Availability and Utilization of Library Portal Services for Research in University Libraries in Nigeria

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ABSTRACT

This research paper delved into the availability and utilization of library portal services for research in university libraries in Nigeria. Two research questions and two null hypotheses were formulated to guide the study. A structured questionnaire was used for data collection. The study was carried out in Nnamdi Azikiwe Library, University of Nigeria Nsukka (UNN) and Felix Aghagbo Nwako Library, Nnamdi Azikiwe University Library (UNIZIK), Awka. A total of 70 professionals (librarians and system analysts) in these libraries supplied data for the study. Data collected was analyzed using mean and standard deviation. These were used to answer the research questions while the null hypotheses were tested using t-test statistic at 0.05 level of significance and 68 degree of freedom. Major findings showed that portal services available in the library showed that the areas of availability of library portal services in Nnamdi Azikiwe Library, U.N.N. includes Agriculture, Health Sciences, Engineering, Environmental Sciences and information about institution, Social Sciences, Arts and Humanities, Natural Sciences. In Festus Aghagbo Nwako Library, Awka, the areas of Portal Library Services include Career Development, Federal Government Programs, Environmental Sciences, Biological Sciences, Social Sciences, Arts and Humanities, Engineering, and Health Sciences. Findings on extent of utilization of portal services available in the libraries indicated that portal services are utilized to a low extent in the university libraries. Furthermore, librarians did not significantly differ in their opinions on the availability of library portal services and on the extent of utilization of library portal services in the libraries under study. It is therefore recommended that provisions should be made by the universities and library management to provide and update required portal services in addition to creating enabling environment for enhanced access and utilization of these services. The governments must make an effort to provide funds for policy implementation, necessary technology training for librarians and users, and develop general information infrastructure.

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Anthonia Nwamaka Ejikeme, Obayi Uche. F., & Eze, Jacintha

50   International Journal of Knowledge Content Development & Technology Vol.11, No.1, 49-64 (March, 2021)

1. Introduction

The main purpose of establishing university libraries is to provide information resources that will go a long way in supporting teaching, learning and research in their parent institutions. The library is widely known as a repository of knowledge that serves and empowers several clients at the same time. The goal of a library is to satisfy the users' needs by providing more value-added services and better information services which can enhance the image of the library. This is why Nwazuoke (2000) in his observation sees that man has recorded a huge success in the 21st century which is attributed to man's enhanced ability to process and manage information with the ultimate goal of decision making. This has been facilitated by the use of information communication technology which helps in harnessing and disseminating information through many access points and formats. The application of ICT has caused a significant change in libraries; automated cataloging, circulation, information retrieval electronic document delivery, and CD-ROM databases. Upkebor (2011) stressed that electronic resources have been used to provide accurate and timely information especially for lecturers and students who depend greatly on electronic resources to boost teaching, research and collaborate with counterparts around the world for intellectual growth. The advent of the internet, digitization, and the ability to access library and research materials from remote locations created dramatic changes by the end of the twentieth century. There have been fast and personal significant changes in librarianship, where digital and electronic libraries complement, and in some cases replace, traditional libraries. The portal is not left out as the world contains selective links providing authoritative, in-depth information about the nations and other areas of the world. They are arranged by country or area with the links for each sorted into a wide range of broad categories. These links were selected by Area specialists and other library staff using library of congress selection criteria. The world is becoming increasingly globalized, and the internet has assumed a powerful and effective role in global information dissemination. Web portals offer a means of global information conveyance and this is why libraries can disseminate information through their web portals, which will be open to millions of readers across the globe. Portals were first introduced in the business sector in the early 1990s owing to the enormous growth of web documents. Locating relevant web files by conventional means was quite difficult. To solve this problem, search engines were created. But they too were found not to be efficient in retrieving the desired documents from the huge amount of web resources. This led to the introduction of the new technology known as a web portal for channeling or categorization of web documents into preconfigured groups. The web portal, considered as an earlier stage of a portal, was first adopted by libraries. In 1998 library portal was introduced at the North Carolina State University, Libraries (Morgan & Reade, 2000).

