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STRATEGIC APPROACHES FOR ENHANCING INNOVATIVE INSTRUCTIONAL TECHNOLOGIES FOR TEACHING CLOTHING AND TEXTILES IN SOUTHWEST NIGERIA

OLUWALEYIMU, O. O
Department of Science and Technology Education
University of Lagos, Lagos State, Nigeria.
ooluwaleyimu@unilag.edu.ng

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OLUWALEYIMU, O. O

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Abstract

The study examined strategic approaches for enhancing innovative instructional technologies for teaching clothing and textiles in southwest Nigeria. Survey research design was adopted for carrying out the study. Through multistage sampling technique, 78 Home economics lecturers were involved as respondents for the study. The instrument for data collection was a structured questionnaire face-validated by three experts who are Senior Lecturers in Home Economics Education. The reliability of the questionnaire was achieved using Chronbach Alpha which yielded a reliability coefficient of 0.751. Data collected were analysed using mean and t-test statistics. The result showed that the respondents agreed to 10 technologies for improving clothing and textile instructions, 13 strategic measures for improving clothing and textile skills acquisition through technology education and 11 challenges confronting the use of technology education for clothing and textile skills acquisition. The findings of the study on hypotheses tested showed no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities. Based on the findings and conclusion, the study recommended among others that there should be adequate funding and provision for modern and contemporary educational technology facilities in Nigerian schools and colleges.

Introduction

Home Economics is a broad field of study that embraces many areas such as food and nutrition Home management, tourism, child care and development, clothing and textiles and so on. Clothing is anything worn by human being to cover and beautify the body. In the opinion of Anyakoha and Eluwa (2008), clothing is any article placed on the body to protect, beautify or adorns it. Akubue and Chukwu (2016) noted that clothing include all types of dresses and their accessories such as hats, shoes, bangles, earings, under wears, hair-dos and even make-ups. Clothing is therefore, derived from textiles. Akubue and Chukwu (2016) described textiles as any material formed by weaving, kritting, crocheting, pressing fibres together and even knotting. Textile is a flexible woven material consists of network of natural or synthetic fibres origin that have twisted into yarn and constructed into cloths. Clothing and textiles are an area of study in Home Economics.

Clothing and textiles is one of the key Home Economics subjects in which entrepreneurial skills are needed to facilitate self-reliance. Igbo (2001) opined that clothing and textiles is a course that is taught at both basic secondary and tertiary institutions as well as in skill acquisition centres where an individual can be equipped with salable skills for self or paid employment on graduation. Iyere and Orumwense (2004) viewed clothing and textiles as covering basic techniques in wardrobe planning and garment making, clothing repair, maintenance, laundry, dyeing and dry cleaning of clothing items. In the opinion of Arubayi (2010), clothing and textiles is one of the three major areas of Home Economics taught in schools. The study of clothing and textiles is classified into

garment construction, studying of fabrics, clothing care and maintenance, wardrobe planning and decorative processes. It is characteristically skill and activity oriented which when properly taught will equip the learner with saleable skills needed for self-reliance. Clothing and textile is an area of Vocational and technical education which enables learners to acquire the necessary skills, knowledge, abilities and attitudes required to function effectively for the development of self and the society, hence contributing to the economic advancement of the nation. Arubayi (2009) observed that the value of the quality of instruction in the teaching of clothing and textiles to national development and the economic empowerment of individuals is not in doubt. This is because, clothing and textiles is a lucrative and an interesting aspect of Home Economics which is of inestimable value to society.

