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## Knowledge Organization Skills for Effective Information Retrieval Among Undergraduate Students in Rev. Fr. Moses Orshio Adasu University, Makurdi Benue State-Nigeria

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**ABSTRACT**

*This study examined knowledge organization skills for effective information retrieval among undergraduate students of Rev. Fr. Moses Orshio Adasu University, Makurdi, Nigeria. The objectives were to identify the types of knowledge resources available, assess the extent of retrieval when resources are organized, and determine the key skills required for effective use. A descriptive survey design was employed with a sample of 373 undergraduates drawn from a population of 5,821 registered library users. Data were collected using a checklist and questionnaire, and analysed with mean, standard deviation, percentages, and chi-square at a 0.05 significance level. Findings revealed that a wide range of resources including textbooks, journals, newspapers, conference proceedings, and e-resources are available in the university library. Results further showed that systematic organization of resources significantly enhances students' ability to retrieve accurate, relevant, and timely information for coursework and research. Essential skills identified for effective knowledge organization include cataloguing, classification, information technology, shelf management, and information literacy. Chi-square analysis confirmed that knowledge organization skills have a significant influence on effective information retrieval. The study concludes that strengthening librarians' professional competencies in knowledge organization is critical to improving access and supporting undergraduate academic success.*

## Background to the Study

Libraries as custodians of knowledge are known for acquisition, organization and dissemination of information products and services to their patrons. They are basically concerned with systematic selection, acquisition, organization, processing and dissemination of knowledge or information to intended users. This is a global practice as far as library practice is concerned. In line with this, Ochogwu (2019) described library as a professionally organized collection of print and non-print, graphic and non-graphic information resources for exploitation.

Knowledge organization in university libraries has to do with classification and cataloguing skills of librarians who work behind the scene. Abdullah and Al Zamil (2021) observed that knowledge organization skills of librarians provide users with easy access, secure and accurate information in which they are interested to retrieve. Librarians need to be fully equipped with the skills needed to catalogue and classify all the information resources in order for retrieval to be easier by undergraduates (users). In library parlance, classification and cataloguing are very essential activities that without them, library operations will be stalled or truncated (Ojo-Ade, and Jagboro 2020). The essence of ensuring that knowledge is organized in university libraries is to guarantee easy retrieval of information of choice by the users. Information retrieval is the area of study concerned with searching for documents, for information within documents, and for meta about documents, as well as that of searching structured storage, relational databases and the worldwide web. Automated information retrieval systems are used to reduce what has been called information overload. Many university libraries use information retrieval systems to provide access to books, journals, and other documents. Web search engines are the most visible information retrieval applications.

In relation to this, information retrieval is not first an action restricted to the knowledgeable few such as reference librarians and professional disseminators but also to undergraduates for their learning, research and personal development purposes.

## Statement of the Problem

University libraries globally are known for their service delivery to their varied users including undergraduates. This is achievable through their various information resources in different formats both print and non-print. What matters basically in this sense is not just acquisition only but basically the organization of information resources so acquired. That is what knowledge organization typifies. Knowledge organization is fundamental as it is concerned with expediting users' access to the bulky-amount of word-based information in most cases. Impliedly, when knowledge in all fields of study is systematically and professionally organized according to specifications, easy access to whatever information needed by clients and subsequent retrieval from millions of documents is very possible. However, it is saddening that university libraries that serve undergraduates are often in the chaotic or sorry state. Chaotic in the sense that most of their information resources are not organized in time. As a result, information retrieval by undergraduates and other users is grossly impeded.

