
Media Improvisation of Lecturers in the State-Owned Colleges of Education in the South-West, Nigeria

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ABSTRACT

Media improvisation among lecturers in colleges is inevitable because of insufficient media resources for utilization. The study investigated media improvisation in the state-owned colleges of education in the South-West, Nigeria. The study is anchored on Media Richness Theory. Stratified sampling technique was adopted to select 812 lecturers. Media improvisation scale ($r = .71$) was used for data collection and T-test statistical method was adopted for data analysis. The result showed that there was no significant differences between media improvisation of Art/Social Science and Science lecturers (Crit. $t = 1.96$, Cal. $t = 821$, $df = 278$, $p > .05$) and that of lecturers in the School of Art/Social Sciences and Vocational/Technical Education (Crit. $t = 1.96$, Cal. $t = .136$, $df = 276$, $p > .05$). Significant difference did not exist between that of the Schools of Languages and Education (Crit. $t = 1.96$, Cal. $t = 1.946$, $df = 288$, $p < .05$). It is recommended that media improvisation of lecturers in schools should be encouraged and improved upon.

1. Introduction

Instructional media or materials are inevitable in teaching and learning in educational institutions in Nigeria especially in college of education which is a teacher training college for teachers' preparation towards teaching in primary and secondary schools in Nigeria. Media resources are information carriers (Egunjobi & Ogunwuyi, 2017; Shittu & Dauda, 2018). Media resources utilisation is very essential in colleges of education because of the benefits which they provide in teaching and learning processes. In real sense, not all necessary media resources are available and accessible in all colleges of education. Some are expensive to purchase and not available for teaching and learning while some of the available ones are obsolete for planning, executing and evaluating teaching activities. As a result of these situations, it is necessary for the lecturers to improvise for unavailable and obsolete media resources.

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Media improvisation is a creative and innovative ability of the lecturers to generate media resources and integrate them into processes of instructional delivery (Ogunwuyi, 2018). Media resources improvisation is a solution to the problem of unavailability and lack of accessibility to media resources essential for instructional delivery of lecturers in colleges of education. The challenges of communication and information dissemination in teaching brought about initiation of media improvisation in schools. Media improvisation is a key to the functionality of any college of education in Nigeria. Based on policy of National Commission for Colleges of Education, evidence of media improvisation is one of criteria for approval of any college of education in Nigeria.

According to National Teacher Institute (2009), media resources improvisation is the making of substitute from local materials when the real or original ones are not available. The concept simply refers to construction, invention and production of materials for teaching and learning activities in absence of commercially made ones (Nwabunwanne, 2009; Adu & Adu, 2014). Media improvisation is essential in colleges of education in Nigeria based on policy and practice. This is more reason why Centre for Educational Technology (CET) was created in all colleges of education. Also, libraries and laboratories in schools of Education, Arts and Social Sciences, Languages, Sciences and Vocational and Technical Education were structured to mention a few. These structures are to make media resources available and accessible to lecturers (Egunjobi & Ogunwuyi, 2017; Ogunwuyi, 2018). Therefore, there is need for lecturers to collaborate with other staff members in the CET and laboratories and libraries to improvise for media resources for utilisation in teaching.

According to Berk and Trieber (2009) improvisation of media resources can be achieved through the following steps which include identification of items to be improvised, understanding the basic principles involved in designing. Then, making a list of materials needed, production, trial testing and evaluation of the prototype should be done before re-designing and mass production of the media resources.

Media improvisation is a technical, innovative, creative and resourceful activity of lecturers in collaboration with their students for effective training of pre-service teachers in colleges of education. According to Ogbe and Omenka (2017) media improvisation helps in providing cognitive bridge between abstraction and reality to students. It saves cost and makes positive efforts towards effective teaching and learning. Actually, it makes lecturers to find out cheaper and faster methods of making process of teaching easier for teaching and learning. Therefore, this study investigated the pattern of media improvisation among lecturers in schools (Science, Art and Social Science, Education, Languages and Technical and Vocational Education) that are common to state-owned colleges of education in South-West, Nigeria.

