HOMOPHILY- HETEROPHILY COMPLIANCE AND AVAILABILITY OF INFORMATION

RESOURCES AS CORRELATES OF EFFECTIVE REFERENCE SERVICES IN UNIVERSITY

LIBRARIES OF NORTH –CENTRAL NIGERIA.

BY

STELLA AMARACHUKWU ONWUKANJO (PhD)   CLN
LIBRARY AND INFORMATION TECHNOLOGY DEPARTMENT
FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA. NIGER STATE
GSM 08023417566 /08101075555
EMAIL *stellaradiant@yahoo.com*

Abstract

Purpose: The study seeks to find out the correlation that exists between Homophily- heterophily compliance and Availability of Information Resources on Effective Reference Services to Undergraduates in the University Libraries of North Central- Nigeria.

Methodology : Descriptive design of correlational type was adopted. Multi-stage sampling procedure was used to stratify the universities into federal, state and private universities. Subsequently, random sampling technique was used to select four states from which four (federal) Federal University of Technology Minna, University of Abuja, University of Ilorin, University of Jos) and four state (Benue State University, Ibrahim Badamasi University Lapai, Nassarawa State Unversity, and Kogi State University Ayigba) were randomly selected. Furthermore, purposive sampling technique was used to select one privately owned university (Nigerian Turkish Nile University). Proportionate sampling technique was used to select 1,500 (1.21%) of undergraduates out of 123,950 undergraduates across faculties of Arts, Agriculture, Social Sciences, and Science and Technology. The self developed instruments used were: Effective reference Services (r = 0.95), Homophily- Heterophily (r = 0.91), Staff quality (r = 0.94), Information literacy (r= 0.86) and availability of Information resources (r = 0.96) questionnaires. Data were analysed using Pearson's product moment correlation and Multiple regression at 0.05 level of significance.

Findings :The study also found out that reference services to the undergraduate students in the universities of North Central Nigeria could partly be occasionally effective, grossly inadequate and far from being satisfactory, while majority of the respondents said reference services were not effective at all. The study revealed that non practice or unconsciousness of the homophily – heterophily concept engenders ineffective reference services delivery to the university undergraduates. The study revealed that there is insufficient availability of information resources, which engenders ineffective reference services. The study revealed that there is significant positive relationship between homophily – heterophily and effective reference services. .The findings revealed that there was significant positive relationship between availability of information resources and effective reference services to the undergraduates in North Central Nigeria.The findings revealed that the composite effect of all the independent variables (put together) have significant positive relationship to effective reference services. Furthermore, the findings reveal that the two independent variables of homophily- heterophily, and availability of information resources all have relative significant positive relative influence on effective reference services.

Implications: The study shows that all the independent variables namely homophily-heterophily, and availability of information resources showed strong positive and significant relationships both individually(relatively) and collectively (jointly or compositely) to the dependent variable which is effective reference services. Therefore for effective reference services in university libraries all the independent variables need to be taken into consideration, that is they need to be in existence for effective reference services.

Originality: There is need to sensitize the library workers both professional and non professional cadres on the importance of effective and satisfactory reference services. For effective reference services, there should be deliberate consciousness of the homophily- heterophily concept in communication and reference transactions as it engenders effectiveness in reference transactions.

Keywords: Reference services, Homophily-heterophily, Availability of Information resources, North- Central Nigeria

Introduction

A library is an organisation responsible for the acquisition, organisation, storage, retrieval, and dissemination of information to users and also the repacking of such information into formats suitable to users. Saharan (2013) opined that the reason behind the existence of any library is to acquire and organise recorded information in such a way that permits access by users. Hameed (2010) described a library as "a social institution for the exploitation of knowledge contained in published matter", a collection of information materials that is not accessible to users cannot be considered a library. Librarians work hard to provide access to resources and services that can satisfy users' needs and support the objectives of their parent organisation.(Saharan, 2013).Issa, Igwe, and Uzuegbu (2013) sees the library as a unique and strategic sector of any society due to their services to all segments of the same society for the advancement of man in all ramifications.

The university library is a service organisation and the users have of necessity to be the central focus. Adequate services should be rendered by the library staff to support the intellectual, cultural and technical development of the undergraduates enrolled in the Nigerian universities. The section of the library that gives direct personal assistance to users in their quest for information is the reference section. Reference services are direct personal assistance to users in their quest for information that will lead them to knowledge. Reference services are undertaken to either provide or locate answers for the user. The answers may be limited or extensive, actual or citations to the information leading the user to other sources, human or material which will provide the necessary information. Reference services could range from very simple questions that take little time to very complex questions that demand the expertise and various search strategies of the reference librarian.

University libraries Nigeria provide reference services to support the curriculum. Some of the activities in reference section are Instruction in subject headings and classification, Searching both manual/computerised catalogues, Use of reference materials, CD-ROM databases, using microform equipment, assignments, instruction that ends with a theoretical/practical test etcetera. Selective dissemination of information services (SDI), bibliographic verification searches, indexing and abstracting are all carried out in the reference section.

Provision of effective reference services is very necessary and it involves involves supportive duties and actions, from selection of materials to adequate space and personnel. (Senna, 2003; Aina, 2004). Reference services also involve providing instruction on the use of library resources, through user education. It also includes all the functions performed by the reference librarian to meet the information needs of users in person, by telephone, or electronically including but not limited to answering substantive questions at the reference desk. The reference librarians instruct users on the selection and use of appropriate reference tools for finding information. They conduct researches on behalf of the users and direct users to the location of library resources, and assist in the evaluation of information, and refer them to resources outside the library when appropriate. They keep reference statistics and participate in the development of reference collections (Reitz, 2004; Fabunmi, 2010).

Information communication technology (ICT) has greatly impacted on reference services delivery to make it more effective. Onwukanjo (2015) citing Krubu and Osawaru (2011) believes IT has revolutionised access to information retrieval in the university libraries in Nigeria. The introduction of various (1CT) trends has led to reorganisation, change in work pattern, and demands for new skills, job retraining and reclassification positions. The electronic data base, online services, CD-ROMS, and the advent of the internet has radically transformed access to information in Nigeria. This is because online catalogue terminals, indexes and abstracts on CD-ROM work stations allow users to search data bases in their entirety. This saves the users the task of searching numerous catalogue drawers or annual volumes of printed indexes. Some reference librarians in Nigeria now answer reference questions by email and this boosts the competence of the librarian before their users. University libraries are using modern ICTs for their core functions, implementing effective and efficient library cooperation, and resource sharing networks, implementing management information systems, developing institutional repositories of digital contents, and digital libraries, and initiating ICT based capacity building programmes for library users.

Information and communications technology (ICT) has brought unprecedented changes and transformation to university libraries. Conventional library and information services (LIS) services such as OPAC, user services, bibliographic services, current awareness services, selective dissemination of information services, in-depth literature searches, inter library loan services, audio-visual services, document delivery services and customer relations can also be provided more effectively and efficiently, using ICTs. In recent times, as part of global shift from the hard copy information prints to electronic based ones, university libraries now subscribe to a number of electronic databases consisting of journals and monograph reports. Some of these databases are JSTOR, AGORA, HINARI, and OARE. This means they can be accessed by logging into the university's website while on campus but needs passwords outside the campus.(Bopp and Smith,2001;Fabunmi, 2010; Krubu and Osawaru, 2011).

The reference librarian must offer services that would attract users at all times. He should be amicable and approachable at all times, must have the desire to help the enquirer at all times, should be empathetic, resourceful and attentive among other qualities. He must have a high degree of bibliographical knowledge or broad subject knowledge, adequate knowledge of reference tools, keen analytical mind, flexibility of mind and the right psychological approach to information. He must be a person of intellectual depth and breath, who has the ability to keep users at ease. He must have an equable temperament so as to be able to always keep patrons at ease irrespective of their ages and temperaments, and must have the ability to communicate with different types of users. He must have the ability to decide at what stage to stop searching the resources of his library, and to resort to outside resources or even engage in referral services for his users (Clarke, 1997; Nwalo, 2000; Aina, 2004; Fabunmi, 2010, Ezeala and Yusuf, 2011).

It is only reference librarians with the foregoing attitudes that can deliver effective reference services. Effective reference services delivery have become an issue in academics because the undergraduate users of the university libraries need to know how to locate information in different directions and locations, so as be informed and educated graduates needed for socio-economic development. This will produce the high academic quality graduates needed in the society. It will equally reduce the issue of low academic quality graduate syndrome which has become a great concern to Nigeria.