Personal investigation by the researcher indicates that Rev. Fr. Moses Orshio Adasu University Library is neck deep into this quagmire. This leaves the library in a very sympathetic, devastating and chaotic state when undergraduates stream or troop into the library basking in the euphoria of expectation that their needs will be met, only to be frustrated at the end. The delay and unprofessionalism of some librarians that work in technical sections where information materials are left unorganized for a long time is disastrous and worrisome. Also, the inability of some staff in readers' services unit to match catalogued and classified information materials with their corresponding class marks or call numbers on the shelf leaves much to be desired. In some cases, users reshelf material on the shelf with the intention of hiding them from other users,

these is capable of crippling research efforts of undergraduates whose main aim of retrieving information is for learning, research and personal development. Consequently, they may end up not coming to the library to avoid more disappointments and these will lead libraries into solitaries or shadows of themselves. It is against this backdrop that this study is undertaken.

## Purpose of the Study

**Specifically the study sought to:**

1. Ascertain the kinds of knowledge available for organization information retrieval among university undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi.
2. Examine the extent of information retrieval among undergraduates when knowledge is organized in Rev. Fr. Moses Orshio Adasu University, Makurdi.
3. Identify the skills needed for knowledge organization for effective information retrieval among undergraduates of Rev. Fr. Moses Orshio Adasu University, Makurdi.

## Research Questions

The following research questions guided the study:

1. What are the kinds of knowledge available for organization for effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi?
2. What is the extent of information retrieval among undergraduates when knowledge is organized in Rev. Fr. Moses Orshio Adasu University, Makurdi?
3. What are the skills needed for knowledge organization for effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi?

## Hypotheses

The following null hypotheses were formulated and tested at a 0.05 level significance.

$HO_1$. Knowledge organization skills have no significant influence on effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University.

$HO_2$. Knowledge organization has no significant purpose on effective information retrieval among undergraduates of Rev. Fr. Moses Orshio Adasu University.

## Review of Related Literature

**The study is anchored on the following theories:**

Parasuraman, Berry Leonard and A. Zeithanis' Service Quality Theory (1985) the aim of the theory is to assess customers' perception of services quality in both services and retail business. Richarad L. Oliver's Expectation Confirmation Theory (1977)The theory seeks to explain post-purchase or post adoption satisfaction as a function of expectation, perceived performance and disconfirmation of beliefs.

## Conceptual Framework

### Knowledge in University Libraries

The concept of knowledge as used in university libraries or any type of library connotes information resources or products available in library in any format (print or non-print) for exploitation by the users or patrons. Knowledge as viewed by Ekeng and Agboke (2021) refers to library resources which are information retrieval tools both physical and non-physical such as books, journals, periodicals, newspapers, catalogues, newsletters, computer software, online

subscription and many others which contain information needed by information seekers.

Knowledge Organization

Knowledge organization is a part of knowledge management practices that involves obtaining knowledge from the identified sources and arranging it in a manner for easy retrieval. According to Kassim (2017), knowledge organization deals with organizing knowledge in an organization using methods such as classification schemes, online public access catalogue and institutional repositories among others. Almaadida (2015) identified three major ways that organisations can organize their available knowledge. The approaches include: selection of valuable knowledge for conservation, documentation, archiving and reloading of the memory from time to time.

Knowledge Organization Skills

Knowledge organization skills have to do with competences, and abilities that information professionals acquire to systematically organize resource in the library for easy accessibility and retrieval users. According to Fakandu & Maina (2019), knowledge organization in university libraries require some technical skills such as information technology skills, cataloguing skills, classification skills, knowledge management skills, as well as book shelving skills, information literacy skills, indexing and abstracting skills among others. Knowledge organization serves as a bridge between the user and the information.

