

African Research Review

An International Multi-Disciplinary Journal, Ethiopia

Vol. 3 (5), October, 2009

ISSN 1994-9057 (Print)

ISSN 2070-0083 (Online)

Perception of College of Education Lecturers about Technical Education Research and Evaluation in Nigeria

Odu Oji Kennedy - Department of Technical and Business Education
Delta State University, Abraka, Delta State, Nigeria

Abstract

The study was conducted to ascertain the perception of Federal College of Education Technical lecturers towards technical education research in South-South geo-political zone of Nigeria. In pursuance of this purpose, four research questions were formulated and one hypothesis tested. The population comprised of 70 lecturers of Federal Colleges of Education (Technical) in Asaba, Umunze and Omoku. The entire population was used for the study. No sampling was done because of the fewness of the population. The design used was a survey. The instrument used was the questionnaire. On the whole 57 items were drawn using the likert scale format. The instrument was considered valid by experts with the reliability coefficient of 0.89 using Cronbach alpha. Simple percentage and t-test were used to analyse the data. The study revealed that: Government's inactive role in supporting and promoting research activities in colleges of education (technical) caused low morale of lecturers towards research; A lot of constraints such as poor attitude to research, falsification of research data, among others are the challenges of technical education research. The study recommends among others that: About 10 percent of the education tax fund should be voted to research; Government should improve its communication network.

Introduction

Concepts of Technical Education Research

Research in technical education requires space in the form of buildings, equipments, libraries and research oriented teachers.

The basic element of an effective research is to use the knowledge acquired from research to solve the practical problems of our developing society. In the same vein, research in technical education is also justified if it helps the teacher to teach more effectively and to acquire higher degrees (Adeyeri, 1989; Eyibe, 1990a).

This paper considers the place of research in technical education in Colleges of Education, technical in Nigeria. The College of Education (Technical) is a teacher education programme that prepares N.C.E (Technical) teachers with the intellectual and professional background adequate for teaching technical and vocational subjects and to make them adaptable to any changing situation in technological development, not only in Nigeria but also, in the world at large.

Research Evaluation

Evaluation is the process of gathering and analyzing information to aid judgement of merit in decision making. It involves the assessment, appraisal, and estimation of the quality of the educational inputs, learning process and outcome for the purpose of making value judgement for quality improvement. Igwe (2004) refers to evaluation as an in-built mechanism for managing and monitoring learning.

Evaluation in technical education research is a forum for technical education researchers, teachers and students to share their views on the broad field of vocational technical education and the inter-rated disciplines which is documented in journals. Traditionally, a journal is defined as a print medium through which research works, informed comments and opinions of high scholastic quality may be published not only for the benefit of the learners and all those seeking new information, but also for policy and decision-makers (Dosunmu, 1989). Therefore, every article submitted to such a journal for publication must be presented to a knowledgeable reader or assessor in the field for comment.

Statement of the Problem

Research in every endeavour of life is a stepping stone to national development. In developed countries of the world, research is highly regarded and funded, the reason being that a nation's development depends on the effectiveness of her research efforts. In advanced countries, research is monitored and findings are often implemented. Research and teaching are the primary functions of various departments in the tertiary institutions of the world. For these functions to be performed effectively according to Odu (2007), human and material resources should be in place to make up a good atmosphere for the teaching and research. On the side of the government, research and evaluation are irrelevant and are therefore can merely serve for academic exercise (Adeyeri, 1989, Eyibe, 1990a).

The problem this study intends to tackle is to find out whether poor attitude of government towards research is the only challenges faced by Federal College of Education (Technical) lecturers in conducting and evaluating research in technical education or are there any other hindrances encountered by the lecturers? Specifically, this study sought answers to the following research questions and tested an hypothesis.

1. To what extent has government contributed to the low morale of lecturers in carrying out their research activities?
2. What is the perception of Federal College of Education (Technical) lecturers towards constraints encountered in conducting their research activities?
3. To what extent are lecturers of Federal College of Education (Technical) competent in carrying their researches and evaluation?
4. What are the criteria for selecting articles for academic journal?

Hypothesis

Ho₁: *The responses of male and female lecturers of Federal Colleges of Education (Technical) about their constraints in carrying out their research activities and evaluation will not differ significantly.*

Methodology

The study utilized the ex-post factor research design. The reason for using this design was because the study was based on existing facts. The population

comprised of 70 lecturers in the school of Technical Education from Federal Colleges of Education (Technical) in the South-South zone of Nigeria. These colleges include Federal Colleges of Education (Technical), Asaba, Delta State; Federal College of Education (Technical) Omoku, Rivers State and Federal College of Education (Technical), Umuze, Anambra State. The entire population was surveyed. Because of the fewness of the population all the 70 technical education lecturers were used for the study.