For maximum effectiveness in reference services delivery, there must be a reference interview between the reference librarian and the library patrons. According to Mc–Daniels and Ohles (1993), as cited by Onwukanjo (2017)

> An ideal reference interview occurs when a patron asks for reference assistance, and the reference staff, through dialogue with the patron determines his information needs, and interprets the question and subsequent answer in terms of the library's resources". The reference interview clarifies and eliminates ambiguities in the questions or reference queries being posed. It makes the reference librarian articulate the needs of the user, and helps him out, for instance, if the patron is a stammerer, who cannot even articulate his questions properly.

An effective reference librarian should be able to conduct a good reference interview and produce satisfactory result. He must possess all the good qualities expected of a reference librarian, as such would impact on his performance. Efficiency is a limited concept that is concerned about the internal workings of the organisation, as against effectiveness which is a broad concept that takes into account a conglomeration of factors and criteria both inside and outside the organization. Efficiency is measured as the ratio of inputs to outputs; therefore, it refers to the ways in which resources are put to use. Onwukanjo (2015) citing (Narayana and Rayane, 1997). According to Millet (2009), being effective in its simplest terms, means having the internal and external processes that lead to the desired end result. It means having the means to produce the desired effect in reference services which is maximum user satisfaction. In the same vein, Drucker (2006) posit that effectiveness implies causing the desired or intended result. It means doing right things and selling right targets to achieve an overall goal, and achieving your worthwhile goals that support your vision and mission. Management effectiveness relates to getting the right things done.

Effective reference services in any university library cannot thrive without the consciousness of homophily-heterophily concepts on the part of the reference librarians. Homophily-heterophily refers to the degree to which interacting individuals are similar or dissimilar in certain attributes. The attributes that lead to homophily are demographic characteristics like age, education, socio-economic status, attitudes, beliefs, and values. The degree to which people differ in the attributes is the heterophily between them, (Rufner and Burgon, 1988; Lovin and Cook, 2001; Elliot, 2007; Bowik, (2008). The authors posit that homophily–heterophily factors are factors in communication arts and communications research where the source and receiver relationships are the units of analysis.

These factors cut across some disciplines like the communication arts, psychology, sociology, social network analysis, and now have implications for researches in library and information sciences, especially in information communication in libraries. It has become more pertinent to work with these factors in information communication in libraries as it has to do with beliefs, values attitudes, and other demographic peculiarities between the source of information and receiver of information, which would bring about a change in behaviour. Onwukanjo (2011). This change in behaviour would be as a result of satisfaction derived from effective reference services delivery. This means that the consciousness of such demographic peculiarities as they could affect source of information and receiver of information in reference service transaction makes it pertinent for the reference staff to employ his skill of homophily-heterophily consciousness to deliver effective service to his users.

The reference librarian and his staff have been entrusted with the task of assisting users exploit the library's stock of accumulated wisdom of mankind. Nwalo (2000) and Aina (2004) opined that no matter how well and systematic the materials are organised, no matter how good the catalogue is, personal assistance to users in exploiting information resources is essential. The reference librarian is a link between the information and the user therefore, the homophily-heterophily factors have serious implications for reference services in libraries. This is because the search strategy consists of steps the reference librarian would use in supplying the required information. He would first analyse and clarify the query; identify the type of reference service; and identify the information source to use. This means that the success of the reference transaction process depends on how well the two parties have cooperated during this transaction.

Lending support to the foregoing, Nwalo, (2000); and Aina, (2004) all observed that if every user were to formulate his questions clearly, half of the problem would have been solved, but many users have vague ideas of what they want or need and might mislead the reference librarian into providing an unacceptable answer. This could be as a result of many factors like doubt on the ability and competence of the librarian, inferiority or superiority complex, limitations of language, limitations of users knowledge by the librarian, lack of proper communication skills, attitude of the librarian to the user, notion of the reference librarian. All the foregoing factors that could impede effective reference services are hinged on the homophily- heterophily factors which shows the extent to which interacting individuals are similar or dissimilar in certain attributes. With homophily-heterophily consciousness, the reference librarian as observed by Carke (1997) as cited by Onwukanjo (2015) and others should have, the right psychological approach to all information seekers. For instance, a homophilous reference librarian may always empathise to a heterophilous user, so that the heterophilous user would give out successful reference transaction interview. This would enable the homophilous staff draw out all the clarification and information he needs, articulate his needs and

help him out, for example if the patron is a stammerer who cannot even articulate his questions properly.

The rendering of reference services in an academic library involves the interactions between human beings who use material facilities. The reference librarian is involved in service delivery through judicious provision of needed reference sources and provision of conducive setting for reference service. The user is the recipient of all the reference activities of the reference librarian which include acquisition, organisation, storage, creation, access and dissemination of information.

It is important to note that the process of reference service is essentially based on various types of communication. It involves intrapersonal communication, between the reference librarian and the library user. They are source, channel, receiver and feedback. The cordiality between the source and the receiver would result in the choice of channel and the contents of human communications, mediated interpersonal communication, group communication, written communication, and information technology mediated communication. The types of communication notwithstanding, there are basic elements in the process of communication or even mediated by electronic facilities. There is an established   commonality on the principal issues and elements in the communication process. In other words the extent to which the source and receiver are homophilous, to that extent communication will flow positively and effective reference service would be rendered. The effectiveness of reference services in any university library depends strongly on the reference staff's communication competence which engenders homophily. Homophily is necessary for effective reference services because reference staff are the means by which effective reference services are provided. Though Homophily- heterophly concerns the interaction between the users and staff of the reference department, this study has measured it from the user approach. Every service in the library ought to be user – centred. Therefore any measurement of effectiveness of a service needs to be done from the user s point of view for an objective result to be produced.

The availability of resources is a prerequisite for reference services effectiveness. Availability here means that library resources must be present in the library for immediate use (Aguolu and Aguolu, (2002). The fundamental problem of making available adequate information resources in any Nigerian university library results from the need to meet the highly varied and unpredictable bibliographic and information requirements of university students (diploma, undergraduates, postgraduates and faculty) with varied humanistic, social, and scientific interests. The university library is the heart of the university because the academic health, intellectual vitality and effectiveness of any university which depends largely upon the state of health and excellence of its library. An inert and moribund university library almost invariably means an inert and moribund university. (Aguolu and Aguolu, 2002). Aguolu and Aguolu (2002) quoting the British University Grants Committee, state that:

> The character and efficiency of a university may be gauged by its treatment of its central organ, the library. We regard the fullest provision for library maintenance as the primary and most vital need in the equipment of a university. An adequate library is not only the basis of all teaching and; it is the essential condition of research, without which additions cannot be made to the sum of human knowledge.

It has been empirically determined that there is a strong correlation between the size of university library collections and excellence of universities. In an assessment of the quality of American postgraduate education, the American Council on Education, according to Aguolu and Aguolu (2002) posited that the adequacy of a university library collection is an index to the quality of postgraduate study and research. It also noted that all American universities that were rated "distinguished'' had all their libraries rated "distinguished". The finding was based upon the total number of volumes, and current periodicals held by the university libraries, and upon the number of volumes added annually. Although the size of a library collection alone may not be the index of its quality and relevance, there is a relationship between size of a library collection and its adequacy. The university library must own a minimum number of books, periodicals and other types of information resources in certain subjects, to be able to satisfy the basic information needs of students, and faculty in those subjects. It is the size of a collection combined with its quality that ensures adequacy. Thus adequacy of any library collection has quantitative and qualitative dimensions.

The university library is the principal instrument of the university in the conservation of recorded knowledge. Proper fulfilment of this role provides a sound basis for the transmission and advancement of knowledge. The library has to collect materials published and unpublished, in some depths and globally in almost all fields of knowledge, not necessarily in those offered in the university. However, the value of the records of human communication lies in the information they contain. Information can be stored in books, periodicals, newspapers, technical reports, pamphlets, conference papers, of learned societies, and professional associations, machine readable databases, manuscripts, cartographic materials, graphic materials, sound recordings, motion pictures, video recordings, digital and electronic materials compact discs, archival materials and variety of other formats. These formats are collectively called information carriers Aguolu and Aguolu 2002; Aina, 2004;).

