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# Plagiarism and Ethical Issues in Academic Research in Tertiary Institutions in South–South

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#### ABSTRACT

Plagiarism and ethical issues are major threats to research integrity in educational research in Nigeria. The study aimed at discovering the nature of plagiarism and ethical issues that are plaguing research integrity in Nigerian tertiary institutions. The study employed descriptive quantitative survey design to prosecute the investigation. The population of the study will comprised lecturers in the Colleges of Education, Polytechnics and the Universities in the South –South states of Nigeria. The sample was drawn from three higher institutions from selected three states, using stratified sampling technique. Data analysis was done using various software for: Descriptive analysis, One-way analysis of variance (ANOVA), Confirmatory factor analysis, multiple regression analysis and structural equation modeling (SEM). The results brought to the fore various forms of plagiarism and other ethical issues in educational research considered as threat to research integrity in the educational system. Recommendations were made based on the findings that would offer pragmatic solutions to the problems.

Keywords: Plagiarism, Ethical Issues, Academic, Research, Tertiary Institutions, Integrity, 21stCentury, Educational System

## Introduction

Research in higher institutions in Nigeria has been bastardized by plagiarism and ethical issues leading to a threat to the integrity of academic research, society's advancement and development in the 21st century. Tertiary institution is synonymous with research. Higher institutions are believed to be research oriented and research focus. Higher institutions were established to develop research knowledge and mindsets to bring about development and dynamic society. Research literacy is a means of bringing about knowledge, new ideas, understanding for phenomenal or evidence based solution to real life problems. Research is needed in every facet of human endeavour and for a proactive society with new ideas for solving problems. The development and advancement of any society as well as institutions within the society are products of reliable and valid researches.

The increase of plagiarism and unethical issues in the research institutions are in the rise with little or nothing done to check the escalation. Olutola(2014) remarked that the rate at which university students involved in various acts of plagiarism has been a matter of central concern to academics and university management over the last decades in Nigeria. Ramzan, Munir, Sidique and Asif (2011) opined that the varieties of empirical and ethical issues are on the rise in academic environment. Specifically, plagiarism is almost becoming part of the global educational and research culture. Guo (2011) expressed that plagiarism has raised great concern within Uk's higher education sectors over some past decades. Samuel and Blast as cited in Guo (2011) stressed that plagiarist misappropriates another person's work with misrepresentations that he or she is the author of the plagiarized work. Furthermore, Ramzan, et al (2011) asserted that the foundation of academic and scholarly world revolves around ethics and integrity, where new ideas, theories are created, confirmed and re confirmed, experiments and research works are carried out and published for the benefits of the humanity with a genuine desire of acknowledgement. Thus, universities and other higher institutions were established to produce highly skilled and competent graduates with high standard of honesty, ethics and professionalism to serve the communities. However, the issue in the Nigerian institutions of higher learning is in the reverse as a result of dishonesty in research production devoid of ethics in research professionalism and integrity.

Besides plagiarism, researches in higher institutions in the country are conducted in deviance of ethical and scientific adequacy and standards (Guo, 2011). Scottish Educational Research Association (2005)) demanded that educational research be conducted in accordance with ethical standards shared across disciplinary boundaries to maintain the integrity of their research. Resnik and David (2015) surmised that ethics are moral or rules for distinguishing what is right and wrong, or as a code of professional conduct. He expressed that ethical norm in research helps to build public support for research, leading to people funding research projects, if they can trust the quality and integrity of research. Udo-Akang (2013) outlined ethical values in academic research to include: honesty, fairness, objectivity, openness, trust worthiness and respect for others. Also, Sharmoo and Resnik (2015) collaborated the view that ethical codes in research includes: integrity, respect for intellectual property, confidentiality, competence, legality, human subject protections, among others. Research integrity has been defined by many from different stand points. Ogundele, Gyot and Bwoi

(2016) viewed research integrity as a high level confidence, respects and dignity associated with the results or findings derived from the research conducted. Ogwuche (2009) associated research integrity to the conduct of effective research that have quality assurance, dignity and respect for the research conduct and the researchers.

The doubts and reservations expressed by users and intended users of research products from the nation's higher institutions are on the issues of plagiarism and ethical values of the academic research. The time is now in tackling these monsters in academic research with alacrity to bringing about integrity in educational research. It is on this backdrop that this study is intended to examine the various measures attempted at addressing these issues in our higher institutions' research activities with a move to building integrity in academic research.