A 57-item questionnaire which covered extent of government contribution to low morale of lecturers in research activities with 10 items; constraints of lecturers in Conducting and Evaluating research Activities with 14 items; Competency of lecturers in carrying out research activities with 24 items; criteria for evaluating articles for academic journal with 9 items. The instrument was validated by three lecturers from the department of technical and business education, Delta Sate University Abraka. They scrutinized the questionnaire. Their comments were assembled and based on their corrections, three items were dropped and finally leaving the questionnaire with 57 items. A reliability coefficient of 0.89 was obtained using Cronbach alpha. A total of 70 copies of the questionnaire were administered. The respondents were requested to complete the questionnaire and returned same to the investigator.

All copies of the questionnaire were duly completed and returned for analysis. Data collected were analyzed by means of frequency count, percentage and t-test.

Results

The results of the study are presented in table 1-5 based on the research questions and hypothesis.

Research Question 1

To what extent has government contributed to the low morale of lecturers in carrying out their research activities?

Items in Table 1 sought to find out the extent of government's contribution to the low morale of lecturers in carrying out their research activities. The average percent by respondents in favour of government's contribution to low morale of lecturers to research is 79% while 21% of the cases show the unfavourable disposition of the respondents about government's contribution to the low morale of lecturers towards their research activities.

Research Question 2

What is the perception of Federal College of Education (Technical) lecturers towards constraints they encountered in conducting their research activities?

Items considered in Table 2 were used to verify the perception of Federal College of Education (Technical) lecturers towards their constraints in research activities.

The average percentage level of their constraints is 76% while 24% of the respondents claimed that there were no such constraints in conducting their researches.

Research Question 3

To what extent are lecturers of Federal College of Education (Technical) competent in carrying their researches and evaluation?

Table 3 shows the level of competencies exhibited by Federal College of Education (Technical) lecturers towards their research activities and evaluation. The average response in agreement that the lecturers possess enough competencies in carrying out their research is 73% while 27% disagreed with these responses.

Research Question 4

What are the criteria for evaluating articles for academic journal?

Table 4 indicates the criteria used by Federal Colleges of Education (Technical) Lecturers in evaluating articles for their technical education journal. The average response in favour of the criteria is 85% while the response against the criteria is 15%.

Analysis of the opinions of the two groups of respondents (Male and Female lecturers) provided various computed t-value compared with the t-table value. The table – value at 41 and 27 degree of freedom (df) given 0.05 level of significance is 2.000. However, the calculated t-values of all items are less than the t-table value of 2.000. Therefore the Null Hypothesis is accepted. This shows that there is no significant difference in the opinion of male and female lecturers of Federal Colleges of Education Technical on their constraints to technical education research.

Findings

This research has revealed the following findings:

1. Government's inactive role in supporting and promoting research activities in colleges of education technical has caused the low morale of lecturers in carrying out their research activities. These hindrances posed by the government are poor funding, poor means of co-ordinating and disseminating research findings, inadequate supply of suitable research personnel, and poor enabling environment such as lack of workshops, laboratories, studios and libraries.
2. A lot of constraints such as poor attitude to research by lecturers, falsification of research data, plagiarism, error in reporting research results, use of obsolete literature, inadequate books, journals, periodicals, unwillingness of the respondents in giving information to the researchers are some of the challenges contending with the lecturers in carrying out their research in technical education, poor communication network as found in telephone, internet, email or facsimile.
3. Lecturers of federal colleges of education (technical) possess enough competencies in carrying out their research work.
4. The criteria for evaluating articles for academic journals in colleges of education technical are adequate.

Discussion

This study was conducted to determine the perception of college of education technical lecturers about technical education research and evaluation in Nigeria. Results obtained reveal that government's non-challant attitude have contributed immensely to the low morale of lecturers in carrying out their research activities. Lack of funding of technical education research, poor means of co-ordinating and disseminating research findings, inadequate supply and motivation of existing research personnel, lip-service of the governments: federal, state and the local government councils and their agencies, poor enabling environment, lack of research facilities and equipment are some of the factors that cause lecturers' morale to be low in carrying out research work. The findings agreed extensively with the earlier reports of Nduka and Iheoma (1983); Ibe-Bassey (1988) and Nworgu (1991), which highlighted some of the obstacles to research personnel in the third world nations including Nigeria. According to these school of thoughts, the identified constraints which however, focused on human and material resources distribution, human attitude and negligence required careful analysis and total amelioration in order to ensure the place of technical education research. Garba (2000) observed that unwillingness of the

industrial organisations to commercialize research findings has been a problem to many breakthroughs.

From the findings of the study, poor means of co-ordinating and disseminating research results is a bottle-neck in research development. Government does not use and implement research findings, if it does, then the number is too infinitesimal. A nation that does not heed and allow for the development of research result is heading for a doom. Such nations cannot invest the bountiful fruits of research. It is indeed through the commercialization and relevant application of research results that nation could be technologically and economically buoyant (Mahea, 1970; Jacob, 1987; Eyibe, 1989).

