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Moving from OPAC to Discovery Systems: Nigerian Librarians' Perceived Knowledge and Readiness

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ABSTRACT

The recent trend of move from OPAC to discovery system has not been observed in Nigeria. Hence, this study examined Nigerian librarians' perceived knowledge and readiness to move from OPAC to discovery system. The study adopts mixed method research approach. The study found that Nigerian librarians are not ready to move from OPAC to library discovery system in the nearest future. It was also shown that there is little or no knowledge of library discovery system among Nigerian librarians. The study concludes that Nigerian librarians are not ready nor have knowledge of moving from OPAC to library discovery system.

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Library catalogs; discovery platforms; OPACs; federated search; readiness to change; Nigerian libraries

Introduction

Overtime, it has been established that the only constant thing in life is change. From as long as humans have lived, there has been continuous development in virtually all facets of life, which has only been possible by willingness to move away from old ways to a new system. This change often involves developments that improve activities and processes of a traditional means to more effective and timely modern means. Change has also been evident in the field activities and routines of library and information services with respect to information and knowledge organization. Before the 1980s, the common and well-known form of catalog was the card catalog. This was displaced by Online Public Access Catalog (OPAC) before the end of 1980s. Since then, this form of catalog has enjoyed wide acceptability among library and information science professionals. In Nigeria, the OPAC has been, and it is still, widely accepted by libraries and library professionals in cataloging library collections.

Generally, it has been perceived that many libraries in Nigeria have implemented and some still implement the OPAC to access library collections. Meanwhile, the world of library and information service is moving

away from the OPAC to a more sophisticated and wide-ranging system, which is the “discovery system.” Discovery systems are also known as web-scale discovery systems and are accessed via the internet. It was reported that the first discovery system was launched in 2009,¹ but also that OCLC launched the first discovery system with WorldCat.org in December 2008.² Many misconstrued discovery systems as Federated Search engines, although discovery systems search from an integrated index list and display results in a single window while Federated Search engines make searches in sets of databases and aggregate results. Federated Search engines differ from Discovery System in terms of functionality and retrieval.

Simply put, discovery systems are more expansive, timely, and effective in accessing library collections. A discovery system is a combination of a pre-harvested central index tool coupled with a richly featured discovery layer, offering a single search across a library’s local, open access, and subscription collections.³ It was noted that discovery tools support users as well as library staff in their search of library resources, institutional repositories, open access content, and the subscription-based external resources all at the same time and within a single search box.⁴ A discovery system provides a single search box where users and library professionals can search for library resources in an integrated index. This is done by searching with keywords to bring forth results that are related to the search query.

The advent of discovery systems coalesces provision of access to vast resources subscribed to by the library. The systems combine an index of all library collections and display results on a single window. Discovery system products are categorized into commercial products and open source products. Commercial system products are index-based products, which are fee-based and are capable of searching in open access and an institution-created index is incorporated in it. This is unlike open source systems, which provide just the front-end interface and the application software can be downloaded without cost.⁵ Some examples of discovery systems that are fee-based include EBSCO Discovery Service, WorldCat Discovery (OCLC), Primo Central (ProQuest/ExLibris) and Summon (Serial Solutions). Meanwhile, some examples of open source systems include Lukida (GBV Common Library Network), Blacklight, XC (Rochester University) and VuFind (developed and maintained by Villanova University Library).

Generally, the readiness for change or development in libraries is usually geared toward improving the service provided to users. Hence, libraries should be prepared and open to change that will aid their service deliveries to their varying and ever-demanding users. This is the only way libraries can stay relevant, most especially in this 21st Century. It has been observed

that efforts to implement new programs, practices, or policies in organizations often fail because leaders do not establish enough organizational readiness for change.⁶ Human beings are known to usually find it difficult to shift from their comfort zone. However, adequate preparation to shift ground and openness to change, would ease transitions. It is noteworthy that individuals' readiness to change may affect organizational readiness positively or negatively. On this premise, it is suggested that a library should carry along librarians in the shift from OPAC to discovery system.

Meanwhile, a library's readiness and determination to adopt a discovery system can put librarians on their toes and leave them with no option other than to adopt the new system. The library's readiness efforts can be in the form of training, retraining, and seminars and workshops on the proposed change. Generally, librarians show readiness if a library shows intensity and effort to move from the traditional OPAC to discovery system. It was noted that when organizational readiness is high, members are more likely to prompt change, exert greater effort, show greater persistence, and display more cooperative behavior, which overall results in implementation of the proposed change.⁷ This signifies that the willpower of a library to adopt discovery system would prompt librarians to be ready for the new system.