### **Problem Statement/ Justification**

Plagiarism and ethical issues in academic research is raising global concern as it possess threat to integrity of research produced from our higher educational sector, the institutions vested with research mandates. Research in Nigerian higher institutions in 21st century is misconstrued and the intended benefits by humanities and for nation's development and advancement are none realizable. However, few literature exist in this respect. The continuous overlook of these maladies spell dome to current and coming generations and the society, as new ideas, humans and national problems lack solutions, lack of knowledge for development and advancement, theories and standards are not generated through creative research works. Furthermore, the nation's higher education stands to be discredited as credible research works are benchmarks in the accreditation of nations' universities globally. The justification for this study cannot be overstressed as few efforts geared towards identifying these maladies in the nation's academic research works do not receive much attention in bring an end to its permeating destructive influence into the citadel of learning. The need to arise to provide some workable solutions through much research is now to bring about research integrity and reliability in addressing human and national issues in the 21st century. Except measures are instituted by the research institutions and communities, educational research will be devoid of intended usefulness and the products of graduates from our educational system will lack adequate research orientations and literacy.

### Objectives of the Study

The study's intention was to investigate plagiarism and ethical issues in academic research in tertiary institutions with its implications on research integrity in 21st century educational system. The specific objectives of the study was to examine:-

- (i) the extent to which plagiarism and ethical issues affect research integrity in our tertiary institutions in South-South, Nigeria;
- (ii) the nature of plagiarism and ethical issues practiced as it affect research integrity in the tertiary institutions in South-South, Nigeria;
- (iii) measures instituted to detect or control plagiarism and ethical issues as it affect research integrity by tertiary institutions in South -South, Nigeria;
- (iv) the extent higher institutions are ensuring adequate research ethical codes and conducts to promote research integrity by tertiary institutions in South-South, Nigeria;

### **Research Questions**

The following research questions were asked to guide the study:-

- (i) to what extent does plagiarism and ethical issues influence research integrity in the tertiary institutions in South-South, Nigeria?
- (ii) what is the nature of plagiarism and ethical issues practiced as it influence research integrity in the tertiary institutions in South-South, Nigeria?
- (iii) what measures are instituted to detect or control plagiarism and ethical issues as it influence research integrity by tertiary institutions in South -South, Nigeria;
- (iv) to what extent do higher institutions ensure adequate research ethical codes and conducts to influence research integrity by tertiary institutions in South- South, Nigeria?

### Statement of Hypotheses

The following null hypotheses were tested at .05 significant alpha level:-

- (i) There is no significant influence of plagiarism and ethical issues on research integrity in the tertiary institutions in South- South, Nigeria.
- (ii) There is no significant influence of the nature of plagiarism and ethical issues practiced on research integrity in the tertiary institutions in south- south, Nigeria.

- (iii) There is no significant influence of measures instituted to detect or control plagiarism and ethical issues on research integrity in the tertiary institutions in the South- South, Nigeria.
- (iv) There is no significant influence of the extent higher institutions ensuring research ethical codes and conducts on research integrity in South-South, Nigeria.

### Literature Review

Studies globally have identified plagiarism and ethical conducts as threat to research integrity in educational sector and by extension a plague to the society. Onuoha and Ikonne (2013) in a study on "Awareness and Perception of Plagiarism of Postgraduate Students in Selected Universities in Ogun State, Nigeria", suggested measures that could be adopted by the governing bodies, lecturers and students to maintain an environment of academic integrity free from menace of plagiarism. In another study on the same issue of plagiarism, a case study of Northern Nigerian University, Maina, Maina and Jauro (2014) observed that this problem has bedeviled the academic system which has not only brought disrepute to our academic system but the prosperity of the society as well. Idiegbeyan-ose, Nkiko and Osinulu (2016) investigated awareness and perception of plagiarism of postgraduate students in selected Universities. The findings revealed average level of awareness of plagiarism among postgraduate students, level of training influenced their level of awareness; pressure to meet deadlines, inadequate writing skills and lack of knowledge of what constitutes plagiarism were found to be responsible for the malaise. The study observed that plagiarism was a heinous academic crime which negates the main objective of research to discover new facts and expand the frontiers of knowledge. They recommended that the various institutions and the National Universities Commission should enforce the use of Turnitin in all Nigerian Universities and the introduction of information ethics as a compulsory course of study in the tertiary institutions.

Countries like Ghana, Pakistan, Iran, Kenya, Uk, Australia and other 51 countries around the globe have given serious considerations to this virus threatening the integrity of academic research (Paradigms, 2004 as cited in Smith, 2005). A study in Ghana by Appiah and Awuah (2016) investigated plagiarism as a crime towards academic integrity in higher educational institutions and discovered different forms of plagiarism practiced by students in WaMunipalicity of Ghana. Similarly, Khoshsaligheh, Mehdizadkhani and Keyvan (2017) found that amongst the Iranian master's degree students there were violations of research ethics with varieties of plagiarism which had raised great concern with levels of attentions to update and enforce awareness measures. The study recommended empirically supported guidelines for curriculum design of academic writing in the universities in Iran. Also, Ramzan, et al (2012) discovered that respondents admitted that they have intentionally plagiarized research materials. The study recommended that plagiarism policies, empirically formulated policies be instituted to combat plagiarism in the nation's higher institutions.