Furthermore, constraints such as poor attitude to research by lecturers, falsification of research data, plagiarism, error in reporting research results, lack of research facilities and equipment, poor communication network as found in telephone, internet, email or facsimile are some of the variables that hinder research activities in colleges of education (Technical). This assertion has confirmed (Nworgu, 1991) why research in Nigeria has not progressed beyond what must be described as the foundation level.

Lack of enabling environment, from the finding of this study also contributes to poor research activities in Nigeria. Research and teaching are the primary functions of various departments in the tertiary institutions of the world. For these functions to be performed effectively human and material resources should be in place to make up a good atmosphere for the teaching and research (Hassan, 2003). It is unfortunate for Nigeria, a country that has been crying for technological growth, technological emancipation and technological breakthrough has little to show up in terms of enabling environment. No matter how good the teaching staff are, they may not deliver the goods without adequate materials. Few technical writers exist in Nigeria and it is not enough to rely on our local authors and publishers for all library needs. The availability of facilities, like workshops, studios laboratories and libraries will no doubt create an enabling environment for more researches in technical education (Onyeukwu, 1989; Imarhiagbe, 1992). But the reverse is the case in our tertiary institutions.

From the findings of the study in Table 3, it was discovered that lecturers of Federal College of Education Technical possess enough competencies to carry out with their research work and evaluation. Research competence according to Kajang (2006), is the process of arriving at dependable answers

to problems through a planned and systematic approach, which is dependent on successful integration of theory into practical by teachers/lecturers. Technical education lecturers in Federal Colleges of Education are well trained and research-oriented. They are academically and professionally skills to inform, motivate, challenge, train, and stimulate technical education research. According to Modibbo, (1989); Ivowi (1990) and Eyibe (1990:b) College of Education lecturers need to promote in their students enterprise, technical ability, intellectual curiosity, innovation, productivity in technical education research.

The findings of the study in Table 4 indicate that all the criteria for evaluating articles for academic journals of Colleges of Education (Technical) were adequate. An academic paper should investigate a problem situation, offer solutions to such problems and crusade ideas within the article to qualify for selection (Ross, 1972).

Conclusion

From the foregoing, it is very clear that development of research activities in Nigeria is faced with a number of hurdles. It is therefore no doubt that with serious determination, sound planning, provision of better facilities and funding of research in tertiary institutions particularly in Federal Colleges of Education (Technical), fruitful researches will be carried out and proper application of the findings will transform Nigeria from traditional to a technological society in future.

Recommendations

Government should assist technical education research in Federal Colleges of education (Technical) in the following ways:

1. Provide sufficient fund to support their research activities. About 10 percent of the education tax fund should be voted for research in technical education.
2. Improve its communication network such as the telephone, internet, email or the facsimile services such that an average researcher can carryout his projects at a minimal and affordable rate.
3. Procure books and other library materials for the institutions.
4. Provide enabling environment for research activities.

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Table 1: Extent of Government’s Contribution to the Low Morale of Lecturers in Research Activities

S/N	Items	Number Agreeing	%	Number Disagreeing	%
1.	Poor Funding	62	89	8	11
2.	Poor means of co-ordinating and disseminating research findings	66	94	4	6
3.	Inadequate supply of suitable research personnel	53	76	17	24
4.	Poor enabling environment	51	73	19	27
5.	Inadequate laboratories	55.	79	15	21
6.	Inadequate studios	50	71	20	29
7.	Inadequate library space	56	80	14	20
8.	Dearth in hand tools	54	77	16	23
9.	Dearth in machine	55	79	15	21
10.	Scarcity of training materials for applied research	50	71	20	29
	Average Percent 79(+) 21(-)				

Table 2: Perception of Lecturers towards Constraints In Conducting Their Research Activities

S/N	Items	Number Agreeing	%	Number Disagreeing	%
1.	Poor research attitude	57	81	13	19
2.	Unwillingness of the respondents to pass research information to the researchers	52	74	18	26
3.	Indolence in undertaking research activities	49	70	21	30
4.	Falsification of research data	53	76	17	24
5.	Plagiarism	59	84	11	16
6.	Use of obsolete literature	55	79	15	21
7.	Inaccurate reporting of research results	58	83	12	17
8.	Inadequate books for consultation	41	59	29	41
9.	Scarcity of relevant journals	53	76	17	24
10.	Inadequate periodicals	42	60	28	40
11.	Poor library facilities	62	89	8	11
12.	Lecturers undertake research not because of their contribution to knowledge but	56	80	14	20

	because of promotion				
13.	Most information from internet does not suit our local situation	55	79	15	21
14.	Poor communication network as found in telephone, internet, email or facsimile	50	71	20	29
	Average Percent 76(+) 24(-)				