**Information Retrieval**

Information retrieval is the area of study for information within documents, and for meta about documents, as well as that of searching structured storage, relational databases and world wide web. Abdullah and Al Zamil (2021) described information retrieval as a descriptive of acquisition of information relevant to needed information from a collection of information resources. What is paramount here is retrieving or extracting of documents that can satisfy a user's query. An information retrieval process begins when a user enters a query into a system, (query in an informal statement of information need(s). Information retrieval as observed by Ashaver (2023) is the discovery of material (usually text) that fulfills an information requirement from within a huge collection (usually stored on computers). Mei (2017) emphasized that information retrieval systems consist mainly of building up effective indexes that organize item-data into an organized fashion, processing user queries and developing ranking algorithms to enhance the results by displaying most interested ones. To measure the success of information retrieval Darmoni (2018) stated that two concepts of relevance that are widely used: precision which is defined as the "ratio of relevant items retrieved to all items retrieved, or the probability given that an item is retrieved that will be relevant" and recall which is determined as the "ratio of relevant items retrieved to all relevant items in the collection, or the probability given that an item is relevant" that it will be retrieved.
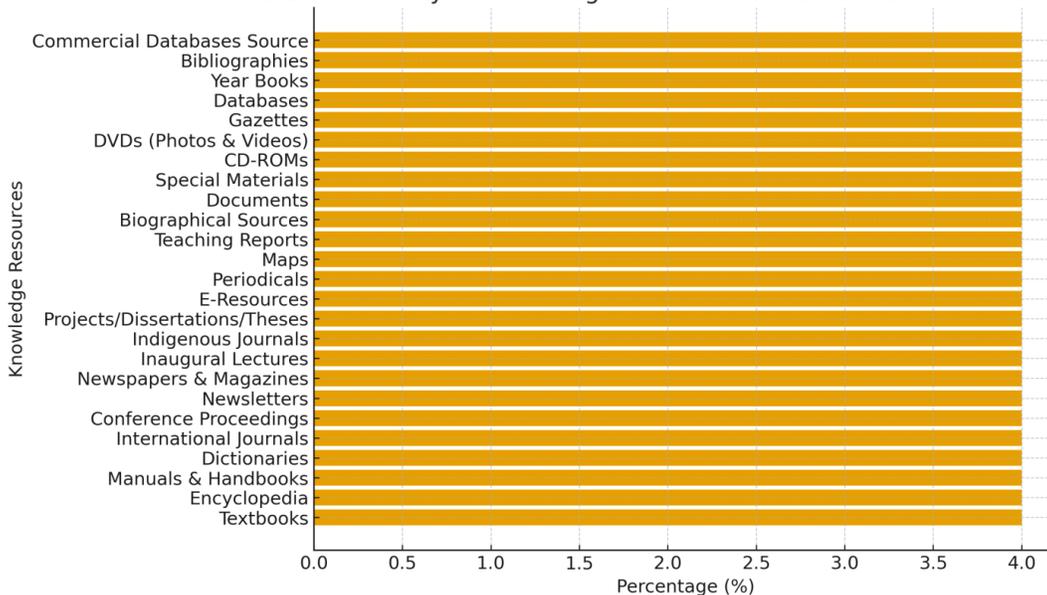
**Research Methodology**

A descriptive survey research design was adopted. The population comprised 5,821 undergraduates students of Rev. Fr. Moses Orshio Adasu University registered with the University Library and Information Services (ULIS) and 373 sample, which was determined using simple random sampling technique. Data were collected using observation checklist and structured questionnaire and analysed using mean, standard deviation, simple percentages and chi-squre at a 0.05 significance level.

**Analysis and Interpretation**

**Table 1: Mean score and Standard Deviation on kinds of knowledge available for organization for effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi**