Furthermore, Guo (2011) in Scotland, UK discovered factors concerning plagiarism in Accounting Education and factors that affect plagiaristic behaviours of students. The study recommended that educators should adopt supportive approaches to motivating students to act in a consistent, ethical manner in their scientific life. In addition, Njeri (2016) discovered that some universities in Kenya still rely on plagiarized materials in research without encouraging their elites to create originality in research papers.

On ethical issue resulting on a threat to research integrity, Marshall (2007) expressed that researchers in the social and behavioural sciences are confronted with the challenges of adhering to national and international regulations in social and cultural environments in which ethical guidelines may not be easily translated or applied. Therefore, increased awareness of ethical concerns associated with study design and informed consent among researchers is needed. Also, strengthening professional knowledge about international research ethics is not enough, but practical advice on the best methods or models for articulating ethical guidelines in the field.

In a similar vein, UdoAkang (2013) stressed for the continuing discussion on academic honesty and intellectual property rights so that the climate of scholastic enterprise is respected. Pillay (2014) in a study in South Africa called for ethical legal protection of subjects involved in research activities. Ogundele, Gyot and Bwoi (2016) in a study considered the need to promote ethical value orientations in the conduct of research in Nigerian educational system. They authors believed that there should be integrated strategies to effectively manage ethical issues in educational research that will enhance research integrity in educational research to ensure best global practices in academic research in Nigerian higher education system. Therefore, the institutions will end up producing half baked graduates who can barely generate knowledge through rendering the universities no longer research centers. This is the picture that is allowed to flourish in higher institutions in Nigeria.

# Methodology

### Research Design

The study adopted descriptive quantitative survey design to gather responses from the subjects.

### Study Area

The area of the study covered South- South, Nigeria comprising six states of: Akwa Ibom, Cross River, Rivers State, Bayelsa, Delta and Edo and is strategically located at the point where the Y tail of the river Niger joins the Atlantic Ocean through the Gulf of Guinea.. The South –South region provides the mainstay of the country's economy: oil. In addition to oil and gas, the region equally contributes other key resources, with potential huge

investment opportunities in tourism and agriculture. The various states in the south- south, Nigeria has federal and state higher institutions, such as: States and Federal Colleges of Education, States and Federal Polytechnics and states and federal Universities.

### Sample and Sampling Techniques

The sample for the study comprised: One hundred and fifty Professors/ Associates; one hundred and fifty Senior lecturers and one hundred and fifty post graduate students from the universities. One hundred and fifty lecturers in Polytechnics; as well as one hundred and fifty lecturers from Colleges of Educations made up the sample for the study. Therefore, the subjects were drawn from Universities, Polytechnics and Colleges of Educations in the study area.

#### Data collection

The instrument for data collection was descriptive questionnaire administered to the subjects by the researchers and the team that were engaged in the administrations and collections of the instrument.

# **Data Analysis**

The study used various data analysis software such as SPSS and Predictive analytical model to analyze the mean, standard deviation, Oneway analysis of Variance (ANOVA), Structural Equation Modelling (SEM) and Path analysis.

#### Results

The results of the study identified the various causes and forms of plagiarism practices in the tertiary institutions. The various unethical issues affecting research integrity in educational system. The various actions, to be instituted by the different institutions to find a lasting solution to these issues bastardizing research integrity in the educational system. From the findings, pragmatics solutions were recommended to solving the identified problems.

### PRESENTATION OF RESULTS

The Study was carried out to identify the various causes and forms of plagiarism practices in selected tertiary institution in the South South Region of Nigeria.

Copies of the questionnaire which contained ten (10) item assumed to related to issues that has to do with research integrity were identified. The questionnaire were administered to Seven Hundred and Fifty both Lecturers and postgraduate students.

Responses from the 750 respondents were finally used for the analysis using version eleven of the Statistical Package for Social Sciences (SPSS) programme.

Results of the descriptive analysis are presented in Table 1 for causes of plagiarism as follows:-

Items	N	Mean	Std Deviation	
1	750	.7844	.41166	
2	750	.7578	.42890	
3	750	.7956	40374	
4	750	.7311	44388	
5	750	.8533	.35417	
6	750	.7711	.42059	
7	750	.7178	.45058	
8	750	.7444	.43666	
9	750	.6778	.46785	
10	750	.7044	.45680	

Factor analytical method was used in analyzing the data for the hypothesis. To carry out the analysis, a correlation was calculated to drive a factor pattern demonstrating the underlying relationships of the assumed items. This resulted in a component factor matrix in which items that measured about same assumed related issues were identified. The factors were then rotated using VARIMAX method to ensure that when a factor loads highly on a factor, it should load a low as possible on other factors to minimize repetition. A principal component analysis was then carried out for each of the ten (10) items to extract the significant causes of plagiarism. All factors loadings below 1.00 were considered insignificant, so significant causes of plagiarism were identified.