Table 3: Competency of Lecturers in carrying out Researches

S/N	Items	Number Agreeing	%	Number Disagreeing	%
1.	Research title of lecturers in Federal Colleges of Education (Technical) is suitable and is addressing a neglected issue	61	87	9	13
2.	Title of research paper is properly addressed and likely to fill a gap in current knowledge or practice	58	83	12	17
3.	Problem of study is clearly stated.	56	80	14	20
4.	Literature review is relevant to the study	52	74	18	26
5.	Literature review is adequate	50	71	20	29
6.	Literature review is up-to-date	45	64	25	36
7.	Authors demonstrate an adequate understanding of the current literature in the field	60	86	10	14
8.	The literature review throw up a need for the study	58	83	12	17
9.	The paper employ theory in a meaningful way	42	60	28	40
10.	The objectives of the study are clearly stated	50	71	20	29
11.	The objectives of the study are adequate vis-à-vis the title	48	69	22	31
12.	Opinion papers provide a critical analysis of existing points of view.	63	90	7	10
13.	The paper provide a new understanding of the problem of study	47	67	23	33
14.	In empirical papers, method of data collection (test, questionnaire, interview, observation, document etc) is adequate	56	80	14	20
15.	Method of data analysis is appropriate	40	57	30	43
16.	Tables are properly presented	60	86	10	14

17.	Statistical values obtained are correctly interpreted	57	81	13	19
18.	Results/findings reflect all the objectives	45	64	25	36
19.	Results/findings are adequately explained and situated in previous findings	41	59	29	41
20.	Conclusions of the study are clearly stated.	54	77	16	23
21.	The conclusions are adequately tie together to the results of the study	59	84	11	16
22.	All the cited authors in the text are listed in the references.	61	87	9	13
23.	The references conform to the APA format.	15	21	55	79
24.	The standard of writing, including spelling and grammar is satisfactory.	43	61	27	39
	Average percent 73(+) 27(-)				

Table 4: Criteria for Evaluating Articles for Academic Journals of Technical Education

S/N	Items	Number Agreeing	%	Number Disagreeing	%
1.	Original contribution relevant to vocational technical education	66	94	4	6
2.	Evidence of Scholarship	60	86	10	14
3.	Content of subject matter	68	97	2	3
4.	Soundness of treatment	63	90	7	10
5.	Clarity of Presentation	53	76	17	24
6.	Clear research methods for empirical research	59	84	11	16
7.	Thorough documentation	49	70	21	30
8.	Results and discussion for empirical research	64	91	6	9
9.	Conclusion and recommendation	54	77	16	23
	Average Percent 85 (+) 15 (-)				

Table 5: T-Test Comparison of Male and Female Lecturers of Colleges of Education (Technical) about Constraints to Technical Education Research and Evaluation

S/N	Items	Group \overline{X}_1	(SD1) ²	Group \overline{X}_2	(SD2) ²	t-cal	t-crit	Decision
1.	Poor research attitude	3.96	1.18	3.99	1.17	0.17	2.000	NS
2.	Unwillingness of respondents to pass research information to the researchers.	4.18	1.05	4.20	1.03	0.13	2.000	NS
3.	Indolence in undertaking research activities	4.36	0.84	4.38	0.81	0.08	2.000	NS
4.	Falsification of Research Data	4.40	0.85	4.41	0.83	0.08	2.000	NS
5.	Plagiarism	3.78	1.32	3.79	1.31	0.05	2.000	NS
6.	Use of obsolete literature	3.80	1.30	3.79	1.29	0.09	2.000	NS
7.	Error in reporting research results	4.02	1.16	4.05	1.11	0.17	2.000	NS
8.	Inadequate books for consultation	3.74	1.35	3.72	1.36	0.17	2.000	NS
9.	Scarcity of relevant journal	3.73	1.26	3.71	1.25	0.02	2.000	NS
10.	Inadequate periodicals	3.75	1.29	3.74	1.30	0.09	2.000	NS
11.	Poor library facilities	4.30	1.27	3.78	1.27	0.18	2.000	NS
12.	Poor funding	4.31	0.96	4.18	1.07	1.46	2.000	NS
13.	Lecturers undertake research not because of their contribution to knowledge but because of promotion	4.35	1.01	4.47	0.99	0.23	2.000	NS
14.	Most information from internet does not suit our local situation	3.79	1.33	3.87	1.25	1.24	2.000	NS
15.	Poor computer usage and application	3.64	1.41	3.63	1.42	0.08	2.000	NS

$N_1 = 42; N_2 = 28$

Df = 68

Group 1 (N_1) – Male lecturers of Federal College of Education (Technical)

Group 2 (N_2) – Female lecturers of Federal College of Education (Technical)

S – Significant

NS – Not Significant