According to Oyewusi and Oyeboade (2009), the primary purpose of university libraries is to support teaching, learning and research in ways consistent with and supportive of the universities missions and goals. Therefore, the library's resources should be sufficient in quality, quantity, diversity and currency to support the universities curriculum. This will support the intellectual, cultural, technological, and social development of undergraduates enrolled in Nigerian universities.

The implication of this is that the availability of resources must be in existence for effective reference services to thrive.

Libraries are service organisations and it is the information resources that determine their quality Hermon and Nitech (2009) posit that service quality includes three areas (a) resources, information resources/content, which bother on availability of information resources, (b) service environment and resource delivery, this bothers on effectiveness like reference services effectiveness; takes into recognition homophily–heterophily consciousness. Rehman and Shafiq (2011) corroborated the assertion by positing that the extent to which user needs are promptly satisfied is dependent on the size and quality of library collection, (the adequacy of the collections, organisation of the collections, the usefulness of the bibliographic tools (indexes and abstracts) providing access to the collections, (availability of information resources) and the ability and willingness of staff to exploit these resources based on their homophily-heterophily consciousness in communication transactions.

Nwalo (2000) citing Lancaster (1988) corroborated the above by positing that the extent to which user needs are promptly satisfied is dependent on the size and quality of library collection, (the adequacy of the collections, organization of the collections, the usefulness of the bibliographic tools (indexes and abstracts) providing access to the collections (availability of information resources) and the ability and willingness of staff to exploit these resources based on their level of homophily-heterophily compliance in communication transaction.

All these assertions need to be empirically clarified in Nigerian university libraries. That is why the researcher embarked on a study of this nature to investigate how homophily-heterophily and availability of information resources would correlate effective reference services delivery in the university libraries in North- Central Nigeria. In the same vein previous studies like Pindlowa (2002), Fabunmi (2010), had concentrated on staff quality and effective reference services delivery. Oyediran- Tidings (2004) and Ugah (2007) dwelt on availability of information resources vis-avis reference services, while Ojedokun (2014) dwelt on information literacy and reference services. There is dearth of studies on combined effect of the two variables in Nigeria especially on homophily-heterophily which could succinctly be said to be the extent to which the reference librarians characteristics or behavioural qualities match with the users characteristics or individuality. This is the gap that the study intends to fill. Therefore this study investigated homophily-heterophily and availability of information resources to see how these variables would correlate effective reference services delivery in the university libraries in North- Central Nigeria.

 Statement of the problem

The Nigerian universities are expected to train high academic quality under graduates who would eventually metamorphose to high academic quality graduates needed for socio-economic

development. Non usage and under-utilisation of university libraries because of lack of effective reference services has serious negative implications for the quality of undergraduates, who eventually become graduates that are churned out by the universities in Nigeria..

Non-application of the homophily-*heterophily* knowledge and skills in reference services transactions, and inadequate library resources could result in ineffective reference services.Effective reference services cannot thrive with unavailability of information resources. All these could affect the reference services and make the librarian it to become ineffective. It is on this note that this study investigated homophily-heterophily, andavailability of information resources as correlates of effective reference services   in university libraries in North Central Nigeria.

Objectives of the study

The broad objective of the study is to investigate the variables of homophily-heterophily, staff quality, information literacy and availability of information resources on effective reference services in university libraries in Nigeria. The specific objectives are to:

1. Find out the perception of undergraduates on effectiveness of reference services in the university libraries in North Central Nigeria;
2. Find out the homophily-heterophily compliance of the reference librarians;
3. Find out the perception of undergraduates on the availability of information resources in the university libraries of North Central Nigeria.
4. Find out the composite contribution of the independent variables of homophily-heterophily and availability of information resources on the dependent variable (effective reference services)
5. Examine the relative contribution of the independent variables of homophily-heterophily and availability of information resources on the dependent variable (effective reference services)

Research questions

1. What are the perceptions of undergraduates as regards reference service effectiveness in the university libraries of the North - Central Nigeria?
2. Are the reference librarians in North - Central Nigeria homophily-heterophily compliant?
3. What are the perceptions of undergraduates on the availability of information resources in the university libraries of North Central Nigeria?

Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significance:

1. There is no significant relationship between homophily-heterophily compliance of reference librarians and effective reference services delivery to undergraduate students in the university libraries in north central Nigeria.
2. There is no significant relationship between availability of information resources and
3. Effective reference services to the undergraduates of the university libraries in North Central Nigeria.
4. There is no significant composite contribution of the independent variables on the dependent variable.
5. There is no significant relative contribution of the independent variables (homophily-
6. Heterophily compliance, and availability of information resources on the dependent variable (effective reference services in the university libraries).

Scope of the study

The study focused on the extent to which homophily-heterophily, and availability of resources will affect effective reference services to the undergraduate students of the universities of the North Central- Nigeria.The universities studied are Federal University of Technology Minna, Ibrahim Badamasi Babangida University(IBBU) Lapai Niger state,(state university) University of Abuja, (Federal university) Nigerian Turkish Nile University (NTNU), Abuja (private university), University of Ilorin federal university), University of Jos (federal university), Benue state University, Kogi State University, Nassarawa State University Keffi. The study dwelt primarily on the effect of two independent variables of homophily-heterophily factors, and availability of information resources on the dependent variable- effective reference services. The time scope for the study was between 2012-2016).

Homophily-heterophily factors that this study investigated include such indicators as love and respect, empathy, attitude, beliefs, values, age, education and socioeconomic status. The indicators for

availability of information resources were sufficiency in quality, sufficiency in quantity, sufficiency in currency and diversity of all resources.

Significance of the study

This study provided empirical evidence that will help reference service effectiveness by examining some variables like homophily-heterophily, and availability of information resources to see the kind of effects they would have on reference services to the undergraduates in the university libraries studied. However, results of the study could be applied across any library or organisation in the world that is concerned with excellence and service effectiveness.

The result of this study is significance to the federal government through its agency, the National Universities Commission (NUC), libraries, and students in tertiary institutions, for example it could encourage the NUC to advise Federal Government to appropriate more funds, through university management for the university libraries which will spur the reference section into providing effective services by having adequate resources and competent human resources. This could be achieved when there is deliberate consciousness on the part of university library management that the reference workers must possess all the attributes of the independent variables, for instance being conscious of homophily-heterophily in reference service, and most importantly, having a reference section where sufficient resources in print and digital/electronic formats are surplus. When all the independent variables are present, then effective reference services will be delivered, and undergraduates will no longer be half baked and then the issue of half baked graduate syndrome will stop.

The consciousness of homophily –heterophily factors in reference services delivery would bring about effectiveness in reference services. The implication is that undergraduate students would enjoy coming to use the resources and services of the library, and the result is that graduates of high academic quality would be produced in Nigerian universities. Conscious recognition of all the variables of this study in reference services delivery would give a boost to the profession and its practices.

Finally it brought into the knowledge industry, the consciousness of homophily-heterophily in service delivery, so that all manner of services delivery will be done efficiently and effectively. The consciousness of this homophily–heterophily concept would eventually become a practice in all spheres of life, this would make the world a better place to live in.

METHODOLOGY

Research design

This study adopted the descriptive design of the correlation type. Nwaogu (2001), states that this type of study seeks to establish the relationship that exists between two or more variables. Usually such studies indicate the direction and magnitude of the relationship between the variables. The researcher has no intention to manipulate any of the variables but will study the effect of the independent variables on the dependent variables.

Population of the study

The population of the study comprises all the regular and full time university undergraduates in the twenty-one (21) universities in the North Central Nigeria. North Central Nigeria consists of the seven states situated geographically in the middle belt region of the country, spanning from the west, around the confluence of the River Niger and the River Benue. The region itself is rich in natural land features, and boasts some of Nigeria's most exciting scenery. The region is also home to many historical and colonial relics.

There are about twenty –one universities in North -Central Nigeria (21). They are comprised of private, state and federal government universities.All the universities under review have been licensed by the National Universities Commission.