When planning a portal, it is important to keep certain principles in mind. It has to be designed from a customer perspective – it needs to be simple to use, dependable and predictable. It should be able to demonstrate value – or deliver results – and make the customer more self-reliant. It is important to involve all stakeholders in portal planning and utilization and to adhere to principles and tools that allow for all units to leverage unifying technologies. For example, in the case of an academic portal, this means a single campus portal. An enterprise portal requires a single identity and authentication system, requires all components to communicate and should have capabilities

that allow students, faculty and staff to complete transactions in real time. The goal of an enterprise portal is to create a framework for adverse user groups and stakeholders to work together. It has to be customer-driven, capable of creating one-stop services and by design, of building a community of interest for the long term. In the case of a university, for example, it might encourage life-long learning. For utilization, designers need to listen to the voice of the customer and develop the ability or the vision to imagine the outcomes of a portal. In discussing and planning any portal framework. It is important to come to a common understanding of what portal means. There are various definitions depending on perspective, mission or function. McCartney and Jones (2002) defined portals as whatever the institution wants them to be − a place that draws people to it because of what it offers and what is enabled. A portal is a that delivers web resources to end-users based on the identification and authentication system in place. The more they know about their customers, the better they can plan and the more useful the portal will be. A portal should have the capability to gradually learn and change based on how it is used by individuals. A portal changes as the status and the activity in its change. It learns as it goes. True portals are bi-directional environments that enable real-time transactions, such as information, financial services or changeable scheduling.

Many libraries are considering web portals as a way to improve their library services. In general, a web portal can be defined as "An organized and integrated set of links to specific content pages, usually based around a topic" (O'Leary, 2004). In the library context, a portal is usually utilized as a way to provide integrated access to a library's services and collections. While many libraries offer access to services and content via their websites, the portal is seen as a way to make library services more attractive and user-centric. Initiative as well as competence to conduct viable academic research for the purpose of solving any kind of social and economic national problems may be inhibited as a result of failure to use library information resources. Okiy (2006) and Iyoro (2004). said that high availability of resources encouraged the use of library services. They further stated that there is a significant relationship between portal and use of library services. The incursion of the electronic resources into library services in the educational sector provides the possibilities to solve most teaching, learning, research and overall information creation, organization, dissemination, preservation and conservation problems even more rapidly and accurately than hitherto conceived. According to Nwachukwu and Asom (2015) this has eventually made the computer and other electronic systems the doyen of research as it continues to extract greater acceptance.

Electronic resources have the ability to offer entrée to contemporary information as these are updated frequently to handle information services. It includes services such as: the online databases, online reference services, digital repository, library web portals, selective dissemination, the use of Online Public Access Catalogue (OPAC), online feed (RSS feed), online tutoring and such like (Nuhu, 2014).

Without functional portal services, library users may find it difficult to access vital and needed information for their research and scholarship. This may impact negatively on their academic work. The provision of access to information resources such as databases, electronic journal (e-journal), electronic book (e-book), e-alerting services, e-special collections, CD-ROM, online reference tools through the library portals helps improve the quality of teaching and research (Nnadozie, Aniebo,

& Chukwueke, 2017).

Despite the importance of library portal services to academic library services and the danger of poor or lack of portal services, it has been observed that many university libraries in Nigeria do not have efficient portal services. It has also been observed that many university libraries are yet to introduce or improve on their library portal services. Despite the importance of library portal services in university libraries and the danger of non-implementation of university library portal services, no study seems to have been carried out to determine the implementation of university library services especially in the two libraries under study. The use of university libraries depends on the availability of the users' desired information resources library portal. In the light of the above, this study intends to determine the extent of implementation of library portal services in Nnamdi Azikiwe Library, University of Nigeria, Nsukka and Nnamdi Azikiwe University Library, Awka. Therefore, the problem of the study put in question form is what is the extent of implementation of library portal services in the two university libraries.

2. Research Questions

The following research questions guided the study:

(a) What are the portal services available in Nnamdi Azikiwe University Awka Library and University of Nigeria Nsukka libraries?
(b) What is the extent of utilization of library portal services by users from different disciplines in the Nnamdi Azikiwe University Awka and University of Nigeria Nsukka libraries?

3. Hypotheses

The following hypotheses were formulated and tested at .05 level of significance.

