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COMPARATIVE STUDY ON AVAILABILITY OF LIBRARY RESOURCES FOR IMPLEMENTATION OF MINIMUM STANDARD FOR NCE BIOLOGY CURRICULUM IN STATE AND FEDERAL COLLEGES OF EDUCATION IN SOUTH EAST, NIGERIA

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ABSTRACT
This study compared the availability of library resources for implementation of minimum standard for NCE biology in state and federal colleges of education in south east Nigeria. Two research questions guided the study while two null hypotheses were tested at 0.05 level of significance. Design of the study was a descriptive survey. The population of the study comprised of 725 final year NCE Biology student and the entire 7 biology departmental library in state and federal colleges of education. The entire population was studied without sampling due to the manageable size. The instrument for data collection was a structured questionnaire titled "Availability of Library Resources for Implementation of Minimum Standard for NCE Biology Curriculum (ALRIMSNCEBC)". The instrument was validated by three experts in science education, measurement and evaluation and curriculum respectively. The reliability of the instrument was obtained using Cronbach Alpha formula which yielded internal consistency value of 0.72. The data obtained were analyzed using mean and standard deviation for answering the research question while the null hypotheses were tested at 0.05 level of significance using t-test. The findings of the study revealed that the biology departmental library (print) resources available in federal colleges of education are more than the biology departmental library (print) resources in the state colleges of education in south east Nigeria. It was also discovered that the biology departmental E-library (non-print) resources available in federal colleges of education are more than the biology departmental E-library (non-print) resources in state colleges of education in south east Nigeria. The study further revealed that the biology departmental E-library (non-print) resources in state and federal colleges of education for implementation of minimum standard for NCE biology curriculum were very low. Based on the finding, the study recommended among others that College academic board and biology head of department should encourage the government to equip the E-library at the departmental level in order to enhance effective teaching and learning of biological concepts, process and principles among biology students in colleges of education and also to boost quality assurance.

Keywords: Library Resources, Curriculum, Minimum Standard, Implementation, Biology Education.

Introduction

Education has variously been defined as permanent change in behaviour as a result of learning. Education is a process that aimed at eradicating illiteracy among citizens of a nation. Education is one of the most powerful instruments for both development of man and transformation of human society (Tsefe, 2013). The efficacy of education as an instrument of transformation depends entirely on the standard of its library resources.

A library is a social institution created to conserve knowledge, preserve the cultural heritage and provide information for education and research purposes. It is the world of knowledge and one of the teaching and learning tools at all levels of education system. Library according to Ochogwu (2010) is defined as professionally organized collection of graphic and non-graphic materials for exploitation. Islam (2004) described library as a learning institution equipped with treasures of knowledge, maintained, organized and managed by trained

personnel to educate the children, men and women continuously and assist in their self improvement through an effective prompt dissemination of information embodied in the resources. Library resources are raw materials that provide vital services in teaching and learning process. Library resources contain information in both print and non-print formats. The print resources include textbooks, journal, indexes, newspaper and magazines, reports while the non- print resources on the other hand, include internet, e-books, e-journals, video tapes, diskettes and microforms. Library resources are important for the preparation of lesson plan by teachers and for education advancement. It also the function of the library to support the curriculum planned by providing up-date information to keep the teacher and students abreast of new development.

Curriculum is central to education at all levels in the world. Curriculum according to Olaitain and Ali (2007) is a planned experience provided by the school to assist the pupils/ students in attaining the designated learning outcomes in the different school subjects they choose to study in the schools. Akudolu (2004) defined curriculum as an organized knowledge presented to the learners in school, embedding every element in the learning environment. Curriculum is all the experiences children have under the guidance of the teachers. In line with the above, Obialor (2021) defined curriculum as the entire teaching and learning activities of the school which aims at giving the children complete and purposeful education. Offorma (2004) listed the major elements that influence type of curriculum offered by schools and the extent of its implementation as follows:

1. The nature of the society
2. Philosophy of education
3. Psychology of learning
4. Subject specialist
5. The learner
6. The teacher
7. Examinations
8. Economic of the society
9. Resources and
10. Values

The minimum standard is a type of curriculum used in training teachers in the colleges of education. The first minimum standard curriculum for all the NCE programmes/subjects including sciences (biology) offered or taught in colleges of education in Nigeria was produced in 1990 after the National Commission for Colleges of Education (NCCE) organized a series of workshops for administrators, experts in curriculum planning and development, teacher educationalists and specialist from the different subjects disciplines offered in Nigeria College of Education. The commission was mandated with the responsibility to lay down minimum standards for all programmes of the teacher education, to co-ordinate and supervise the activities of all the colleges of education, accredit certificates and academic awards in order to ensure a uniform approach and modalities in the mode of operations in colleges of education in producing NCE graduates for Nigeria's educational system. Biology is one of the courses studied in colleges of education and it usually combined with any other science subjects that are accredited and acknowledge by National Commission for Colleges of Education (NCCE). The minimum standard for NCE biology curriculum stipulated that there should be sufficient books to cover all the subject area to the ration of one student to ten books in the department and college library. In addition, there should be E- library at the departmental level for effective implementation of the curriculum (Nigeria Certificate in Education Minimum Standard, 2012). However, a perennial problem plaguing the colleges of education in Nigeria is lack of resources (Onadeko in Obialor, 2021). An institution that lacks basic facilities will certainly not implement the curriculum effectively. Thus, the problem of lack of adequate facilities has always been blamed on the Government (Onyejemezie, 2002). College of education without the necessary facilities (library resources) will produce half-baked teachers, similarly, it has been noted that the curriculum is based on the assumption that all the colleges of education have the needed facilities for the effectual implementation of the curriculum. But the question stills remains; are

their differences or similarities in the availability of biology departmental library (print) and e-library (non-print) resources in state and federal colleges of education in south east Nigeria as stipulated in the minimum standard for NCE biology curriculum. It is against this background of thought that the researchers thought it necessary to compare the availability of library resources in state and federal colleges of education in south east Nigeria for effective implementation of NCE biology curriculum.

Research Questions

The following research questions guided the study

1. What are the departmental library (print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in South East Nigeria?

2. What are the E-library (non-print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in South East Nigeria?

Hypotheses

The following null hypotheses guided the study and were tested at 0.05 level of significance

1. There is no significant difference between the NCE biology students' responses on the available departmental library (print) resources stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.
2. There is no significant difference between the NCE biology students' responses on the available departmental E-library (non-print) resources stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.

Research Method

The study adopted a descriptive survey research design. The study was carried out in colleges of education in south east Nigeria. The population of the study comprised of seven hundred and twenty five (725) final year NCE biology students and the entire seven biology departmental library in state and federal colleges of education in south east Nigeria. The entire population was studied without sampling. This is because the population size is small and considered manageable by the researchers. The instrument for data collection was a structured questionnaire developed by the researchers to determine the availability of library (print and non-print) resources in biology department of colleges of education in south east Nigeria. The instrument was titled "Questionnaire on Availability of Library Resources for Implementation of Minimum Standard for NCE Biology Curriculum (QALRIMSNCEBC)". The instrument was divided into two parts 1 and 2. Part 1 is concerned with the personal data of the respondents and ownership of the colleges (state/federal). Part 2 is divided into two sections of A and B. Section A contained 10 items on availability of departmental library (print) resources and section B contained 9 items on availability of departmental E-library (non-print) resources. The two sections were structured on a 4-point rating scale categorized as Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The instrument was validated by three experts in science education, measurement and evaluation and curriculum studies respectively. The questionnaire was subjected to internal consistency to ensure its reliability. The internal consistency was determined using Cronbach Alpha and this yielded 0.82. The instrument was administered to the respondents personally by the researchers on the spot completion and collection basis which facilitated a 100 percent response rate. The data collected were analyzed using mean and standard deviation. The cut-off mean point

of 2.50 was used in taking decision on the research questions while the null hypotheses was accepted if the p value at 0.05 level of significance is greater than the computed value but it is rejected if the p value at 0.05 is less than the computed value.