The importance of adequately taught clothing and textiles lessons is of inestimable value to skill acquisition, economic enhancement and empowerment of the individual for self or paid employment. The teaching and learning of clothing and textiles entails various skills and techniques hence the need to apply information and communication technology to enhance effectiveness in the study. Olubiyi, Olaniyan and Odiaka (2015) pointed out that technology has revolutionized the way, ease, speed and time with which we conduct our activities as business transactions are conducted faster while teaching and learning become richer with the use of technologies. The use of technologies in education is fast revolutionalizing the way people live and work in every aspect of human endeavor; and that the electronic world is characterized as an agent of change mainly driven by information and communication technology (ICTs). The use of technologies in learning, according to Amiaya and Ranor (2015) creates, fosters, delivers and facilitates learning. This is because, technologies in educations have rapidly changed and revolutionized the nature, content and scope of instruction at all levels of education. The technologies that are employed in education are all forms of technologies that create, store, process and use information in its various forms (data, voice, image and multi-media presentations) to facilitate and support communication. They are broad-based technologies that use equipment, applications, methods and management that support the creation, storage, manipulation and communication of information for effective instructional delivery. Federal Ministry of Education (2010) described all technologies use in education as involving all equipment and tools (inclusive of conventional technologies of radio, video and television to the newer technologies of computers, hardware, firmware, mobile learning gargets), as well as the methods, practices, processes, procedures, concepts and principles that come into play in the conduct of the information and communication activities.

Innovative instructional technologies are modern facilities use for instructional delivery to foster quality teaching and learning. Khurshid and Ansari (2012) identified innovative instructional technologies to include the use of computer assisted instruction among others. These technologies make classroom instructions more interactive and can illustrate a concept through attractive animation, sound and demonstration (Sani, 2011). The use of innovative technologies or information and communication technologies (ICTs) is fast gaining prominence and becoming one of the most important elements defining the basic competencies in education system (Apreala, 2013). The increase in the use of technologies in education has facilitated the paradigm shift from traditional pedagogical methods to innovative technological-based teaching and learning methods imbedded in school educational programmes (Oketoobo, 2020). Educational technologies facilitate communication in teaching and learning process because they increase access to learning for students, stimulate a wide range of scientific phenomenon and generally motivate both teachers and students, develop problem solving capabilities and aid deeper understanding in learning experience.

Considering the relevance and significance of technologies in education, skills in the use of these technologies are also essential. Skill is the ability of an individual to perform an intellectual or physical task. Skills are practical activities which make one employable, self-reliant and relevant to the society. Skills are needed to solve problems and engender quality in any area of human endeavour. It was in line with this that this study examined strategic approaches for enhancing innovative instructional technologies for teaching clothing and textiles in southwest Nigeria.

Objective of the Study

The broad purpose of the study was to examine strategic approaches for enhancing innovative instructional technologies for teaching clothing and textile in southwest Nigeria. Specifically, the study identified:

1. Innovative instructional technologies for teaching clothing and textile.
2. Strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies.
3. Challenges confronting the use of innovative instructional technologies for teaching clothing and textiles.

Research Questions

1. What are innovative instructional technologies for teaching clothing and textiles?
2. What are strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies?
3. What are challenges confronting the use of innovative instructional technologies for teaching clothing and textiles?

Hypotheses

$H0_1$: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on innovative instructional technologies for teaching clothing and textiles.

$H0_2$: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies.

$H0_3$: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on the challenges confronting the use of innovative instructional technologies for teaching clothing and textiles.

Methodology

The study was carried out in southwest Nigeria comprising six states which are: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States. Three research questions were answered by the study while three null hypotheses were tested at 0.05 level of significance. Descriptive survey research design was adopted in carrying out the study. Described survey research design according to Nworgu (2015) is a method in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. Rouse (2019) described survey research design as the process of data collection by asking individuals questions either in person, on paper, by phone or online using questionnaire through primary research which is the gathering of first-hand data from its source. The design is suitable for this study because it involved the collection of the

required data and information on improving clothing and textile skills acquisition through effective technology education programme.

