INFLUENCE OF INSTITUTIONAL VARIABLES ON RESEARCH SKILLS OF ACADEMIC STAFF IN UNIVERSITIES IN AKWA IBOM AND CROSS RIVER STATES, NIGERIA

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Abstract

The study focused on the extent to which institutional variables such as university ownership and location influenced research skills of academic staff in public universities in Akwa Ibom and Cross River States, Nigeria. Six research questions and six null hypotheses guided the study. The study adopted ex-post facto research design. The sampling technique adopted for this study was proportionate and simple random sampling techniques to select 525 (323 males and 202 females) academic staff from the two states out of a population of about 1591. The instrument used for data collection was a questionnaire titled "Lecturers' Research Skills Questionnaire" (LRSQ). Data collected for the study was analyzed using Two-way Analysis of Variance tested at .05 level of significance. The result revealed that university ownership does not have significant influence on academics' staff research skills of literature research, instrument construction and validation, data collection and analysis, referencing and reporting as well as overall research skills. The result further revealed that the university location as well as the interaction effect of university ownership and location significantly influence all the various dimensions and overall research skills among the academic staff of universities in Cross River and Akwa Ibom States. It was recommended that government should adequately support universities, provide research facilities, funds and general conducive environment for research in order to bridge the disparity in activities among academics.

Keywords: Institutional variables, research skills, academic staff of universities, Akwa Ibom State, Cross River State.

Introduction

Universities and research institutes have the onerous role to engage in quality research that can provide solution to society's problems. Hence, these institutions are to be promptly positioned to perform these roles for the development of Nigeria particularly in this era where transformative research is most craved for. Research exercise involves intellectual skills, technological/ICT skills and mechanical activities, and the university lecturers are at the centre of research activities, carrying out research publications as the most significant indicator of their productivity. It may be observed that research publication in any discipline does not only provide current information for growth,

progress, development but it is so significant that academic staff promotions and the social prestige attached to the increasing status up to the professorial ranks, all depend on it. In universities and research institutes alike, attainment in research is determined by the number of published articles in referred journals, abstracted, indexed and conference proceedings of high repute.

Research skill is a special ability to perform tasks or undertake a careful investigation of a phenomenon. This includes the ability to follow the right principles procedures, methodologies and otherwise of a research in order to discover new knowledge for the purpose of adding to the knowledge bank (Ali, 2009). Therefore, research skill is developed by doing and not reading. It involves participating in conferences, seminars, workshops, symposia, collaborative research and mentoring. Involvement in these and related activities foster research skills in the individuals while non-participation may produce the reverse result. The academic staff all over the world seeks opportunities to undertake research and develop their knowledge as a means of building their individual and collective capacity for rapid national development.

Mclntire (2002) has identified five skills for academic staff wishing to embark on research endeavour including: formulating research question, literature review, gathering data, writing a dissertation and a useful readable report. Faculty turnover, adequate and appropriate application of above research skills have been the concern of emerging studies (Ali, 2009; Bassey, Akuegwu, Udida & Udey, 2007; Eze, 2011; Idika, Joshua &Umoinyang, 2017; Xu, 2008). They claim that many scholars lack skills to outline existing knowledge and this has led to the collapse of adequate application of research skills in projects. Unfortunately too, a careful search into many published and unpublished works indicate that, there is a breach of such traditions as clear statement of problems, adequate review of literature, proper documentation, appropriate research methodology that should give rise to valid and reliable data analytic techniques and adequate interpretation of research result and drawing inferences based on the results.

Research skills development among academic staff is the engine that keeps universities to their mandate as centres of ideas and innovation. Without efforts in this direction, the relevance of the lecturers and the university to the society may diminish. More so, we are in an era where almost every new information that is received may have come from research. Innovation and breakthroughs can hardly be achieved except the skills required to bring them about by academic staff and other researchers are acquired and demonstrated adequately. In addition, lecturers are normally expected to attend structured courses such as: Advanced Research Methods, Advanced Statistics with Computer, which help to sharpen the research skills focus of future and practicing researchers. Research skills are developed by lecturers' right from their undergraduate levels in the university as they go through their various degree courses in research methods and related courses like tests and measurement among others.