The total number of undergraduate in North central Nigeria is one hundred and twenty three thousand, nine hundred and fifty (123,950) students, according to ICT and Admissions Offices of the various universities. (2016)

Sampling technique and sample size

Multi-stage sampling procedure was used to stratify the universities into states and federal universities. At the second stage, simple random sampling technique was used to select four states and four federal universities in the North- Central Nigeria out of twenty –one universities. Simple random sampling technique involves balloting where the elements are listed on small sheets of paper and wrapped to select the desired number or sample size. According to Aina (2004) everybody in the population is given a chance be part of the sample. The third stage involved purposive selection of a privately owned university in Abuja to serve as representative of other private universities in the zone, making a total of nine universities. Choosing nine (9) out of twenty-one (21) universities was very representative because the percentage was 42. 86%. Next, proportionate sampling technique was used to select 1.21% of undergraduates. Stratified sampling technique was again employed for selecting the respondents according to their strata or levels of study.

Also purposive sampling method was adopted to select two faculties from each of the universities. The technique was also used to select two departments from each of the two faculties. Purposive sampling method was considered appropriate because of the need to study homogenous population in terms of departments common to all the selected faculties. In purposive sampling, the researcher handpicks certain groups or individuals for their relevance to the issue being studied. The advantage is that information is got from the respondents who are crucial to the study (Aina, 2001 and Nwaogu, 2001).

The selected faculties are Management, Agriculture, Business and Social Sciences, Arts, Engineering, Information and Communications Technology. The faculties are presented in Table 3.2. The selected departments of Business Administration, Banking and Finance, Electrical and Electronic Engineering, Public Administration, Animal Science, Agricultural Economics and Extension, Accounting and Finance, Mass Communication, Animal Production, Agronomy, Agricultural Economics and Rural Psychology, Sociology, Geography, Political Science and International Relations, English and Literary Studies, History, psychology, sociology, Economics

The sample size of this study was be 1500 of the 123,950 full time regular under graduate students of North Central Nigeria. The sampling fraction used for selecting the sample from 123, 950 students was 1.21%. This gave the researcher 1500 undergraduate students selected from the nine universities. The students for each university were selected through proportionate sampling technique. The sample size of 1500 students was considered adequate and representative of the whole population, especially considering the fact that the population is a homogenous population of regular undergraduate students. Secondly, scholars like Jeeves (2010) states that for a population of fifty thousand (50,000), three hundred and ninety seven (397) representing 0.79% could be used as sample. In the same vein, Krejcie and Morgan (1970) state that for a population of 200,000, a sample of 384 representing 0.19% could be used. Based on these assertions, the researcher considered 1500 (1.21%) of 123,950 of the study population appropriate and representative of the larger population of the present study.

Accordingly, the sample size of 1500 of the 100-500 level undergraduate students were selected by proportionate sampling method from the nine universities for the study. This sample size of 1500 were shared based on the individual universities involved in the study, that is, the university that has more population of students gets larger proportion of the samples than those that have less population size of students. Proportionate Sampling according to Jeeves (2010) is a sampling strategy, or a method for gathering participants for a study used when the population is composed of several subgroups that are vastly different in number. The number of participants from each subgroup is determined by their number relative to the entire population.

Stratified sampling technique was used for the selection of the undergraduate students according to their levels, or strata. That is 100-500 level students. Stratified sampling technique is ideal to address the heterogeneity introduced in the sample population as a result of their different academic levels.

Research instruments/data collection instruments

The questionnaire was the research instrument that was used for this study. The questionnaire is designed under three different names known as effective reference services questionnaire,(ERSQ), Homophily-heterophily questionnaires(HM-HTQ), and Availability of

Information Resources questionnaire(AIRQ). This questionnaire was the main instrument for data collection. These instruments, that is ERSQ, HM-HTQ, AIRQ all have One section A. This section: A focused on the background information of the undergraduate students which is their demographic variables. These include information on the name of their universities, gender, faculty, the department and academic level.

Section B: Effective reference services scale(ERSQ) is concerned with data on effective reference services to the undergraduates students. There were questionnaire statements like how often do you visit the library? Do you get satisfactory services? Do the staff give you satisfactory services as expected in a reference section? Do the reference staff assist you in consulting the monographs and fact books?

Section C : Homophily- Heterophily Scale (HM-HTQ) focused on age, education, socioeconomic attributes, attitudes beliefs and values as factors that encourage or discourage reference services effectiveness. Questionnaire statements like, the reference staff is uncooperative in attending to you because he feels you are not a match educationally? The reference staff is rude to you because he feels you are of low socioeconomic status?

Section D: Availability of Information Resources Questionnaire (AIRQ) focused on the availability of information resources especially in sufficiency, quality, quantity, and diversity of both hard copy and electronic documents. Questionnaire statements like, your level of satisfaction with the subject coverage of reference/ library resources in your discipline is quite high? The reference/ library resources are sufficient in quantity, quality, currency and diversity? The reference/ library resources support your intellectual, cultural technological and socioeconomic development.

The four point likert rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD), and Very Often, Often, Occasionally and Never; were used to determine the average or aggregate responses of the respondents. For the scale on effective reference services delivery the ratings were 1- Very often, 2- Often, 3- Occasionally and 4- Never.

Validity and reliability of the instruments

Validation of the instruments implies adopting procedures to ensure the instruments measure what they are supposed to measure (Nwogu, 2001). Therefore to ensure face and content validity of the questionnaire, they were given to the researcher's supervisor some senior lecturers and professors in the Department of Library and Information Technology   (LIT) and Library, Archival, and Information studies(LARIS). It was corrected and pretested by administration of forty (40) copies on the undergraduate students of Faculty of Education, University of Ibadan. It was administered to them across the major departments of the Faculty.

The Cronbach Alpha method was used to determine the reliability coefficients of the instruments. The value obtained was 0.95 for Effective Reference Services Questionnaire (ERSQ), 0.91 for Homophily-heterophily Questionnaire (HM-HTQ) and 0.96   for Availability of Information Resources Questionnaire (AIRQ).

Method of data analysis

The data in the study with respect to research questions were analysed using descriptive statistics of percentages, mean and standard deviation, while the inferential statistics of Pearson product moment correlation coefficient and multiple regression were used for different purposes. Pearson product moment correlation was used to determine the relationship between the variables, while multiple regression was used to predict or determine the effect of the independent variables to the dependent variable. The socio-demographic information were also analysed using descriptive statistics of frequency counts and percentages.

Analysis based on research questions

Results from analysis of the research questions are hereby presented in the order of the research questions as follows: Five research questions were answered in this study, to find out the correlations of all the independent variables to the dependent variable. The results are presented in order of the research questions.

Research question 1: What are the perceptions of the undergraduates on reference service effectiveness in the university libraries of the North Central Nigeria?

In order to determine how effective the reference services given to the undergraduates are, the respondents were asked to identify with some questionnaire statements that could reveal effectiveness and maximum satisfaction. The findings are presented in Tables 1

Table 1 Frequency Table Showing effectiveness of reference Services to the undergraduate students

Table 1 Effective reference services to the undergraduate students

S/NO	Statements	Very Often frequency /percentage (3)	Often frequency /percentage (2)	Occasionally Frequency/percentage (1)	Never Frequency/percentage (0)	Mean $\bar{X}$	Standard Deviation
1	How often do you visit the reference services section of the library	_	446 (29.7%)	1054 (70.3%)	_	2.70	.45
2	Do the staff give you direct personal assistance as much as expected in reference services?	_	296 (19.7%)	1204 (80.3%)	_	2.70	.45
3	Do the staff give you satisfactory services?	_	250 (16.7%)	1250 (83.3%)	_	2.70	.45
4	How often does the reference staff answer your questions satisfactorily?	_	206 (13.7%)	1294 (86.3%)	_	2.7027	.45
5	Do the reference staff assist you in making use of the vertical files?	_	246 (9.7%)	1244 (90.3%)	_	2.70	.45
6	Are you assisted in CD-ROM searches?	_	276 (18.4%)	1224 (81.6%)	_	2.65	.47
7	Are you assisted in surfing the web?	_	496 (33.1%)	1004 (66.9%)	_	2.68	.46
8	Are you assisted in online searches and retrieval?	_	475 (31.7%)	1025 (68.3%)	_	2.68	.46
9	Are you assisted in consulting the fact books / monographs?	_	276 (18.4%)	1224 (90.3%)	_	2.67	.67
10	Are you assisted while using the encyclopedias?		386 (25.7%)	1114 (74.3%)	_	2..67	.47
11	Are you assisted while using the directories?		246 (16.4%)	1254 (83.6%)	_	2.67	.46
12	Are you assisted while using the dictionaries both subject , general, bilingual and polyglot	_	246 (16.4%)	1254 (83.6%)	_	2.66	.47
13	Are you assisted while using the year books?	_	146 (9.7%)	1354 (90.3%)	_	2.67	.46
14	Are you assisted while using the manuals?	__	386 (25.7%)	1114 (74.3%)	__	2.68	.46
15	Are you assisted while using handbooks and almanacs?	__	460 (30.7%)	1040 (69.3%)	_		
16	Are you assisted while using gazetteers ,atlases and maps?	_	300 (20.0%)	1200 (80.0%)	_	2.67	.46
17	Are you assisted while using bibliographical sources (abstracts indexes, bibliographies ,and library catalogues)?		386 (25.7%)	1114 (74.3%)	_	2.66	.47
18	Are your reference enquiries always met efficiently and adequately?	__	389 (25.9%)	1111 (74.1%)	_	2.67	.46
19	Are the reference assistances given to you	__	346 (23.1%)	1154 (76.9%)	__	2.66	.47