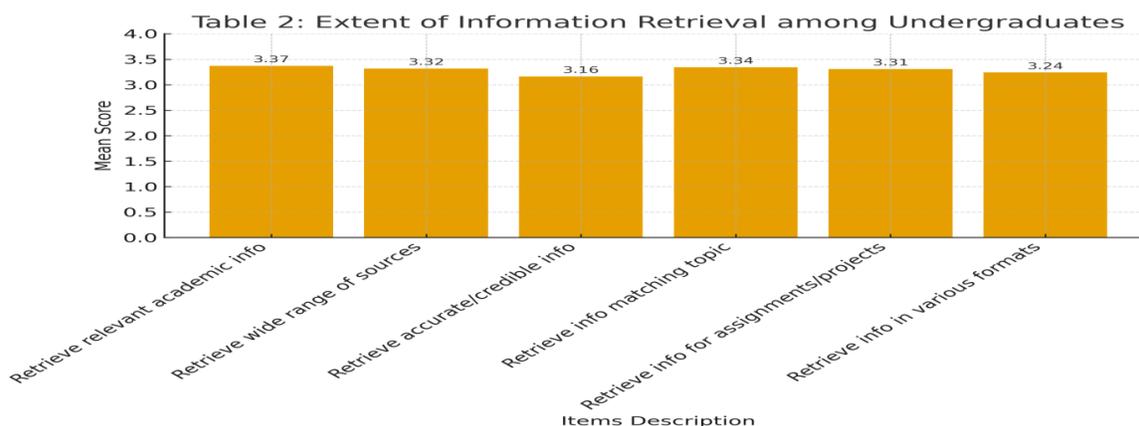Table 1: Availability of Knowledge Resources for Effective Information Re

| S/N | Knowledge Resource | Availability | Frequency | Percentage |
|---|---|---|---|---|
| 1. | Textbooks | Available | 1 | 4.0 |
| | Encyclopedia | Available | 1 | 4.0 |
| | Manuals and Handbooks | Available | 1 | 4.0 |
| | Dictionaries | Available | 1 | 4.0 |
| | International Journals | Available | 1 | 4.0 |
| | Conference Proceedings | Available | 1 | 4.0 |
| | Newsletters | Available | 1 | 4.0 |
| | Newspapers and Magazines | Available | 1 | 4.0 |
| | Inaugural Lectures | Available | 1 | 4.0 |
| | Indigenous Journals | Available | 1 | 4.0 |
| | Projects, Dissertations and Theses | Available | 1 | 4.0 |
| | E-Resources | Available | 1 | 4.0 |
| | Periodicals | Available | 1 | 4.0 |
| | Maps | Available | 1 | 4.0 |
| | Teaching Reports | Available | 1 | 4.0 |
| | Biographical Sources | Available | 1 | 4.0 |
| | Documents | Available | 1 | 4.0 |
| | Special Materials | Available | 1 | 4.0 |
| | CD-ROMs | Available | 1 | 4.0 |
| | DVD (Photos And Videos) | Available | 1 | 4.0 |
| | Gazettes | Available | 1 | 4.0 |
| | Data Bases | Available | 1 | 4.0 |
| | Year Books | Available | 1 | 4.0 |
| | Bibliographies | Available | 1 | 4.0 |
| | Commercial Databases Source | | 1 | 4.0 |
| | Cumulative | | 25 | 100 |

Table 1 shows that all 25 knowledge resources listed in the checklist are available in the university libraries. This represents 100% coverage of the information sources considered

crucial for effective information retrieval. The balanced distribution (each category contributing 4%) suggests a comprehensive collection that supports diverse academic and research needs, ranging from print to electronic and multimedia formats.