Furthermore, the finding of an exploratory interview conducted by Gablinske (2014) and Tokuhama-Espinosa (2008) on the problem of poor research skills among academics has substantiated to a large extent, hence, the need for the present study. The

interview with some lecturers within and outside the study area revealed that poor research skills among lecturers if not addressed may become a bane to effective supervision of students' research projects and dissertations and may impact on subsequent transfer of knowledge. For instance, a situation where a supervisee has to referred to someone else for construction and validation of research instrument, statistical analysis and even formulation of research hypothesis is worrisome. Even more worrisome is the common response from the interviewees on the research skills in the universities used for the study as a concern. A few other lecturers interviewed described the situation of lack of research skills as "helpless". The problem of this study put in a question form is: how do institutional variables influence research skills among academic staff in universities in Akwa Ibom and Cross River States in Nigeria. It is against this backdrop that this study investigated the influence of university ownership and location on research skills in term of literature search, instrument construction and validation, data collection and analysis, referencing and reporting as well as overall research skills exhibition among academic staff in Akwa Ibom and Cross River States

This study was anchored on the theory of self-efficacy by Albert Bandura (1977). This theory lies at the centre of Bandura's social cognitive theory which emphasizes observational learning and social experience in the development of personality. According to this theory, self-efficacy is a person's belief in his or her capabilities to organize and execute course of action required to manage prospective situations. This theory has implication for university ownership and location as this study hypothesizes that these institutional variables could impact the propensity of academics to develop research skills and engage in quality research practices.

The purpose of the study was to investigate the influence of institutional variables on research skills of academic staff in universities in Akwa Ibom and Cross River States, Nigeria. Specifically, the study investigated the influence of:

i. University ownership and location on academic staff research skills of literature search.
ii. University ownership and location on research skills of instrument construction and validation of academic staff.
iii. University ownership and location on academic staff research skills of data collection and analysis.
iv. University ownership and location on academic staff research skills of referencing.
v. University ownership and location on academic staff research skills of reporting.
vi. University ownership and location on overall research skills of academic staff.

Hypotheses
The following hypotheses were formulated to guide the study:

1. There is no significant influence of university ownership and location on academic staff research skills of literature search.

2. University ownership and location do not significantly influence research skills of instrument construction and validation of academic staff.
3. Universities ownership and location do not significantly influence academic staff research skills of data collection and analysis.
4. There is no significant influence of universities ownership and location on academic staff research skills of referencing.
5. University ownership and location do not significantly influence academic staff research skills of reporting.
6. There is no significant influence of university ownership and location on overall research skills of academic staff.

Method

The *ex-post facto* research designed was used in this study, because the research skills and practices as well as the effect of university ownership and location on them have naturally occurred in the setting among academic staff and therefore, they were only described and not manipulated by the researcher in the course of this study.

The sampling technique adopted for this study was proportionate and simple random sampling techniques. In the two states studied, the four public universities – two of which were federal and two were states, were selected. In all the four universities, the possible number of faculties identified were twelve and one third (33) of the faculties being a representative proportion believing that it will be a true representative of the population, was selected for the study through simple random sampling method. The number of academic staff that was selected for the study was 525 (323 males and 202 females) representing 33 of the accessible population of 1591.