Multistage sampling technique was used to select the respondents for the study. The first stage involved random selected of two states (Lagos and Ogun) from the existing six states in southwest Nigeria. The second stage involved purposive selection of seven public tertiary institutions (Colleges of education and Universities) offering Home economics education programme in the two states. At the third stage of the sampling, all the 78 Home economics lecturers drawn from the nine tertiary institutions were sampled. Hence, the total sample for the study was 78 respondents from which data for the study were collected. The instrument for data collection for the study was a structured close-ended questionnaire designed by the researcher. The questionnaire was structured into four sections (A, B, C and D). Section A was developed to obtain personal data of the respondents such as names of schools, gender and highest educational qualification. Section B was structured to obtain the required data on innovative instructional technologies for teaching clothing and textile. Section C was developed to elicit data on strategic approaches for teaching clothing and textile using innovative instructional technologies while Section D was structured to generate data on challenges confronting the use of innovative instructional technologies usage for clothing and textile. Sections B, C and D of the questionnaire were structured into 4-point scale rating scale of Strongly Agreed (SA); Agreed (A); Disagreed (D) and Strongly Disagreed (SD) with corresponding rating values of 4, 3, 2, and 1 respectively. The instrument was face-validated by three experts who are Senior Lecturers in Home Economics Education. The reliability of the questionnaire was ascertained by trial testing 10 copies of the instrument on 10 Home economics lecturers in public tertiary institution in Oyo State. Data collected from the trial testing were analysed using Cronbach Alpha reliability method which yielded a reliability coefficient of 0.751 for the instrument.

Data for the study were collected by the researchers with the help of six research assistants to cover the seven schools. Due to close monitoring of the research assistants, the entire 78 copies of the questionnaire administered to the respondents were completely filled and returned representing the envisaged 100.0% rate of return. The data collected were analysed using mean and standard deviation for answering the research questions while the hypotheses were tested using t-test statistics. Cut-off point value of 2.50 on 4-point scale was used for interpreting the results. The cut-off point was computed thus:

$$\frac{4+3+2+1}{4} = \frac{10}{4} \qquad = \mathbf{2.50}\ (cut-off\ point)$$

Based on the obtained cut-off point value, any item with mean value of 2.50 and above was interpreted as "Agreed" while items with mean values less than 2.50 were interpreted as "Disagreed". On the null hypotheses tested, the hypothesis of no significant difference was accepted for items whose t-calculated (t-cal) value was less than the t-table (t-tab) value of 1.96 at 0.05 level of significance while hypothesis of no significant difference was rejected for items whose t-calculated (t-cal) values was greater than the t-table (t-tab) value of 1.96 at 0.05 level of significance.

Results

Research Question One

What are innovative instructional technologies for teaching clothing and textile?

Table 1:
Mean ratings of the respondents on innovative instructional technologies for teaching clothing and textiles (N = 78).

SN	Innovative instructional technologies for teaching clothing and textiles include:	$\overline{X}$	SD	Rmks
1	Audio visual such as projectors for in clothing and textiles instructions.	3.72	0.57	Agreed
2	Engagement of mobile learning devices such as phones, ipad etc.	3.54	0.54	Agreed
3	Video conference in Home economics instruction.	3.61	0.69	Agreed
4	Computer programmes & software to complement home economics teaching	3.47	0.54	Agreed
5	Smart phones, Laptops MP3 players and E-book readers.	3.49	0.70	Agreed
6	Social medial platforms such as Facebook, Twitter, Whatsapp, and instagram for clothing and textiles instructional delivery.	3.53	0.81	Agreed
7	Computer Based Test (CBT) in clothing and textiles assessment	3.48	0.83	Agreed
8	Web Based Test (WBT) in clothing and textiles assessment	3.43	0.66	Agreed
9	AUTOCAD for clothing and textiles instruction	3.68	0.61	Agreed
10	Animation games for clothing and textile teaching and learning	3.53	0.53	Agreed
	Pooled Mean	3.55	0.62	Agreed

Note*:* $\bar{X}$ *= Mean;* ***SD*** *= Standard Deviation.*

The mean ratings of the respondents in Table 1 ranged from 3.43 to 3.72 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicates that the 10 items in the table are innovative instructional technologies for teaching clothing and textile instruction in tertiary institutions in southwest Nigeria. The standard deviation values ranged from 0.54 to 0.83 which indicates that the responses of the respondents are close to one another and the overall mean.

Hypothesis One

$H0_1$: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on innovative instructional technologies for teaching clothing and textile.