	adequate in quality and quantity for your intellectual and academic growth?					
20	Generally do the reference transactions go smoothly?	_	472 (31.7%)	1028 (68.3)	_	2.67	.47
21	Overall, would you consider reference services offered by your library as effective	_	50 YES	1450(97%) NO	_	2.67	.48

From Table 1 the students responses show that all of the 21 questionnaire statements that reveals maximum reference services effectiveness and user satisfaction, all had high mean scores. Their high mean score is above 1.5 on the four point Likert Scale, where very often is 3, often is 2, occasionally is 1 and never is 0, that is the addition of 3,2,1,0 is 6. When 6 is divided by 4 it is 1.5.That is how 1.5 is the bench mark mean score therefore any mean score above it shows ineffectiveness. Unfortunately all the questionnaire items had high mean scores above 1.5, for instance item 1 How often do you visit the reference services section of the library, χ= = 2.70, STD =.45, item 2 Do the staff give you direct personal assistance as much as expected in reference services? χ= 2.70, STD =.45, Item 4 Are you assisted in surfing the web? Mean = 2.70, STD = .45, item 9 Are you assisted in consulting the fact books / monographs? χ== .26753, STD .67, item 17 Are you assisted while using bibliographical sources (abstracts indexes, bibliographies, and library catalogues)? χ= =2.66, STD= .47, item 21: Overall, would you consider reference services offered by your library as effective χ== 2.67, STD .48. All the 21 items had high mean scores which are above the 1.5 bench mark on the four point Likert Scale. This is a clear case of in effectiveness on the part of reference services delivery, as much as 1450 respondents (97%) indicated and said NO that generally reference services given to them were not effective.

Secondly, the results from Table 4.4 shows that the reference services to the undergraduate students in the university libraries in North Central States of Nigeria are occasionally effective. This is an indication that the services being rendered by the library staff to the undergraduate students in the university in the North Central States of Nigeria is far from being satisfactory and, therefore, not effective. This is shown in Table 4.4 as the highest number of respondents in the 21 item questionnaire indicated that reference services were not effective.

Research question 2: Are the reference librarians homophily-heterophily compliant?

In order to ascertain the homophily-heterophily consciousness of the reference librarians, the respondents were asked to respond to some statements that revealed absence of homophily-heterophily consciousness or non practice of the homophily concept. The findings are presented in table 2.

Table 4. Homophily-heterophily table (HM-HT Q) for undergraduate students

S/No	Statements	SA frequency /percentage((4)	A frequency /percentage 3	D Frequency /percentage (2)	SD Frequency /percentage (1)	Mean X̄	STANDARD DEVIATION
1	The reference staff is uncooperative in attending to you because he feels you are not a match educationally.	780 52.0	610 40.7	80 5.3	30 2.0	3.43	.68
2	The reference staff feels your level of education is low, and treats you with disrespect	780 52.0%	610 40.7%	80 5.3%	30 2.0%	2.67	.47
3	The reference staff is rude to you because he feels that you are of low socioeconomic status.	241 16.1%	1004 66.9%	149 9.9%	106 7.1%	2.92	.73
4	The reference staff is unfriendly because of the apparent differences in religion.	210 14.0%	1030 68.7%	178 11.9 %	82 5.5%	2.91	.68
5	The reference staff shows antagonism because of the differences in socioeconomic status	272 18.1%	1014 67.6%	153 10.2%	61 4.1%	2.99	.66
6	The reference staff cooperates in the reference transaction process because both of you have similar dress codes.	275 18.3%	1050 70.0%	108 7.2%	67 4.5%	3.02	.65
7	The reference staff show antagonism because of the differences in dress code e.g Islamic dressing	253 16.9%	954 63.6%	136 9.1%	157 10.1%	2.87	.81
8	The reference staff cooperate I n reference transaction processes because of the apparent similarity in religion.	648 43.2%	441 29.4%	163 10.9%	243 16.9%	2.99	1.0
9	The reference transactions go smoothly because the reference librarians and the students have the same culture.	344 22.9%	748 49.9%	104 6.9%	304 20.3%	3.02	1.17
10	The reference transactions go smoothly because the reference librarians and students have the same native language.	780 52.0%	610 40.7%	80 5.3%	30 2.0%	2.67	.47
11	The reference transactions go smoothly because the reference librarians and students are from the same tribe.	747 49.8%	595 39.7 %	86 5.7%	72 4.8%	2.67	.46
12	The reference transactions go smoothly because of the reference librarians ideological leaning	749 49.9%	609 40.6	93 6.2%	49 3.3%	3.37	.74
13	The reference transactions go smoothly because the reference librarians and students belong to the same religious sect.	768 51.2%	608 40.5	74 4.9%	50 3.3%	3.39	.73
14	The reference staff feels the students intelligent quotient (IQ) is low, and as such they should not engage them in reference transactions.	765 51.0%	611 40.7%	94 6.3%	30 2.0%	3.41	.69
15	The reference staff is understanding, friendly and amiable, cooperative, sympathetic and empathetic loving and, respectful, unassuming and caring and has the right psychological approach to information, thereby showing persistence in information search.	42 2.8%	49 3.3%	634 42.3%	775 51.7%	3.43	.69
16	In another vein, the reference staff is unfriendly, antagonistic, insensitive and uncaring, rude and disrespectful, antipathetic, harsh and haughty.	692 46.1%	645 43.0%	85 5.7%	75 5.2%	3.30	.79

From Table 4. The students responses show that all of the 16 item questionnaire statements that reveal absence or unconsciousness of homophily-heterophily all have high mean scores. Their high mean score were above2.5 on the four point Likert Scale, where very strongly agreed is 4, Agreed is 3, Disagreed is 2, and strongly disagreed is 1, that is the addition of 4,3,2,1 is 10. When10 is divided by 4 it is 2.5.That is how 2.5 is the bench mark mean score therefore any mean score above

it shows absence or unconsciousness of homophily -hetrophily. Unfortunately all the questionnaire items had high mean scores above 2.5, for instance item 1 The reference staff is uncooperative in attending to you because he feels you are not a match educationally, χ = 3.43, STD= .68, item 2: The reference staff feels your level of education is low, and treats you with disrespect, χ = 2.67. STD = .47, item 5: The reference staff shows antagonism because of the differences in socioeconomic status χ = 2.99, STD= 66, item12: The reference transactions go smoothly because of the reference librarians ideological leaning, χ= 3.37, STD = .74, item 16: In another vein, the reference staff is unfriendly, antagonistic, insensitive and uncaring, rude and disrespectful, antipathetic, harsh and haughty. χ= 3.30, STD = .79, These high mean scores reveal absence or un consciousness, or non practice of the homophily-heterophily concept.

Secondly majority of the respondents either agreed or strongly agreed to all the questions that revealed absence, un consciousness, or non practice of the homophily-heterophily concept, for instance, item 4 has a frequency of 1030 representing 68.7% for agree and a frequency of 210 representing 14% that strongly agreed and agreed to all the items that reveal absence or non practice of the homophily –heterophily concept. The same goes for item 5 with 1014 responses and a frequency of 67.6%, 272 representing 14.% all agreeing and strongly agreeing to all the questions that reveal un consciousness, or non practice of the homophily-heterophily concept. The same goes for all the other items but in item number 15 where there was a little twist in the question like, the reference staff is understanding, friendly and amiable, cooperative, sympathetic and empathetic loving and, respectful, unassuming and caring and has the right psychological approach to information, thereby showing persistence in information search, majority of the respondents for the first time disagreed and strongly disagreed with frequencies of 634 representing 42.3% and 775 representing 51.7% for strongly disagreed. All these in clear and concise terms, translate to absence or unconsciousness, or non practice of the homophily-heterophily concept in reference services delivery.