- **Ho1**: There is no significant difference in the mean responses of librarians of the Nnamdi Azikiwe University Library Awka, Anambra State and University of Nigeria Nsukka Library, Enugu State on the availability of library portal services.
- **Ho2**: There is no significant difference in the mean responses of librarians of the Nnamdi Azikiwe University Library Awka, Anambra State and University of Nigeria Nsukka Library, Enugu State on the extent of utilization of library portal services.

4. Literature Review

For Looney and Lyman (2000) portals, even at the most basic level, can help combat 'Infoglut' and prevent users feeling 'Lost on the Web'. The authors refer to portals as a 'Home on the Web'

a place to return to make sense of necessary information. For Katz (2002) building relationships between institutional constituent groups is a primary task of institutional portals. The new, wonderful and challenging aspect of web management posed by portals is the idea of creating and managing information systems whose primary purpose is to sustain positive relationships between an institution's stakeholders and the institution. Moreover, in the new electronic environment, librarians perform triple fundamental roles of information access provision, research assistance and collaborative system designing. A number of portal developments are viewed in terms of customer service development, for example, the University of Delaware indicates that the portal provides a tool for managing relationships with "Customers". Jacobsen (2000) refer to the portal as providing easier access for Villanova, customers. Whilst the term 'customer' has connotations of the commercialization of education the 'customer' in these scenarios is not the student paying for the courses, though they form an important stakeholder group, but the teaching staff, researchers and parents and employers who are the recipients of institutional information and users of institutional services and resources.

Looney and Lyman (2000) highlight the potential of institutional portals to both develop and maintain institutional communities: "we believe that the value of a portal to a campus is that it can be used to engage constituent groups, empower them with access to information resources and communication tools, and ultimately retain them by providing a more encompassing sense of membership in an academic community". The authors indicate that many of the key questions when planning portals are concerned with building communities beyond the campus walls fostering application, acceptance and retention rates and increasing the quality of alumni and parent relationships. McCredie (2002) has indicated that fostering institutional community beyond the campus and meeting customer requirements has remained central to developments at the University of California Berkeley. Bringula, Sarmiento, and Basa (2017) in a more recent study further affirmed that educational web portals serve as gateways to information and services for learning and teaching.

In the UK the commitment to customer service shaped the development of the London School of Economics' 'LSE for you' Cobb, Riley, and Earley (2002) note the incongruity between the high numbers of overseas students applying to the school and the standard UK office hours and public holidays observed by the institution. In order to foster a sense of identification with the institution through the delivery of effective services to applicants the institution developed a portal to provide 24/7 access to information and services. Eisler (2001) noted that portals offer the prospect of helping higher education find new ways to connect with students, faculty, alumni and the community … many colleges strongly feel the need to create new avenues for building community among their people. The creation and maintenance of an institutional community ware central to the development of the g web at George Washington University, where the institution was keen to replicate and develop the university's sense of community in an online environment. The university noted, with concern, students using external sites – such as Yahoo and AOL – for information and communication and as a result, much of the portal effort has centered on getting users to return to institutional sites and services (Olsen, 2002). Web portal has the following advantages:

- Provide data from multiple sources and in multiple formats that can be organized into a single menu.

- Provide web-based services such as chat rooms, searches, free password – protected email, FTP, bulletin boards, live-moderated events, forums, news, entertainment, and retail services.
- Incorporate triggers that alert users or run an application when a specific event takes place.
- Allow users to conduct business transactions.

Looking at previous related studies, Englert (2003) reflected on the growing importance of portals in institutions around the world using senior representatives of institutions in the UK, USA, Canada, Italy, Singapore and Australia and reveals that Whilst 31 of the 47 institutions surveyed were not currently deploying a portal, three quarters felt that they were either important or very important and 96% of the respondents were planning, developing or currently utilizing an institutional portal.

In a closer context, Ugah (2008) investigated the portal and the use of library services at Michael Okpara University of Agriculture Umudike to examine the relationship of (portal) availability and accessibility of information sources with the use of library services in the university library. Findings in the study revealed that more than 80% of the respondents agreed that their use of the library services depends on the availability of library portal information sources and slightly fewer than that found availability to be an influence on their use. The use of library services depends on the availability of information resources and library portal services and vice versa.

4.1 Requirements for Utilization of Library Portal Services

One of the resources of the library portal is the internet library for librarians. Internet library for librarians is a popular information resource site for librarians and library support staff. According to Savarese (2005), a funny thing happened to the traditional card catalog as it morphed into the Online Public Access Catalog (OPAC). The whole mission of the library changed along the way, and the purpose of the library catalog changed along with it.