Presentation of Results

Research Question One: What are the departmental library (print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in South East Nigeria?

Table 1: Mean Scores of Responses on Departmental Library (Print) Resources Available as stipulated in the Minimum Standard for Implementation of NCE Biology Curriculum in State and Federal Colleges of Education

		State College N= 280			Federal College N=492		
S/N	Items	Mean	SD	Remarks	Mean	SD	Remarks
1.	Textbooks	3.60	1.73	Agree	4.00	1.58	Agree
2.	Projects	3.76	1.66	Agree	3.98	1.67	Agree
3.	Encyclopedias	1.80	0.86	Disagree	3.81	1.56	Agree
4.	Journals	1.88	0.67	Disagree	1.72	0.57	Disagree
5.	dictionaries	4.02	1.60	Agree	3.17	0.76	Agree
6.	Maps	1.40	0.53	Disagree	1.76	0.70	Agree
7.	pictures	2.94	1.02	Agree	1.41	0.53	Disagree
8	Reference source	1.93	0.69	Disagree	3.01	0.51	Agree
9	Newspapers	3.01	0.51	Agree	3.76	1.66	Agree
	Total	**2.70**			**29.9**		**Agree**

Data presented in Table 1 shows that the grand mean score for the state colleges of education was 2.70 while the grand mean score for the federal college of education was 29.9. This indicates that the departmental library (print) resources available in state and federal colleges of education were high as the grand mean score was above the acceptable mean of 2.50. However, the departmental library (print) resources available in federal colleges of education are more than the departmental library (print) resources in the state college of education as seen in items 1 (Textbooks), 2 (Projects), 3 (Encyclopedias) 5, (Dictionaries) 6 (Maps), 8 (References source) and 9 (Newspapers).

Research Question Two: What are the E-library (non-print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in South East Nigeria?

Table 2: Mean Scores of Responses on Departmental E-library (non-print) Resources Available as stipulated in the minimum standard for Implementation of NCE Biology Curriculum in State and Federal College of Education

		State College N= 280			Federal College N=492		
S/N	Items	Mean	SD	Remarks	Mean	SD	Remarks
1.	Desktop computers	2.09	1.07	Disagree	3.03	1.15	Agree
2.	Lab-top computers	1.80	1.18	Disagree	1.72	0.57	Disagree
3.	E-books	1.61	1.17	Disagree	2.22	1.09	Disagree

4.	E-Journal	1.26	1.39	Disagree	1.81	0.88	Disagree
5.	Internet	2.18	0.72	Disagree	2.08	1.46	Disagree
6.	Scanners	2.46	0.99	Disagree	3.09	0.98	Agree
7.	Printers	2.63	0.89	Agree	1.46	0.92	Disagree
8	Digital Camera	2.29	1.09	Disagree	2.09	1.07	Disagree
9	Multi-media projector	2.46	0.99	Disagree	1.94	1.21	Disagree
10	Audio Taper	2.08	1.46	Disagree	2.22	1.09	Disagree
	Total	**2.08**			**2.16**		**Disagree**

Data presented in Table 2 shows that the grand mean score for the state colleges of education was 2.08 while the grand mean score for the federal colleges of education was 2.16. This indicates that the departmental E-library (non-print) resources available in state and federal colleges of education were low since the grand mean is below the acceptable mean of 2.50. However, the federal colleges of education tend to have more departmental E-library (non-print) resources than state colleges of education as seen in items 6 (Scanners) and 1 (Desktop computers).