Since the advent of discovery systems, there has been wide acceptance globally. Most especially, it has been implemented by libraries that are domiciled in developed countries. It has been observed that library users are impatient in their search of multiple databases to access stored information.⁸ This necessitates the importance to provide a platform with universal index of all library resources, which seeks better way to provide information resources to library users. Such alternate platform would improve the promptness and timeliness of accessing library resources in the library. Discovery system products offer service that will promptly provide users with library resources. Despite the considerable benefit of using discovery systems in libraries, there is no Nigerian library that is using discovery system. It is based on this premise that this study examines Nigerian librarians' perceived knowledge and readiness to move from OPAC to Discovery System.

Statement of the problem

In the past decade, there has been a trend among libraries the world over to shift from the traditional OPAC to a new and more extensive discovery system. With the provision of access to unified index to broad and varying library resources, discovery system technology has enabled libraries to

significantly expand the service they provide to clients.⁹ Considering the benefits of discovery systems to libraries and their clientele, it is surprising that no library in Nigeria is using them. Moreover, newly established libraries in Nigeria still consider the option of OPAC over discovery system. This suggests that there may be a lack of knowledge among librarians in Nigeria about discovery systems. If the benefits of discovery systems are well known to these librarians, would they consider a discovery system over an OPAC? It is against this backdrop that this study examined Nigerian librarians' perceived knowledge and readiness to move with the global trend of moving from OPAC to discovery system.

Objectives

The specific objectives of this study are to:

- i. describe Nigerian librarians' perceived knowledge of discovery systems
- ii. assess librarians/library management readiness for the adoption of a discovery system in Nigerian libraries
- iii. analyze the probable challenges that may hinder the implementation of a discovery system
- iv. proffer possible solutions to alleviate challenges hindering the implementation of a discovery system

Research questions

The findings of this study seek to answer the following research questions:

- i. What is Nigerian librarians' perceived knowledge of a discovery system?
- ii. How ready are librarians/library management for the adoption of a discovery system?
- iii. What are the probable challenges that may hinder the implementation of a discovery system in Nigeria libraries?
- iv. What are the possible solutions to alleviate challenges hindering the implementation of a discovery system?

Hypothesis

H_{01} : There is no statistically significant relationship between perceived knowledge of Nigerian librarians and their readiness to move from OPAC to discovery systems

Review of related literature

Although the literature is replete with studies on the use of OPACs in Nigeria, there is none on the use of discovery systems in Nigeria.

Wells examined library discovery systems and their users, using Curtin University Library as a case study. The study examined transaction logs from the Ex Libris Primo installation of Curtin University Library sampled between 2013 and 2015, together with the results of a user survey conducted in 2014, to investigate actual patterns of use and perceptions of value of the available discovery system functionality. Results confirm the original contention of discovery system designers that the single-search box approach adopted by Google and other internet search engines is appropriate for library catalog design. Moreover, it was revealed that discovery system users clearly value functionality corresponding to traditional library tasks over attempts to locate the catalog in the conceptual framework of social media. The study also established that searches in more specialized scopes, particularly for locating specific journal titles and reserve items for particular units, nevertheless also have a clear constituency.¹⁰

Gupta carried out a survey on the awareness and use of discovery tools among library professionals. The study adopted quantitative approach and questionnaire to collect data for the study. One hundred copies of a questionnaire were distributed, and 87 respondents returned completed questionnaires. Results show that library professionals need to be aware of the new technology related to the library activities using federated searching, discovery tool, next-generation catalog, and web-scale discovery tools. It was revealed that awareness of Information and Communication Technologies (ICTs) and knowledge management are required by the library professionals. The findings showed that most library professionals who responded are aware of library software terminology but did not know other newer technologies like discovery tools, federated search, facet search, web-scale discovery, and next-generation catalog.¹¹

Allison and Mering investigated the use of discovery tools in libraries that are members of the Association of Research Libraries (ARL). The study uses a web-based questionnaire to collect information on the use of discovery tools at ARL academic libraries and their intentions regarding making changes to those tools. ARL academic libraries were selected because most have discovery tools and provide a representation of academic libraries. Canadian ARL university libraries whose websites were written only in French were eliminated from the survey. Survey invitations were e-mailed in June 2017 to one library administrator at each of the 112 ARL academic libraries. The results show that more than half of the respondents have either changed their tool within the last five years or are planning to change it. This shows that libraries are still seeking better ways

to assist users in discovery. Hence, future discovery tools will need to keep up with web search engines and will need to move into the artificial intelligence realm by providing personal assistant functionality or be left behind.¹²

A longitudinal study was carried out by Nuttall and Wang on the customizations of web-scale discovery tools in Alabama's public and independent college and university libraries. The study adopted content analysis as it allows data collection from a variety of participants, which is ideal for qualitative study of web-scale discovery (WSD) customizations. The study selected the library websites of sixteen Alabama senior institutions having WSD service. All data were collected over a period from June 2013 through February 2016. Findings revealed that libraries cast a mantle of the familiar over the unfamiliar. Also, like online catalogs, web-scale discovery tools include books among their records indexed, but they cannot be searched exactly like a catalog. Results show that libraries also index records from databases; but even if the search interface looks familiar, web-scale discovery tools are not best searched exactly the same way as native databases. Moreover, it was revealed that to reduce the initial search results list to a manageable number and achieve greater results relevance, WSD searches are refined by employing quotation marks around search terms or changing field labels.¹³