But, first: How did we get here? The file-drawer-based card catalog was an inventory of the objects (mostly books and periodicals) that were physically presented in the library. With the burst of new electronic resources – first electronic databases on CD, then e journals (full-text electronic collections), and all manner of resources on the internet – the library's job got a lot bigger. People who used the library expected it to help them deal with the entire universe of information, not just the books on the nearby shelves. So, the OPAC had to transform itself to meet a similar challenge. The online library software somehow had to catalog, or at least provides a gateway to, a huge variety of materials in the hands of many different proprietors. Integrated library systems (ILSs) have met this challenge by converting the simple OPAC into a comprehensive, customer-driven library portal.

The system requirements vary based on your system configuration and the number of concurrent self-service connections that are maintained on the web server. Computerization as the world knows is an expensive but necessary project. The utilization of a library portal implies that libraries will spend more money on computer hardware and software, licensing, training of librarians in new technologies especially in the area of text selection, scanning, web technologies skills to support and manage them. Copyright holders have to be contacted and rights obtained. Money is needed

to translate content into digital form and to access the resources. A powerful server is required, supported by specialized software and personnel. The server must operate all day, and new materials should constantly be added. Building and sustaining a library portal requires the proper technological infrastructure which includes telecommunication, servers, application platforms and software applicatio ns (Gbaje, 2007). There is a need to have a good telecommunication infrastructure in place for the utilization of library portals. Even though there is a massive improvement in the telecommunication industry over the past few years, however, a lot still needs to be done to improve its present state.

Web technology skills are needed to maintain web servers that host locally digitized materials and other digital resources hosted remotely as well as maintaining proxy access to restricted resources. Ashcroft and Watts (2004) observed that Nigeria has an acute shortage of digital systems librarians. Information and web technology literate staff in libraries to install and manage technology net works. The erratic nature of electric power supply in Nigeria is a major problem. Library portal cannot exist in this situation because web servers that host locally digitized contents and proxy servers that provide authentication and remote access to subscribed electronic resources need to be on for twenty-four hours a day. There should be no power outage. Other related challenges according to Enweani (2018) include demands for new skills, cost/funding, managing a new generation of learners amongst others. But with the advent of information technology renovation of the existing library buildings will need to be done to accommodate new trends, facilities and services. Again, the distinct user interface of every product is another challenge, users, therefore, need to remember different passwords for different products. The scope of the coverage and available achieves are often limited. At times, difficulties are encountered while downloading or printing, there is no cost savings especially when both the virtual and print products are maintained.

Everything is not available in digital format. There are restrictions which vary from vendor to vendor, on how the product can be used. The library portal relies on power and computer networks in order to be available for use. Users cannot spread everything in front of them and use it all at once. Users are most comfortable using books. Lack of web technology skilled staff, lack of funds, lack of basic information infrastructures (internet access, electricity, and web server), limits of network bandwidth and slow transmission are some factors hindering the effective development of library portal.

The basic concept of a portal is a URL from which web client link to all manner of internet services and activities (search, content, personal authority, transaction, and social-interactive sites). However, Webopedia (www.zdwebopadia.com) has its own definition. It defines web portal as follows: "A web-site or service that offers a broad array of resources and services, such as e-mail, forums, search engines, and on-line shopping malls. The first web portal was online services such as AOL that provided access to the web portals to attract and keep a larger audience. Libraries have always served as access points for information. Services have evolved from the days of closed stacks through shelf browsing and card catalogues, punch cards, and OPACS; to concept of open access and institutional repositories Crow (2002). This historic migration has tried to satisfy the changing needs of library users, including ease of access, interaction richness, low interaction and low cost. Anunobi and Okoye (2008) stated that whether through a consortium or by independent subscription, academic libraries acquire and disseminate electronic portals and databases. The consortium of Nigerian university