Table 2
Summary of extracted factors and their Eigen values

S/N	Component Extracted sums of Squared Loadings		Rotation Sums of Sq			
	% of Variance		Cumulative %	Eigenvalues	% of Variance	Cumulative %
1	7.811	13.019	13.019	5.277	8.795	8.795
2	5.615	9.359	22.377	4.404	7.340	16.135
	3.552	9.920	28.297	3.627	6.044	22.179
	2.920	4.866	33.163	3.572	5.953	28.132
	2.421	4.035	37.199	3.051	5.085	34.083

Results of the analysis in Table 2 shows the extraction of significant five (5) identified causes of plagiarism from the 10 assumed causes. The five (5) causes were identified because their eigen Value were not below 1.00. The first factor had an eigen value of 7.811 with a percentage variance of 13.019 while the second factor had an eigen value of 5.615 with a percentage variance of 9.359. The eigen value kept falling leaving the ( $5^{th}$ ) fifth factor with 2.421 eigenvalue and a percentage variance of 4.035. The implication is that from the Six (6) assumed causes the eigenvalue were below 1.00 so considered insignificant. The rule of thumb for significant loadings is  $\pm .30$ . That is factor loading greater  $\pm .30$  are considered significant loadings  $\pm .40$  are considered more important  $\pm .50$  are considered very significant. The greater the absolute size of the loading then more significant the loading in interpreting the factor matrix. This criterion was adopted in this study. The most important causes of plagiarism in the South South Nigeria are rated as follows:

- 1. Benchmark for Promotion
- 2. Lack of consequences for those who practice it
- 3. Inadequate training in Research
- 4. Perception of task as boring
- 5. Time Management

Other causes that may contribute are:- time management, ignorance, inadequate knowledge of statistical analysis, Poverty/Inadequate funding and poor implementation of research findings.

The forms of plagiarism, the C Section of the questionnaire which contained Sixteen (16) suggested forms of plagiarism were administered to Seven Hundred and Fifty (750) of both lecturers and postgraduate students. Response from the Seven Hundred and Fifty (750) respondents were finally used for the analysis using Version eleven of the Statistical package for Social Sciences (SPSS) programme.

Results of the descriptive analysis are presented in Table 3 for forms of plagiarism.

 Items	N	Mean	Std Deviation
1	750	.7844	.41166
2	750	.7578	.42890
3	750	.7956	40374
4	750	.7311	44388
5	750	.8533	.35417
6	750	.7711	.42059
7	750	.7178	.45058
8	750	.7444	.43666
9	750	.6778	.46785
10	750	.7044	.45680
11	750	.6289	.48364
12	750	.6533	.47644

13	750	.6444	.47921
14	750	.7289	.44503
15	750	.6333	.48243
16	750	.6267	.43155

Again, factor was used to analyze data to actually identify from the suggested forms, the major significant forms of plaguing research integrity in tertiary institutions in South South Nigeria. To carry out the analysis, a correlation matrix was calculated to drive a factor pattern demonstrating the relationships of the suggested forms plagiarism. This resulted in a component factor matrix in which the items that measured about the same suggested forms were identified. The factors were then rotated using VARIMAX method to ensure that when a factor loads highly on a factor, it should load as low as possible on other factors to avoid repetition.

A principal component analysis was again carried out for each of the sixteen (16) suggested items to extract the forms of plagiarism mostly plaguing research integrity in tertiary institution in the South South, Nigeria. All factor loadings below 1.00 were considered insignificant, so significant forms of plagiarism were:-

Table 4
Summary of extracted factors and their eigen values for forms of plagiarism.

Component	Extracted Sums of Squared Loadings		Rotations Sums of Squared Loadings			
	Total	% of variance	Cumulative %	Eigen value	% of variance	Cumulative %
1	14.801	24.666	24.668	9.431	15.719	15.719
2	8.279	13.799	38.466	8.152	13.587	29.305
3	6.488	10.813	49.279	6.663	11.106	40.411
4	3.195	5.325	54.604	5.710	9.517	49.928
5	2.932	4.886	59.490	5.418	9.030	58.958
6	2.171	3.619	63.109	2.491	4.151	63.109
7	2.166	3.610	66.719	2.099	4.096	67.205
8	2.096	3.493	70.212	2.094	3.891	71.096
9	1.688	2.613	72.825	2.026	2.656	73.752
10	1.562	2.422	75.247	1.841	2.310	76.062

Results of the analysis in table 4 shows the extraction of significant Ten (10) identified major forms of plagiarism plaguing tertiary institution in the South South, Nigeria. The ,tenth significant forms were identified because their eigenvalue were not below 1.00. The first factor had an eigen value 14.801 with a percentage variance of 24.666 while the second factor had an eigenvalue of 8.279 and a percentage variance of 13.799. The eigen values kept falling leaving the tenth (10th) with 1.562 eigenvalue and a percentage variance of 2.422. The implication is that from the eleven (11) suggested forms of plagiarism, the eigenvalue were below 1.00, so was considered insignificant.