Research question: 3 what are the perceptions of undergraduates on the availability of information Resources in the university libraries of North Central Nigeria. The respondents were made to react to all the questions that revealed high level of satisfaction with the available information resources. The findings are presented in table 3

Table 3: Availability of information resources table (AIRQ) for undergraduate students

S/NO	STATEMENTS	SA frequency /percentage ((4)	A frequency /percentage 3	D Frequency/ percentage 2	SD Frequency /percentage 1	Mean $\bar{X}$	STD DEVTN
1	Your level of satisfaction with the subject coverage of the library/ reference stock in your discipline is quite high	67 4.5%	145 9.7%	732 48.8 %	556 37.1%	3.18	.78
2	The reference / library resources are sufficient in quality, quantity, diversity and currency to support the university curriculum.	82 5.5%	105 7.0%	740 49.3%	573 38.2%	3.20	3.2
3	The reference /library resources support your intellectual, cultural, technological and socioeconomic development.	178 11.9%	130 8.7%	642 42.8 %	550 36.7%	3.20	.96
4	Your reference/ library resources are accessible.	56 3.7%	85 5.7%	747 49.8%	612 40.8%	3.28	.73
5	You are highly impressed with the way your university library subscribes to remote and online databases, by gathering their passwords and distributing to students to supplement the physical materials.	42 2.8%	123 8.2 %	823 44.9%	512 34.1%	3.20	.70
	The following reference/ library resources are sufficient in quality, quantity, diversity and currency to support the university's curriculum.	–	–	–	–	–	–
6	Computer terminal	88 5.9 %	122 8.1%	776 51.7%	514 34.3%	3.14	.79
7	Online searching	88 5.9%	106 7.1%	731 48.7%	575 38.3%	3.20	.80
8	CD-ROM Searching	52 3.5%	192 12.8%	729 48.6%	527 35.1%	3.07	.77
9	OPAC	154 10.3 %	243 16.2%	447 29.8	656 43.7%	3.15	1.00
10	Encyclopedia and Dictionaries	39 2.6%	156 10.4%	562 37.5%	743 49.5%	3.34	.76
11	Manuals and Directories	53 3.5%	196 13.1%	613 40.9%	638 42.5%	3.22	.80
12	Bibliographic sources e.g. Indexes, abstracts and bibliographies.	263 17.5%127 8.5%	127 8.5%	579 38.6%	531 35.4%	2.92	1.06
13	Serials (journal, newspapers and magazines.)	223 14.9%	223 14.9%	569 37.9%	485 32.3%	2.88	1.02
14	Handbooks and Almanacs	36 2.4%	103 6.9%	754 50.3%	519 34.6%	3.17	.73
15	Geographical reference sources like maps, gazettes and atlases.	35 2.3%	103 6.9%	721 48.1%	641 42.7%	3.31	.70
16	Text books and other monographs.	90 6.0%	196 13.1%	664 44.3%	550 36.7%	3.12	.85
17	Theses, dissertations, projects and government documents.	125 8.3%	139 9.3%	688 45.9%	548 36.5%	3.11	.88
19	Vertical files (newspaper indexes) and newspapers.	154 10.3%	158 10.5%	707 47.1%	481 32.1%	3.01	.91

From table 3, the student's responses show that all of the 19 item questionnaire statements that reveal abundance and excellence in information resources were either disagreed upon or strongly disagreed upon. All have high mean scores. Their high χ scores were above 2.5 on the four point likert scale, where very strongly agreed is 4, Agreed is 3, Disagreed is 2, and strongly disagreed is 1, that is the addition of 4,3,2,1 is 10. When10 is divided by 4 it is 2.5.That is how 2.5 is the bench

mark mean score therefore any mean score above it shows strong dissatisfaction and ineffectiveness. Unfortunately all the questionnaire items had high mean scores above 2.5, for instance item 1: Your level of satisfaction with the subject coverage of the library/ reference stock in your discipline is quite high. χ= 3.18, STD =.78, item 2: The reference / library resources are sufficient in quality, quantity, diversity and currency to support the university curriculum χ ==3.20, STD.79373, item 3: The reference /library resources support your intellectual, cultural, technological and socioeconomic development. X=3.20, STD = .96, item 5: You are highly impressed with the way your university library subscribes to remote and online databases, by gathering their passwords and distributing to students to supplement the physical materials. χ= = 3.20, STD = .70. These high mean scores show dissatisfaction by the undergraduate students as regards the availability of information resources and this brings about ineffectiveness in reference services delivery.

On the other hand, a glance at the table exhibits the fact that all the questionnaire items that showed impressive collections or abundance and excellence in information resources available were either disagreed upon or strongly disagreed upon by the respondents. For instance item 1: has a frequency of 732 respondents representing 48.8% who disagreed and a frequency of 556 representing 37.7% who strongly disagreed to that item. Item 2: has a frequency of 740 respondents representing 49.3% who disagreed and a frequency of 573 representing 38.2% who strongly disagreed to that item. Item3: has a frequency of 642 respondents representing 42.8% who disagreed and a frequency of 550 representing 36.7% who strongly disagreed to that item. Item 5 has a frequency of 823 (44.9%) who disagreed and a frequency of 512 (34.1%) who strongly disagreed to that item. This indicates that there is insufficient availability of information resources as perceived by the undergraduate students, and so effective reference services cannot thrive.

Presentation of hypotheses / hypotheses testing

Hypothesis One:

There is no significant relationship between homophily-heterophily concept and effective reference services delivery to undergraduate students in the university libraries in North Central Nigeria.

Table 4: Correlation table showing relationship between homophily- heterophily and effective reference services delivery

Variable	N	Df	Mean	Std Deviation	R	P	Remark
Homo-Heterophily	1500	1498	48.54	7.20	0.981	0.000	Sig
Effective Service Delivery	1500		56.72	7.41			

The result from table 4. shows the relationship between homophily-heterophily and effective reference service among undergraduate students in the North Central. The relationship was found to be significant (r = 0.981, P < 0.05). It implies that there is significant positive relationship between homophily-heterophily and effective reference service among undergraduate students in the North Central, Nigeria. Therefore, the null hypothesis is rejected.

Hypothesis two: There is no significant relationship between availability of information resources and effective reference services to the undergraduates of the university libraries in North Central Nigeria. The result of the test is presented in Table 5

Table 5: Correlation table showing relationship between availability of information resources and effective reference services delivery

Variable	N	Df	Mean	Std Deviation	R	P	Remark
Availability of Information Resources	1500	1498	52.21	6.30	0.760	0.000	Sig
Effective Service Delivery	1500	1498	56.72	7.41			

The result from Table 5 shows the relationship between availability of information resources and effective reference service among undergraduate students in the North Central. The relationship was found to be significant (r = 0.760; P < .05). It implies that there is significant positive relationship between staff quality and effective reference service among undergraduate students in the North Central, Nigeria. Therefore, the null hypothesis is rejected.

Hypothesis three: There will be no significant composite effect of the independent variables on the dependent variable. The result has been presented in Table 6

Table 6: Summary of regression analysis of the combined prediction of the independent variables on effective reference services

R = 0.760
R^2 = 0.577
Adjusted R^2 = 0.575
Std. Error of Estimate = 0.10317

	Sum of Squares	Df	Mean Square	F-ratio	P	Remark
Regression	82213.102	4	20553.276	19.31	0.000	Sig
Residual	15.914	1495	0.011			
Total	82229.016	1499				

Table 6 showed that the composite /combined effect of the independent variables (homophily '-heterophily concept, and availability of information resources) were such that these factors have positive multiple correlations with the dependent variable (R = .577). This however, showed that these factors are quite relevant and important in predicting effective reference services. This is in line with the result earlier obtained on each of the two factors in their bivariate correlations with effective reference service. Also, the two variables combined could explain 76% of the total variance in effective reference service (R^2 = 0.575). The remaining 24% was due to other factors and residuals not included in this study.