libraries (NULIB) has subscribed to EBSCO host. Internet portals include Access to Global Online Research in Agriculture (AG-ORA), Health Internetwork Access to Research Initiative (HINARI), Online Access to Research in the Environment (OARE), Database of African Theses and Dissertation (DATAD), and many offline databases including MEDLINE, these are global information resources which could be accessed through academic library gateways. Crow (2002) describes institutional repositories as " Digital collections capturing and preserving the intellectual output of a single or multi-university community". An institutional repository is a way of reducing cost of scholarly research from faculty and students of academic institutions by hosting them in the institutions, professional societies, or third-party provider's websites. While academic libraries were at the centre to providing access to print archives, the institutional repository has given them the responsibility of providing access and also interoperability functions (standardizing metadata formats and metadata harvesting). Academic libraries must provide access to both print and electronic resources to serve users and as a measure of prestige. Similarly, with the growing number of internet users with free e-mail accounts and the availability of free web base instant messaging software, library portal services is a technology that academic librarians can exploit without spending money on proprietary software.

The use of library services according to Ugah (2008) has a 79% dependence on the accessibility of information sources and an 81.0% dependence on the availability of library portal resources.

Ajayi and Adetoye (2005) also stated that, staff and students maximally utilize library books to enhance academic excellence in Nigerian tertiary institutions. They further stated that there is progressive increase in the number of books borrowed and consulted from season to session. The progressive increase in the utilization of library resources is an indication that the library is meeting its primary role of supporting the objectives of its parent institution.

Awojobi (2004) on the other hand viewed that, the quest for postgraduate studies seemed to be the driving force behind the use of library information resources. This perhaps explains why the respondents used the library in the places where they were pursuing higher degrees the more. He however stated that there is paucity of current and relevant resources in relation to science based disciplines in most university library portal.

Postgraduate students seem to make use of non-print information resources, a lot to facilitate their research work. Non print information resources, instructional media or electronic information resources broadly speaking are wide variety of tools, devices and materials that either present or help present information to the learner or afford the opportunities for the learner to make responses which will help him or her to learn. The utilization of these form of information resources by the postgraduate students increase the rate of learning and simultaneously free them to use more time on gainful study and research activities.

Earlier studies have shown that library information resources especially electronic resources are widely used in the university libraries. Rogers (2001) in his study at Ohio State University showed that there was increase of e-resources and decrease use of printed library resources by faculty and graduate students as the number of available e-resources increases. He added that physical access to a net worked work stated seems to be the biggest determinant to adoption of the net work. Okiki and Asiru (2011) studied the use of electronic information sources (library portal) by post

graduate students in Nigeria Influencing factors and discovered that the programme of study could be ranked as one of the factors that encourage the use of E-Library Sources (library portal).

The need of carrying out research was discovered as one of the strongest factor that influenced the use of electronic information resources. 175 (79.61%). 1045 (47.78%) and (47.83%) of the respondents used ELS for their research work, writing term paper and completing course assignment respectively.

5. Research Methods

A researchers' designed/developed (structured) questionnaire was used to elicit necessary data on utilization of library portal services in Festus Aghagbo Nwako library Nnamdi Azikiwe University (UNIZIK) and University of Nigeria, Nsukka (UNN) library from the librarians. These comprised of the University Librarians – heads of the libraries (UL), the professional librarians (PL) and system analysts (SA) of the two libraries - a total of 70 respondents; thirty six (36) were staff of university of Nigeria (UNN) library and thirty four (34) were staff of Nnamdi Azikiwe University (UNIZIK) library. The questionnaire was divided into two parts, part one and part two. Part one elicited the personal data of the respondents while part two contains five sections which addressed the research questions. The instrument was face validated by two experts in library and Information Science Department and one in Measurement and Evaluation to determine the suitability of language, adequacy and relevance of the items in addressing the research questions.

For the purpose of obtaining the internal consistency and reliability of the instrument, Cronbach Alpha reliability method was used and the overall reliability index for the instrument was 0.77. The analyses of the data were carried out after scoring the collected raw data. Mean and standard deviation was used to answer the three research questions while t-test was used to test the null hypotheses at 0.05 level of significance.

6. Results

Analysis of data and presentation of results were carried out in the order of the research questions raised and hypotheses postulated for the study. While the analysis was done using mean and standard deviation, the decision is based on real limits of numbers for clarity thus:

Mean score of up to 1.00 – 1.49 = Very low extent/strongly disagree
1.50 – 2.49 = Low extent/disagree
2.50 – 3.49 = High extent/agree
3.50 – 4.00 = Very high extent/Strongly agree

The null hypotheses were tested in this section. The t-test statistic was used for analyzing the hypotheses at 0.05 level of significance.