1.1. Statement of Problem

It has been observed that media resources are not enough in the colleges of education especially state-owned colleges of education and lecturers are not adequately improvising for them. Many studies (Aleburu, 2008; Abdo & Semela, 2010; Fakomogbon, Olanrewaju & Soetan, 2015) had focused on media resources utilisation but studies on media improvisation in state-owned colleges of education in the South West, Nigeria are scarce as at the time of this study. Therefore, this

study investigated pattern of media improvisation of lecturers in selected schools in colleges of education in South-West, Nigeria.

1.2. Objectives of the study

The objectives of this study are to investigate media improvisation of lecturers in the state-owned colleges of education in the South-West, Nigeria. The specific objectives of the studies are to:

- Examine the difference between media improvisation of lecturers in the schools of Art/Social Science and Sciences.
- Find out the difference between media improvisation of lecturers in the schools of languages and education.
- Determine the difference between media improvisation of lecturers in schools of art/social science and vocational/technical education.

1.3. Hypotheses

Three null hypotheses were tested at 0.05 level of significance. They are:

- Ho1: There is no significant difference between media improvisation of lecturers in the schools of languages and education
- Ho2: There is no significant difference between media improvisation of lecturers in the Schools of Art/Social Science and Vocational/ Technical Education.
- Ho3: There is no significant difference between media improvisation of lecturers in the Schools of Art/Social sciences and Science.

2. Literature Review

The present study is anchored on Media Richness Theory developed by organizational scholars (Daft & Lengel, 1986). The theory presents effectiveness in the use of communication channel by matching the richness of a medium and equivocality of task. The theorists emphasized that quality or richness of information in organisation can reduce the uncertainty and equivocality in organisation. Uncertainty was described as lack of information while equivocality is the state of confusion or lack of understanding. The richness of the medium of communication which is determined by immediate feedback, multiple cues, language variety, and personal focused can promote communication in organisation. This theory is most effective in face to face communication followed by phone, written, address document e.g flier. This theory can be applied to teaching in college of education to eradicate lack of information, understanding and confusion through improvisation of media resources that are rich for teaching and learning activities.

Media improvisation promotes curiosity, alertness, and learning in education. It is discovered as a collaborative or collective effort involving more than a person as against individualized effort

in teaching (Lidia & Sara, 2010). Many studies such Taiwo (2008), Jude and Dankoro (2012), Aina (2013) conducted on media improvisation of teachers are essential to guide this present study. The improvisation of media resources has been observed in science education as a bridge between scientific theory and reality especially when models are utilised in teaching of science subjects (Gilbert, Justice, & Arsela, 2003). Improvised media resources promoted active teaching in molecular biology instruction against the passive use of illustration during teaching (Udosen & Ekuikianam, 2014).

Improvised media resources helped in enhancing effective teaching in environmental concept in Art and Social Science and Science Subjects (Onwumere, 2006) and a good source of enriching science lessons in technology and mathematics (Wasaga, 2000). In another study by Ezeasor, Opara, Nnajiolor and Chukwukere (2012), Science lecturers in colleges of education did not improvise for media resources and hardly use improvised media resources during teaching. Also, Jude and Dankoro (2012) submitted in another study on media improvisation in a college of education that ICT resources were not available but lecturers improvised by bringing their own computers while Aina (2013) showed that there was shortage of instructional media resources in physics but teachers improvised resources in physics teaching by using local materials. Improvisation of new tools, instrument, material and modification of existing media resources for instructional delivery is noted in science, technical and language schools (Rabi'u, 2014). This is noted as innovative, resourcefulness and creative potentials in thinking and manipulative dexterity of lecturers (Rabi'u, 2014).

Adu and Adu (2014) presented that improvised media resources are applicable to subjects like Arts, Science, education, medical science, engineering and non-academic activities. They emphasized that the ability of lecturers to create suitable substitute for unavailable media resources is regarded as improvised media. The finding of Abdelraheem and Al-Rabene (2005) had shown that creation of improvised media with local materials could enlarge limited knowledge and enrich instruction to a guaranteed quality.