A questionnaire title "Lecturers' Research Skills Questionnaire" (LRSQ) was the instrument used for data collection. The instrument was divided into two sections: A and B. Section A sought the demographic data of the respondents such as: sex, university ownership and location while section B measured research skills of academics staff in term of literature research, instrument construction and validation, data collection and analysis, referencing and reporting. The reliability of Section B of the instrument was determined using 30 academic staff from two universities in Cross River State that were not part of the study sample. The data collected from them were analyzed using Cronbach Alpha reliability method which produced reliability coefficients as follows: 0.83 for literature search: 0.81 for instrument construction and validation: 0.77 for data collection and analysis: 0.73 for referencing: 0.78 for reporting and 0.82 for overall research skills. The data collected were analyzed using descriptive statistics and Two-way Analysis of Variance tested at .05 level of significance.

Results:
Hypothesis One

There is no significant influence of university ownership and location on academic staff research skills of literature search.

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The independent variables in this hypothesis are two namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff research skills of literature search. The statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 1.

TABLE 1:   2-way ANOVA of influence of university ownership and location on literature research among academic staff in Akwa Ibom and Cross River States (N=525).

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	17683.15	3	5894.38	29.38	.000
Intercept	345884.64	1	345884.64	1724.17	.000
University ownership	0.009	1	0.009	0.00	.995
Location	4975.50	1	4975.50	24.80	.000
Uni ownership*location	2016.81	1	2016.81	10.05	.000
Error	104515.75	521	200.61		
Total	712287.00	525			
Corrected total	122200.90	524			

*P<.05, Critical F-ratio = 3.0

The result in Table 1 indicated that university ownership (F=0.000; p>.05) did not significantly influence academic staff research skills of literature search but location was statistically significant (F=24.80; p<.05) at .05 level. Hence, the null hypothesis was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on staff skills of literature search was significant at .05 (F=10.05; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on the research skills of literature search among the academic staff, but the influences of location as well as the interaction effect of university ownership and location were significant.

Hypothesis Two
University ownership and location do not significantly influence research skills of instrument construction and validation of academic staff.

The independent variables in this hypothesis are two, namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff research skills of instrument construction and validation. The

statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 2.

Table 2: **Influence of university ownership and location on instrument construction and validation of academic staff in Akwa Ibom and Cross River States**

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	15320.44	3	5106.81	25.22*	.000
Intercept	301626.43	1	301626.4	1489.57*	.000
University ownership	145.87	1	145.87	0.72	.396
Location	4571.82	1	4571.82	22.58*	.000
Uni ownership*location	1438.97	1	1438.97	7.11*	.008
Error	105498.51	521	202.49		
Total	647594.00	525			
Corrected total	120818.95	524			

*P<.05, F critical = 3.0

The result in Table 2 indicated that university ownership (F=0.72; p>.05) did not significantly influence academic staff research skills of instrument construction and validation but location was statistically significant (F=22.58; p<.05) at .05 level. Hence, the null was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on staff skills of instrument construction and validation was significant at .05 (F=7.11; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on the research skills of instrument construction and validation among academic staff, but the influences of location as well as the interaction effect of university ownership and location were significant.

Hypothesis Three

Universities ownership and location do not significantly influence academic staff research skills of data collection and analysis.

The independent variables in this hypothesis are two namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff research skills of data collection and analysis. The statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 3.

TABLE 3: **Influence of university ownership and location on data collection and analysis among academic staff in Akwa Ibom and Cross River States (N=525).**

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	31243.80	3	10414.60	31.64	.000
Intercept	518835.71	1	518834.71	1576.33	.000
University ownership	18.43	1	18.43	0.06	.813
Location	10388.97	1	10388.97	31.56	.000
Uni ownership*location	2469.99	1	2469.99	7.50	.006
Error	171482.01	521	327.14		
Total	1093055.00	525			
Corrected total	202725.81				

*P<.05, F critical = 3.0

The result in Table 3 indicated that university ownership (F=0.06; p>.05) did not significantly influence academic staff research skills of data collection and analysis but location was statistically significant (F=31.56; p<.05) at .05 level. Hence, the null was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on staff skills of data collection and analysis was significant at (F=7.50; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on the research skills of data collection and analysis among academic staff, but the influences of location as well as the interaction effect of university ownership and location were significant.

