admission policy in favour of science related courses are strictly adhered to and its impact felt in the society.

The study would contribute to existing literature on science and Technology which could have positive impact on the Nation economic development. This research will therefore investigate the implementation of 60:40 ratio admission policy for Science and Arts related courses in Kwara state tertiary institutions. Including gender as moderating variable could yield valuable information on woman participation in science.

Aim and Objectives of the Study

The aim of this study is to analyse the implementation of 60:40 ratio admission policy into science and Arts related courses in Kwara State tertiary institutions. It strives to achieve the following objectives:

- (i) To determine the extent to which 60:40 ratio admission policy for science and arts related courses in kwara state tertiary institutions have been implemented.
- (ii) To determine the difference between male accesses to science related courses and male access to arts related courses in Kwara State tertiary institutions.
- (iii) To determine the difference between female access to science related courses and female access to arts related courses in Kwara State tertiary institution,
- (iv) To examine the difference between male access to science related courses and female access to Arts related courses in Kwara state tertiary institution?.

Research Questions

The following research questions were addressed in the study:

- (i) What is the extent of implementation of 60:40 ratio admission policy into Science related courses and Arts related courses in Kwara state tertiary institutions.
- (ii) Would there be difference between male access to Science related courses and male access to Arts related courses in Kwara state tertiary institutions.
- (iii) Would there be any difference between male access to Science related courses and female access to science related courses in Kwara state tertiary institutions?
- (iv) Would there be any difference between male access to science related courses and female access to Arts related courses in Kwara state tertiary institution?..

Methodology

The research design employed for this study is Content Analysis Research Design Approach (CARDA). This is a technique that enables researcher to study human behaviour in an indirect way, through an analysis of their communications. Text books, Essays, Newspapers, Novels, Records, Magazines, Articles, Cook books, Songs, Political speeches, Advertisements, Picture and in fact the contents of virtually any type of communication can be analysed (Jack and Norman, 2000). The population of the study will consist of all the candidates offered admission in Kwara state tertiary institutions for the period of five academic sessions (2011/2012 - 2015/2016) which is Thirty-Six Thousand, Two Hundred and Eighty-Seven candidates (36287) (KWSTIAU,2018). Admission placements list was used as research instrument.

Method of Data Collection

The researcher collected letter of introduction from the department (Science Education, Federal University of Technology Minna) to various tertiary institutions in Kwara State. On arrival at the tertiary institutions the researcher went to the various tertiary institutions registrar`s office to introduce himself and he was asked to apply for what he wanted and state clearly how he wanted it. This was done and admission placement lists of all the tertiary institutions concerned were obtained in Kwara State. Simple percentage method was used to determine the overall placements based on science and Arts courses and gender access to science and Arts related courses in Kwara state tertiary institutions.

Results

Research Question one: What is the extent of implementation of 60 - 40 ratio admission policy into Science related courses and Arts related courses in Kwara State Tertiary Institutions?

Table 1: Percentage Distribution of Admission Placements for Science related courses against Arts related courses in Kwara State Tertiary Institutions.

Sessions	Sciences	Arts	Total	%Science	%Arts	Total
2011/2012	1998	2447	4445	44.95	55.05	100
2012/2013	2465	3352	5817	42.38	57.62	100
2013/2014	2284	2828	5112	44.60	55.40	100
2014/2015	4109	3687	7796	52.71	47.29	100
2015/2016	4083	3646	7729	52.83	47.17	100
Total	14939	15960	30899	48.35	51.65	100

Source: Kwara State Tertiary Institutions Admission Units, (KWSTIAU, 2018)

Table 1 is the percentage distribution of admission for science and arts related courses in Kwara state tertiary institutions. The total percentage of 48.35 % candidates admitted into

Kwara state Tertiary institutions were in the area of Science related courses as against 51.65% admitted in area of Arts related courses. This fall short of 60% Policy in favour of Science courses as against 40% in favour of Arts courses by the Federal Government of Nigeria through the National policy on Education.

Research Question Two: Would there be difference between male access to science related courses and male access to art related courses in Kwara state tertiary institutions?

Table 2: Percentage Distribution of Admission Placements for male access to Science related courses against male access to Arts related courses in Kwara state Tertiary institutions.

Sessions	Male Sci.	Male Arts	Total	% Science	% Arts	Total
2011/2012	945	834	1776	53.21	46.79	100
2012/2013	1189	1316	2505	47.47	52.53	100
2013/2014	1022	1158	2180	46.88	53.12	100
2014/2015	2340	1664	4004	58.44	41.56	100
2015/2016	2098	1654	3752	55.92	44.08	100
Total	7594	6626	14220	53.41	46.59	100

Source: Kwara state Tertiary Institutions, Admission Unites, (KWSTI, AU, 2018)

Table 2 is the percentage distribution of admission for male access to science and arts related courses in Kwara state tertiary institutions. It indicated that total percentage of 53.40% of male students admitted into Kwara state tertiary institutions study science related courses as against 46.60% Arts related courses during the period of five academic sessions under study. This means that the policy of 60:40 admission policy is not properly implemented.