Theoretical framework

Weiner's theory of organizational readiness to change

Weiner's theory of organizational readiness to change was proposed in 2009. This theory addresses organizational readiness as a collective psychological state in which organizational members feel committed to implementing an organizational change (change commitment) and confident in their collective abilities to do so (change efficacy). It was presented that organizational structures and resource endowments shape readiness perceptions. It was also proposed that organizational readiness for change is situational and not a general state of affairs.¹⁴ Contextually, Weiner theorizes that receptive nature does not translate directly into readiness. For instance, a library could demonstrate habitual efficient service delivery to its users and always be receptive toward what would ensure this service delivery. However, despite its receptive nature, the library could still exhibit low readiness to implement a system that would aid efficient library service delivery. Above all, Weiner opined that receptive nature is a necessary but not sufficient condition for readiness.

Meanwhile, Weiner theorizes that change commitment and change efficacy are conceptually interrelated. The author exemplifies that these

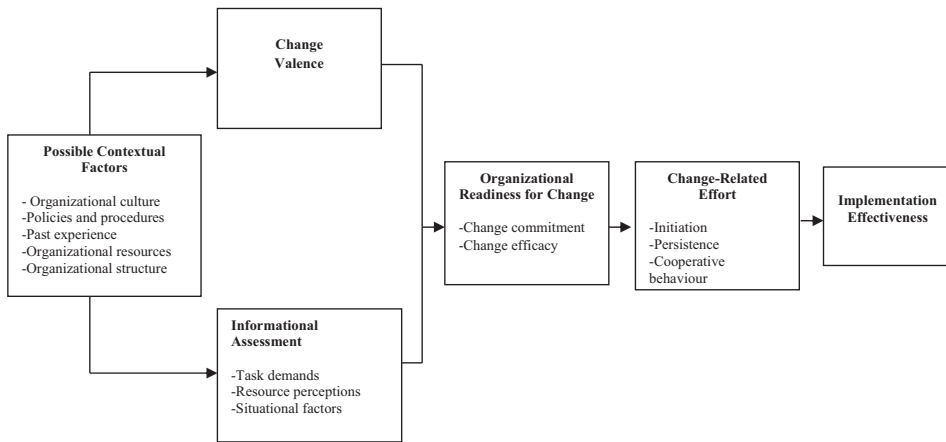


Figure 1. Weiner's theory of organizational readiness to change. Source: Weiner (2009).

cognitive and motivational aspects of readiness are expected to vary concurrently, albeit not perfectly. This can be typified by a continuum, which has at one end, possible organizational members' confidence in the successful implementation of the change. On the other end, the members may be pessimistic about the process necessary for the successful implementation of the change. Weiner predicts that organizational readiness is likely to be highest when organizational members not only want to implement an organizational change but also feel confident that they can do so. It was proposed that what would engender a shared sense of readiness included consistent communication among an organization's employees and a broad organizational process like attraction, socialization, and attrition. Bringing this into context, it is essential for a library to consistently communicate the change process from OPAC to discovery system in order to ensure swift transition (Figure 1).

Meanwhile, Weiner proposed that change commitment is largely a function of change valence. The author theorizes that the more organizational members value the impending change, the more they will want to implement the change and feel prompted to participate in activities involved in the process of the change implementation. This suggests that there is a fundamental task to ensure that librarians see the value of, and need for, discovery system. Librarians should be made to understand discovery system values, such as a unified index-based catalog that provides different access to different kinds of library resources like newspaper articles repository, OPAC, e-resources subscribed by the library, institutional repository and all other segregated resources subscribed to by the library. Weiner asserts that change valence is a parsimonious construct that best fits the divergent drivers of readiness that management experts and scholars have discussed.

Table 1. Participants for the interview.

University Librarians	E-librarians
University of Ilorin Library, Ilorin Kwara State University Library, Malete	Kwara State University Library, Malete Wellspring University, Benin

The author posits that members may value a change because they see urgent need for it.¹⁵ They might believe the change will entrench effectiveness and solve organizational problems. Moreover, they might value the benefits that come with the change. These benefits may be on an individual or organizational basis. They may value the change because it resonates with their core values.