Table 2:
Result of t-test of statistics of significant difference between the mean ratings of Home Economics lecturers in Colleges of Education and Universities on innovative instructional technologies for teaching clothing and textiles

Variables	**N**	$\overline{X}$	**SD**	**DF**	**Std. Error**	**t-cal**	**t-tab**	**Level of sig.**	**Rmks**
COE Lecturers	47	3.52	0.57						
				76	0.027	0.31	1.96	0.05	**NS**
Uni. Lecturers	31	3.58	0.50						

Note: NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 2 reveals that the t-calculated (t-cal) value of 0.31 is less than the t-critical (t-tab) value of 1.96 at 76 degree of freedom. This implies that there is no significant ($p<0.05$) difference in the mean ratings of the responses of Home economic lecturers in colleges of education and universities on innovative instructional technologies for teaching clothing and textile in tertiary institutions in

southwest Nigeria. Therefore, the null hypothesis of no significant ($p<0.05$) difference in the mean ratings of the responses of the two groups of respondents is accepted for hypothesis one.

Research Question Two

What are strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies?

Table 3:
Mean ratings of the respondents on strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies (N = 78).

SN	Strategic approaches for enhancing the teaching of clothing and textiles through innovative instructional technologies are:	$\overline{X}$	SD	Rmks
1	Adequate provision of fund by school management for procurement of educational technology devices	3.62	0.68	Agreed
2	Regular training of Home economics lecturers and technologists on effective use of modern technologies for instructions.	3.48	0.77	Agreed
3	Provision of steady electricity supply in Nigerian institutions for uninterrupted use of technologies for teaching and learning	3.70	0.72	Agreed
4	Public Private Partnership (PPP) for adequate provision of required learning technologies in schools.	3.58	0.65	Agreed
5	Site tertiary institutions in urban areas to increase the acquisition and use of modern technological devices to teaching and learning.	2.23	0.87	Disagreed
6	Mandatory use of modern technologies for Home economics instruction in schools	3.45	0.62	Agreed
7	Increased incentives to lecturers to own personal computers and other relevant modern learning facilities.	3.57	0.54	Agreed
8	Formulation of educational technology policies by government and school to enhance the use of technologies for teaching and learning.	3.39	0.62	Agreed
9	Donation of computers and other relevant instructional technological facilities to schools by stakeholders and NGOs	3.53	0.67	Agreed
10	Recruitment of ICT-inclined lecturers and technologists to handle Home economics instructions.	3.42	0.49	Agreed
11	Subsidizing the cost of learning technology gargets for lecturers by the schools management	3.60	0.76	Agreed
12	Subsidizing the cost of learning technology gargets for students by the schools management	3.51	0.48	Agreed
13	Increased emphasis on sponsoring of lecturers to attend technology related conferences and workshops.	3.54	0.60	Agreed
14	Developing good maintenance culture of educational technology devices by staff and school authorities.	3.48	0.51	Agreed
	Pooled Mean	3.44	0.59	Agreed

Note*:* $\overline{X}$ *= Mean; SD = Standard Deviation.*

The mean ratings of the respondents on 13 out of the 14 items in Table 3 ranged from 3.39 to 3.70 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This indicates that the 13 identified items in the table are strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies in tertiary institutions in southwest, Nigeria. Although, the mean value on item 5 in the table was 2.23 which is less than the cut-off point value of 2.50 on 4-point rating scale, indicating that item 5 is not part of the strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies. The standard deviation values for the 14 items ranged from 0.48 to 0.87 which signifies that the responses of the respondents are close to one another and the overall mean.

Hypothesis Two

H0₂: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies.

Table 4:
Result of t-test of statistics of significant difference between the mean ratings of Home Economics lecturers in Colleges of Education and Universities on strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies

Variables	N	$\overline{X}$	SD	DF	Std. Error	t-cal	t-tab	Level of sig.	Rmks
COE Lecturers	47	3.43	0.71						
				76	0.022	0.29	1.96	0.05	**NS**
Uni. Lecturers	31	3.45	0. 63						

Note: NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 4 show that the t-calculated (t-cal) value of 0.29 is less than the t-critical (t-tab) value of 1.96 at 76 degree of freedom. This indicates that there is no significant ($p<0.05$) difference in the mean ratings of the responses of Home economic lecturers in colleges of education and universities on strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies in tertiary institutions in southwest Nigeria. Consequently, the null hypothesis of no significant ($p<0.05$) difference in the mean ratings of the responses of the two groups of respondents is upheld on hypothesis two.