The Table 6 also showed that the adjusted R^2 value of 0.575 obtained is not due to chance as it was found to be significant ($F_{(3,1496)}$ = 19.31; P < .05). Consequently, the hypothesis which states that there will be no significant composite effect of the independent variables on the dependent variable was therefore not accepted.

Hypothesis Six: There is no significant relative contribution effect of the independent variables (homophily-heterophily concept, staff quality, information literacy and availability of information resources) on the dependent variable (effective reference services in the university libraries)

Table 7: Summary of relative contribution of the independent variables to effective reference services

Model		Unstandardized Coefficients		Standardized Coefficients			
		B	Std. Error	Beta(ß)	Rank	T	Sig.
1	(Constant)	-2.447	0.205			11.926	0.000
	HM-HT Q	0.006	0.002	0.006	2nd	3.320	0.001
	ARQ	0.171	0.014	0.146	1st	12.354	0.000

significant at P< .05

Table 7 reveals the relative contribution of the two independent variables to the dependent variable, expressed as beta weights. The partial correlation coefficient of homophily-heterophily concept has positive relationship with the effective reference services of the undergraduate students. The positive value of the effects of and availability of information resources implies that the effective reference services of undergraduate students is actually determined by reinforcement of these two variables. Using the standardized regression coefficient to determine the relative contributions of the independent variables to the explanation of the dependent variables, the availability of information resources (ß = 0.146, t= 12.354, P < .05) followed by homophily-heterophily factor (ß = 0.006, t = 3.320, p < 0.05) made potent contributions to the prediction.

Discussion of findings based on research questions

Research question one: Perceptions of the undergraduate students as regards reference services effectiveness in the university libraries in North Central States of Nigeria,

The study revealed that reference services to the university undergraduates in the libraries of North Central Nigeria were occasionally effective. This is an indication that the reference services being rendered to the undergraduate students are grossly inadequate and far from being satisfactory. Majority of the respondents had the same view on all the question items listed, as being occasionally satisfactory and grossly inadequate. There is a clear case of in effectiveness on the part of reference services delivery, as majority of the respondents indicated and said NO that generally reference services given to them were not effective. These findings contrast with the views of Kumar and Surreh (2006), Millet (2001) and Drucker (2006) about what effective reference services are. These authors posit that effective reference service delivery implies having the means to cause desired result or intended result which comes as a result of maximum satisfaction. Effective reference service delivery implies having the means to cause desired result or intended result which comes as a result of maximum satisfaction. It also means having the way to produce the desired effect in reference services delivery, and anything short of this is ineffective reference services delivery.

For library services it makes for excellent and satisfactory reference services as all undergraduate students would come into the reference section of the library where they are treated as kings. This would make them imbibe the culture of independent study, which encourages long term learning habits. It would make them achievers academically and build in them high quality graduates that would never be academically maladjusted or educationally imbalanced. As usual when undergraduates know that effective reference services is being given to them in the library, they would imbibe the culture of independent learning and turn out to be high academic fliers needed for socioeconomic development of the country.

Research question 2: Reference librarians homophily-heterophily conscious in university libraries of North-Central Nigeria

In order to ascertain the homophily-heterophily consciousness of the reference librarians, the respondents were asked to respond to some statements that revealed absence of homophily-heterophily consciousness or non practice of the homophily concept. Majority of the respondents either agreed or strongly agreed to all the questions that revealed absence, unconsciousness, or non practice of the homophily-heterophily concept. All these in clear and concise terms, translates to absence or un consciousness, or non practice of the homophily-heterophily concept in reference services delivery. All these contrast with the findings of of Golub and Jackson (2008) in their work "how homophily and heterophily affects diffusion of learning in networks". They found that

consciousness of homophily – heterophily enhanced quick learning and assimilation which could be likened to effective reference services delivery. They now suggested that universities and other organizations should bring the homophily–heterophily consciousness into service delivery. It also discordant or in contrast with the views of Ruffner and Burgon (1988), Lovin and Cook (2001), Elliot (2007), Bowik 2008, that people are more likely to interact well with similar others, and to be either lukewarm or unfriendly to dissimilar others. The implication is that non practice or unconsciousness of the homophily –heterophily concept can only engender ineffective reference services to university undergraduates.

Homophily- heterophily has direct impact on reference staff or employee effectiveness on the job and service delivery in the organizations as when employees who render services are conscious of homophily-heterophily concept they would ensure they offer their services sat isfactorily. This makes for oganisational goal attainment. Therefore homophily- heterophily has implications not just for library services but for all services in all organizations where the customers would always realise they are treated as kings.

Research question 3: The perceptions of undergraduates on the availability of information resources in   the university libraries in North -Central Nigeria

It was discovered that all the questionnaire items that showed impressive collections or abundance and excellence in information resources available were either disagreed upon or strongly disagreed upon   by the respondents. All these indicate that there is insufficient availability of information resources as perceived by the undergraduate students, and so   effective reference services cannot thrive.

The foregoing is discordant with the views of Oyewusi and Oyeboade (2009) that the resources of the university libraries must be sufficient in quantity, quality, diversity and currency to support the universities curriculum. The above findings equally agree with the views of Ogunrombi (2004) that effective reference services can only thrive with availability of information resources in all formats. Ologbonsaiye (1994) as cited by Onwukanjo (2015) is also proven right as he posits that quality of library information resources has been identified as one of the yardsticks for measuring users satisfaction and by implication effective reference services. The foregoing findings is   in agreement with Ugah (2011) who sums it all up by describing poor services or ineffective reference services as a result of lack of quality information sources. The foregoing findings of insufficient availability of information resources is also in consonance with the findings of Oyediran-Tidings (2004) who studied the information needs of students of Yaba College of Technology and observed low use of library, frustration on the part of the students and ineffective reference services due to unavailability of desired information resources.

Availability of information resources has direct impact on effective reference services because it is with availability of information resources that is sufficient in quantity, quality, diversity and currency that effective reference service is achieved. Secondly for organizations and industries that are knowledge based, they need availability of information resources to be able to satisfy their clients. This equally would maximize their profits and by extension, organizational goal attainment.

Discussion of findings based on the tested hypotheses

Significant relationship between homophily-heterophily concept and effective reference services delivery to undergraduate students in the university libraries in North Central Nigeria.

Table 4 is the correlation table showing relationship between homophily – heterophily and effective reference services delivery to the undergraduate students of the North Central States of Nigeria. From the result, a statistically significant relationship was found between homophily-heterophily and effective reference service among undergraduate students in the North Central Nigeria. Since there is a strong significant relationship between homophily-heterophily and effective reference service among undergraduate students in the North Central, Nigeria, it implies that homophily-heterophily have positive relationship with effective reference services. Based on this, the null hypothesis is rejected, which means that there is a significant relationship between homophily-heterophily and effective reference services delivery. This significant positive relationship revealed by hypothesis one, contrasted with all the questionnaire statements that revealed that the reference staff were uncooperative, unfriendly, insensitive, and uncaring. These showed absence or no consciousness of the homophily- heterophily concept in reference service delivery.

The significant and positive relationship between homophily – heterophily and effective reference services as expressed in hypothesis one: is in inconsonance with the findings of of Golub and Jackson (2008) in their work "how homophily and heterophily affects diffusion of learning in networks". They found that consciousness of homophily – heterophily enhanced quick learning and assimilation which could be likened to effective reference services delivery. They now suggested that universities and other organizations should bring the homophily–heterophily consciousness into service delivery. It also agree with the views of Ruffner and Burgon (1988), Lovin and Cook (2001), Elliot (2007), Bowik 2008, that people are more likely to interact well with similar others, and to be either lukewarm or unfriendly to dissimilar others.

Significant relationship between availability of information resources and effective reference services to the undergraduates of the university libraries in North Central Nigeria.

Table 5 shows the correlation table showing relationship between availability of information resources and effective reference services to the undergraduate students in North Central Nigeria. The

results from the table shows that there is a statistically significant relationship between availability of information resources and effective reference services to the undergraduate students of North Central Nigeria Since there is significant relationship between availability of information resources and effective reference services to the undergraduate students of North Central Nigeria, it implies that availability of information resources have positive relationship with effective reference services. Based on this, the null hypothesis is rejected, which means that there is a significant relationship between availability of information resources and effective reference services delivery.