Hypothesis Four

There is no significant influence of universities ownership and location on academic staff research skills of referencing.

The independent variables in this hypothesis are two, namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff research skills of referencing. The statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 4.

Table 4:   Influence of university ownership and location on referencing among academic staff in Akwa Ibom and Cross River States (N=525).

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	30616.14	3	10205.38	26.101*	.000
Intercept	589330.72	1	589330.72	1507.27*	.000
University ownership	92.70	1	92.70	0.24	.063

Location	7554.73	1	7554.73	19.32*	.000
Uni ownership*location	4355.65	1	4355.65	11.14*	.000
Error	4357.05	521	390.992		
Total	1227276.00	525			
Corrected total	234323.19	524			

*P<.05, F critical = 3.0

The result in Table 4 indicated that university ownership (F=0.24; p>.05) did not significantly influence academic staff research skills of referencing but location was statistically significant (F=19.32; p<.05) at .05 level. Hence the null was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on staff skills of referencing was significant at .05 (F=11.14; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on the research skills of referencing among academic staff, but the influences of location as well as the interaction effect of university ownership and location were significant.

Hypothesis Five

University ownership and location do not significantly influence academic staff research skills of reporting.

The independent variables in this hypothesis are two namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff research skills of reporting. The statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 5.

TABLE 5: Influence of university ownership and location on reporting among academic staff in Akwa Ibom and Cross River States (N=525).

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	35695.41	3	11898.47	37.31	.000
Intercept	585914.31	1	585914.31	1837.09	.000
University ownership	7.88	1	7.88	0.03	.875
Location	6009.38	1	6009.38	18.84*	.000
Uni ownership*location	7716.95	1	7716.95	24.10*	.000
Error	166165.39	521	318.94		
Total	1207028.00	524			

Corrected total	201860.79	524	

*P<.05, F critical = 3.0

The result in Table 5 indicated that university ownership (F=0.03; p>.05) did not significantly influence academic staff research skills of reporting but location was statistically significant (F=18.84; p<.05) at .05 level. Hence the null was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on staff skills of reporting was significant (F=24.10; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on the research skills of reporting among academics, but the influences of location as well as the interaction effect of university ownership and location were significant.

Hypothesis Six
There is no significant influence of university ownership and location on the overall research skills of academic staff.

The independent variables in this hypothesis are two namely: university ownership with (2 categories) and location (with 2 categories). The dependent variable was academic staff overall research skills. The statistical analysis techniques deployed to test this hypothesis was 2-way Analysis of Variance (2-way ANOVA) as presented in Table 6.

Table 6: **Influence of university ownership and location on overall research skills of academic staff in Akwa Ibom and Cross River States (N=525).**

Sources of Variation	Sum of squares	df	Mean square	F-ratio	p-level
Corrected model	856019.62	3	285339.87	37.71	.000
Intercept	15973255.75	1	15973255.75	2110.10	.000
University ownership	2.66	1	2.66	0.00	.985
Location	220951.66	1	220951.66	29.20	.000
Uni ownership*location	112754.95	1	112754.95	14.90	.000
Error	3904942.24	519	7523.97		
Total	23087587.00	525			
Corrected total	4798266.95	524			

*P<.05, F critical = 3.0

The result in Table 6 indicated that university ownership (F=0.00; p>.05) did not significantly influence overall research skills of academic staff but location was

statistically significant (F=29.20; p<.05) at .05 level. Hence the null was rejected for location but upheld with respect to ownership. The interaction effect of university ownership and location on overall research skills of the academic staff was significant (F=14.90; p<.0.5) and the null hypothesis was therefore rejected. This implied that there is no significant influence of ownership of university on overall research skills of the academic staff, but the influences of location as well as the interaction effect of university ownership and location were statistically significant.