**Table 2: Mean score and Standard Deviation on the Extent of Information Retrieval among Undergraduates when Knowledge is Organized in Rev. Fr. Moses Orshio Adasu University, Makurdi**
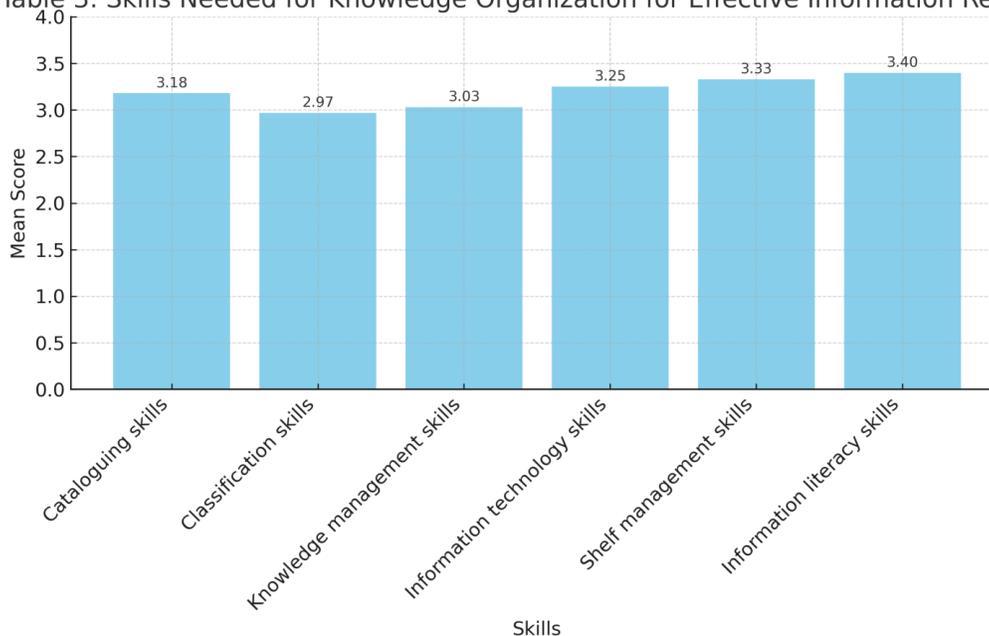


Table 2: Extent of Information Retrieval among Undergraduates

| S/N | Items Description | N | VHE | HE | LE | VLE | $\bar{X}$ | Std. | Decision |
|-----|-------------------|---|-----|-----|-----|-----|-----------|------|----------|
| | I am able to retrieve relevant academic information that meets the requirements of my coursework or assignments. | 364 | 189 | 127 | 42 | 6 | 3.37 | .75 | Agree |
| | I retrieve a wide range of information sources (e.g., books, journals, articles, online content) for my academic work. | 364 | 207 | 91 | 34 | 32 | 3.32 | .96 | Agree |
| | I retrieve information that is accurate, credible, and current. | 364 | 167 | 116 | 55 | 26 | 3.16 | .93 | Agree |
| | I successfully retrieve information that aligns with my specific academic topics or research area. | 364 | 192 | 130 | 30 | 12 | 3.34 | .77 | Agree |
| | I retrieve information that helps me to complete assignments, seminar papers, or research projects effectively. | 364 | 153 | 180 | 21 | 10 | 3.31 | .70 | Agree |
| | I retrieve information in various formats (e.g., print, electronic, audiovisual) depending on my academic needs. | 364 | 165 | 144 | 32 | 23 | 3.24 | .86 | Agree |
| | Cluster Mean/Std. | | | | | | 3.32 | .99 | Agree |

Table 2 indicates or reveals the mean scores of items 1-6 as 3.37, 3.32, 3.16, 3.34, 3.31 and 3.24 with corresponding standard deviations of 0.75, 0.96, 0.93, 0.77, 0.70 and 0.86 respectively. All the items are above the criterion mean of 2.50. The cluster mean of 3.32 with corresponding standard deviation of 0.99 is high above the criterion mean of 2.50. This implies that there is a high extent of information retrieval when knowledge resources are properly organised. Overall, students agree they are able to retrieve information effectively once it is well structured and accessible.