Methodology

This study adopts mixed methods research, which combines both quantitative and qualitative approaches to determine the perceived knowledge and readiness of Nigerian librarians in moving from OPAC to library discovery systems. Concurrent triangulation was adopted in the collection of data. Therefore, both a questionnaire and interviews were used to collect data for the study. Concurrent triangulation is the use of both quantitative and qualitative approaches to accurately describe the relationships among variables of interests. Concurrent triangulation allows a researcher to simultaneously collect data using both quantitative and qualitative approaches and sometimes compare the results.¹⁶ The study adopts total population sampling, which is a type of purposive sampling technique. The study adopts a total population sampling technique because it focuses on librarians with common interest in the provision of efficient library service delivery to users in respect to library catalog. The web-based questionnaire was designed using SurveyAnyplace¹⁷ and was administered to librarians via various Nigerian librarian association groups on WhatsApp. Some of the WhatsApp groups included the Nigeria Library Association IT Section and the Nigeria Library Association/Cataloging and Classification, and then subsequently shared to other professional groups by colleagues. One hundred and eighty-two surveys were returned, bringing the sample size for the study to 182. Interviews were carried out with four participants, which include University Librarians and Heads of Automation Units. The interviews were analyzed using thematic analysis. The participants interviewed for the study are tabulated in Table 1:

Data analysis and interpretation

This section presents the analysis of the collected data. The quantitative data was analyzed using frequency count and simple percentage while the

Table 2. Demographic information of the respondents.

Variables	Frequency	Percentage
Gender		
Male	131	72.0
Female	51	28.0
Total	182	100
Years of Experience		
1–10 years	108	59.3
11–20 years	17	9.4
21–30 years	34	18.7
31 years and above	23	12.6
Total	182	100
Library Categories		
Academic library	120	66.0
Public library	23	12.6
Special library	16	8.8
Public library	23	12.6
Total	182	100
Highest Qualification		
Secondary School Certificate	0	0.0
OND/NCE and equivalents	0	0.0
HND/BSc	60	33.0
MSc	95	52.2
MPhil/PhD	27	14.8
Total	182	100

Source: Author's Fieldwork (2019).

hypothesis was tested using Pearson's product moment correlation (MS Excel).

Table 2 shows that 131 (72.0%) of the respondents were male while 51 (28.0%) were female librarians. Also, it can be inferred from the Table that the largest number of survey respondents have between 1 and 10 years of experience, that the smallest distribution of the respondents with the smallest representation were those that have been in service for 31 years and above. Table 2 further shows that most of the respondents were working in academic libraries, which could be libraries domiciled in any higher educational institution. It was shown in the Table that the smallest representation of librarians are those that practice in special libraries. Moreover, it was shown in Table 2 that more than an average number of the respondents have a master's degree, one-third of them have either a Higher National Diploma or bachelor's degree and 27 (14.8%) of them have a MPhil or PhD.

It can be seen in Table 3 that 88 (48.4%) of the respondents agreed that a discovery system performs the same functions as federated search engine, 49 (26.9%) were neutral while 45 (24.7%) of the respondents disagreed. This shows that less than a quarter of the respondents believed a discovery system does not perform the same functions as a federated search engine. The rate of neutral responses indicates that slightly over a quarter of the respondents were not confident in their knowledge of the difference between a discovery system and a federated search engine. Moreover, Table 3 shows that 132 (72.5%) of the respondents agreed that a discovery system provides access to vast and various resources subscribed to by the

Table 3. Perceived knowledge of discovery system among Nigerian librarians.

Items	Responses									
	Strongly Agreed		Agreed		Neutral		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%	N	%
Discovery system performs same functions as federated search engine	6	3.3	82	45.1	49	26.9	39	21.4	6	3.3
Discovery system provides access to various resources subscribed to by the library	121	66.5	11	6.0	20	11.0	22	12.1	8	4.4
Discovery system provides a single search box to search for library resources integrated index	46	25.3	88	48.3	18	9.9	24	13.2	6	3.3
Discovery system is more expansive than OPAC	30	16.5	28	15.4	11	6.0	58	31.9	55	30.2
Discovery system is also known as web-scale system	25	13.7	46	25.3	10	5.5	72	39.6	29	15.9

Source: Author's Fieldwork (2019) (N.B.: SA + A=Agreed, SD + D=Disagreed).

library, 20 (11.0%) were neutral and 30 (16.5%) disagreed. This implies that majority of the respondents were of the opinion that discovery systems provide access to vast and various resources subscribed to by the library.

Table 3 shows that 134 (73.6%) of the respondents agreed that a discovery system provides a single search box to search for library resources in an integrated index, 18 (9.9%) were neutral and 30(16.5%) disagreed. This means that most of the respondents perceived that discovery systems provide a single search box to search for library resources in an integrated index. Also, 58 (31.9%) of the respondents agreed that discovery system is more expansive than an OPAC, 11 (6.0%) were neutral and 113 (62.1%) disagreed. This shows that more than half of the respondents believed a discovery system is not as wide-ranging as an OPAC. Seventy-one (39.0%) agreed that a discovery system is also known as web-scale discovery system, 10 (5.5%) were neutral while 101 (55.5%) disagreed (Table 3). This illustrates that more than half of the respondents disagreed that discovery system is also known as web-scale discovery system.