Research Question Three

What are challenges confronting the use of innovative instructional technologies for teaching clothing and textiles?

Table 5: Mean ratings of the respondents on challenges confronting the use of innovative instructional technologies for teaching clothing and textiles (N = 78).

SN	Challenges confronting the use of innovative instructional technologies for teaching clothing and textiles include:	$\overline{X}$	SD	Rmks
1	High cost of procurement and maintenance of technologies in education.	3.33	0.66	Agreed
2	Poor internet connectivity as a major limitation in the use of online technologies in education.	3.58	0.64	Agreed
3	Unstable power supply result in interrupted use of instructional technologies and devices.	3.32	0.52	Agreed
4	Inadequate classroom spaces to accommodate technological devices	2.20	0.82	Disagreed
5	Difficulty in the use of educational technologies in Home economics	3.60	0.76	Agreed
6	The fear of theft of modern instructional technologies and information lost.	3.49	0.50	Agreed
7	Techno-phobia or fear of new technologies by some lecturers is a challenge in educational technology.	3.62	0.66	Agreed
8	General poor maintenance culture of educational technologies and devices.	3.70	0.69	Agreed
9	Fragility of most educational technological devices is a challenge	3.43	0.52	Agreed
10	Poor attitude and disposition of students towards learning with educational technologies	1.72	0.85	Disagreed
11	The challenges of poor battery life span of technological devices affect their uses for teaching and learning.	3.57	0.73	Agreed
12	Poor funding of public schools resulting to inadequacy of needed technologies in education	3.53	0.73	Agreed
13	Inadequate incentives to Home economics lecturers to acquire needed modern technologies for service delivery.	3.62	0.68	Agreed
	Pooled Mean	3.29	0.67	Agreed

Note*: $\bar{X}$ = Mean; **SD** = Standard Deviation.*

The mean ratings of the respondents on 11 out of the 13 items in Table 5 ranged from 3.32 to 3.70 which are all greater than the cut-off point value of 2.50 on 4-point rating scale. This implies that the 11 identified items in the table are challenges confronting the use of innovative instructional technologies for teaching clothing and textiles in tertiary institutions in southwest Nigeria. On the other hand, the mean values on items 4 and 10 in the table are 2.20 and 1.72 respectively which are in each case less than the cut-off point value of 2.50 on 4-point rating scale. This indicates that items 4 and 10 do not constitute challenges confronting the use of innovative instructional technologies for teaching clothing and textiles. The standard deviation values for the 13 items ranged from 0.50 to 0.85 which indicates that the responses of the respondents are close to one another and the overall mean.

Hypothesis Three

$H0_3$: There is no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities on the challenges confronting the use of innovative instructional technologies for teaching clothing and textiles.

Table 6:
Result of t-test of statistics of significant difference between the mean ratings of Home Economics lecturers in Colleges of Education and Universities on the challenges confronting the use of innovative instructional technologies for teaching clothing and textiles.

Variables	N	$\bar{X}$	SD	DF	Std. Error	t-cal	t-tab	Level of sig.	Rmks
COE Lecturers	47	3.32	0. 64						
				76	0.030	0.42	1.96	0.05	NS
Uni. Lecturers	31	3.27	0. 73						

Note: NS = Not Significant at 0.05.

The data presented on the t-test statistics in Table 6 reveal that the t-calculated (t-cal) value of 0.42 is less than the t-critical (t-tab) value of 1.96 at 76 degree of freedom. This indicates that there is no significant ($p<0.05$) difference in the mean ratings of the responses of Home economic lecturers in colleges of education and universities on the challenges confronting the use of innovative instructional technologies for teaching clothing and textiles in tertiary institutions in southwest Nigeria. Hence, the null hypothesis of no significant ($p<0.05$) difference in the mean ratings of the responses of the two groups of respondents is accepted on hypothesis three.