This significant positive relationship revealed by hypothesis 4 is in agreement with all the questionnaire statements that depict availability of information resources, for instance: your level of satisfaction with the subject coverage of the reference/ library resources in your discipline is quite high? (b) the reference / library resources are sufficient in quality, quantity ,diversity and currency to support the university curriculum? (c) Your reference /library resources support your intellectual, cultural, technological and socio-economic development? (d) You are highly impressed by the way your university library subscribes to remote and online databases, by gathering their passwords and distributing to students to supplement the physical materials?

The foregoing agreed with the views of Oyewusi and Oyeboade (2009) that the resources of the university libraries must be sufficient in quantity, quality, diversity and currency to support the universities curriculum. The above findings equally agree with the views of Ogunrobi (2004) that effective reference services can only thrive with availability of information resources in all formats. Idiodi and Igbinosa (2003) is also proven right as he posits that quality of library information resources has been identified as one of the yardsticks for measuring users satisfaction and by implication effective reference services. Ugah (2011) sums it all up that by describing poor services or ineffective reference services as a result of lack of quality information sources.

This positive significant relationship is also in consonance with the findings of Oyediran-Tidings (2004) who studied the information needs of students of Yaba College of Technology and observed low use of library, frustration on the part of the students and ineffective reference services due to unavailability of desired information sources.

Significant composite or joint effect of the independent variables on the dependent variable or there will be no significant composite effect of homophily- heterophily, staff quality, information literacy and availability of resources on effective reference services.

Table 6 showed that the composite/combined effect of the independent variables (homophily-heterophily concept, staff quality, information literacy and availability of information resources) were such that these factors have positive multiple correlations with the dependent variable (R = .577). This however, showed that these factors are quite relevant and important in predicting effective reference

services. This is in line with the result earlier obtained on each of the four factors in their bivariate correlations with effective reference service. Also, the four factors combined could explain 76% of the total variance in effective reference service ($R^2 = 0.575$). The remaining 24% was due to other factors and residuals not included in this study.

The Table 6 also showed that the adjusted R^2 value of 0.575 obtained is not due to chance as it was found to be significant ($F_{(4,1495)} = 1930845.959$; $P < .05$). Consequently, the hypothesis which states that there will be no significant composite effect of the independent variables on the dependent variable was therefore not accepted.

The findings are in line with that of Lancaster (1988), as cited by Nwalo (2000) , Hermon and Nitech (2009) and RSerman and Shafiq (2011). They posited that libraries are service organisations and it is the information resources that determine their quality. Service quality includes three areas (a) resources, information resources/content which bothers on availability of information resources, (b) service environment and resource delivery, this bothers on effectiveness like reference services effectiveness; (c) service delivered by staff, which bothers on staff quality; and a good quality staff that is information literate and takes into recognition homophily–heterophily consciousness in communication transaction.

Relative contribution effect of the independent variables (homophily-heterophily concept and availability of information resources) on the dependent variable (effective reference services in the university libraries)

Table 7 shows positive value of the effects of staff quality, information literacy and availability of information resources implies that the effective reference services of undergraduate students is actually determined by reinforcement of these four variables. Using the standardized regression coefficient to determine the relative contributions of the independent variables to the explanation of the dependent variable, availability of information resources is the most potent contributor to the prediction followed by the   homophily-heterophily factor.

So it can be seen that relatively all the independent variables have significant contribution with effective reference services. For homophily–heterophily all the questionnaire statements revealed unconsciousness or non compliance of homophily- heterophily concept in reference transactions, hence the high positive correlation to show that any unconsciousness or non practice of it in reference services should be addressed because reference staff should even undergo trainings on how to practice it especially for empathy. Availability of resources is very essential for effective reference services because studies have shown that without, information resources, there cannot be effective reference services.

Conclusion

The study shows that all the independent variables namely homophily-heterophily, and availability of information resources showed strong positive and significant relationships both individually(relatively) and collectively (jointly or compositely) to the dependent variable which is effective reference services. Therefore for effective reference services in university libraries all the independent variables need to be taken into consideration, that is they need to be in existence for effective reference services.

Recommendations

Based on the findings of this research, the following recommendations are proffered to improve effective reference services to university undergraduates in North Central Nigeria. It is essential for Nigerian universities to produce high academic quality graduates needed for socioeconomic development. Under utilisation of the reference services section of the Nigerian university libraries because of unsatisfactory and ineffective reference services has serious negative implications for the quality of graduates churned out in particular, and for the Nigerian polity in general, therefore,

1. There is need for parents and all stake holders in the education industry, university's administration, university's library administration, government at all levels or tiers, in Nigeria to ensure that all the independent variables that were duly investigated and found to have significant relationships with effective reference services are adequately provided in Nigeria's university libraries in general and that of North Central Nigeria in particular.

2. There is need to sensitize the library workers both professional and non professional cadres on the importance of effective and satisfactory reference services. Librarians work in the reference section without realising that the section is for direct personal assistances to users. The section exists to make users feel loved and important, to respect the users ideological leaning, and to make the user and independent learner for individualized learning. There should be training and sensitization programmes on effective reference services using reference query slips as a measure of reference services effectiveness. Once there is adequate training on the need to satisfy the users on all the items mentioned in that reference query slip, which is a tool for effective reference services, (statistics), then the library would achieve effective reference services in all their reference transactions.

3. For effective reference services, there should be deliberate consciousness of the homophily-heterophily concept in communication and reference transactions as it engenders effectiveness in reference transactions. With the consciousness of homophily- heterophily in reference services transactions, the reference staff would show respect for the ideological leanings of the undergraduate students, be friendly, cooperate and empathise with them for

smooth reference transactions, there would be influx of the students in the reference section seeking direct personal assistance that would help them in knowledge acquisition.

4. Librarians that should be deployed to the reference section are the ones that respect the existence and principle of homophily- heterophily concept. There should be adequate training about the homophily- heterophily concept for librarians and other workers that render services. Once employees become conscious of it in libraries or any organization, people would begin to respect each other's ideologies and feelings, people would employ empathy when dealing with others. Workers who are conscious of it would respect the likes and dislikes of others. This homophily- heterophily is a necessity for effective reference services delivery, be it effective reference services or any other services delivery in any organisation. It is a package that should be made popular to others by training and intensive sensitization. University library's management and university authorities should post staff that are homophily-heterophily compliant to the reference section. In employment generally, employees that are homophily –heterophily compliant should be given employed so that services would go on smoothly. This would make all customers to be satisfied with the organization and would result in profit maximization.

5. Effective reference services cannot thrive without availability of information resources. Therefore information resources must be available in sufficiency, adequacy, currency and diversity to engender reference services effectiveness. There should be broad subject coverage of library materials in all disciplines. The reference / library materials should be sufficient in quality. Quantity, diversity and currency to support the university's curriculum. For electronic/ online resources, the students should be satisfied with the way the university library subscribes to remote and online databases. These suggest that the reference services delivery to the undergraduate students should be effective, as there cannot be effective reference services with insufficient resources.

6. Availability of information resources significantly influence effective reference services since it means ensuring the presence of the materials in the library for immediate use. The university library management, university management and all stakeholders in the education industry should ensure that there is availability of information resources which are sufficient in quantity, quality, diversity, and currency, as this is the only way it can support the school's curriculum, and enhance effective reference services. If the resources are not there, statistics of effective reference services cannot be kept. There should be enough funds for print, non print, electronic online, hardcopy and softcopy materials to flood the library for effective reference services. The university library management should press for adequate funds from the university authority, and the university authority should press for adequate funds from the federal government, to run the university generally and library in particular. This is because the library is the academic life wire of the university. The academic health, intellectual

vitality and effectiveness of any university depends largely upon the state of health and excellence of its library, which is its life blood.

7. The prediction of all the two independent variables to the dependent variable, effective reference services correlated positively with all the two predictor variables. The significance of composite contribution was tested at P< 0.05 using the f-ratio at the degree of freedom (df=4/1495) The analysis of variance for the regression yielded F-ratio of 1930845.959 (significant at 0.05 level.) This implies that the joint contribution of the independent variables to the dependent variable were significant, to conclude the fact that the two independent variables are needed for effective reference services.   This means that these variables relatively or singly are all positively correlated to effective reference services.   These imply that they are potent factors to consider when recruiting reference staff in libraries, or any other organisation.

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