The rules of thumb for significant loadings is ±.30 that is factor loading greater ±.30 are considered significant, loadings ±.40 are considered more important; ±.50 are considered very significant. The greater the absolute size of the loading the more significant the loading in interpreting the factors matrix. Again this criterion was adopted to identify the ten (10) forms of plagiarism plaguing tertiary institutions in the South South, Nigeria are rated as follows:

- 1. Copy someone's idea verbatim without acknowledgement
- 2. Paraphrasing someone's idea without putting the source
- 3. Writing projects for supervisee
- 4. Contracting Project writing to either the supervisor or another person
- 5. Citing authors without referencing

- 6. Copy someone's idea verbatim with acknowledge but without putting the content in double quotes.
- 7. Summarizing someone's idea without acknowledging the source
- 8. Copy from the internet someone's work and submitting as one's works
- 9. Copy someone's idea verbatim without acknowledgement whilst not putting the content in double quotes.
- 10. Writing Projects for a friend

The implication is that items eleven (11) to sixteen (16) occurs but very rarely.

After detecting the major causes of plagiarism and the types plaguing tertiary Institution in the South South Nigeria, the research went ahead to test the stated hypothesisas shown from table 5... to...

### Hypothesis 1

There is significant influence of plagiarism and ethical issues on research integrity in the tertiary institutions in South South, Nigeria.

One-way analysis of variance test statistics was used to analysis responses from the questionnaire. The subjects who responded in each of the strata were grouped according to institution. Their responses were sorted out and subjected to the test of significance. Results of the analysis are presented in table below:-

One-way ANOVA of the influence of plagiarism and ethical issues on research integrity in tertiary Institutions in South South, Nigeria

Grouping Accoring selection	N	X	3D
Professor and Associate	150	18.235	7.678
Senior Lecturers	150	24.030	8.535
Post Graduate Students	150	27.955	7.668
Lecturers from Colleges of Education	150	22.371	8.913
Lecturers from Polytechnic	150	20.363	6.814
Total	750	23.046	6.864

Source of variation	55	Df	MS	F
Between groups	9833.065	4	8461.360	259.511*
Within groups	19980.534	744	32.605	
Total		748		

\*P.05, critical f = 259.511, df 4  $\alpha$  744, critical f = 2.37

Results of the analysis in table 5 shows that the calculation F=ratio of 259.511 is greater than the critical F=ratio of 2.37 at 0.05 level of significance with 4 and 744 degree of freedom. This means that plagiarism and ethical issues significantly plagued research integrity in tertiary institutions in South South, Nigeria.

# Hypothesis II

There is no significant influence of the nature of plagiarism and ethical issues practiced on research integrity in the tertiary institutions in South South, Nigeria.

### Table 6

The independent variable (predictor) in this study is identified major causes of plagiarism while the dependent variable (interior) were the responses from the 5 categories respondents in tertiary institutions.

The major factors (causes) that were identified in the factor analysis were saved and used for the analysis. The major causes were:-

 $X_1$  = Bench work for Promotion

 $X_2 = Lack$  of consequence for those who practice it

 $X_3$  = Inadequate training in research

 $X_4$  = Perception of task as boring

X<sub>5</sub> = Time Management

Multiple regression analysis technique was adopted to test the hypothesis. The results of the analysis are presented in tables 7 and 8

Results in table 7 are the composite effect of the significant causes of plagiarism on research integrity in the South South. The R-value of 0.978 is the general correlation coefficient for the variable and it measures the strength of association between the dependent variable (responses on the effect of plagiarism on research integrity) and the independent variables (the five significant causes of plagiarism).

The R-square value of 0.956 is the coefficient of determination measuring the proportion of the variation of the criterion variable about its mean which is explained by the independent variable. This implies that the identified major causes of plagiarism combined to have 95.6% on research integrity in the South Nigeria. The remaining 4.4% (I-R<sup>2</sup>) can be attributed to other non significant causes of plagiarism not identified by the factor loadings. The calculated F - ratio of 1176.377 is greater than the critical F - ratio of 1.95 at .05 level of significance with 5 and 744 degrees of freedom.

 Table 7

 Composite influence of nature of plagiarism and ethical issues on research integrity in tertiary institutions in the South South Nigeria.

R = 0.956

 $R^2$  (R square) = 0.956

Standard error = 1.65868

Source of variation	SS	df	MS	F
Progression	25891.781	5	3236.473	1176.377*
Residual	1191.278	744	2.751	
Total	27083.059	749		

<sup>\*</sup>Significant at .05, critical f = 2.21

This means that there is a significant influence of the nature of plagiarism and ethical issues on practical research integrity in South South Nigeria.