Table 3: Mean score and Standard Deviation on the Skills needed for Knowledge Organization for Effective Information Retrieval among Undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi

Table 3: Skills Needed for Knowledge Organization for Effective Information Retri



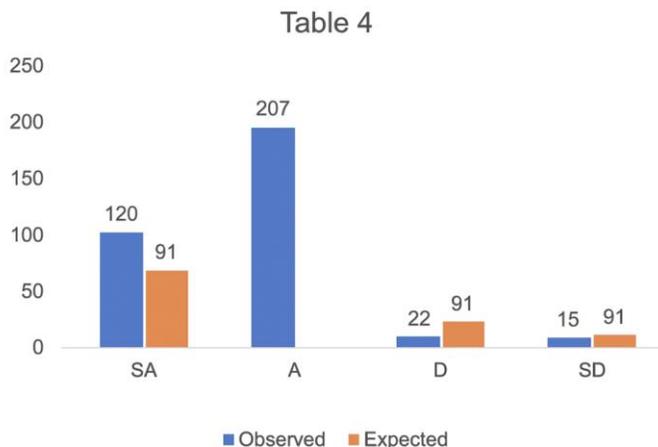| S/N | Items Description | N | SA | A | D | SD | $\overline{X}$ | Std. | Decision |
|---|---|---|---|---|---|---|---|---|---|
| | Cataloguing skills | 364 | 120 | 207 | 22 | 15 | 3.18 | .72 | Agree |
| | Classification skills | 364 | 105 | 173 | 59 | 27 | 2.97 | .86 | Agree |
| | Knowledge management skills | 364 | 132 | 151 | 41 | 40 | 3..03 | .95 | Agree |
| | Information technology skills | 364 | 168 | 137 | 41 | 18 | 3.25 | .84 | Agree |
| | Shelf management skills | 364 | 204 | 99 | 41 | 20 | 3.33 | .88 | Agree |
| | Information literacy skills | 364 | 189 | 143 | 23 | 9 | 3.40 | .71 | Agree |
| | Cluster Mean/Std. | | | | | | 3.19 | .83 | Agree |

Table 3 indicates or reveals the mean scores of items 7-12 as 3.18, 2.97, 3.03, 3.25, 3.33 and 3.40 with corresponding standard deviations of 0.72, 0.86, 0.95, 0.84, 0.88 and 0.71 respectively. All the items are above the criterion mean of 2.50. The cluster mean of 3.19 with corresponding standard deviation of 0.83 is high above the criterion mean of 2.50. This implies that cataloguing skills, classification skills, knowledge management skills, information technology skills, shelf management skills and information literacy skills are kinds of knowledge organization skills available for effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi. To put simple, knowledge organization skills have significant influence on effective information retrieval

among undergraduates in Rev. Fr. Moses Orshio Adasu University.

Table 4: The table below shows the chi-square test on skills needed for Knowledge Organization for Effective Information Retrieval among Undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi.

Table 4



| Responses Mode | SA | A | D | SD | Df | $X^2$ | P | Decision |
|---|---|---|---|---|---|---|---|---|
| Observed | 120 | 207 | 22 | 15 | | | | |
| | | | | | 16 | 241.648 | .000 | $H_o$ Rejected |
| Expected | 91.0 | 91.0 | 91.0 | 91.0 | | | | |

Table 4 shows that ($X^2$ = 16, 241.648, P = 0.00). Since P is 0.00<0.05 level of significance, the null hypothesis which states that; Knowledge organization skills have no significant influence on effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University was therefore rejected. This implies that, Knowledge organization skills have significant influence on effective information retrieval among undergraduates in Rev. Fr. Moses Orshio Adasu University.

**Table 5: The table below shows the chi-square test on purpose of Knowledge Organization skills for Effective Information Retrieval among Undergraduates in Rev. Fr. Moses Orshio Adasu University, Makurdi.**

| Responses Mode | SA | A | D | SD | Df | $X^2$ | P | Decision |
|---|---|---|---|---|---|---|---|---|
| Observed | 189 | 127 | 42 | 6 | | | | |
| | | | | | 15 | 361.011 | .000 | $H_o$ Rejected |
| Expected | 91.0 | 91.0 | 91.0 | 91.0 | | | | |

Table 5 shows that ($X^2$ = 15, 361.011, P = 0.00). Since P is 0.00<0.05 level of significance, the null hypothesis which states that; Knowledge organization has no significant purpose on effective information retrieval among undergraduates of Rev. Fr. Moses Orshio Adasu University was therefore rejected. This implies that, Knowledge organization has a significant purpose on effective information retrieval among undergraduates of Rev. Fr. Moses Orshio Adasu University.