Anthonia Nwamaka Ejikeme, Obayi Uche. F., & Eze, Jacintha

Research Question 1: What are the library portal services available in the libraries?

Table 1. Mean Ratings on the Library Portal Services available in the Libraries

s/n	ITEMS	SA	A	D	SD	X	SD	Dec.
1	Agriculture	13	40	9	8	2.83	0.87	Agree
2	Health Sciences	21	38	8	3	3.10	0.76	Agree
3	Engineering	15	42	8	5	2.96	0.79	Agree
4	Biological Sciences	10	54	5	1	3.11	0.44	Agree
5	Arts and Humanities	30	35	3	2	3.33	0.70	Agree
6	Social Sciences	27	34	7	2	3.23	0.75	Agree
7	Natural Sciences	23	25	1	4	2.90	0.99	Agree
8	Environmental Sciences	26	34	5	5	3.16	0.85	Agree
9	Information about the Institution	51	10	5	4	3.54	0.86	Strongly Agree
10	Federal Government Programme	48	16	3	3	3.56	0.77	Strongly Agree
11	Career Development	48	12	6	4	3.49	0.88	Agree
	Grand Mean					3.20	0.79	Agree

The data presented in **Table 1** revealed that the identified portal services are available in the libraries. These items are numbered 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11 with mean scores of 2.83, 3.10, 2.96, 3.11, 3.33, 3.23, 2.90, 3.16, 3.54, 3.56 and 3.49 respectively. These disciplines covered by the portal services included Agriculture, Health sciences, Engineering, Biological sciences amongst others. However, they strongly agreed to the availability of information about the institution and federal government programmes (Items 9 & 10). The values of standard deviation ranged from 0.44 to 0.99 which indicated that the respondents were not too far from the mean and from the opinion of one another in their valid. The grand mean of 3.20 also indicated that the aforementioned items are available in the library portal services.

Hypothesis 1: There is no significant difference in the mean responses of librarians in the Nnamdi Azikiwe University Library Awka and University of Nigerian Nsukka Library on the availability of library portal services.

Table 2. The t-test Analysis of Mean Responses of UNIZIK and UNN Librarians on the availability of University Library Portal Services for Research

Group	X	SD	Df	t-cal	t-crit	Decision
UNIZIK	3.02	0.87				Ho not
UNN	2.79	0.70	68	1.21	1.96	Rejected

Results in **Table 2** revealed that the calculated t-value (1.21) is less than the critical t-value (1.96) at 68 degree of freedom and at 0.05 level of significance. The results indicated that librarians

in UNIZIK and those in UNN had uniform opinions on the availability of university of university library portal services on research. The implication, therefore, is that the null hypothesis is not rejected since the calculated t-value (1.21) is less than the critical t-value of 1.96.

Research Question 2: What is the extent of utilization of library portal services in the libraries under study?

Table 3. Mean Ratings of the Respondents on the Extent of Utilization of Library Portal Services by Users from different Disciplines in the Libraries under Study

S/N	ITEMS	VHE	HE	LE	VLE	X	SD	Dec
1	Agriculture	18	5	38	9	2.46	1.02	Low Extent
2	Health Sciences	13	32	19	6	2.74	0.86	High Extent
3	Engineering	11	36	9	14	2.63	0.98	High Extent
4	Biological Sciences	8	11	40	11	2.23	0.85	Low Extent
5	Arts and Humanities	9	13	43	5	2.37	0.80	Low Extent
6	Social Sciences	10	13	42	5	2.40	0.82	Low Extent
7	Natural Sciences	7	10	45	8	2.23	0.78	Low Extent
8	Environmental Sciences	9	9	47	11	2.23	0.78	Low Extent
9	Information about the Institution	14	33	13	10	2.73	0.95	High Extent
10	Federal Government Programme	11	36	9	14	2.50	0.79	High Extent
11	Career Development	10	33	10	17	2.51	1.02	High Extent
	Grand Mean					2.46	0.89	Low Extent

Results from **Table 3** indicated that library portal services were utilized to a high extent in five areas − Health Science, Engineering, Information about the Institution, federal government programmes and career development. The items are numbered mean values of 2.74, 2.63, 2.73, 2.50 and 2.51 respectively. The values of their standard deviation ranged from 0.79 to 1.02. On the other hand, results further indicated that library portal services were utilized to a low extent in areas such as Biological Sciences, Arts and Humanities, Social Sciences, Natural Sciences, and Environmental Sciences with mean scores ranging from 2.23 to 2.46 and standard deviation from 0.78 to 1.02. The values of standard deviation were also homogenous. The grand mean of 2.46 indicated that library portal services were utilized to a low extent in the Nnamdi Azikiwe and University of Nigeria libraries.