It can be seen in Table 4 that 43 (23.7%) of the respondents agreed that there are chances that Nigeria libraries will shift from OPAC to discovery systems in five years' time, 49 (26.9%) were neutral and 90 (49.4%) disagreed. This shows that most of the respondents do not anticipate the possibility that Nigeria libraries will move from an OPAC to a discovery system in five years' time. Furthermore, 65 (35.7%) of the respondents agreed that library management's readiness is high toward the implementation of discovery system, 26 (14.3%) were neutral while 91 (50.0%) disagreed. This shows that the respondents perceived that an average of library management in Nigeria has low penchant toward the implementation of a discovery system.

Table 4. Perceived readiness of librarians/library management for the adoption of discovery system.

Items	Responses									
	Strongly Agreed		Agreed		Neutral		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%	N	%
There are chances that Nigeria libraries will shift to OPAC in five year's time.	32	17.7	11	6.0	49	26.9	53	29.1	37	20.3
Library's management readiness is high toward implementing discovery system	38	20.9	27	14.8	26	14.3	56	30.8	35	19.2
Consistent communication between library managements and librarians will ease the transition from OPAC to discovery system	106	58.2	38	20.9	5	2.8	11	6.0	22	12.1
OPAC meets the needs of users better than a discovery system	24	13.2	93	51.1	8	4.4	30	16.5	27	14.8
There are no technology resources to aid to shift from OPAC to discovery system	48	26.4	13	7.1	6	3.3	44	24.2	71	39.0
Librarians are not equipped with the skillsets to shift from OPAC to discovery system	93	51.1	71	39.0	4	2.2	5	2.8	9	4.9

Source: Author's Fieldwork (2019) (N.B.: SA + A=Agreed, SD + D=Disagreed).

Table 4 shows that 144 (79.1%) agreed that consistent communication between library management and librarians about the change will ease transition from OPACs to discovery systems, 5 (2.8%) were neutral and 33 (18.1%) disagreed. This shows that an overwhelming number of the respondents perceived consistent communication between library management and librarians to be pivotal in the transition from OPAC to discovery system. Furthermore, it can be seen in Table 4 that 117 (64.3%) of the respondents agreed that OPAC serves and meets needs of library users better than discovery system, 8 (4.4%) were neutral while 57 (31.3%) disagreed. This shows that most of the respondents believe that an OPAC serves and meets the needs of library users better than a discovery system.

Table 4 further shows that 61 (33.5%) of the respondents agreed that there are no adequate technology resources in the library to aid the shift from OPAC to discovery systems, 6 (3.3%) were neutral and 115 (63.2%) disagreed. This implies that more than half of the respondents disagreed that there are no adequate technology resources in the library to drive the change from OPAC to discovery systems. With this significant number of respondents who disagreed regarding the inadequacy of technology resources, it can be inferred that there are adequate technology resources to drive the change from OPAC to discovery systems. Moreover, Table 4 shows that 164 (91.1%) of the respondents agreed that librarians are not equipped with the skillsets that would propel the move from OPAC to discovery systems, 4 (2.2%) were neutral, and 14 (7.7%) disagreed. This shows that

Table 5. Challenges that may hinder the implementation of discovery systems.

Items	Responses									
	Strongly Agreed		Agreed		Neutral		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%	N	%
Parent institution of the library will not support the shift from OPAC to discovery system	9	4.9	15	8.3	14	7.7	61	33.5	83	45.6
Subscription cost may hinder the move from OPAC to discovery systems	27	14.8	117	64.3	3	1.7	9	4.9	26	14.3
Inadequate technology will hinder the move from OPAC to discovery systems	95	52.2	31	17.0	17	9.3	24	13.2	15	8.3
Librarians' inadequate skillsets may hinder moving from OPAC to discovery system	46	25.3	111	61.0	8	4.4	11	6.0	6	3.3
Librarians' commitment to change may hinder moving from OPAC to discovery system	38	20.9	100	55.0	11	6.0	22	12.1	11	6.0

Source: Author's Fieldwork (2019) (N.B.: SA + A=Agreed, SD + D=Disagreed).

majority of the respondents perceived that librarians do not have the skillsets to ensure the shift from OPAC to discovery system.

It can be observed in Table 5 that 24 (13.2%) of the respondents agreed that parent institution of the library will not support the shift from OPAC to discovery system, 14 (7.7%) were neutral, and 144 (79.1%) disagreed. This shows that a great number of the respondents were of the perception that the libraries' parent institutions will support the shift from OPAC to discovery system. Also, 144 (79.1%) of the respondents agreed that cost of subscription may hinder the move from OPAC to discovery systems, 3 (1.7%) were neutral, and 35 (29.2%) disagreed. This implies that most of the respondents perceived the cost of subscription as a hindrance to the move from OPAC to discovery systems.