Discussion

The results of this study showed that concerning literature search, instrument construction and validation, data collection and analysis, reporting, referencing and overall research skills of academic staff, there is no significant influence of university ownership on these research skills. This implies that both federal-owned and state-owned universities do not differ in their exhibition of these research skills in Akwa Ibom and Cross River States. This further confirms the role of universities in the three areas of their mandates: research, teaching and community service.

Though, not much empirical findings have been reported in this area as earlier noted, this little available literature seems to differ from the findings of this study. This includes the findings of Ali (2009) on the influence of university proprietorship on the application of research skills among graduate students in universities in South-South Zone, Nigeria. And whose result indicated that the type of university has a significant influence on the application of all the components of skills studied and the overall research skills of graduate students. This difference which was found to be in favour of federal universities, however, could be attributed to differences in analytical methods, size of sample, area covered and subjects used in the two studies.

Similarly, the findings of Amadi (2015) on influence of university type on the use of multi-literacy platforms for research among universities in the South-South zone, Nigeria, in contrast, found that the use of these platforms for research differed according to university types. These findings have contrarily indicated that federal universities apply research skills more than state and private universities and based their conclusion on more human resources (more professors) and other privileges including research facilities in federal than in the state universities.

The findings of the study also showed that there is a significant influence of university location on the exhibition of research skills (literature search, instrument construction and validation, data collection and analysis, reporting, referencing and overall research skills of academic staff). Further observation of the result shows that within Cross River State (between University of Calabar and Cross River University of Technology), a difference exists in research skills exhibition in favour of UNICAL as indicated in Table 1. This difference can be attributed to the longtime existence of University of Calabar leading to the improvement in research practices over the others and since then, research activities in the university have tended to remain intense, together with the recent crave to meet the need of publishing in high impact journals. In

fact, this is a positive sign to improvement of quality of research skills among academics in Nigerian universities.

This is further supported by the findings of Laband and Zhang (2006) that location with rich resources can encourage research skills development for quality publications in the world's most referred databases. In line with this view, Tettey (2006) observed that universities located in rich settings could have academics staff with greater potentials and motivations to carry out research. Other views concerning the discrepancy in location with respect to research skills exhibition of academic staff asserted that given that research is key to meaningful development in any nation, it thus requires that government in all locations give supports to its intellectuals in the universities to enable them progress in their research practices and productivity which will enhance development.

In like vein, it is equally argued that lecturers operating in poor research location as it is common in less developed countries like universities in Nigeria, which continually have been at the rear in the world ranking, receive poor research funding, operate within inadequate basic technology, insecurity and erratic power supply cannot compete favourably with their counterparts in a rich research locations like the developed states of the world (Ma Fuyai, 2012).

On the interaction effects of university ownership and location on the staff's research skills (literature search, instrument construction and validation, data collection and analysis, reporting, referencing as well as the overall research skills), the results indicated that there is no significant effect of ownership but there is a significant main effect of location on all the research skills and overall skills of academic staff in universities in Akwa Ibom State and Cross River State. The findings also revealed a significant two-way interaction effect of ownership and location on research skills of lecturers.

Conclusion and Recommendations

Based on the findings of this study, it was concluded that there was no significant influence of university ownership but a significant influence exists in location of university on overall research skills of lecturers. There was a significant two-way interaction effect of ownership and location on overall research skills of academic staff. In view of the enormous benefits derivable from research, lecturers in all universities and locations should have equal opportunity to involve in activities that could lead to improvement in their research skills and quality of research output.

1. Government should adequately support universities to provide research facilities, funds and general conducive environment for research. This could help to bridge the disparity in activities among academics.
2. Academic staff could improve in this area through government's and university's increased and enhanced effort to fund academic research, train staff to develop the necessary expertise for good proposal writing and improvement in

department, faculty and institution information regarding research funding opportunities and deadlines.
3. There is need also, for grant agencies such as TETFUND to relax some policies as regarding accepting only two academics/participants per institution in annual conferences.

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