Research Question Three: Would there be any difference between male access to science related courses and female access to science related courses in Kwara state tertiary institutions?

Table 3: Gender gap in the Admission placements in Science related courses in Kwara state Tertiary Institutions

Sessions	Male Science	Female Science	Total	%Male Sciencs	%Female Science	Total
2011/2012	1184	847	2058	57.53	42.47	100
2012/2013	1639	1209	2848	57.55	42.45	100
2013/2014	2166	1442	3608	60.03	39.96	100
2014/2015	2941	1880	4821	61.00	39.00	100
2015/2016	2453	2005	4456	55.05	44.95	100
Total	10383	7408	17791	58.36	41.64	100

Source: Kwara State Tertiary Institutions, Admission Unites, (KWSTI, AU, 2018)

Table 3 is the percentage distribution of admission for gender in science related courses in Kwara state tertiary institutions. It shows that the total percentage of 58.36% males gained access to Science related courses as against 41.64 % female access to Science related courses in Kwara state Tertiary Institutions. This indicated a considerable gender gap in terms of access to science related courses in Kwara state tertiary institutions. The gender gap is in favour of male students.

Research Question Four. Would there be any difference between male access to science related courses and female access to art related courses in Kwara State tertiary institutions?

Table 4: Percentage Distribution of Admission Placements for male access to science related courses against female access to Arts related courses in Kwara state Tertiary institutions.

Sessions	Male Sci.	Female Arts	Total	% Male Science	%Female Arts	Total
2011/2012	945	874	1819	51.95	48.05	100
2012/2013	1189	1209	2398	49.58	50.42	100
2013/2014	1022	1442	2464	41.48	58.52	100
2014/2015	2340	1880	4220	55.45	44.55	100
2015/2016	2098	2005	4103	51.13	48.87	100
Total	7594	7410	15004	50.61	49.39	100

Source: Kwara state Tertiary Institutions, Admission Unites, (KWSTI, AU.2018)

Table 4 is the percentage distribution of admission for male access to science and female access to arts related courses in Kwara state tertiary institutions. The table shows that the total percentage of 50.61% males gained access to science related courses as against 49.39% female access to art related courses in Kwara State tertiary institutions.

Discussion

The percentage distribution of admission placements for science related courses in Kwara State tertiary institutions indicated that 48.35% gained access to science related courses as against 51.65% arts related courses. This fall short of NPE guidelines quoted by JAMB registrar in his speech delivered at the workshop for all Head of Tertiary Institutions in Nigeria (Tunde, 2016). He stated that admission into tertiary institutions will be based on National Policy on Education (NPE).60-40 ratio in favour of science. This policy has been proved otherwise by this study.

The percentage distribution between male access to science related courses and male access to arts related courses in Kwara State tertiary institutions shows that 53.40% males gained access to science related courses as against 46.60% male access to arts related courses. This contradict the work of Abdurahaman, Adisa and Raji (2012) which indicated that male access to arts related course is more than male access to science related courses. This variation may be as a result of many institutions considered by the researcher.

The percentage distribution between male access to science related courses and female access to science related courses in Kwara State tertiary institutions shows that 58.36% males gained access to science related courses as against 41.64 female access to science related courses. This indicated a considerable gender gap in terms of access to science related courses in Kwara State tertiary institutions. Earlier, Faloke (2012) had observed, that we cannot hope to develop as a nation and be self-reliant with other people's science and technology. We must develop our own in order to be self-reliant. Hence the current emphasis in university admission is in favour of STM. It is common knowledge today that university enrolment in STM appears to favour the males more than the females. This tends to agree with the findings of Uhumuavbi (2009) that significant differences exist between male and female enrolment in STM in Nigerian universities. They however, did not find any definite trend or pattern in the enrolment: Coombs (cited in Aguele and Uhumuavbi, 2009) observed that gender differentials in enrolment and achievement in higher education is invariably rooted in inequality at the primary and secondary levels where the real sorting out of University bound students take place. According to (Coombs, 2009) female participation and interest in STM diminishes as they move up in the educational ladder towards the university level due to a variety of factors that are primarily rooted in their religious and cultural beliefs surrounding the role of women in the society.

Conclusion

The conclusion arrived at from the findings of this study is that there are gender gaps in terms of access to science education in Kwara state tertiary institutions. The Government guideline through National Policy on Education (NPE) on 60-40 ratio for admission in favor of science has not been met in Kwara state tertiary institutions and a lot of factors could be responsible. The gender gap in access to science education is quite significant in terms of their differences.

Recommendations

It is recommended that admissions into science related courses in tertiary institutions in Kwara State should be highly improved by the management of the institutions. Also, secondary school science should be greatly improved in the state in order for the students to pass terminal examinations which would make them admissible into the tertiary institutions to study science related courses.

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