3. Methodology

3.1. Research Design

Descriptive research design was adopted for the study. Descriptive research was adopted because it is analytical and focused on the existing variables without manipulation. Questionnaires were used for data collection.

3.2. Population

The population of the study comprises 1,354 lecturers in state owned colleges of education in Nigeria. They are represented in **Table 1**.

Table 1. The Population of Lecturers in the State Owned Colleges of Education in the South-West, Nigeria

S/N	Name of College	Education	Art and Social Sciences	Vocational and Technical Education	Languages	Science	Total
1	College of Education Ikere, Ekiti	20	40	25	18	32	135
2	Adeniran Ogunsanya College of Education Otto-Ijanikin, Lagos State	83	69	59	52	60	323
3	College of Education Ilesa, Osun State	26	40	43	36	31	178
4	Osun State College of Education, Ila-Orangun, Osun State.	27	31	39	32	69	198
5	Emmanuel Alayande College of Education, Oyo, Oyo State	54	42	52	49	36	233
6	Tai Solarin College of Education Omu-Ijebu, Ogun State.	61	68	48	57	53	287
Total		271	290	266	246	281	1,354

Source: Ogunwuyi (2018)

3.3. Samples and Sampling Techniques

The sample size is represented by **Table 2**. It shows each college of education, schools, population against the number of lecturers sampled in bracket.

Table 2. The Sample of Lecturers in State-Owned Colleges of Education in the South-West, Nigeria

S/N	Name of College	Education	Art and Social Sciences	Vocational & Technical Education	Languages	Science	Total
1	College of Education Ikere, Ekiti	20 (12)	40 (24)	25 (15)	18 (11)	32 (19)	135 (81)
2	Adeniran Ogunsanya College of Education Otto-Ijanikin, Lagos State	83 (49)	69 (41)	59 (35)	52 (31)	60 (36)	323 (192)
3	College of Education Ilesa, Osun State	26 (16)	40 (24)	43 (26)	36 (23)	31 (19)	178 (108)
4	Osun State College of Education, Ila -Orangun, Osun State.	27 (16)	31 (19)	39 (23)	32 (19)	69 (41)	198 (118)
5	Emmanuel Alayande College of Education, Oyo, Oyo State.	54 (32)	42 (25)	52 (31)	49 (30)	36 (22)	233 (140)
6	Tai Solarin College of Education Omu-Ijebu ,Ogun State.	61 (37)	68 (41)	48 (29)	57 (34)	53 (32)	287 (173)
Total		271 (162)	290 (174)	266 (159)	246 (148)	281 (169)	1,354 (812)

Stratified sampling technique was adopted to select lecturers in five common schools in the state owned-colleges of education in the South-West, Nigeria. They are schools of Arts/Social Sciences,

Vocational/Technical Education, Languages, Sciences and Education. The colleges of education in Nigeria is stratified along the Schools. Sixty percent (60%) of total population of 1354 lecturers was selected based on proportionate to size of the schools. Eight hundred and twelve (812) lecturers formed the sample of the study as presented in **Table 2**. Out of 812 questionnaires administered to lecturers only 710 questionnaires were retrieved back. as thus: School of Art/Social Science (138), School of Sciences (142), School of Languages (124), School of education (166) and school of vocational and Technical Education (140) questionnaires. The average age is 40.5.

3.4. Research Instrument

A structured questionnaire tagged Media Improvisation of Lecturers Scale (MILS) was used to collect data from respondents. The questionnaire was sub-divided into two sections. The first section contains demographic variables such as age, gender, college of education and school. The second section contains media improvisation scale which was constructed by Ogunwuyi (2018). It was used to elicit media improvisation information from the lecturers. It is a 20-item scale of 4 Likert format ranging from most adequate (4), more adequate (3), adequate (2) and not adequate (1). The instrument was validated through experts in the Department of Educational Media Resource Studies, University of Ibadan, Nigeria, for logical analysis of the content or the items that make up the construct. Based on their criticism and suggestions on the appropriateness of the items, some items were modified. The trial testing was carried out on 50 lecturers of Michael Otedola College of Education, Epe, Lagos State to find out the reliability coefficient of the scale. The data collected was subjected to Cronbach Alpha of 0.71.