**Discussion of Findings**

The first finding of the study reveals that different kinds of knowledge such as textbooks,

encyclopedia, manuals and handbooks, dictionaries, conference proceedings, newspapers and magazines, newsletters, inaugural; lectures, indigenous journals among others available for organization in university libraries for effective information retrieval. This finding collaborates with that of Abdullah and Al Zamil (2021) which observed that medical students access knowledge such as textbooks, medical reports, medical journals, medical dictionaries, newsletters, newsletters and magazines among others when they are organized. Specifically, the finding was that knowledge available in medical libraries in universities can be accessed more easily when properly organized.

The findings on the second objective indicate that undergraduates at Rev. Fr. Moses Orshio Adasu University demonstrate a high level of information retrieval when library resources are systematically organised. Effective organisation through cataloguing, classification, indexing, and the provision of diverse formats enhances students' ability to locate and utilise materials for academic purposes. The highest-rated item, retrieval of information for coursework and assignments, reinforces the central role of libraries in supporting curriculum-based learning. This aligns with Ashaver (2023) observation that retrieval skills must be complemented by critical evaluation to ensure the use of quality information. Overall, the results underscore that organised knowledge resources significantly improve both access and academic outcomes, though further training in information literacy remains essential to strengthen students' capacity to identify and apply credible, up-to-date sources.

The third finding of the study reveals that knowledge organization skills have significant influence on effective information retrieval among undergraduates. This finding is in agreement with that of Fakandu and Maina (2019) whose findings of the study revealed that the knowledge in the university libraries is well organized and accessible. It also found out that there are methods of organizing knowledge and

that organization of knowledge was done using classification scheme. Up till today, knowledge organization in university libraries using classification skills of librarians remains paramount.

## Conclusion

Based on the findings of the study, the researcher concluded that all librarians irrespective of their affiliations and areas of specialization have to be exposed to in-depth training on knowledge organization since it is a lead way to information retrieval by all library users, not only undergraduates. Knowledge organization in university libraries, not just the library of Rev. Fr. Moses Orshio Adasu University, Makurdi alone need to be optimized by librarians through deliberate effort towards developing skills necessary for achieving this feat.

## Recommendations

**Based on the findings of the study, the following recommendations are the by the researcher:**

1. That given the fact that knowledge when organized enhances effective information retrieval, every kind of knowledge available in university libraries should be organized without delay by cataloguers and classifiers in technical section and readers' service librarians in circulation unit.
2. That all librarians should perfect themselves in knowledge organization skills such as cataloguing skills, classification skills, ICT skills, information literacy skills, shelf management skills, in-depth subject analysis skills as well as indexing and abstracting skills with the aim of seeing to it that every knowledge in university library is duly organized and in time too, to pave way for effective information retrieval.
3. Since knowledge organization serves the purpose of enhancing effective

information retrieval among undergraduates by way of facilitating quick search for information, creating easy location and access to information, bridging the gap between the user and the information, ensuring improved service delivery among others, more should be done by librarians towards acquiring the needed skills for knowledge organization for better service delivery.

## Contributions to knowledge

This study has contributed to knowledge in the following ways:

1. This study has contributed to the body of knowledge by revealing that knowledge available in university libraries both print and non-print has to be organized according to specifications for it to be retrieved by users with ease.
2. The instrument for data collection developed by the researcher titled "Knowledge Organization Skills for Effective Information Retrieval Questionnaire (KOSEIRQ)" was very unique and upcoming researchers will use this pattern to design their questionnaire for data collection on researches of similar characteristics.

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