Discussion of Findings

The study identified innovative instructional technologies for teaching clothing and textiles to include: audio visual such as projectors, engagement of mobile learning devices such as phones, ipad etc, video conference, computer programmes and software to complement home economics teaching, smart phones, Laptops MP3 players and E-book readers, Computer Based Test (CBT) in clothing and textiles assessment and AUTOCAD for clothing and textiles instruction among others. This finding corroborated that of Nedum-Ogbede (2016) who identified modern technologies to facilitate teaching and learning to include: projectors, e-mail, smart boards, mimeo boards, teleconferencing, video conferencing, e-book reader and streaming videos.

This study identified strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies to include: adequate provision of fund by school management for procurement of educational technology devices, regular training of Home economics lecturers and technologists on effective use of modern technologies for instructions, provision of steady electricity supply in Nigerian institutions for uninterrupted use of technologies for teaching and learning, Public Private Partnership (PPP) for adequate provision of required learning technologies in schools, mandatory use of modern technologies for Home economics instruction in schools, increased incentives to lecturers to own personal computers and other relevant modern learning facilities, formulation of educational technology policies by government and school to enhance the use of technologies for teaching and learning and recruitment of ICT-inclined lecturers and technologists to handle Home economics instructions among others. The findings conformed with the result of Okoro (2013) who identified adequate funding of ICT facilities, provision of adequate ICT equipment by school authorities, provision of adequate ICT facilities, provision of adequate electricity supply, proper implementation of ICT policies, employment of adequate qualified ICT teachers, reduction in cost of ICT facilities, reduction in cost of ICT equipment and sponsoring of lecturers to attend workshops/seminars as strategies for enhance use of ICT facilities for teaching. Similarly, the findings of the study agreed with that of Onojetah (2019) who identified adequate provision of fund by school management, organizing regular workshops/seminars for training lecturers and technologists on effective use of learning technologies, and proper implementation of ICT policies by school authorities as measures for promoting the use educational and mobile learning technologies.

This study identified the challenges confronting the use of innovative instructional technologies for teaching clothing and textile to include: high cost of procurement and maintenance of technologies in education, poor internet connectivity as a major limitation in the use of online technologies in education, unstable power supply result in interrupted use of instructional technologies and devices, inadequate classroom spaces to accommodate technological devices, difficulty in the use of educational technologies in Home economics, the fear of theft of modern instructional technologies and information lost, techno-phobia or fear of new technologies by some lecturers is a challenge in educational technology and general poor maintenance culture of educational technologies and devices. The findings agreed with the findings of Amiaya and Ranor (2015) who identified the challenges to the use of modern learning technologies in education as: connectivity and battery life span are common phenomena, accessibility and cost barriers for end users are common, durability and obsolescence of the handheld devices, subject of mobility in the content of mobile learning is a challenge.

Conclusion

The strategic role of innovative technologies in instructional delivery is paramount. Hence, this study examined strategic approaches for enhancing innovative instructional technologies for teaching clothing and textile in southwest Nigeria. Through the data collected and analysed, the study identified 10 innovative instructional technologies for teaching clothing and textile, 13 strategic approaches for enhancing the teaching of clothing and textile through innovative instructional technologies and 11 challenges confronting the use of innovative instructional technologies for clothing and textile instruction. The findings of the study on hypotheses tested showed no significant difference in the mean ratings of Home economic lecturers in colleges of education and universities.

Recommendations

Based on the findings and conclusion, the study recommended that:

i. There should be adequate funding and provision for modern and contemporary educational technology facilities in Nigerian schools and colleges.

ii. There should be continuous training and retraining of Home economics lecturers for effective use of learning technologies for quality instructional delivery in Nigerian tertiary institutions.

iii. The current epileptic power supply to Nigerian schools should be addressed to guarantee effective use of technologies for educational purposes.

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Author Information

Oluwaleyimu O. O
Department of Science and Technology Education, Faculty of Education, University of Lagos