Table 5 shows that 126 (69.2%) of the respondents agreed that inadequate technology may hinder the implementation of a discovery system, 17 (9.3%) were neutral, and 39 (21.5%) disagreed. This shows that most of the respondents agreed that inadequate technology to implement the move from OPAC to a discovery system may hinder the process. Also, it can be seen in Table 5 that 157 (86.3%) of the respondents agreed that inadequate librarians' skillsets may hinder the move from OPAC to a discovery system, 8 (4.4%) were neutral, and 17 (9.3%) disagreed. This indicates that majority of the respondents agreed that inadequate librarian skillsets may hinder the move from OPAC to a discovery system. Furthermore, it can be seen in Table 5 that 138 (75.9%) of the respondents agreed that librarians' commitment to change may hinder the move from OPAC to a discovery system, 11 (6.0%) were neutral, and 33 (18.1%)

Table 6. Possible solutions to challenges hindering the implementation of discovery systems.

Items	Responses									
	Strongly Agreed		Agreed		Neutral		Disagreed		Strongly Disagreed	
	N	%	N	%	N	%	N	%	N	%
Provision of technology resources will aid the shift from OPAC to discovery system	88	48.4	60	33.0	6	3.3	11	6.0	17	9.3
Training of librarian on skillsets to manage discovery system will aid moving from OPAC to the system	65	35.7	89	48.9	5	2.8	13	7.1	10	5.5
Change efficacy of librarian will aid moving from OPAC to discovery system	58	31.9	82	45.1	9	4.9	18	9.9	15	8.2
Understanding of the values and benefits attached to discovery system will aid the move from OPAC to discovery systems	95	52.2	67	36.8	3	1.7	7	3.8	10	5.5
Library management's commitment will aid the move from OPAC to discovery systems	61	33.5	78	42.9	8	4.4	14	7.7	21	11.5

Source: Author's Fieldwork (2019) (N.B.: SA + A=Agreed, SD + D=Disagreed).

disagreed. This implies that most of the respondents agreed that librarians' commitment may hinder the move from OPAC to a discovery system.

Table 6 shows that 148 (81.4%) agreed that provision of adequate technology resources will help alleviate the challenge of moving from OPAC to discovery system, 6 (3.3%) were neutral, and 28 (15.3%) disagreed. Most of the respondents agreed that provision of adequate technology resources will help in alleviating the challenge of moving from OPAC to discovery system. Also, it can be seen in Table 6 that 154 (84.6%) agreed that training librarians on the necessary skillsets needed to move from OPAC to discovery systems will mitigate the challenge in the process of the change, 5 (2.8%) were neutral, and 23 (12.6%) disagreed. This reflects that the majority of the respondents agreed that training of librarians would mitigate the challenges in the process of moving from OPAC to discovery system.

It can be seen in Table 6 that 140 (77.0%) agreed that change efficacy of librarians would ease the challenge involved in the move from OPAC to discovery systems, 9 (4.9%) were neutral, and 33 (18.1%) disagreed. This implies that a significant number of the respondents agreed that change efficacy of librarians would ease the challenge involved in the move from OPAC to discovery systems. Also, it can be seen in Table 6 that 162 (89.0%) of the respondents agreed that proper and consistent communication to librarians about the values and benefits of the new system will ease the transition, 8 (4.4%) were neutral, and 35 (19.2%) disagreed. An overwhelming number of the respondents agreed that proper and consistent

Table 7. Relationship between perceived knowledge and readiness.

Variables	N	df	R-value	P-value	Remark
Perceived knowledge	182	180	.543**	1.785	Sig ...
Perceived readiness					

**Correlation is significant at 0.01 level (2-tailed).

communication about the values and benefits of the new system to librarians will ease the transition from OPAC to discovery system. Moreover, it can be seen in Table 6 that 139 (76.4%) agreed that positive change commitment of library managements will aid the move from OPAC to discovery systems, 8 (4.4%) and 35 (19.2%) disagreed. Most of the respondents perceived that a positive change commitment by library management will aid the move from OPAC to discovery systems.

Test of hypothesis

H₁: There is no significant relationship between Nigerian librarians’ perceived awareness and knowledge to move from the use of OPAC to discovery system

Table 7 shows that the degree of freedom for the hypothesis is 180. The r value is 0.543656. The p-value is 1.78507, which is more than 0.05. Hence, the null hypothesis will be accepted. This implies that there is no statistically significant relationship between perceived knowledge of Nigerian librarians and their readiness to move from OPAC to discovery systems.