4. Analysis

The three hypotheses were analyzed using t-test statistical method.

Ho1: There is no significant difference in the media improvisation of Schools of Language and Education Lecturers

Table 3. Significant Difference in the Media Improvisation of Social of Language and Education Lecturers

Media Resources Improvisation	N	Mean	Std. Dev.	Crit-t	Cal-t	Df	P
Language lecturers	124	151.9919	45.9817	1.96	1.946	288	.053
Education Lecturers	166	140.9337	49.2399				

The above table showed that there was significant difference in the Media improvisation of language and education lecturers (Crit-t = 1.96, Cal.t = 1.946, df = 288, p<05 level of significance). The null hypothesis is therefore rejected.

Ho2: *There is no significant difference in the media improvisation of social science and vocational/technical education lecturers*

Table 4. Significant Difference in the Media Improvisation of Social Science and Vocational/Technical Education Lecturers

Media Resources Improvisation	N	Mean	Std. Dev.	Crit-t	Cal-t	Df	P
Art/Social Science Lecturers	138	153.2174	47.3271	1.96	.136	276	.892
Vocational/Technical Lecturers	140	153.9571	43.3012				

The above table showed that there was no significant difference in the Media Improvisation of social science and vocational/technical lecturers (Crit-t=1.96, Cal.t = .136, df=276, p>.05 level of significance). The null hypothesis is therefore accepted.

Ho3: *There is no significant difference in the media improvisation of schools of art/social sciences and sciences lecturers*

Table 5. Significant Difference in the Media Improvisation of Social Science and Science Lecturers

Media Resources Improvisation	N	Mean	Std. Dev.	Crit-t	Cal-t	Df	P
Art/Social Science Lecturers	138	153.2174	47.3271	1.96	.821	278	.821
Science Lecturers	142	152.0423	39.4434				

*Sig. at .05 level, **Sig. at .01 level

The above table showed that there was no significant difference in the Media Improvisation of social science and science lecturers (Crit-t = 1.96, Cal.t = .226, df = 278, P > .05 level of significance). The null hypothesis is therefore accepted.

5. Discussion

The results of the study revealed that there is no significant difference between media improvisation of lecturers in schools of Arts/Social sciences and Sciences. It means that the lecturers in the two schools are improvising media resources in the similar direction. It shows that the lecturers are innovative, creative and resourceful in improvising media resources that are not available, enough and accessible for teaching in the colleges of education. This supports Nwabunwanne (2009) that media improvisation involves the construction, invention and production of materials in absence of commercially made-ones for effective teaching and learning activities. Furthermore, the finding is in agreement with Adu & Adu (2014) who found that Improvised media resources are applicable to subjects in art, science, education, medical, engineering disciplines. It is noted that studies of Onwumere (2006), Wasaga (2000), Aina (2013), Gilbert, Justi, and Aksela (2003) agree with the

present finding on science lecturers' improvisation media resources for effective teaching but contradicts Ezeasor, Opara, Nnajofofor and Chukwukere (2012) submitted that science lecturers did not improvise for unavailable media resources in colleges of education.

Significance difference existed between media improvisation of lecturers in schools of languages and education. It shows that the lecturers in the school of languages have greater media improvisation than those from the school of education. It means that the level at which lecturers in the school of languages provide for media resources that are not available, accessible and not enough is better than that of lecturers in school of education. The creative and innovative ability of lecturers in the school of languages to generate media resources and integrate them into teaching for proper training of pre-service teachers is greater. This study contradicts the previous study of Taiwo (2008) that improvisation of new tools, instructional material, devices, or modification of existing ones for instructional delivery are common in science, technical and language schools and that of Adu and Adu (2014) that improvised media resources are common to teachers in art, sciences, education, medical science, engineering and non-academic spheres.