Table 8

Multiple regression analysis of the nature of significant causes of plagiarism on research integrity in tertiary institutions in South South Nigeria.

Variables	В	Standard Error	Beta	t	Significant
Constant	3.143	0.084	-	466.701	0.00*
$X_1$	5.446	0.078	0.762	69.814	0.00*
X <sub>2</sub>	1.550	0.091	0.183	17.093	0.00*
X <sub>3</sub>	4.039	0.092	0.458	43.805	0.00*
X <sub>4</sub>	2.232	0.093	0.253	23.895	0.00*
X5	3.135	0.089	0.367	35.081	0.00*

Results on table 8 are the relative effect of the individual causes of plagiarism and ethical issues on research integrity in South South Nigeria. The results however show that it was variable  $(X_1)$  ie Bench mark for Promotion most, with (t = 69.814) that other significant causes. This was follows by inadequate training in research  $(X_3)$  with a t – value of 43.805; while Time Management  $(X_5)$  with a t – value of 35.081 came up as the third significant causes and so on.

# Hypothesis III

There is no significance of measures instituted to detect or control plagiarism and ethical issues on research integrity in the tertiary institutions in South South Nigeria.

One-way analysis variance was used to test this hypothesis. The independent variable in this hypothesis is the responses on the measures instituted to detect or control plagiarism. The dependent variable is the responses from the categorized scholars on the results of those measures.

Results of the analysis in table shows that the calculated f – ratio of 470.660 is greater than the critical f – ratio of 2.21 at 0.05 level of significance with 4 and 744 degrees of freedom. This means that there measures instituted to detect or control plagiarism and other ethical issue has significantly influence on research integrity. The null hypothesis is therefore rejected.

Table 9

One-way ANOVA of the influence of measures instituted to control or detect plagiarism and other ethical issues on research integrity.

19022.813

9033.267

28056.080

Selection		N	X	SD
Professor and Associate	150	32.47	5.07	
Senior Lecturers	150	39.87	3.72	
Post Graduate Student	150	48.38	4.60	
Lecturers from Colleges of Education	150	135.74	3.84	
Lecturers from Polytechnic	150	46.26	3.62	
*significant at .05, critical f = 2.21				
Source of Variation	SS	df	MS	F

9511.407

470.660

20.209

### Hypothesis IV

Between groups

Within groups

Total

There is no significance of the extent higher institution ensuring research ethical codes and conducts on research integrity in tertiary institution in the South South Nigeria.

744

748

The independent (predictor) variables in this hypothesis were the means from the individual groups used as factors while the dependent (criterion) variable was responses on higher institutions are ensure of plagiarism from the selected groups.

 $X_1$  = Professor and Associate

 $X_2$  = Senior Lecturers

X<sub>3</sub> = Post Graduate Students

X<sub>4</sub> = Lecturers from Colleges of Education

 $X_5 = Lecturers$  from Polytechnics

Multiple regression analysis was adopted to test the hypothesis. The result of the analysis is represented in table 10a and 10b. The result is the composite influence of the measures instituted to ensure ethical roles and conducts on research integrity in tertiary institutions in South Nigeria. The R – value of 0.920 is the general correlation coefficient for all the selected groups. It measures the strength of association between the dependent variable. The  $R^2$  value of 0.847 is the coefficient of determination measuring the proportion of the variation of the variables. It implies that 84.7% of the measures to detect or control plagiarism is the combined effort from all the tertiary institutions.

### Table 10a

Composite effect of extent of measures instituted to detect or control ethical codes and conducts in tertiary institution in the South South Nigeria

R = 0.920

R square  $(R^2) = 0.847$ 

Standard error = 3.09080

 Source of variation SS		df	MS	F
Progression	22927.448	5	3821.248	400.004
Residual	4155.570	744	2.751	
Total	27083.059	749		

<sup>\*</sup>significant at .05; critical f = 2.21

\*significant at .05, critical f = 2.21

Table 10b

Multiple regression analysis of the predicted validity of the extent of measures to ensure ethical codes and conducts on research integrity.

Variables	В	Standard Error	Beta	t	Significant
Constant	40.901	0.156	-	261.579	0.00*
X <sub>1</sub>	5.353	0.174	0.498	30.850	0.00*
$X_2$	3.748	0.171	0.429	24.946	0.00*
X <sub>3</sub>	2.348	0.153	0.290	15.326	0.00*
X <sub>4</sub>	2.232	0.169	0.253	23.895	0.00*
X <sub>5</sub>	2.265	0.173	0.299	13.035	0.00*

Results on table 10b are the extent relative measures instituted to ensure ethical codes and conducts in tertiary institutions in the South South, Nigeria. The results shows that in all the selected institutions have put in measures to ensure ethical code and conducts to check plagiarism and other ethical issues. The results however shows that in institutions in which those Professors and Associate Professors work, (t = 30.850) that institutions put in better measures to control plagisrism.