Hypothesis 2: There is no significant difference in the mean responses of librarians of the UNIZIK and those in UNN on the extent of utilization of library portal services.

60 *International Journal of Knowledge Content Development & Technology Vol.11, No.1, 49-64 (March, 2021)*

Anthonia Nwamaka Ejikeme, Obayi Uche. F., & Eze, Jacintha

Table 4. The t-test result of comparison between the opinions of librarians in UNIZIK and those in UNN on the extent of utilization of library portal services

Group	N	X	SD	Df	t-cal	t-crit	Decision
UNIZIK	34	2.58	0.83				Ho not
UNN	36	2.79	0.70	68	1.05	1.96	rejected

* t-cal = Calculated value of t; t-crit = Critical table value of t

Data presented in Table 4 revealed that the calculated t-value of 1.05 is less than the critical t-value of 1.96. This implied that librarians in UNIZIK those in UNN did not differ significantly in their opinions on the extent of utilization of university library portal services. The null hypothesis of no significant difference was not rejected since the calculated t-value is loss than the critical t-value at 68 degree of freedom and at 0.05 level of significance.

7. Discussion of findings

Findings on portal Services available in the Library showed that the areas of availability of library portal services in Nnamdi Azikiwe Library, U.N.N. includes Agriculture, Health Sciences, Engineering, Environmental Sciences and Information about Institution, Social Sciences, Arts and Humanities, Natural Sciences. In Festus Aghagbo Nwako Library, Awka, the areas of portal library services include Career Development, Federal Government Programmes, Environmental Science, Biological Sciences, Social Sciences, Arts and Humanities, Engineering, and Health Sciences. This finding is in line with that of Englert (2003), Bringula, Rex, and Sarmiento (2017) who observed the growing importance of portals in various disciplines in various institutions around the world. Englert's research in those days was carried out with senior representatives of institutions in the UK, USA, Canada, Italy, Singapore and Australia and reveals that whilst 31 of the 47 institutions surveyed were not currently deploying a portal, three-quarters felt that they were either important or very important and 96% of the respondents were planning, developing or currently implementing an institutional portal. Bringula, Rex, and Sarmiento (2017)'s recent research affirmed that most institutions have adopted portal services. It is note-worthy that no participants felt that this issue was unimportant. The digital age has brought about a completely different way of providing library services resulting to the development of new services. Library portal services have been found to be an important development in this present digital age.

Findings on extent of utilization of portal services available in the libraries indicated that portal services are utilized to a low extent in the university libraries. This finding is in consonance with Chibunna et al. (2012) who asserted that library resources in most schools in Nigeria appear to be inaccessible and under-utilized. Utilization of library information resources is a key factor in the provision of quality services in different types of libraries. Bhatt (2013) also asserted that successful library services depend mainly on satisfaction level of its users with the relevant library information resources, user centric library services and library staff supportive attitude. In my own view, any technological organized library is essential for educational development.

Librarians in the libraries did not significantly differ in their opinions on the availability of library portal services and on the extent of utilization of library portal services in the libraries under study.

8. Conclusion

The increasing number of higher institutions and poor funding by the concerned government have implications for research and development, as research depends on having access to the current and relevant literatures and information resources. Provisions should be made by the universities as well as library management to provide and update required portal services in addition to creating enabling environment for enhanced access and utilization of these services. The governments must make a deliberate effort to provide funds for policy implementation, provide necessary technology training for librarians and users, and develop general information infrastructure to provide and support an enabling ICT environment for utilization of university library portals. Since university library portals are available for use by users from different disciplines, the inadequate level of utilization could be enhanced by enriching and updating the portals with trending information resources and as such attract higher level of utilization. To achieve this, the government and governing bodies/management of the university libraries should readdress funding of the libraries as a whole and portal related projects in particular.

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