Significant difference did not exist between media improvisation of arts/social sciences and vocational/technical education lecturers. The media improvisation of arts/social sciences and vocational/technical education lecturers are similar. The lecturers in the two schools made substitute from local materials when the real or original materials are not available, enough and accessible. The lecturers were able to use their technical know-how to construct media resources that are useful for delivery of lectures. This finding supports Adu and Adu (2014) that technical and Arts/ social science schools improvised media resources for instructional delivery but contradicts Ezeasor, Opara, Nnajofofor and Chukwukere (2012) who submitted that lecturers did not improvise for media resources and hardly utilize media resources for instructional delivery.

6. Conclusion

Media improvisation of lecturers in the schools common to colleges of education in South-West, Nigeria was established. It was concluded that media improvisation of lecturers in the schools of languages and education were different while lecturers in the schools of Arts/Social Science and Sciences and that of Art/Social Sciences and Vocational and Technical Education were not different.

Based on the outcomes of the study. It is recommended that:

- Media improvisation should be promoted in school of Sciences, Art/Social Sciences and Technical Education
 - Media improvisation should be acknowledged in schools Languages and Education
 - School authorities in colleges of education should promote training in media improvisation knowledge, attitude and skills.
 - National Commission on Colleges of Education (NCCE) should organise seminar, workshops and conferences on media improvisation for lecturers in colleges of education in Nigeria.
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References

- Abdelraheem, A. Y., & Al-Rabane, A. H. (2005). Utilisation and Benefits of Instructional Media in Teaching Social Studies Courses as Perceived by Omani students. *Malaysian Online Journal of Instructional Technology*, 2(1), 8. Retrived from https://www.researchgate.net/publication/228640099_Utilisation_and_benefits_of_instructional_media_in_teaching_social_studies_courses_as_perceived_by_Omani_students
- Abdo, M., & Semela, T. (2010). Teachers of poor communities: The tale of instructional media use in primary schools of Gedeo Zone, Southern Ethiopia. *Australian Journal of Teacher Education (Online)*, 35(7), 78-92. doi:10.14221/ajte.2010v35n7.7
- Adu, F. O., & Adu, E. I. (2014). Improvisation as a Tool for Improving the Teachers Knowledge in Basic Technology. *Journal of Research & Method in Education (IOSR-JRME)*, 4(1), 14-18. doi:10.9790/7388-04111418
- Aina, K. J. (2013). Instructional Materials and Improvisation in Physics Class: Implications for Teaching and Learning. *Journal of Research & Method in Education (IOSR-JRME)*, 2(5), 38-42. doi:10.9790/7388-0253842
- Aleburu, V. I. (2008). Using educational media for effective teaching. in E.O Adeniyi., T. Ajobiewe .& A.A Adejumobi (Eds.), *A handbook on effective classroom practices for participants in federal teachers' scheme (1st ed.)*. Abuja: Universal Basic Education Commision, 71-94.
- Berk, R. A., & Trieber, R. H. (2009). Whose Classroom is it, anyway? Improvisation as a Teaching Tool. *Journal on Excellence in College Teaching*, 20(3), 29-60. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.484.7071&rep=rep1&type=pdf>
- Daft, R. L., & Lengel, R. H. (1986). Organizational Information Requirements, Media Richness and Structural Design. *Management Science*, 32(5), 554-571. Retrieved from <http://www.jstor.org/stable/2631846>
- Egunjobi, A. O., & Ogunwuyi, B. O. (2017). Emotional- Intelligence and Teacher Self-Efficacy as correlates of Media Improvisation among lecturers in State-Owned Colleges of Education in South-West, Nigeria. *Nigeria Journal of Social Works Education*, 16, 174-183.
- Ezeasor, M. E. N., Opara, M. F., Nnajifor, F. N., & Chukwukere, C. G. (2012). Assessing teachers' use of improvised instructional materials in science education. *International Researchers*, 1(3), 107-114.
- Fakomogbon, M. A., Olanrewaju, O. S., & Soetan, A. K. (2015). Lecturers' Awareness and Utilization of Instructional Media in the State-Owned Colleges of Education, South-West Nigeria. *Malaysia n Online Journal of Educational Technology*, 3(2), 13-19. Retrieved from <https://eric.ed.gov/?id>
-