Followed by institution in which Senior Lecturers work, (t = 24.946). Colleges of Education came third with (t = 23.895). for Postgraduate students (t = 15.326), effort to detect came forth while in Polytechnics, (t = 13.055) effort is the least.

# **Discussion of Findings**

Effort to study plagiarism and influence on ethical issues in Academic Research in Tertiary Institutions in South South Nigeria vis-a-viz implications for Research integrity in the 21<sup>st</sup> Century Educational System made use of 750 subjects drawn from the population of Nine Thousand, Five Hundred and Twelve academic staff of the three (3) categories of Tertiary Institutions in the South South Nigeria. The findings of this study is discussed in the context of personal experience of the researcher and findings of other studies earlier reviewed.

The finding of this study considered the sub variation found in objectives, purpose and the hypotheses of the study as follows:- First and foremost, the factor analysis of the responses (data) collected in the course of the study showed the rating from the most significant to the least significant as follows:-

- Bench mark for Promotion;
- Lack of consequence for those who practice it;
- Inadequate training in Research;
- Perception of task as boring; and
- Time management; and this shows that plagiarism acts are equally associated with tertiary academic environment in the South South Nigeria.

This finding asserts that of Olutola (2014) who remarked that plagiarism has been a central concern University and other tertiary education environment over the last decades in Nigeria. Supporting, this is Ramzan, Umir, Sidique and Asif (2001) who earlier saw the prevailing of empirical and ethical issues as being on the rise in academic environment. The prevalence is not only within Nigeria as Guo (2011) expressed that plagiarism has raised great concern within United Kingdoms Higher Education Sector over some past decades.

Another considerable findings of this investigation was to unravel the nature of plagiarism and ethical issue which negatively might affect ethical codes and conducts vis-a-viz research integrity in tertiary institutions in South Nigeria. The results showed that ten (10) forms of plagiarism are prevalence in the South Nigeria. These are rated based from highly significance to least significance as follows:-

- Copying someone's idea verbatim without acknowledgement;
- Paraphrasing someone's idea without putting the source;
- Writing project for supervisee;
- Contracting project writing to either the supervisor or another person;
- Citing authors without referencing;
- Copying someone's idea verbatim with acknowledgement but without putting the content in double quotes;

- Summarizing someone's idea without acknowledging the source;
- Copying from the interest someone's work and submitting as one's work;
- Copying someone's idea verbatim without acknowledgement whilst not putting the content in double quotes; and
- Writing projects for a friend.

This findings is supported by a study carried out by Appriah and Awuah (2006) who while investigating plagiarism in Wa Municipality discovered the above listed different forms of plagiarism associated with students work in tertiary institution in Ghana. Similarly, Khoshaligheh, Mehdizadkhani and Keyvan (2017) discovered that there were violations of research ethical codes and conducts with varieties of plagiarism among postgraduate students in Iran.

Further elaborate discussion of the findings of this study decided to test hypotheses stated to guide the study as follows:-

For hypothesis I, it is discovered that , there is a significant influence of plagiarism and ethical issues on research integrity in tertiary institutions in South South Nigeria. This was established by Maina, and Jauro (2014) earlier in a case study of plagiarism among Postgraduate students in Northern Nigeria University. They observed that this problems has benefitted the academic system which has not only brought disrepute to our academic system but the prosperity of the society as well. Collaborating the findings further is Idiegbeyan-oso, Nkiko and Osinula (2016) who rated plagiarism as a heinous academic ermine which negates the main objective of research to discover new facts and expand the frontiers of knowledge.

Furthermore, Marshall (2007) expressing dissatisfaction among researchers on their involvement in plagiarism and ethical issue viewed as acts as constituting serious threat to research integrity and researchers in Social and behaviourial sciences. He went further to suggest that over coming this academic crime can be done by adhering national and international regulations in Social and cultural environments in which ethical guidelines can strengthen articulation of professional knowledge.

For research hypothesis II, it was discovered that, there is significant influences of the nature of plagiarism and ethical issues practiced on research integrity in tertiary institutions in South South Nigeria. The findings is in line with the reasoning of Idiegbeyan-oso, Nkiko and Osinulu (2016) who listed among others, level of training influenced by their level of awareness, pressure to meet deadlines, inadequate writing skills and lack of what constitute plagiarism to be responsible for the malaise. Collaborating this finding, further is Appiah and Awuah (2016) who while investigating plagiarism as a crime towards academic integrity in tertiary institution in discovered different forms of plagiarism to be associated with students work in Ghana educational system.