Hypothesis 1: There is no significant difference between the NCE biology students' responses on the available departmental library (print) resources stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.

Table 3: Comparatives Analysis of the Departmental Library (print) Resources Available in the Minimum Standard for Implementation of NCE Biology Curriculum State and Federal Colleges of Education

Variable		T	DF	Sig (2-tailed)	Mean difference	Std. Error Difference
Availability	Equal variances assumed	-1.564	551	.118	-1.862	1.191
	Equal variances not assumed	-1.560	541.267	.119	-1.862	1.193

From the result in Table 3, t has a value of 0.119 with P 0.118 level of significance. The P value is greater than 0.05. Therefore the null hypothesis is accepted and the alternative is rejected. This means that there is no significant difference between the departmental library (print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.

Hypothesis 2: There is no significant difference between the NCE biology students' responses on the available departmental E-library (non-print) resources stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.

Table 4: Comparatives Analysis of the Departmental E-Library (print) Resources Available as stipulated in the minimum standard for Implementation NCE Biology Curriculum in State and Federal Colleges of Education

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Variable		T	DF	Sig (2-tailed)	Mean difference	Std. Error Difference
Availability	Equal variances assumed	-1.209	498	.227	.874	.723
	Equal variances not assumed	-1.208	493.429	.228	.874	.724

From the result in Table 3, t has a value of -1.209 with P 0.228 level of significance. The P value is greater than 0.05. Therefore the null hypothesis is accepted and the alternative is rejected. This means that there is no significant difference between the departmental E-library (non-print) resources available as stipulated in the minimum standard for implementation of NCE biology curriculum in state and federal colleges of education in south east Nigeria.

Discussion of Findings

The findings of the study revealed that the available departmental library (print) resources and the departmental E-library (Non-Print) resources as stipulated in the minimum standard for implementation of NCE biology curriculum in federal colleges of education was high than those in state colleges of education. However, the difference was not significant as confirmed by the T –test result in table 3 and Table 4. The available departmental library (print) resources in state and federal colleges of education include textbooks, projects, encyclopedias, dictionaries, maps,, reference sources and newspaper while the available departmental E-library(non-print) resources in state and federal colleges of education include desk-tops computers, Scanners and printers. This finding agreed with the findings of Abdullhamid (2016) who reported that the available resources in the staff school libraries in Niger State were printed resources which are mostly textbooks, maps and pictures. The libraries do not have computers and other non- printed resources. This finding is also in agreement with the findings of Mukolu (2019) who reported that textbooks, charts, maps novels, story books and reference materials are available in some selected secondary schools in Aniocha South Local Government Area of Delta State while audio; tapes, computers and other non-printed materials are not available for students to use. This finding is also in line with Tunde and Zainab (2012) who found that inadequate ICT resources in Nigeria libraries is a serious challenge to library and information service providers. However, the library supports all functions of teaching and learning and provides services to its users. Therefore, libraries should not only be available but be up-to-date in its collections. Hence, effort should be made by all the colleges of education to meet and surpass the minimum requirement for E-library resources at the departmental level.

Conclusion

Based on the findings of this study the researchers concluded that the biology departmental library (print) resources are fairly highly available for implementation of minimum standard for NCE biology curriculum in state and federal colleges of education in south east Nigeria while the E-library (non-print) resources was very low. However, some of these available library resources include textbooks, projects, encyclopedias, dictionaries, maps, references sources, newspapers, desktop computers, scanners and printers.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. College academic board and biology head of department should encourage the government to equip the E-library at the departmental level in order to enhance effective teaching and learning of biological concepts, process and principles among biology students in colleges of education and also to boost quality assurance.
2. It may often be assumed that once an institution has scaled through an accreditation exercise it can operate

maximally. This study has shown that even though some of colleges used in the study have been fully accredited for biology programmme, there is still need for the state and federal government that own them to constantly provide them with funds, to be able to maintain accreditation standards.

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