=EJ1085944

- Gilbert, J. K., Justi, R., & Aksela, M. (2003). *The visualization of models: A meta-cognitive competence in the leading of Chemistry*. 4th Annual Meeting of the European Science Education Research Association, Noordwijkerhout.
- Jude, W. I., & Dankaro, J. T. (2012). ICT Resources Utilisation, Availability and Accessibility by Teachers Educators for Instructional Development in Colleges of Education Katsina-ala. *New Media and Mass Communication*, 3, 1-6. Retrieved from <https://www.iiste.org/Journals/index.php/NMMC/article/view/1766>
- Lidia, M., & Sara, C. (2010). Exploration and Improvisation: the use of Creative Strategies in Instructional Teaching. *International Journal for Cross-Disciplinary Subjects in Education*, 1(4), 248-254. doi:10.20533/ijcdse.2042.6364.2010.0035
- National Teacher Institute (2009). *Manual for the re-training of primary school teachers: social studies' resources improvisation*. Lagos: NTI Press.
- Nwabunwanne, C. C. (2009). *Improvisation and Utilisation of Instructional Materials by Basic 7-9 Secondary School Home-Economics Teachers in Anambra State*. Nsukka: University of Nigeria.
- Ogbe, A. O., & Omenka, J. (2017). Improvisation and Utilisation of Resources in the Teaching and Learning of Science and Mathematics in Secondary School in Cross Rivers State. *Global Journal of Educational Resources*, 16, 21-28. doi:10.4314/gjedr.v16i1.4
- Ogunwuyi, B. O. (2018). *Emotional intelligence, media improvisation and self-efficacy as determinants of media resources utilisation among lecturers of state-owned colleges of education in the South-West, Nigeria* (Doctoral dissertation). Centre for Education Resource Studies, University of Ibadan, Ibadan.
- Onwumere, A. O. (2006). Repositioning the Teacher Education in Nigeria College of Education Through Education Technology. *Multidisciplinary Journal of Research Development*, 7(3), 68-73. Retrieved from <https://www.globalacademicgroup.com/journals/nard/Augustine%20%20Onwumere.pdf>
- Rabi'u, H. K. (2014). *Effects of Resources Improvisation on the Academic Performance of Junior Secondary School Social Studies Students in Katsina State* (Master Dissertation). Department of Arts and Social Science, Ahmadu Bello University, Zaria.
- Shittu, A. S., & Dauda, E. (2018). Instructional Media Provisions and Utilisation for Teaching Effectiveness in Classrooms. *KIU Journal of Social Sciences*, 4(4), 163-170. Retrieved from <http://www.ijhumas.com/ojs/index.php/kiujoss/article/view/445>
- Taiwo, S. A. (2008). Principles Underlying the Improvisation of Teaching aids for Effective Classroom Management in E.O. Adeniyi, T. Ajobiewe, & A. A. Adejumobi. 2008.(Eds). *A handbook on effective Classroom practices for Participants in Federal Teachers Scheme*. Abuja: Universal Basic Education Commission, 54-70.
- Udosen, I. N., & Ekukinam, T. U. (2014). Improvisation of Technological instructional media and students' performance in primary science in Nigerian schools. *Research Journal of Education*, 271, 1-13.
- Wasaga, I. (2000). *Improvisation as a Good Science of Enriching Science Resources in M.O. Akalae*,
-

41st Annual Conference Proceeding of Science Teachers Association of Nigeria, Kwali, 55-57.

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