For research hypothesis III, the findings pointed to the fact that there is significant influence of measures instituted to detect or control plagiarism and ethical issues on research integrity in tertiary institutions in the South South Nigeria. This asserts the fact that Nigeria has joined Countries like Ghana, Pakistan, Tran, Kenya, United Kingdom and other 51 countries around the globe to give serious considerations to tackle this virus threatening the integrity of academic research (Paradigms, 2004 as cited in Smith, 2005). Additionally, Ogundale, Gyot and Bwoi (2016) suggested the involvement of integrated strategies to effectively manage ethical issues in education research. They went ahead to affirm that it is only by adhering to their advise will allow educational institutions to enhance research integrity in educational research in order to ensure best global practices in academic research in Nigeria higher education system.

For research hypothesis IV, it was discovered that there is significant influence of the extent higher institutions are ensuring research ethical codes and conducts on research integrity in South South Nigeria. Reasoning along this vein, Idiegbeyan-oso, Nkiko and Osinulu (2016) who suggested that National University Commission should enforce use of **Turnitin** in all Nigeria Universities as well as the introduction of information ethics as a compulsory course of study in the tertiary institutions. Khoshsaliheh, Mohdizadkhani and Keyvan (2017) asserted the involvement of update and enforce awareness measures. Ramzan, etal (2012) maintained tougher plagiarism policies, be instituted in the nations higher institutions. Ogundele, Gyot and Bwoi ()2016) considered that promoting ethical value orientation in the conduct of research in Nigeria tertiary education system should involve integrated strategies that will allow effective management of ethical issues as well as enhance research integrity and best global practices in academic research in Nigeria tertiary education system.

Furthermore, Pillay (2014) when investigated menace in South Africa called for tertiary institution in that country to get as far as ethical legal protection of subjects involved in research activities. Onouha and Ikonne (2013) suggested that the tougher measures could be adopted by Governing Council Lecturers and students if the need to maintain an environment of academic integrity from the menace of plagiarism is desired. Ogundele, Gyot and Bwoi (2016) earlier went further to add that institutions giving kid-glove treatment to the issue of plagiarism and other ethical issues threatening research integrity will end up producing half baked graduates who can barely generate knowledge thereby rendering the universities and other tertiary institutions in Nigeria no longer research centers.

### **Summary, Conclusion and Recommendations**

This stage summarizes as well as concludes the study. Recommendations arising from the findings are also presented.

### Summary of the Study

The study was designed to investigate plagiarism and ethical issues in Academic research in Tertiary Institution in South South Nigeria. It also considered its implication for research integrity in the 21<sup>st</sup> Century Educational System. For the study to have a focus four (4) specific objectives, Research questions and hypotheses were stated to guide the study. Three validated questionnaire were polite tested and found to be reliable. The instruments were administered to Seven hundred and fifty (750) subjects stratified into five (5) groups of Professors and Associates, Senior Lectures, Postgraduate students, Lecturers in Colleges of Education as well as lecturers from Polytechnics from tertiary institution in the study area. Data generated were subjected to tetra choric factor analysis, multiple regressional analysis and one-way analyses of variance; the following findings were made:-

- Plagiarism and ethical issues has significant influence on research integrity in tertiary institutions in South South, Nigeria.
- Nature of plagiarism and ethical issues practiced has significant influence on research integrity in tertiary institutions in South South Nigeria.
- Measures instituted to detect or conhol plagiarism and ethical issues has significant influence on research integrity in the tertiary institutions in the South South; and
- that there is a significant influence of the extent of the higher institutions are ensuring research ethical codes and conducts on research integrity in South South, Nigeria.

It is therefore derived from the findings of this study that if tertiary institutions do not put strict measures to put plagiarism and ethical issue under serious conhol and detection, such institution will end up producing half baked graduates who can barely generate knowledge and therefore rendering such institution no longer research centers. The study also reveals that institution plagued with plagiarism and ethical issue will promote continuous inculcation of corruption process of independent and critical thinking in their products which constitute a serious breach of academic integrity in the 21st Century.

#### Conclusion

Based on the study, the following conclusion were made:-

- plagiarism and ethical issue threatens research integrity in tertiary institutions in South South Nigeria;
- integrated strategies should be effectively involved to reduce the prevalence of plagiarism and ethical issues in our higher educational system as this is the only way global best practices in academic education system; and
- that allow these heinous academic crime to continue unchecked will longer research centers.

### Recommendations

Based on the findings of this study, the following recommendation were made:-

- increased awareness of ethical concerns associated with study design and informed consent among researches should be carried;
- ethical legal protection of subjects involved in research activities should be pursued with vigour.
- Educators should adopt supportive approaches to motivate students to inculcates a consistent, and ethical manner in their scientific life;
- the putting in place empirically supported guidelines for curriculum of academic writing in the Universities and other tertiary institutions;
- the putting in place plagiarism policies, empirically formulated policies to combat the menace in our tertiary institutions; and
- the authorities of tertiary institutions to compulsory enforce the use of Turintin.

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