Thematic analysis

Four participants were interviewed. Three (75%) were interviewed via phone calls while one (25%) was interviewed via e-mail by sending questions and receiving written answers in return. The interview guide was mailed to each participant to get their consent to participate. The participants chose a time convenient for them to be interviewed. It was revealed that two of the respondents held a Master’s in Library and Information Science and two held PhDs in Library and Information Science. It is noteworthy that one was a professor of Library and Information Science. Among their affiliations, the Automation Unit of the University of Ilorin Library was established over 11 years ago, Kwara State University Library was established 7 years ago, and Wellspring University Library was established 2 years prior to the interview (Table 8).

The findings of the study revealed that some Nigerian librarians have not heard of library discovery systems before. As it can be ascertained from Participant 3, who said that:

Table 8. Knowledge of library discovery system.

Investigation	Themes
Librarians' knowledge of library discovery system	Advanced form of OPAC One-in-all to access Little knowledge Once subscribed No knowledge First time

Source: Author's Fieldwork (2019).

I don't know anything about it yet.

The lack of knowledge of library discovery systems was corroborated by Participant 4, who stated that:

I am just hearing it for the first time.

However, it was also found that some Nigerian librarians have the knowledge of discovery systems, but it is little knowledge. This could be ascertained from the response of Participant 2, who stated that:

I know little about it when we were trying to integrate all our databases together.

It was revealed from response of Participant 2 that Kwara State University Library once subscribed to Master Key Index discovery system for two years. However, the service was stopped owing to inability to defray the cost of subscription to the discovery system host. The Participant noted as follows:

We subscribed to it for two years, but due to the cost of subscription, we stopped using it.

This shows that cost of subscription can be a bane to the move from OPAC to library discovery system. This is evident in the case of the University Library of Participant 2, which has been subscribed to a particular library discovery system and was stopped due to the cost of subscription to the system. Furthermore, it was ascertained from Participant 1 that some Nigerian librarian understands the basic knowledge of library discovery system. The Participant noted as follows (Table 9):

A (library discovery system) more advanced form of OPAC; a one-in-all to access and retrieve library resources in diverse formats

Results revealed some of the challenges involved in the use of OPAC include irregular power supply, inadequate skilled manpower, Internet downtime, inadequate funds, traffic on the network, and frequent upgrading on some OPAC software like KOHA. It was revealed that the upgrade sometimes come with features that will require librarians to unlearn and relearn to ensure that they can effectively use the new upgrade. It was noted by Participant 4 that:

Frequent upgrading of KOHA software lead to learning the new features before one is able to use it effectively.

Table 9. Readiness to move from OPAC to library discovery system.

Investigation	Themes
Librarians' readiness to move from OPAC to library discovery system	No plan yet Installing OPAC Not anytime soon Technological resources Staff members' skillsets Wide acceptability

Source: Author's Fieldwork (2019).

Although there are challenges encountered in the use OPAC by librarians, the findings of this study revealed that most Nigerian libraries will not be moving from OPAC to library discovery system anytime soon. The response of Participant 1 when asked if her library has any plan to move to library discovery system was as follow:

Not yet.

This response was dissimilar to the response of Participant 2, who noted that the library may move from OPAC to library discovery system if there is adequate fund provision. The Participant noted that there are challenges as to the stream of fund into the University generally and specifically to her University Library. The response of Participant 2 was as follows:

You know we are running the school from school income. We have not been getting subvention from the government.

It was found that Participant 3 does not have OPAC installed in her library yet. It was ascertained that the University Library is putting in place plans to start using OPAC. However, it was found that there is no plan to move to library discovery system anytime soon. The Participant stated as below:

Not anytime soon.

It was also revealed that the wide acceptability of library discovery system could motivate some libraries to adopt a library discovery system. This wide acceptability may be caused by the effectiveness of library discovery systems. Participant 4 noted the following:

We should be having that ambition has soon as it is widely used by libraries. If there is result of it working better (than OPAC), we will be moving with trend.

It was also found that the university libraries have adequate technological resources and staff members with the skillsets to move from OPAC to a library discovery system. Participant 4 noted that all the staff members of her University Library were IT compliant and that what they may need to move to the new system is training on the system. The Participant stated as follows:

Most of our staff members are computer compliant and many of our staff can work in the unit and can easily be trained on the use of discovery system.

Discussion of findings

With the quantitative approach, the study found that a bit less than half of Nigerian librarians sampled in this study agreed that a discovery system performs the same functions as federated search engine. Furthermore, the study shows that a quarter of the librarians were not sure of their knowledge on the difference between discovery systems and federated search engine. Understanding that their awareness will most likely lead to knowledge of discovery systems, this result corroborates Gupta and Shrivastava findings that library professionals are aware of library software terminology but do not know new technologies like discovery tool.¹⁸ Also, the study found that most Nigerian librarians opined that discovery systems provide access to vast and various resources subscribed to by library but not as wide-ranging as OPAC. Results show that most Nigerian librarians agreed that discovery systems provide single search box to search for library resources in an integrated index. It was found that a bit over average of Nigerian librarians agreed that discovery systems is also known as web-scale discovery systems.

The findings of the quantitative method of this study show that only very few Nigerian librarians agreed that Nigerian librarians will shift from OPAC to discovery systems in five years' time. This is dissimilar to the findings of Allison and Mering that more than half of librarians in Association of Research Libraries have either changed their tool within the last five years or are planning to change their tool.¹⁹ This differs from the findings of the qualitative method, which show that Nigerian librarians do not have the plan to move from OPAC to library discovery systems anytime soon with responses from participants showing that there is no plan yet by libraries to move from OPAC to discovery systems. Findings show that less than half of Nigerian librarians were of the view that average library management in Nigeria has low penchant toward the implementation of discovery systems. However, the interview results show that Nigerian librarians are waiting for discovery systems to be widely acceptable or funding from parent institution to drive the move from OPAC to discovery systems.

From the quantitative method, the results show that most Nigerian librarians perceived consistent communication between library management and librarians as pivotal in the transition from OPAC to discovery systems. It was also shown that most of the librarians believe that OPACs serve and meet the needs of library users better than discovery systems. With the quantitative method, it was found that there are adequate technology

resources in the library to drive the change from OPAC to discovery systems. It was also shown that most Nigerian librarians were of the opinion that they do not have the skillsets to ensure the shift from OPAC to discovery systems. However, the qualitative findings of this study revealed that there are adequate technological resources and staff members with skillsets to support the move from OPAC to library discovery systems. One of the participants in the interview stated that there may be a need to train staff members on the use of discovery systems and that most of the librarians in the library are IT compliant.

The quantitative findings of the study revealed some of the challenges that may be encountered in moving from OPAC to discovery systems. The quantitative findings show that most of the Nigerian librarians agreed that support of parent institutions of the libraries will ensure smooth transition from OPAC to discovery systems and that cost of subscription may pose hindrance to such move. The quantitative finding is underpinned by the results revealed in the qualitative approach of the study. Results of the qualitative findings show that the cost of subscription hinders move from OPAC to library discovery systems, as one of the Participants stated that Kwara State University, Malete, used Master Key Index discovery system for two years before stopping owing to lack of fund. This reflects that the paucity of fund has been a challenge for librarians and libraries in Nigeria to move from OPAC to discovery systems.

The quantitative results show that most of the librarians agreed that inadequate technology to implement the move from OPAC to discovery systems can become a challenge for the library. This finding differs from the results of the qualitative method, as it reveals that there are adequate technological resources to move from OPAC to library discovery systems. This divergence may be caused by the fact that those that attended to the qualitative were in the administrative position in the libraries who may be involved in the day-to-day administration of the libraries. The quantitative results show that most of the Nigerian librarians believe that there are inadequate librarians' skillsets to progress the move from OPAC to discovery systems. This is also different from the qualitative results, which show that librarians have adequate skillsets to drive the move from OPAC to discovery systems. This means that those in library management positions believe the libraries have staff members with adequate skillsets to drive OPACs to discovery systems, but the subjects were not of the same view. This clash in perception may hamper moves from OPACs to discovery systems. The quantitative findings show that most librarians believe the commitment from the library management will play important role in the move from OPAC to discovery systems.

The quantitative results show that most Nigerian librarians proffered that adequate provision of technology resources, training of librarians, and

proper and consistent communication about the values and benefits of the new system will help alleviate challenges involved in moving from OPAC to discovery systems. The quantitative results also show that change efficacy of librarians and positive change commitment of library managements will aid the move from OPAC to discovery systems. This implies that the change preparedness and commitment of both librarians and library management are essential in moving from OPAC to discovery systems. It was also found that there is no statistically significant relationship between perceived knowledge of Nigerian librarians and their readiness to move from OPAC to discovery systems.

Conclusion

It can be established from the findings of the study that Nigerian librarians and library are not ready to move from OPAC to library discovery systems in the nearest future. The study concludes that cost of subscription is a major challenge in library's plan to move from OPAC to library discovery systems. As it can be gleaned from the findings, it was also established that Nigerian librarians do not have adequate knowledge of library discovery systems as there are new libraries that are still opting for OPAC software for their libraries. However, the library management (University Librarians and Automation Librarians) believe Nigerian librarians have the capacity and skillsets to ensure the move from OPAC to discovery systems.

Recommendations

The following recommendations were made based on the findings:

- i. Parent institution of the library should provide adequate fund to ensure transition from OPAC to library discovery systems.
- ii. Nigerian librarians should open up to the new development in library catalog to ensure that all their databases are integrated into one to ensure efficient service delivery to users.
- iii. Nigerian librarians should seek more knowledge on library discovery systems so they can have knowledge on the benefits and value of the new system and development.
- iv. Library managements should ensure they train librarians on library discovery systems before they move to the new system.

Library managements should communicate the benefits and values of library discovery systems to librarians before planning to move from OPAC to the new system.

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